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by W. H. Hudson and Philip Lutley Sclater**

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The INTRODUCTION originally printed in this volume has been moved to Volume I as per author intent in the Preface. Color plates of individual birds have been relocated to follow the title of the bird. All color plates will enlarge with a mouse click while hovering over the plate.

The INDEX at the end of this volume has links only to pages within this volume. The same INDEX has been added to Volume I with links only to pages within that volume.

ARGENTINE ORNITHOLOGY.

A

DESCRIPTIVE CATALOGUE

OF THE

BIRDS OF THE ARGENTINE REPUBLIC.

BY

P. L. SCLATER, M.A., PH.D., F.R.S., ETC.

WITH NOTES ON THEIR HABITS

BY

W. H. HUDSON, C.M.Z.S.,

LATE OF BUENOS AYRES.



BURMEISTER'S CARIAMA.

VOLUME II.

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PREFACE TO THE SECOND VOLUME.

THIS volume contains our account of all the Orders of Birds met with within the Argentine Republic except the Passeres, which were treated of in the First Volume. It also comprises an Appendix and Index, and completes the work. The Introduction is issued with this, but is intended to be bound up with the first volume, and is paged to follow the contents of that volume.

The total number of species which we have thus assigned to the Argentine Avifauna is 434. To this list, no doubt, considerable additions will have to be made when the more remote provinces of the Republic have been explored. We trust that this work may at least serve to excite residents in Argentina to make fresh investigations, for we are quite aware how imperfect is the compilation now offered to the public.

It will be seen that in the following pages, as in the first volume, we have availed ourselves liberally of the information on Argentine birds contained in the writings of Dr. Burmeister, Mr. Barrows, and Mr. Gibson. To all of these gentlemen we wish to offer our most sincere thanks, together with apologies for the liberty we have taken. We have likewise to express our high estimation of the valuable notes which we have extracted from the published writings of the late Henry Durnford and Ernest William White, both most promising Naturalists, and both alike lost to Science at an early age. Nor must we omit to record our thanks to Hans, Graf von Berlepsch, of Münden, Mr. Walter B. Barrows, and Mr. Frank Withington, and other friends and correspondents who have aided us by information and by the loan of specimens.

To the Zoological Society of London and to Mr. Henry Seebohm we are likewise much indebted for the loan of the woodcuts of which impressions are contained in these volumes.

P. L. S.

February 1, 1889.

CONTENTS OF VOL. II.

Order II. MACROCHIRES.

Fam. XX. TROCHILIDÆ, or HUMMING-BIRDS.

	Page
230. <i>Oreotrochilus leucopleurus</i> , Gould. (White-sided Humming-bird.)	1
231. <i>Chætocercus burmeisteri</i> , Scl. (Burmeister's Humming-bird.) [Plate XI.]	2
232. <i>Sparganura sappho</i> (Lesson). (Sappho Humming-bird.)	3
233. <i>Petasophora serrirostris</i> (Vieill.). (Violet-eared Humming-bird.)	3
234. <i>Patagona gigas</i> (Vieill.). (Giant Humming-bird.)	4
235. <i>Calliperidia furcifera</i> (Shaw). (Angela Humming-bird.)	5
236. <i>Leucippus chionogaster</i> (Tsch.). (White-breasted Humming-bird.)	7
237. <i>Leucochloris albicollis</i> (Vieill.). (White-throated Humming-bird.)	7
238. <i>Chrysuronia ruficollis</i> (Vieill.). (Golden-tailed Humming-bird.)	8
239. <i>Hylocharis sapphirina</i> (Gm.). (Red-throated Humming-bird.)	8
240. <i>Chlorostilbon splendidus</i> (Vieill.). (Glittering Humming-bird.)	9

Fam. XXI. CYPSELIDÆ, or SWIFTS.

241. <i>Hemiprocne zonaris</i> (Shaw). (Ringed Spine-tailed Swift.)	11
---------------------------------------------------------------------	----

Fam. XXII. CAPRIMULGIDÆ, or GOATSUCKERS.

242. <i>Podager nacunda</i> (Vieill.). (Nacunda Goatsucker.)	12
243. <i>Chordeiles virginianus</i> (Gm.). (Whip-poor-Will.)	13
244. <i>Antrostomus parvulus</i> (Gould). (Little Goatsucker.)	14
245. <i>Stenopsis bifasciata</i> (Gould). (Wing-banded Goatsucker.)	14
246. <i>Hydropsalis furcifera</i> (Vieill.). (Fork-tailed Goatsucker.) [Plate XII.]	15
247. <i>Heleothreptus anomalus</i> (Gould). (Short-winged Goatsucker.)	16

Order III. PICI.

Fam. XXIII. PICIDÆ, or WOODPECKERS.

248. <i>Campephilus boiæi</i> (Wagl.). (Boie's Woodpecker.)	17
249. <i>Campephilus schulzi</i> (Cab.). (Schulz's Woodpecker.)	18
250. <i>Dryocopus erythroops</i> (Val.). (Red-faced Woodpecker.)	18
251. <i>Picus mixtus</i> , Bodd. (Varied Woodpecker.)	19
252. <i>Picus cactorum</i> , d'Orb. et Lafr. (Cactus Woodpecker.)	19
253. <i>Chloronerpes affinis</i> (Wagl.). (Allied Woodpecker.)	20
254. <i>Chloronerpes frontalis</i> , Cab. (Red-fronted Woodpecker.)	20
255. <i>Chloronerpes aurulentus</i> (Licht.). (Gold-backed Woodpecker.)	21
256. <i>Chloronerpes tucumanus</i> , Cab. (Tucuman Woodpecker.)	21
257. <i>Chrysoptilus cristatus</i> (Vieill.). (Red-crested Woodpecker.)	21
258. <i>Leuconerpes candidus</i> (Otto). (White-bellied Woodpecker.)	23
259. <i>Colaptes longirostris</i> , Cab. (Long-billed Woodpecker.)	23
260. <i>Colaptes agricola</i> (Malh.). (Pampas Woodpecker.)	24

Order IV. COCCYGES.

Fam. XXIV. ALCEDINIDÆ, or KINGFISHERS.

261. <i>Ceryle torquata</i> (Linn.). (Ringed Kingfisher.)	26
262. <i>Ceryle amazona</i> (Lath.). (Amazonian Kingfisher.)	27
263. <i>Ceryle americana</i> (Gm.). (Little Kingfisher.)	27

Fam. XXV. TROGONIDÆ, or TROGONS.

264. <i>Trogon variegatus</i> , Spix. (Purple-breasted Trogon.)	29
265. <i>Trogon surucura</i> , Vieill. (Azara's Trogon.)	29

Fam. XXVI. BUCCONIDÆ, or PUFF-BIRDS.

266. *Bucco maculatus* (Gm.). (Spotted Puff-bird.) 30

Fam. XXVII. CUCULIDÆ, or CUCKOOS.

267. *Crotophaga ani*, Linn. (Black Ani.) 31268. *Guira piririgua* (Vieill.). (Guira Cuckoo.) 32269. *Diplopterus nævius* (Gm.). (Brown Cuckoo.) 35270. *Piaya cayana* (Linn.). (Chestnut Cuckoo.) 36271. *Coccyzus americanus* (Linn.). (Yellow-billed Cuckoo.) 37272. *Coccyzus melanocoryphus*, Vieill. (Black-billed Cuckoo.) 38273. *Coccyzus cinereus*, Vieill. (Cinereous Cuckoo.) [Plate XIII.] 38274. *Coccyzus pumilus*, Strickl. (Dwarf Cuckoo.) 39

Fam. XXVIII. RHAMPHASTIDÆ, or TOUCANS.

275. *Rhamphastos toco*, Gm. (Toco Toucan.) 40

Order V. PSITTACI.

Fam. XXIX. PSITTACIDÆ, or PARROTS.

276. *Conurus patagonus* (Vieill.). (Patagonian Parrot.) 41277. *Conurus acuticaudatus* (Vieill.). (Sharp-tailed Parrot.) 42278. *Conurus mitratus*, Tsch. (Red-headed Parrot.) 43279. *Conurus molinæ*, Mass. et Souanc. (Molina's Parrot.) [Plate XIV.] 43280. *Bolborhynchus monachus* (Bodd.). (Green Parrakeet.) 43281. *Bolborhynchus aymara* (d'Orb.). (Aymara Parrakeet.) [Plate XV.] 46282. *Bolborhynchus rubrirostris* (Burm.). (Red-billed Parrakeet.) 46283. *Chrysotis vinacea* (Max.). (Vinaceous Amazon.) 46284. *Chrysotis æstiva* (Linn.). (Blue-fronted Amazon.) 47285. *Pionus maximiliani* (Kuhl). (Prince Maximilian's Parrot.) 47

Order VI. STRIGES.

Fam. XXX. STRIGIDÆ, or BARN-OWLS.

286. *Strix flammea*, Linn. (Common Barn-Owl.) 48

Fam. XXXI. BUBONIDÆ, or OWLS.

287. *Asio brachyotus* (Forst.). (Short-eared Owl.) 49288. *Bubo virginianus* (Gm.). (Virginian Owl.) 50289. *Scops brasilianus* (Gm.). (Choliba Owl.) 51290. *Speotyto cunicularia* (Mol.). (Burrowing-Owl.) 52291. *Glaucidium nanum* (King). (Pygmy Owl.) 56

Order VII. ACCIPITRES.

Fam. XXXII. FALCONIDÆ, or FALCONS.

292. *Circus cinereus*, Vieill. (Cinereous Harrier.) 57293. *Circus macropus*, Vieill. (Long-winged Harrier.) 58294. *Asturina pucherani*, Verr. (Pucheran's Hawk.) 58295. *Buteo swainsoni*, Bp. (Swainson's Buzzard.) [Plate XVI.] 59296. *Buteo albicaudatus*, Vieill. (White-tailed Buzzard.) 61297. *Buteo erythronotus* (King). (Red-backed Buzzard.) 62298. *Antenor unicinctus* (Temm.). (One-banded Buzzard.) 63299. *Heterospizias meridionalis* (Lath.). (Brown Buzzard.) 63300. *Geranoaëtus melanoleucus* (Vieill.). (Chilian Eagle.) 64301. *Harpyhaliaëtus coronatus* (Vieill.). (Crowned Harpy.) 66302. *Geranospizias cærulescens* (Vieill.). (Grey Crane-Hawk.) 67303. *Falco peregrinus*, Linn. (Peregrine Falcon.) 67304. *Falco fusco-cærulescens*, Vieill. (Orange-chested Hobby.) 69305. *Tinnunculus cinnamominus* (Sw.). (Cinnamomeous Kestrel.) 69306. *Elanus leucurus* (Vieill.). (White-tailed Kite.) 71307. *Rostrhamus sociabilis* (Vieill.). (Sociable Marsh-Hawk.) 72308. *Spizapteryx circumcinctus* (Kaup). (Spot-winged Falcon.) 73

309. *Milvago chimango* (Vieill.). (Chimango Carrion-Hawk.) 74
 310. *Polyborus tharus* (Mol.). (Carancho Carrion-Hawk.) 81

Fam. XXXIII. CATHARTIDÆ, or CONDORS.

311. *Cathartes aura* (Linn.). (Turkey-Vulture.) 89
 312. *Cathartes atratus* (Bartram). (Black Vulture.) 89
 313. *Sarcorhamphus gryphus* (Linn.). (Great Condor.) 90

Order VIII. STEGANOPODES.

Fam. XXXIV. PHALACROCORACIDÆ, or CORMORANTS.

314. *Phalacrocorax brasilianus* (Gm.). (Brazilian Cormorant.) 91

Order IX. HERODIONES.

Fam. XXXV. ARDEIDÆ, or HERONS.

315. *Ardea cocoi*, Linn. (Cocoi Heron.) 93
 316. *Ardea egretta*, Gm. (White Egret.) 98
 317. *Ardea candidissima*, Gm. (Snowy Egret.) 99
 318. *Ardea cærulea*, Linn. (Blue Heron.) 99
 319. *Ardea sibilatrix*, Temm. (Whistling Heron.) 100
 320. *Butorides cyanurus* (Vieill.). (Little Blue Heron.) 101
 321. *Ardetta involucris* (Vieill.). (Variegated Heron.) [Plate XVII.] 101
 322. *Tigrisoma marmoratum* (Vieill.). (Marbled Tiger-Bittern.) 104
 323. *Nycticorax obscurus*, Bp. (Dark Night-Heron.) 105

Fam. XXXVI. CICONIIDÆ, or STORKS.

324. *Mycteria americana*, Linn. (Jabiru.) 106
 325. *Euxenura maguari* (Gm.). (Maguari Stork.) 106
 326. *Tantalus loculator*, Linn. (Wood-Ibis.) 108

Fam. XXXVII. PLATALEIDÆ, or IBISES.

327. *Plegadis guarauna* (Linn.). (White-faced Ibis.) 109
 328. *Theristicus caudatus* (Bodd.). (Black-faced Ibis.) 110
 329. *Harpiprion cærulescens* (Vieill.). (Plumbeous Ibis.) 112
 330. *Phimosus infuscatus* (Licht.). (Whispering Ibis.) 113
 331. *Ajaja rosea*, Reichenb. (Roseate Spoonbill.) 114

Fam. XXXVIII. PHÆNICOPTERIDÆ, or FLAMINGOES.

332. *Phoenicopterus ignipalliatus*, Geoffr. et d'Orb. (Argentine Flamingo.) 117
 333. *Phoenicopterus andinus*, Philippi. (Andean Flamingo.) 119

Order X. ANSERES.

Fam. XXXIX. PALAMEDEIDÆ, or SCREAMERS.

334. *Chauna chavaria* (Linn.). (Crested Screamer.) 119

Fam. XL. ANATIDÆ, or DUCKS.

335. *Bernicla melanoptera* (Eyton). (Andean Goose.) 122
 336. *Bernicla dispar*, Ph. et Landb. (Barred Upland Goose.) 123
 337. *Bernicla poliocephala*, Gray. (Ashy-headed Goose.) 124
 338. *Cygnus nigricollis*, Gm. (Black-necked Swan.) [Plate XVIII.] 124
 339. *Coscoroba candida* (Vieill.). (Coscoroba Swan.) 126
 340. *Dendrocygna fulva* (Gm.). (Fulvous Tree-Duck.) 126
 341. *Dendrocygna viduata* (Linn.). (White-faced Tree-Duck.) 128
 342. *Sarcidiornis carunculata* (Licht.). (Crested Duck.) 128
 343. *Cairina moschata* (Linn.). (Muscovy Duck.) 129
 344. *Heteronetta melanocephala* (Vieill.). (Black-headed Duck.) 130
 345. *Querquedula cyanoptera* (Vieill.). (Blue-winged Teal.) 130
 346. *Querquedula flavirostris* (Vieill.). (Yellowed-billed Teal.) 131
 347. *Querquedula versicolor* (Vieill.). (Grey Teal.) 131
 348. *Querquedula torquata* (Vieill.). (Ring-necked Teal.) 132
 349. *Querquedula brasiliensis* (Gm.). (Brazilian Teal.) 133

350.	<i>Dafila spinicauda</i> (Vieill.). (Brown Pintail.)	134
351.	<i>Dafila bahamensis</i> (Linn.). (Bahama Pintail.)	135
352.	<i>Mareca sibilatrix</i> (Poepp.). (Chiloe Wigeon.)	135
353.	<i>Spatula platalea</i> (Vieill.). (Red Shoveller.)	136
354.	<i>Metopiana peposaca</i> (Vieill.). (Rosy-billed Duck.)	137
355.	<i>Erismatura ferruginea</i> , Eyton. (Rusty Lake-Duck.)	138
356.	<i>Nomonyx dominicus</i> (Linn.). (White-winged Lake-Duck.)	138

Order XI. COLUMBÆ.

Fam. XLI. COLUMBIDÆ, OR PIGEONS.

357.	<i>Columba picazuro</i> , Temm. (Picazuro Pigeon.)	139
358.	<i>Columba maculosa</i> , Temm. (Spot-winged Pigeon.)	140
359.	<i>Zenaida maculata</i> (Vieill.). (Spotted Dove.)	141
360.	<i>Metriopelia melanoptera</i> (Mol.). (Black-winged Dove.)	142
361.	<i>Metriopelia aymara</i> (Knip et Prév.). (Aymara Dove.)	142
362.	<i>Columbula picui</i> (Temm.). (Picui Dove.)	143
363.	<i>Chamæpelina talpacoti</i> (Temm.). (Talpacoti Dove.)	144
364.	<i>Engyptila chalcauchenia</i> (Scl. et Salv.). (Solitary Pigeon.)	144

Order XII. GALLINÆ.

Fam. XLII. CRACIDÆ, OR CURASSOWS.

365.	<i>Crax sclateri</i> , G. R. Gray. (Sclater's Curassow.)	145
366.	<i>Penelope obscura</i> , Temm. (Dark Guan.)	146
367.	<i>Pipile cumanensis</i> (Jacq.). (White-headed Guan.)	146
368.	<i>Ortalis canicollis</i> , Wagl. (Hoary-necked Guan.)	147

Order XIV. GERANOMORPHÆ.

Fam. XLIII. RALLIDÆ, OR RAILS.

369.	<i>Rallus maculatus</i> , Bodd. (Spotted Rail.) [Plate XIX.]	148
370.	<i>Rallus antarcticus</i> , King. (Antarctic Rail.)	148
371.	<i>Rallus rhytirhynchus</i> , Vieill. (Black Rail.)	149
372.	<i>Rallus nigricans</i> , Vieill. (Plumbeous Rail.)	150
373.	<i>Aramides ypecaha</i> (Vieill.). (Ypecaha Rail.)	150
374.	<i>Porzana leucopyrrha</i> (Vieill.). (Red-and-White Crake.)	154
375.	<i>Porzana salinasi</i> (Philippi). (Spot-winged Crake.)	155
376.	<i>Porzana notata</i> (Gould). (Marked Crake.)	155
377.	<i>Porphyriops melanops</i> (Vieill.). (Little Waterhen.)	156
378.	<i>Gallinula galeata</i> (Licht.). (American Waterhen.)	156
379.	<i>Fulica armillata</i> , Vieill. (Red-gartered Coot.)	157
380.	<i>Fulica leucopyga</i> , Hartl. (Red-fronted Coot.)	157
381.	<i>Fulica leucoptera</i> , Vieill. (Yellow-billed Coot.)	158

Fam. XLIV. ARAMIDÆ, OR COURLANS.

382.	<i>Aramus scolopaceus</i> (Gm.). (Southern Courlan.)	159
------	------------------------------------------------------	-----

Fam. XLV. CARIAMIDÆ, OR CARIAMAS.

383.	<i>Cariama cristata</i> (Linn.). (Crested Cariama.)	161
384.	<i>Chunga burmeisteri</i> (Hartl.). (Burmeister's Cariama.)	162

Order XV. LIMICOLÆ.

Fam. XLVI. PARRIDÆ, OR JACANAS.

385.	<i>Parra jacana</i> , Linn. (The Jacana.)	163
------	-------------------------------------------	-----

Fam. XLVII. CHARADRIIDÆ, OR PLOVERS.

386.	<i>Vanellus cayennensis</i> (Gm.). (Cayenne Lapwing.)	165
387.	<i>Charadrius dominicus</i> , Müller. (American Golden Plover.)	170
388.	<i>Eudromias modesta</i> (Licht.). (Winter Plover.)	171
389.	<i>Ægialitis falklandica</i> (Lath.). (Patagonian Sand-Plover.)	172

390.	<i>Ægialitis collaris</i> (Vieill.). (Azara's Sand-Plover.)	173
391.	<i>Oreophilus ruficollis</i> (Wagl.). (Slender-billed Plover.)	174
392.	<i>Hæmatopus palliatus</i> , Temm. (American Oyster-catcher.)	176

Fam. XLVIII. THINOCORIDÆ, or SEED-SNIPES.

393.	<i>Thinocorus rumicivorus</i> , Eschsch. (Common Seed-Snipe.)	176
394.	<i>Thinocorus orbignyana</i> , Geoffr. et Less. (D'Orbigny's Seed-Snipe.)	178

Fam. XLIX. SCOLOPACIDÆ, or SNIPES.

395.	<i>Himantopus brasiliensis</i> , Brehm. (Brazilian Stilt.)	179
396.	<i>Phalaropus wilsoni</i> , Sabine. (Wilson's Phalarope.)	180
397.	<i>Gallinago paraguayæ</i> (Vieill.). (Paraguay Snipe.)	181
398.	<i>Rhynchæa semicollaris</i> (Vieill.). (Painted Snipe.)	182
399.	<i>Tringa maculata</i> , Vieill. (Pectoral Sandpiper.)	183
400.	<i>Tringa bairdi</i> (Coues). (Baird's Sandpiper.)	184
401.	<i>Tringa fuscicollis</i> , Vieill. (Bonaparte's Sandpiper.)	185
402.	<i>Calidris arenaria</i> (Linn.). (Sanderling.)	186
403.	<i>Totanus melanoleucus</i> (Gm.). (Greater Yellowshank.)	186
404.	<i>Totanus flavipes</i> (Gm.). (Lesser Yellowshank.)	187
405.	<i>Rhyacophilus solitarius</i> (Wils.). (Solitary Sandpiper.)	188
406.	<i>Actiturus bartramius</i> (Wils.). (Bartram's Sandpiper.)	189
407.	<i>Tryngites rufescens</i> (Vieill.). (Buff-breasted Sandpiper.)	190
408.	<i>Limosa hæmastica</i> (Linn.). (Hudsonian Godwit.)	191
409.	<i>Numenius borealis</i> (Forst.). (Esquimo Whimbrel.)	192

Order XVI. GAVIÆ.

Fam. L. LARIDÆ, or GULLS.

410.	<i>Rhynchops melanura</i> , Sw. (Black-tailed Skimmer.)	193
411.	<i>Phaëthusa magnirostris</i> (Licht.). (Great-billed Tern.)	194
412.	<i>Sterna maxima</i> , Bodd. (Great Tern.)	195
413.	<i>Sterna trudeauii</i> , Aud. (Trudeau's Tern.)	195
414.	<i>Sterna hirundinacea</i> , Less. (Cassin's Tern.)	196
415.	<i>Sterna superciliaris</i> , Vieill. (Eyebrowed Tern.)	197
416.	<i>Larus dominicanus</i> , Licht. (Dominican Gull.)	197
417.	<i>Larus maculipennis</i> , Licht. (Spot-winged Gull.)	198
418.	<i>Larus cirrhocephalus</i> , Vieill. (Grey-capped Gull.)	201

Order XVII. PYGOPODES.

Fam. LI. PODICIPEDIDÆ, or GREBES.

419.	<i>Æchmophorus major</i> (Bodd.). (Great Grebe.)	202
420.	<i>Podiceps caliparæus</i> , Less. (Bright-cheeked Grebe.)	204
421.	<i>Podiceps rollandi</i> , Quoy et Gaim. (Rolland's Grebe.)	204
422.	<i>Tachybaptus dominicus</i> (Linn.). (American Dabchick.)	205
423.	<i>Podilymbus podiceps</i> (Linn.). (Thick-billed Grebe.)	206

Order XVIII. IMPENNES.

Fam. LII. APTENODYTIDÆ, or PENGUINS.

424.	<i>Spheniscus magellanicus</i> (Forst.). (Jackass Penguin.)	206
------	-------------------------------------------------------------	-----

Order XIX. CRYPTURI.

Fam. LIII. TINAMIDÆ, or TINAMOUS.

425.	<i>Crypturus obsoletus</i> , Temm. (Brown Tinamou.)	207
426.	<i>Crypturus tataupa</i> , Temm. (Tataupa Tinamou.)	208
427.	<i>Rhynchotus rufescens</i> (Temm.). (Great Tinamou.)	209
428.	<i>Nothoprocta pentlandi</i> (Gray). (Pentland's Tinamou.)	210
429.	<i>Nothoprocta cinerascens</i> (Burm.). (Cinereous Tinamou.)	210
430.	<i>Nothura maculosa</i> (Temm.). (Spotted Tinamou.)	211
431.	<i>Nothura darwini</i> , Gray. (Darwin's Tinamou.) [Plate XX.]	213

Order XX. STRUTHIONES.

Fam. LIV. RHEIDÆ, or RHEAS.

433. *Rhea americana*, Lath. (Common Rhea.) 216
 434. *Rhea darwini*, Gould. (Darwin's Rhea.) 219

APPENDIX 221

- I. List of the principal Authorities upon the Ornithology of the Argentine Republic referred to in the present Work 221
 II. List of some of the principal Localities where Collections have been made, mentioned in this Work 231

INDEX 233

LIST OF PLATES IN VOL. II.

Plate		Page
XI.	CHÆTOCERCUS BURMEISTERI	2
XII.	HYDROPSALIS FURCIFERA	15
XIII.	COCCYZUS CINEREUS	38
XIV.	CONURUS MOLINÆ	43
XV.	BOLBORHYNCHUS AYMARA	46
XVI.	BUTEO SWAINSONI	59
XVII.	ARDETTA INVOLUCRIS	101
XVIII.	CYGNUS NIGRICOLLIS	124
XIX.	RALLUS MACULATUS	148
XX.	NOTHURA DARWINI	213

ARGENTINE ORNITHOLOGY.

- 1 -

Order II. MACROCHIRES.

Fam. XX. TROCHILIDÆ, OR HUMMING-BIRDS.

OF the great American family Trochilidæ, which, according to the most recent authorities, contains about 450 species, eleven members have been ascertained to occur within the limits of the Argentine Republic. But of these only three (*Calliperidia furcifera*, *Hylocharis sapphirina*, and *Chlorostilbon splendidus*) reach the neighbourhood of Buenos Ayres, where they occur as summer visitors. The remaining eight have been met with only in the northern and western provinces of Argentina. Of these two (*Oreotrochilus leucopleurus* and *Patagona gigas*) are also found in Chili, the others are Bolivian and South-Brazilian species.

230. OREOTROCHILUS LEUCOPLEURUS, Gould.

(WHITE-SIDED HUMMING-BIRD.)

Oreotrochilus leucopleurus, *Scl. et Salv. Nomencl.* p. 81; *White, P. Z. S.* 1882, p. 615 (Catamarca); *Elliot, Syn. Troch.* p. 36; *Gould, Mon. Troch.* ii. pl. 71.

Description.—Head, upper surface, and wings greyish olive-brown, passing into dull coppery green on the upper tail-coverts; two central tail-feathers and outer one bronzy green, the others white, narrowly edged externally with brown; throat shining green, bordered below by a band of black with bluish reflexions; flanks olive-brown; breast and sides of belly white; centre of belly black with steel-blue reflexions; under tail-coverts olive: whole length 5·0 inches, wings 2·7, tail 2·1. *Female* above like male; beneath white, throat densely spotted with brown; flanks brownish.

Hab. Chili and Northern Argentina.

White obtained a single specimen of this Humming-bird in September 1880, at Fuerte de Andalgala, in Catamarca. It is a well-known species in Chili, where, according to Gould, "it inhabits the sheltered valleys of the Andes, just below the line of perpetual congelation."

- 2 -

231. CHÆTOCERCUS BURMEISTERI, *Scl.*

(BURMEISTER'S HUMMING-BIRD.)

[PLATE XI.]



CHÆTOCERCUS BURMEISTERI.

Chætocercus burmeisteri, *Scl. P. Z. S.* 1887, p. 639.

Description.—Bill straight, entirely black and as long as the head; whole upper part of the body of a dark green metallic colour, except the wings, which are black; the small feathers of the throat on the under jaw are whitish with a darker spot in the middle; there begins on the throat the crimson-red bilateral beard, which is composed on both sides of three rows of very small feathers, these becoming somewhat larger in the middle of the beard and terminating with two ranges of feathers in the exterior half part. Many of these feathers are shining metallic green in certain positions. A white spot behind the eyes descends from there to the breast, which is also whitish, but with a dark spot on every feather, causing a greyish appearance in the middle of the breast. The hinder half of the breast and the belly are black, but the anal portion is white, as also the sides of the body, except the thighs, which are black. The inferior feathers behind the anal region are clear yellow-brown, but those in the middle have a green metallic spot. The tail is composed of eight feathers; the two exterior on each side are more than an inch long, very small but of equal size in the whole extent, and rounded at the tip, not pointed. The exterior rectrix is entirely black; the second has a clear brown stripe on the inside border. The third feather of each side is very short, only half an inch long and more than eight lines shorter than the exterior; its colour is entirely black. The fourth feathers on each side, that is in the middle of the tail, are shorter than the third pair and partly covered by the coverts: they are of metallic green colour like the coverts.

Hab. Tucuman.

The only known specimen of this species was procured in the Valle de Tafi, in the mountains of Tucuman, by Herr Schulz, and is now in the National Museum of Buenos Ayres. This species is nearly allied to *C. bombus*, Gould (*Mon. Troch. Suppl.* p. 45, pl. 32), but differs in the form of the tail. The figure (Plate XI.) is taken from a watercolour sketch of this specimen kindly sent to us by Dr. Burmeister.

232. SPARGANURA SAPPHO (Lesson).

- 3 -

(SAPPHO HUMMING-BIRD.)

Sparganura sappho, *Scl. et Salv. Nomencl.* p. 86; *White, P. Z. S.* 1882, p. 615 (Catamarca).

Cometes sparganurus, *Burm. La-Plata Reise*, ii. p. 449 (Mendoza, Catamarca, Tucuman); *Gould, Mon. Troch.* iii. pl. 174. **Sappho sparganura**, *Elliot, Syn. Troch.* p. 154; *Salvin, Ibis*, 1880, p. 360 (Tucuman, Salta).

Description.—Head, upper back, wing-coverts, and under surface shining bronze-green; lower back and upper tail-coverts shining crimson; tail dark brown at base, remaining part fiery orange, tipped with black; basal half of outer web of external rectrices pale brown; wings purplish brown; under tail-coverts light brown with purplish centres; bill and feet black: whole length 6·2 inches, wing 2·5, tail 4·1. *Female*: crown and back greenish brown; throat and sides of face buffy white, spotted with green; rest of under surface whitish, with large spots of green on the flanks; rump and upper tail-coverts shining crimson; central rectrices crimson, lateral rectrices brownish glossed with crimson; outer web of external rectrix white; bill and feet black.

Hab. Bolivia and North-western Argentina.

Dr. Burmeister tells us that the Sappho Humming-bird is not uncommon in Mendoza, Catamarca, and Tucuman, but keeps to the mountains, and does not descend on to the plains. In the neighbourhood of Mendoza it specially affects the flowers of *Loranthus cuneifolius*; at Tucuman Dr. Burmeister found it also on the orange-blossoms.

Durnford obtained specimens of this species at Tucuman and Salta in the month of June.

White (P. Z. S. 1882, p. 615) gives us the following notes on its habits:—

“I have met with these Humming-birds scattered, although somewhat sparsely, over the upper provinces of the Republic, feeding principally upon *Nicotiana glauca*, the Quichua name for which is ‘palan-palan.’ They follow it southwards as it flowers, even as far as Cordoba; but their true habitat is the Andean region. In Quichua, Humming-birds generally are called ‘Tuminicos.’ When these birds are poised in front of a flower with wings and tail expanded in the full sunshine, they offer the most brilliant feathery picture imaginable; and as they dart off their flight is so speedy that the eye cannot follow them.”

233. PETASOPHORA SERRIROSTRIS (Vieill.).

(VIOLET-EARED HUMMING-BIRD.)

Petasophora serrirostris, *Scl. et Salv. Nomencl.* p. 89; *Elliot, Syn. Troch.* p. 52; *Gould, Mon. Troch.* iv. pl. 223. **Petasophora crispa**, *Burm. La-Plata Reise*, ii. p. 447 (Tucuman).

Description.—Head, upper surface, wing-coverts, flanks, and abdomen dark yellowish green; ear-coverts rich violet-blue; wings purplish brown; tail dark bluish green, crossed near the tip by a broad chalybeate band, beyond which the tips are of a lighter bluish green; throat and upper part of the breast luminous green; across the breast a gorget of shining bluish green; vent and under tail-coverts pure white; bill black; feet blackish brown: whole length 3·8 inches, wings 2·8, tail 1·7. *Female* similar, but not so bright.

- 4 -

Hab. S.E. Brazil.

Dr. Burmeister informs us that he met with this Humming-bird in multitudes in the month of September among the orange-blossoms in the Quintas of Tucuman. It is a well-known species in South-east Brazil, but we know of no other record of its occurrence so far south as Tucuman.

234. PATAGONA GIGAS (Vieill.).

(GIANT HUMMING-BIRD.)

Patagona gigas, *Scl. et Salv. Nomencl.* p. 89; *White, P. Z. S.* 1882, p. 615 (Catamarca); *Elliot, Syn. Troch.* p. 67; *Gould, Mon. Troch.* iv. pl. 232.

Description.—Head and upper surface pale brown, glossed with green; wings and tail darker and more green; basal portion of the shafts of the lateral rectrices white; patch on the rump white; upper tail-coverts edged with white; breast mottled brown and buff; throat and abdomen rusty red; under tail-coverts white, with brownish centre spots; bill blackish brown; feet brown: whole length 7·0 inches, wing 4·9, tail 3·4. *Female* similar but smaller.

Hab. Andes of Ecuador, Bolivia, and Peru, Chili, Patagonia, and Northern Argentina.

White seems to be the only observer who has met with this Humming-bird within the limits of the Argentine Republic. He obtained a pair at Andalgala, in Catamarca, in September 1880, and wrote the following notes on the habits of the species:—

“This magnificent bird, which the natives say they have never seen before at Andalgala, was shot on the ‘palan-palan,’ the usual plant that it frequents at this season. It appeared here just after a two days’ severe snow-storm, so that in all probability it had been driven down hither by it.

"It is exceedingly powerful on the wing, and flutters in front of a flower, sipping the nectar, exactly as the smaller species of this family. They have a most peculiar, zig-zag, jerky flight; which, when making a long detour for any particular spot, becomes undulating.

"They are without doubt partially insect-eaters, as I have not only observed their crops full of flies and small beetles, but have also seen them pursue and catch them in the air, with the motions of a Flycatcher.

"They perch on some bare branch of a plant, which they entirely appropriate, driving off every other bird that dares to approach, and every now and then visit all its flowers to sip the sweets. The large humble-bees, however, cause them some trouble, as they likewise are addicted to sipping nectar; these the *P. gigas* attacks with all its force, and by fluttering its wings, rushing at, pushing and pecking them, succeeds in ridding the spot of their presence.

"The note of this bird is similar to the chirp of a young Sparrow, but much stronger.

"These birds, like animals generally in the Argentine Republic, take no notice of a person mounted, but instantly disappear when a foot-passenger approaches; so that as I was on muleback I was enabled to ride close up to and observe them.

"The seat of *P. gigas* is so firm and close to the branch, that its tiny feet are invisible; the breast is puffed out, and its head in continued motion from one side to the other with a jerky movement. When disturbed it darts off around with a rough jerky flight for a minute or so, and then endeavours to return, but, if still interfered with, seeks a dry twig at the top of some neighbouring tree on which to alight. Its poise when suspended, sipping at the flowers, is heavy and laboured, and the motion of its large wings, although rapid, is perceptible to the eye; and it never remains more than half a minute in this position, when it retires to a branch to rest for at least five minutes, perching, with its head towards the sun and its beak slightly elevated."

235. CALLIPERIDIA FURCIFERA (Shaw).

(ANGELA HUMMING-BIRD.)

Calliperidia furcifera, *Scl. et Salv. Nomencl.* p. 90; *Durnford, Ibis*, 1877, p. 184 (Buenos Ayres).

Heliomaster furcifer, *White, P. Z. S.* 1882, p. 616 (Catamarca); *Barrows, Auk*, 1884, p. 21 (Entrerios); *Elliot, Syn. Troch.* p. 86. **Ornismya angelæ**, *d'Orb. et Lafr. Syn. Av.* ii. p. 28 (Corrientes). **Calliperidia angelæ**, *Elliot, Ibis*, 1877, p. 137. **Heliomaster angelæ**, *Gould, Mon. Troch.* iv. pl. 263; *Burm. La-Plata Reise*, ii. p. 448; *id. P. Z. S.* 1865, p. 466; *id. Anales Mus. B. A.* i. p. 70. **Campylopterus inornatus**, *Burm. La-Plata Reise*, ii. p. 447. (jr.).

Description.—Crown of head luminous metallic green, changing in some lights to aquamarine, in others to bluish green, and in others to golden green; all the upper surface and wing-coverts golden green, the golden hue predominating on the lower part of the back; wings purplish brown; tail purplish black, glossed with dark green; behind the eye a spot of white, and on the cheeks a streak of grey; centre of throat rich metallic purplish crimson, on each side of which is a series of elongated feathers of a rich deep metallic blue; under surface deep green, passing into rich blue on the middle of the body; tuft on each side and vent white; under tail-coverts green, fringed with white; bill black; feet blackish brown: whole length 5·2 inches, wing 2·3, tail 1·7. *Female*: the whole of the upper surface golden bronze, inclining to grey on the crown; tail green, deepening into black towards the extremity, and a spot of white at the tip of the three outer feathers of each side; wings purplish brown; under surface grey, fading into white on the throat and middle of belly.

Hab. S. Brazil, Paraguay, and Argentina.

Of the three Humming-birds which visit the vicinity of Buenos Ayres in the summer months, Mr. Durnford tells us this is the rarest. It is occasionally seen in the riverain wood, and like the other two (*Hylocharis sapphirina* and *Chlorostilbon splendidus*) may generally be found hovering over the flowers of the Ceiba-tree—a species of *Erythrina*.

Further to the north this species would seem to be more abundant. Dr. Burmeister met with it near Tucuman and Paraná, and at one time described the young birds obtained in the latter locality as of a distinct species (*Campylopterus inornatus*), an error which he subsequently corrected (*cf. P. Z. S.* 1864, p. 466). White procured it in the city of Catamarca in August 1880.

Mr. Barrows has published the following interesting account of his observations on this species in Entrerios (*Auk*, 1882, p. 21):—

"Early in September, at Concepcion, when the orange-trees are just whitening with blossoms, these magnificent Humming-birds arrive from the north, and may occasionally be seen about the orange-trees in any garden, as well as about blossoming trees elsewhere. The males seemed for some reason to be much less abundant than the females, hardly more than a dozen being seen in an entire season. They probably nest in November and December, and leave for the north again in February or March. A nearly finished nest, found November 17, was very similar to that of our own Ruby-throat (*Trochilus colubris*) but larger, and was built in the compound fork of a large limb at a height of over 25 feet from the ground. It was deserted soon after, perhaps as a result of my examination. Ten days later another nest was found saddled on the topmost horizontal limb of a dead and moss-grown stub; only about

seven feet from the ground, and exposed to the full force of the sun. This nest contained two eggs nearly ready to hatch. Both nests were beautifully covered with lichens, and the last was lined with the finest of vegetable down. The female made several angry rushes at me before the nest was touched, but as soon as she saw that it was discovered became so shy that it was difficult to secure her. The male was not seen at all. I once saw a bird of this species attack and put to rout a wild dove which passed near it while feeding, and though the dove made every effort to escape, the Hummer not only kept up with it easily, but darted above and below it as well, and finally both went out of sight in the distance together."

- 7 -

236. LEUCIPPUS CHIONOGASTER (Tsch.).

(WHITE-BREASTED HUMMING-BIRD.)

Leucippus chionogaster, *Scl. et Salv. Nomencl.* p. 91; *White, P. Z. S.* 1882, p. 616 (Catamarca); *Elliot, Syn. Troch.* p. 199; *Gould, Mon. Troch.* v. pl. 290.

Description.—Head, upper surface, wing-coverts, and flanks bronzy green; throat and whole lower surface white; wings purplish brown; central tail-feathers bronzy green, lateral dull bronzy brown on the outer webs; inner webs and shafts white, the inner webs clouded with bronzy brown in the centre; bill black, lower mandible paler at the base: whole length 4.2 inches, wing 2.1, tail 1.3. *Female* similar.

Hab. Peru, Bolivia, and Northern Argentina.

White obtained examples of this species at Fuerte de Andalgala, in Catamarca, in September 1880. They were feeding on the flowers of the "Idiondilla," which is one of the "Humming-bird-plants" of that district. "They are very swift and wild in their movements," he tells us, and "make a very loud hum," louder in fact than any other species with which he was acquainted.

237. LEUCOCHLORIS ALBICOLLIS (Vieill.).

(WHITE-THROATED HUMMING-BIRD.)

Leucochloris albicollis, *Gould, Mon. Troch.* v. pl. 291; *Elliot, Syn. Troch.* p. 200. *Thaumatias albicollis*, *Burm. La-Plata Reise*, ii. p. 448 (Tucuman).

Description.—Head, all the upper surface, wing-coverts, chin and sides of the neck, abdomen and flanks deep shining grass-green; on the centre of throat and breast a large patch of white; lower part of abdomen and under tail-coverts white; wings purplish brown; two middle tail-feathers deep shining grass-green, the remainder bluish black, the three outer ones tipped with white; upper mandible black; basal two thirds of the lower mandible fleshy, apical third brown; feet brown: whole length 4.2 inches, wing 2.3, tail 1.4. *Female* similar.

Hab. S.E. Brazil, Paraguay, and N. Argentina.

Dr. Burmeister states that this species is found near Tucuman in company with *Calliperidia furcifera* and *Petasophora serrirostris*; but we have no other authority for its occurrence within the limits of the Argentine Republic.

- 8 -

238. CHRYSURONIA RUFICOLLIS (Vieill.).

(GOLDEN-TAILED HUMMING-BIRD.)

Chrysuronia ruficollis, *Berlepsch, J. f. O.* 1887, p. 18. *Chrysuronia chrysur*, *Scl. et Salv. Nomencl.* p. 93; *Elliot, Syn. Troch.* p. 169 (Arg. rep.), *Gould, Monogr. Troch.* v. pl. 329.

Description.—Head, all the upper surface, wings, and tail-coverts of a golden hue, inclining to brown on the head; wings purplish brown; tail of a very rich golden lustre both above and beneath; chin buff; under surface grey, washed with a golden hue, which is richest on the flanks; vent and thighs white; under tail-coverts grey, with a slight golden lustre; bill fleshy, red at the base of both mandibles and dark at the tip; feet brown: whole length 4.2 inches, wing 2.2, tail 1.2. *Female* similar.

Hab. S. Brazil, Paraguay, and N. Argentina.

Hans v. Berlepsch has lately shown that Azara described this species under the designation "*Picaflor cola de topacio*," and that it must consequently bear the name *ruficollis* of Vieillot, instead of *chrysur* of Lesson, by which it is more commonly known. It visits the more northern portion of the Argentine Republic, and was obtained in the vicinity of Buenos Ayres by Hudson at Conchitas, and by Durnford at Punta Lara. The British Museum contains specimens from both these localities.

239. HYLOCHARIS SAPPHIRINA (Gm.).

(RED-THROATED HUMMING-BIRD.)

Hylocharis sapphirina, *Scl. et Salv. Nomencl.* p. 93; *Durnford, Ibis*, 1877, p. 184 (Buenos Ayres); *Barrows, Auk*, 1884, p. 22 (Entrerios); *Elliot, Syn. Troch.* p. 236; *Gould, Mon. Troch.* v. pl. 342.

Description.—Head, upper surface and under wing-coverts, flanks and abdomen rich deep shining green; chin rufous chestnut; fore part of the neck and breast rich sapphirine blue, with violet reflexions; upper tail-coverts bronzy brown; tail-feathers chestnut, the two centre ones with a bronzy hue, the remainder edged with blackish brown; wings purple-brown; under tail-coverts light chestnut; bill fleshy red, except at the point, which is black; feet brown: whole length 3·5 inches, wing 2·2, tail 1·2. *Female:* upper surface green as in the male, crown approaching to brown, throat pale rufous; only a trace of the blue on the throat; under surface much paler, fading into white on the centre of the abdomen; tail-feathers dark brown, the lateral ones tipped with greyish, and the middle feathers glossed with deep bronze.

- 9 -

Hab. Southern Brazil, Paraguay, and Northern Argentina.

The Red-throated Humming-bird is abundant in the woods along the Plata river, and ranges, I believe, fifty or sixty miles south of Buenos Ayres city. Outside of the littoral woods it is very rarely met with. The only nest I have found was in my own garden, and was placed on a horizontal branch. The female continued sitting on the nest, which contained two eggs, even when I placed my hand almost touching it; the male bird in the mean time exhibiting the greatest anxiety, and hovering so near as almost to brush my face with its wings.

240. CHLOROSTILBON SPLENDIDUS (Vieill.).

(GLITTERING HUMMING-BIRD.)

Chlorostilbon splendidus, *Durnford, Ibis*, 1877 p. 184 (Buenos Ayres); *Salvin, Ibis*, 1880, p. 360 (Salta); *White, P. Z. S.* 1882, p. 616 (Catamarca); *Barrows, Auk*, 1884, p. 22 (Entrerios); *Elliot, Ibis*, 1877, p. 136; *id. Syn. Troch.* p. 244. **Ornismya aureoventris**, *d'Orb. et Lafr. Syn. Av.* ii. p. 28 (Corrientes). **Chlorostilbon aureoventris**, *Scl. et Salv. Nomencl.* p. 94. **Hylocharis bicolor**, *Burm. La-Plata Reise*, ii. p. 448 (Mendoza, Paraná, Tucuman). **Chlorostilbon phaethon**, *Gould, Mon. Troch.* v. pl. 354.

Description.—Head, all the upper surface, and wing-coverts rich golden bronze, but inclining to green on the upper tail-coverts, wings purplish brown; tail black, glossed with deep green; throat and breast glittering emerald-green, merging into glittering coppery bronze on the sides of the neck and abdomen; under tail-coverts green; bill fleshy red at the base, with a darker tip; feet blackish: whole length 3·5 inches, wing 2·2, tail 1·3. *Female* bronzy green above and grey beneath, washed with bronze on the flanks; wings purplish brown; tail bluish black, the two lateral feathers tipped with greyish white.

Hab. South Brazil, Paraguay, and Argentina.

The Glittering Humming-bird appears in the vicinity of Buenos Ayres in September, and later in the spring is found everywhere on the pampas where there are plantations, but it is never seen on the treeless plains. Its sudden appearance in considerable numbers in plantations on the pampas, where there are flowers to which it is partial, like those of the acacia-tree, and its just as sudden departure when the flowers have fallen, have led me to conclude that its migration extends much further south, probably into mid-Patagonia. Like most Humming-birds it is an exquisitely beautiful little creature, in its glittering green mantle; and in its aerial life and swift motions a miracle of energy. To those who have seen the Humming-bird in a state of nature all descriptions of its appearance and movements must seem idle. In the life-habits of the Trochilidæ there is a singular monotony; and the Glittering Humming-bird differs little in its customs from other species that have been described. It is extremely pugnacious; the males meet to fight in the air, and rapidly ascend, revolving round each other, until when at a considerable height they suddenly separate and dart off in opposite directions. Occasionally two or three are seen flashing by, pursuing each other, with such velocity that even the Swift's flight, which is said to cover four hundred miles an hour, seems slow in comparison. This species also possesses the habit of darting towards a person and hovering bee-like for some time close to his face. It also flies frequently into a house, at window or door, but does not, like birds of other kinds, become confused on such occasions, and is much too lively to allow its retreat to be cut off. It feeds a great deal on minute spiders, and is fond of exploring the surfaces of mud and brick walls, where it is seen deftly inserting its slender crimson bill into the small spider-holes in search of prey. The nest, like that of most humming-birds, is a small, beautifully-made structure, composed of a variety of materials held closely together with spiders' webs, and is placed on a branch, or in a fork, or else suspended from slender dropping vines or twigs. Sometimes the nest is suspended to the thatch overhanging the eaves of a cottage, for except where persecuted the bird is quite fearless of man's presence. The eggs are two, and white.

- 10 -

Besides the little creaking chirp uttered at short intervals while flying or hovering, this species has a set song, composed of five or six monotonous squeaking notes, uttered in rapid succession when the bird is perched.

Dr. Burmeister met with this Humming-bird at Mendoza, Paraná, and Tucuman, and says it is the commonest species in La Plata, and easily recognizable by its red bill.

Mr. Durnford also pronounces this species to be the commonest Humming-bird in the province of Buenos Ayres, and "abundant in the summer." It is not usual to meet with them in the winter; but Durnford saw a single specimen in a sheltered garden in the beginning of June. This Humming-bird feeds principally, he tells us, on the flowers of the Ceiba-tree, but not exclusively on honey, for the stomach of a specimen examined contained fragments of minute Coleoptera.

During his last journey Durnford obtained examples of this species near Salta; and White found it very abundant and breeding near Catamarca in the month of September.

According to Mr. Barrows the Glittering Humming-bird is also very common in Entrerios; he writes as follows:—"Very abundant at Concepcion in summer, arriving from the north early in September and departing again in April. Though found everywhere among flowers, they are particularly partial to open ground, flowery fields, gardens, &c., and in October it was not uncommon to have six or eight in sight at once."

Fam. XXI. CYPSELIDÆ, OR SWIFTS.

The cosmopolitan family of Swifts, as far as is yet known, represented by one species only in the Argentine Republic. This is a fine large form of wide distribution, which extends over most of Southern and Central America.

241. HEMIPROCNE ZONARIS (Shaw).

(RINGED SPINE-TAILED SWIFT.)

Hemiprocne zonaris, *Scl. et Salv. Nomencl.* p. 95. *Acanthylis collaris*, *Burm. La-Plata Reise*, ii. p. 449 (Mendoza).

Description.—Black, glossed with bronzy; a white collar round the neck, rather broader in front; tail spiny, slightly forked: whole length 8·5 inches, wing 7·5, tail 2·8. *Female* similar.

Hab. Central and South America down to Argentina.

Dr. Burmeister observed specimens of this fine large Spine-tailed Swift near the Sierra of Mendoza in December and the following month.

Fam. XXII. CAPRIMULGIDÆ, OR GOATSUCKERS.

Nearly fifty different species of the singular nocturnal birds commonly known as "Goatsuckers" are found in the Neotropical Region. They are most numerous within the tropics, where insect-life is more abundant, but also occur more sparingly in temperate latitudes. Six of them have been recorded as having been met with within the limits assigned to this work.

The Goatsuckers generally take their insect-prey on the wing late in the evening; but many of them often alight on the ground, and usually nest there or in hollow trees.

242. PODAGER NACUNDA (Vieill.).

(NACUNDA GOATSUCKER.)

Podager nacunda, *Scl. et Salv. Nomencl.* p. 95; *iid. P. Z. S.* 1868, p. 142 (Buenos Ayres); *Burm. La-Plata Reise*, ii. p. 449 (Paraná); *Barrows, Auk*, 1884, p. 24 (Entrerios, Bahía Blanca).

Description.—Above brown with dense black vermiculations and occasional blotches; wings black, with a broad white cross bar across the base of the primaries; secondaries and coverts like the back; tail above like the back, beneath grey with blackish cross bands; four outer tail-feathers broadly tipped with white: beneath, breast brown variegated with black, as above; chin fulvous; band across the throat and whole belly and crissum white; bill black; feet pale brown: whole length 11·0 inches, wing 9·5, tail 4·9. *Female* similar, but without the white ends to the tail-feathers.

Hab. South America.

The specific name of this Goatsucker is from the Guaraní word *Ñacundá*, which Azara tells us is the Indian nickname for any person with a very large mouth. In the Argentine country it has several names, being called *Dormilon* (Sleepy-head) or *Duerme-duerme* (Sleep-sleep), also *Gallina ciega* (blind hen). It is a large handsome bird, and differs from its congeners in being gregarious, and in never perching on trees or entering woods. It is an inhabitant of the open pampas. In Buenos Ayres, and also in Paraguay, according to Azara, it is a summer visitor, arriving at the end of September and leaving at the end of February. In the love season the male is sometimes heard uttering a song or call, with notes of a hollow mysterious character; at other times they are absolutely silent, except when disturbed in the daytime, and then each bird when taking flight emits the syllable *kuf* in a hollow voice. When flushed the bird rushes away with a wild zigzag flight, close to the ground, then suddenly drops like a stone, disappearing at the same moment from sight as effectively as if the earth had swallowed it up, so perfect is the protective resemblance in the colouring of the upper plumage to the ground. In the evening they begin to fly about earlier than most *Caprimulgi*, hawking after insects like swallows, skimming over the surface of the ground and water with a swift, irregular flight; possibly the habit of sitting in open places exposed to the full glare of the sun has made them somewhat less nocturnal than other species that seek the shelter of thick woods or herbage during the hours of light.

The Nacunda breeds in October, and makes no nest, but lays two eggs on a scraped place on the open plain. Mr. Dagleish says of the eggs:—"They are oval-shaped, and resemble much in appearance those of the Nightjar, except that the markings, which are similar in character to those of the latter, are of a reddish-brown or port-wine colour."

After the breeding-season they are sometimes found in flocks of forty or fifty individuals, and will spend months on the same spot, returning to it in equal numbers every year. One summer a flock of about two hundred individuals frequented a meadow near my house, and one day I observed them rise up very early in the evening and begin soaring about like a troop of swallows preparing to migrate. I watched them for upwards of an hour; but they did not scatter as on previous evenings to seek for food, and after a while they began to rise higher and higher, still keeping close together, until they disappeared from sight. Next morning I found that they had gone.

In Entrerios, Mr. Barrows tells us, this Goatsucker is an abundant summer resident, arriving early in September, and departing again in April. It is strictly crepuscular or nocturnal, never voluntarily taking wing by daylight. In November it lays a pair of spotted eggs in a hollow scooped in the soil of the open plain. These in shape and markings resemble eggs of the Nighthawk (*Chordeiles virginianus*) somewhat, but are of course much larger, and have a distinct reddish tinge. We found the birds not uncommon near Bahia Blanca, February 17, 1881, but elsewhere on the Pampas we did not observe them.

243. CHORDEILES VIRGINIANUS (Gm.).

(WHIP-POOR-WILL.)

Chordeiles virginianus, *Scl. et Salv. Nomencl.* p. 96; *Barrows, Auk*, 1884, p. 24 (Entrerios); *Berlepsch, J. f. O.* 1887, p. 120 (Paraguay).

Description.—Above black, varied and mottled with brown; wings black, with a broad white bar across the bases of the five outer primaries; tail black, with brown cross bands and a broad white subapical bar: beneath white, with dense blackish cross bands; breast blacker; broad throat-band white; bill black; feet pale brown: whole length 8·5 inches, wing 7·8, tail 4·0. *Female* similar, but throat-band tawny and no white band on the tail.

Hab. North and South America.

The well-known "Whip-poor-Will" of the U. S. appears to extend its winter-migration into Northern Argentina. Mr. Barrows has recorded the capture of two specimens of this species at Concepcion in Entrerios in January 1880 and December of the same year. Its occurrence in Paraguay is also known to us, and Natterer obtained examples of it in S.E. Brazil.

244. ANTROSTOMUS PARVULUS (Gould).

(LITTLE GOATSUCKER.)

Caprimulgus parvulus, *Gould, Zool. Voy. Beagle*, iii. p. 37. *Antrostomus parvulus*, *Scl. P. Z. S.* 1866, p. 138, pl. xiii.; *Scl. et Salv. Nomencl.* p. 96; *Burm. La-Plata Reise*, ii. p. 451 (Paraná); *Durnford, Ibis*, 1877, p. 184 (Buenos Ayres); *Barrows, Auk*, 1884, p. 24 (Entrerios); *Withington, Ibis*, 1888, p. 467 (Lomas de Zamora).

Description.—Above rufous mottled with blackish, crown black; tips of wing-coverts spotted with white; beneath fulvous with irregular black cross bands; primaries black, with white bars across the second, third, and fourth about half-way down; tail like the back, but tips of outer rectrices white: whole length 7·5 inches, wing 5·3, tail 4·0. *Female* similar, but without the white spots on the wings and tail.

Hab. Brazil and Argentina.

Resident, according to Mr. Durnford, in the province of Buenos Ayres, "but probably, from its shy and retiring disposition, considered rarer than it really is. Like our Nightjar (*Caprimulgus europæus*) it frequents open spots in sheltered coppices on banks under a sheltering hedge of thorns, and may generally be found in the same place from day to day, coming out about dusk in quest of moths and other insects."

Mr. Barrows tells us that this species is not uncommon in Entrerios in summer time, and "doubtless breeds." At dusk he frequently saw it near the margins of the woods and thickets, where it makes only short flights, soon settling on the ground.

Gould's original description of this species was based on a specimen obtained by Darwin near Santa Fé on the Paraná, which is now in the British Museum.

245. STENOPSIS BIFASCIATA (Gould).

(WING-BANDED GOATSUCKER.)

Stenopsis bifasciata, *Scl. et Salv. Nomencl.* p. 96; *iid. P. Z. S.* 1868, p. 142 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 37 (Chupat), et 1878, p. 396 (Centr. Patagonia). *Antrostomus longirostris*, *Burm. La-Plata Reise*, ii. p. 450 (Mendoza).

Description.—Above greyish brown variegated with black, crown black; light rufous collar at the back of the neck; wing-coverts with large light brown spots; primaries black, with a broad white bar across the five outer ones; tail black; lateral rectrices with a white bar near the base, and very broad white tips; beneath fulvous, with narrow blackish cross bands; throat-band white; crissum pale fulvous: whole length 10·0 inches, wing 6·0, tail 5·0. *Female* similar, but the white on the throat, wings, and tail replaced by fulvous and less extended.

Hab. Chili, Patagonia, and Argentina.

A single skin of this species was obtained at Conchitas by Hudson. Durnford also found it rather rare in Chupat and its vicinity, though resident and breeding in that district. "When flushed it never flies very far, but seeks the shelter of a small bush, squatting flat on the ground, and from its peculiar zigzag mode of flight it is difficult for the eye to follow it."

246. HYDROPSALIS FURCIFERA (Vieill.).

(FORK-TAILED GOATSUCKER.)

[PLATE XII.]



HYDROPSALIS FURCIFERA.

Hydropsalis furcifera, *Scl. et Salv. Nomencl.* p. 96; *Durnford, Ibis*, 1877, p. 185 (Buenos Ayres); *Barrows, Auk*, 1884, p. 24 (Entrerios). **Hydropsalis psalurus**, *Burm. La-Plata Reise*, ii. p. 450 (Paraná). **Hydropsalis torquata**, *Lee, Ibis*, 1873, p. 134 (Guauguaychú).

Description.—Above brown varied with black; a light rufous collar on the back of the neck; wing-coverts with numerous rounded white or fulvous spots; wings black, crossed beneath by pale rufous bands; outer primary edged with white; beneath paler, with a pale fulvous throat-collar; tail with the outer rectrix twice as long as the middle pair, black, edged with white; the next three pairs similar, but gradually diminishing in length; the middle pair like the back, and rather longer than the second pair: whole length 20·0 inches, wing 7·2, tail 15·5. *Female* similar, but tail short, black banded with fulvous, and without any white.

Hab. Paraguay and Argentina.

This remarkable Goatsucker was often observed by Durnford in the province of Buenos Ayres in spring and autumn. It lives on the ground, generally in damp situations, and where the grass is long and thick enough to afford some slight cover, and is generally observed in parties of four or five individuals. Its flight is noiseless, and performed by jerky erratic movements. In Entrerios Mr. Barrows tells us this species is a "rather common summer resident, arriving in August and leaving in May. While hunting capybaras and armadillos by moonlight he frequently had good opportunities for watching its movements. Its flight is nearly as irregular and as noiseless as that of a butterfly, while its beautiful tail is opened and shut in the same manner as with the Scissor-tailed Flycatcher. Alighting frequently on the ground or on stones or roots, it keeps up a continual but very soft clucking, which is the only note uttered. It was most often seen in open grassy or sandy spots in the woods, especially along the margins of the streams. By day it sits close on the ground, and if disturbed only flies a few yards, though it evidently sees well." Of its nesting-habits and eggs Mr. Barrows did not obtain any information.

The figure (Plate XII.) is taken from a specimen in Sclater's collection, which was obtained at Guauguaychú in Entrerios by Mr. Lee.

247. HELEOTHREPTUS ANOMALUS (GOULD).

(SHORT-WINGED GOATSUCKER.)

Amblypterus anomalus, Gould, *Icon. Av.* pl. 11. *Heleothreptus anomalus*, *Sci. et Salv. Nomencl.* p. 97; Durnford, *Ibis*, 1878, p. 62 (Buenos Ayres); Pelz. *Orn. Bras.* p. 12.

Description.—Greyish brown, irregularly dashed and spotted with black; long superciliaries and faint nuchal collar pale fawn-colour; wing-coverts and secondaries like the back, but with pale fawn-coloured spots; primaries black, with the basal portion reddish fawn-colour and tips white, the first six nearly equal in length, and curved inwards; tail fawn-colour, irregularly barred with blackish, two centre feathers like the back: beneath, throat and breast blackish brown, with slight fawn-coloured shaft-spots; abdomen pale fawn-colour, with irregular blackish cross bands; tarsi long, naked: whole length 7·0 inches, wing 5·2, tail 3·5. *Female* similar, but wings banded with rufous, and without the white tips.

Hab. South Brazil and Argentina.

Mr. Durnford obtained a single female of this rare and anomalous Caprimulgine form on the 31st of March, 1877, near Quilmes in the province of Buenos Ayres. It was flushed from a clump of thistles, and its stomach was full of insect-remains.

Order III. PICI.

- 17 -

Fam. XXIII. PICIDÆ, OR WOODPECKERS.

The Woodpeckers are distributed all over the world except Australia and the adjacent islands (up to Flores and Celebes) and Madagascar. They are very abundant in the Neotropical and Oriental Regions, where great forests predominate. From South and Central America about 120 species, mostly belonging to peculiar genera, have been recorded. In Argentina, as might have been expected from the vast extent of the pampas districts, Woodpeckers are not so plentiful as in the densely wooded countries of Amazonia and Colombia. But four Woodpeckers are met with in the riverain woods of Buenos Ayres, and a fifth, a curiously modified form, is peculiar to the Pampas, while eight others are known with more or less certainty from the northern provinces of the Republic.

248. CAMPEPHILUS BOIÆI (Wagl.).

(BOIE'S WOODPECKER.)

Campephilus boiæi, *Sci. et Salv. Nomencl.* p. 98; Durnford, *Ibis*, 1877, p. 185 (Buenos Ayres); Salvin, *Ibis*, 1880, p. 360 (Salta); White, *P. Z. S.* 1882, p. 617 (Catamarca, Salta); Barrows, *Auk*, 1884, p. 25 (Entrerios).

Description.—Above and beneath black; crested head and neck scarlet, ear-coverts black, with a white line below; upper back and interscapulum pale tawny white; bend of wing cinnamonous; inner webs of primaries pale chestnut; bill white, feet black: whole length 12·0 inches, wing 7·4, tail 4·2. *Female* similar, but head black, except the sides of the back of the head and the under portion of the crest, which are scarlet.

Hab. Bolivia and Northern Argentina.

Durnford found this fine Woodpecker "resident and common" to the north of Buenos Ayres, and on the banks of the Paraná. It is likewise met with in the more northern provinces of the Republic. White obtained specimens in Catamarca and Salta, and Durnford, during his last expedition, in the latter locality. Mr. Barrows speaks of its occurrence in Entrerios as follows:—

"A part of the last week in April 1880 was spent in a considerable tract of forest bordering a stream known as the 'Arroyo Gualeguaychú' at a point about twenty miles west of Concepcion. The wood borders the stream to a depth of a mile or more on each side and stretches up and down stream indefinitely. It had suffered comparatively little from the axe of the charcoal-burner, and many birds, not elsewhere seen, were met with here. Among these was the present beautiful Woodpecker, of which, however, only a single pair was observed, and the male alone taken. It is said to occur sparingly in all the large forests."

- 18 -

249. CAMPEPHILUS SCHULZI (Cab.).

(SCHULZ'S WOODPECKER.)

Phloeotomus schulzi, *Cab. Journ. f. Orn.* 1883, p. 102. *Dryocopus atriventris*, *Burm. La-Plata Reise*, ii. p. 444 (?).

Under this title Dr. Cabanis has shortly described a Woodpecker procured in Central Argentina by Herr Schulz. It is a diminutive form of *C. pileatus* of North America; and differs from that species in colour only in the following points:—The red crest is comparatively more developed and more pointed; the general colour is more intensely black; the white

markings of *C. pileatus* are present in *C. schulzi*, but the extent of the white on the underside of the wings and on the carpal joint is much less in the latter species. No dimensions are given.

Dr. Cabanis is of opinion that the bird from Mendoza described by Dr. Burmeister as the young of *C. boiæi* is referable to this new species.

250. DRYOCOPUS ERYTHROPS (Val.).

(RED-FACED WOODPECKER.)

Dryocopus erythropus, *Scl. et Salv. Nomencl.* p. 99; *White, P. Z. S.* 1882, p. 617 (Misiones).

Description.—Above black; crested head scarlet; broad line from front beneath the eye and down the neck white; malar patch scarlet; beneath, throat white, with black striations; breast black; belly white, transversely barred with black; under surface of wings white; bill plumbeous; feet black: whole length 13·0 inches, wing 7·5, tail 5·0. *Female* similar, but anterior half of head black, and no scarlet malar patch.

Hab. Brazil.

White states that he "observed" a few specimens of this Brazilian species in the dense forests of Misiones; but its occurrence so far south requires confirmation. A more likely species of this genus to occur there would be *D. lineatus*, which has been found in Paraguay (*cf.* Berlepsch, *J. f. O.* 1887, p. 20).

251. PICUS MIXTUS, Bodd.

(VARIED WOODPECKER.)

Picus mixtus, *Scl. et Salv. Nomencl.* p. 99; *Durnford, Ibis*, 1878, p. 62 (Buenos Ayres); *White, P. Z. S.* 1882, p. 617 (Catamarca); *Barrows, Auk*, 1884, p. 25 (Entrerios); *Withington, Ibis*, 1888, p. 467 (Lomas de Zamora).

Description.—Above black, with regular white cross bars; head black, with narrow yellowish shaft-spots; a large patch behind the ear on each side of the neck white; feathers of the nape slightly pointed with rosy red; beneath white, with longitudinal black stripes; under surface of wings white, with black cross bars: whole length 6·0 inches, wing 3·5, tail 2·2. *Female* similar, but head uniform black, and no red on the nape.

Hab. South Brazil and Argentina.

In the district of Buenos Ayres this little Woodpecker, the smallest of the Argentine species of the family, is usually called *Come-palo* (Wood-eater) in the vernacular. It has all the habits characteristic of the true Woodpeckers, inhabiting the woods and perching vertically on the trees, where it is heard vigorously striking the bark to dislodge the lurking insects with its sharp beak. When disturbed it flits away with a shrill querulous cry, passing to the nearest tree with a rapid undulating flight, and conceals itself by running round the bole to the opposite side. It excavates a straight hole in a rotten or decaying branch to breed in, and a common species of *Synallaxis* (*Leptasthenura ægithaloides*) frequently makes use of its forsaken breeding-holes. The entire plumage in both sexes is very dark, nearly black, densely and evenly marked with oblong white spots. The loose feathers of the crown are black tipped with scarlet, but in the female the one spot of bright colour is scarcely if at all perceptible.

White met with this Woodpecker near Cordova and in Catamarca, and Mr. Barrows in Entrerios, where, however, though resident, it does not appear to be common.

252. PICUS CACTORUM, d'Orb. et Lafr.

(CACTUS WOODPECKER.)

Picus cactorum, *Scl. et Salv. Nomencl.* p. 99; *Salvin, Ibis*, 1880, p. 361 (Salta); *White, P. Z. S.* 1882, p. 617 (Catamarca); *Barrows, Auk*, 1884, p. 25 (Guaqueguaychú). *Dendrobates cactorum*, *Burm. La-Plata Reise*, ii. p. 445 (Catamarca).

Description.—Above black; large blotch on the front and another on the nape dull white; small coronal spot scarlet; wings and tail black, with white cross bands; rump white, spotted with black; beneath buffy white, throat strongly tinged with orange; bill and feet black: whole length 6·8 inches, wing 4·1, tail 2·3. *Female* similar, but without the red spot on the crown.

Hab. Bolivia and Northern Argentina.

Prof. Burmeister met with three specimens of this Woodpecker at Capellán, south-west of Catamarca. White obtained examples of both sexes in Catamarca, and found it tolerably abundant in that province. "Three or four are usually observed together on a large cactus, but on being disturbed either take to another cactus or to the lofty branches of algaroba-trees."

In Entrerios Mr. Barrows tells us this species is more common than *P. mixtus*, but abundant only on the Guaqueguaychú, about twenty miles west of Concepcion.

253. CHLORONERPES AFFINIS (Wagl.).

(ALLIED WOODPECKER.)

Chloronerpes affinis, *Scl. et Salv. Nomencl.* p. 99; *White, P. Z. S.* 1882, p. 617 (Salta).

Description.—Above dull olive-green, with fine yellowish shaft-spots; wings and tail black, spotted with white; head black, bordered behind by a yellow nuchal collar, front of head with white shaft-spots, hinder half with scarlet ends to the feathers: beneath greyish white, with narrow black cross bands; under surface of wings white, barred with black: whole length 6·5 inches, wing 3·7, tail 2·4. *Female* similar, but without any red on the nape.

Hab. Brazil.

White identified a pair of birds obtained at Campo Santo, in Salta, as belonging to this species, but his determination requires confirmation, as there are several forms of this genus nearly alike which require accurate discrimination.

254. CHLORONERPES FRONTALIS, Cab.

(RED-FRONTED WOODPECKER.)

Chloronerpes (Campias) frontalis, *Cab. Journ. f. Orn.* 1883, p. 110.

Description.—Like *C. maculifrons* (Spix), but larger; red of head darker and broader, and without any golden-yellow border; beneath darker and more thickly cross-banded, with the bright bands narrower.

Hab. Tucuman.

This little-known species is one of Herr Fritz Schulz's discoveries in the mountain-forests of Tucuman.

255. CHLORONERPES AURULENTUS (Licht.).

(GOLD-BACKED WOODPECKER.)

Chloronerpes aurulentus, *Scl. et Salv. Nomencl.* p. 99; *White, P. Z. S.* 1882, p. 617 (Misiones).

Description.—Above olive-green, crown and malar stripe scarlet; sides of head slaty, with a yellowish line above and beneath; wings black, with transverse bars of rusty red; tail black: beneath greyish white, regularly barred across with black, throat yellow: whole length 8·0 inches, wing 4·8, tail 2·2. *Female* similar, but only the nape scarlet, rest of cap like the back.

Hab. Brazil.

The occurrence of this Woodpecker in Argentina also rests upon White's authority. But as it is found in Paraguay (*cf.* Berlepsch, *J. f. O.* 1887, p. 120), it is very likely to extend into Misiones. White states that it is common in San Javier, and usually "seen singly in dead high trees."

256. CHLORONERPES TUCUMANUS, Cab.

(TUCUMAN WOODPECKER.)

Chloronerpes tucumanus, *Cab. Journ. f. Orn.* 1883, p. 103.

Description.—Like *C. rubiginosus*, and principally distinguishable by its rather larger size and darker under surface, in which the yellowish hue is wanting.

Hab. Tucuman.

This is another discovery of Herr Fritz Schulz in Tucuman, which has been shortly described by Dr. Cabanis.

257. CHRYSOPTILUS CRISTATUS (Vieill.).

(RED-CRESTED WOODPECKER.)

Chrysoptilus melanochlorus, *Burm. La-Plata Reise*, ii. p. 445 (Paraná, Cordova, Tucuman).

Chrysoptilus chlorozostus, *Scl. et Salv. P. Z. S.* 1868, p. 143 (Conchitas). **Chrysoptilus cristatus**, *Scl. et Salv. Nomencl.* p. 100; *Gibson, Ibis*, 1880, p. 11 (Buenos Ayres); *White, P. Z. S.* 1882, p. 618 (Catamarca); *Barrows, Auk*, 1884, p. 25 (Entrerios); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora). **Colaptes leucofrenatus**, *Leybola, Leopoldina*, Heft viii. p. 53 (1873).

Description.—Above black, barred across with white; rump white, with black spots; top of head black, nape scarlet; sides of head white, bordered beneath by black, which carries a scarlet malar stripe: beneath white, on the neck yellowish, thickly covered with round black spots; throat white, striped with black; under surface of wings white, tinged with yellow; tail black, lateral rectrices slightly barred with yellowish; bill and feet black: whole length 10·5 inches, wing 5·8, tail 4·0. *Female* similar, but without the scarlet malar patch.

Hab. Paraguay and Argentina.

This Woodpecker ranges as far south as the vicinity of Buenos Ayres, and is not uncommon there in the few localities which possess wild forests. It is the handsomest of our Woodpeckers, having brighter tints than its congener of the plains, *Colaptes agricola*. Like that bird, though not to the same extent, it has diverged from the typical Picidæ in its habits, alighting sometimes on the ground to feed, and also frequently perching crosswise on branches of trees. It has a powerful, clear, abrupt, and oft-repeated note, and a rapid undulating flight.

The following interesting account of its breeding-habits appears in one of Mr. Gibson's papers:—"The excavation for the nest is begun as early as September; but the eggs are only laid during the first half of October. The hole is generally commenced where some branch has decayed away; but care is taken that the remainder of the tree is sound. It opens at a height of from six to nine feet from the ground, and is excavated to a depth of nearly a foot. Occasionally it is sufficiently wide to admit of one's hand, but such is not always the case. No preparation is made for the eggs beyond the usual lining of some chips of wood.

"The pair which frequented the garden excavated a hole in a paradise-tree, and bred there for two consecutive years. The tree stood near one of the walks, and on any one passing the sitting bird immediately showed its head at the aperture, like a jack-in-the-box, and then flew away. Last year this pair actually bred in one of the posts of the horse-corral, notwithstanding the noise and bustle incident to such a locality. While waiting there, at sunrise, for the herd of horses to be shut in I used often to knock at the post, in order to make the Woodpecker leave its nest, but the bird seemed indifferent to such a mild attack, and would even sit still while a hundred horses and mares rushed about the corral or hurled themselves against the sides of it. In another case I had worked with hammer and chisel for half-an-hour, cutting a hole on a level with the bottom of a nest, when the female first demonstrated her presence by flying out almost into my face. This last nest contained four (considerably incubated) eggs, which I took. Happening to pass the spot a fortnight after, I inspected the hole and was surprised to find that it had been deepened and other five eggs laid, while the entrance I had cut was the one now used by the birds. The nest was again resorted to the following year and a brood hatched out, but since then a pair of Wrens have occupied the place to the exclusion of the rightful owners."

The eggs are white, four or five in number, pear-shaped, and with polished shells.

White obtained specimens of this Woodpecker in Catamarca, and Mr. Barrows found it resident in Entrerios. The latter tells us it is "abundant in the woods everywhere, and conspicuous for its activity, bright colours, and large size."

258. LEUCONERPES CANDIDUS (Otto).

(WHITE-BELLIED WOODPECKER.)

Leuconerpes candidus, *Burm. La-Plata Reise*, ii. p. 445 (Paraná, Cordova); *Sci. et Salv. Nomencl.* p. 100; *Salvin, Ibis*, 1880, p. 361 (Salta); *White, P. Z. S.* 1882, p. 618 (Misiones); *Barrows, Auk*, 1884, p. 25 (Entrerios).

Description.—Above white; wings and upper back, with a line on each side running up to the eye, black; nape tinged with yellow; beneath white; tail black, with white cross bands: whole length 11·0 inches, wing 5·5, tail 4·5. *Female* similar, but without the yellow on the nape.

Hab. S. Brazil, Bolivia, Paraguay, and Northern Argentina.

Prof. Burmeister met with this peculiarly coloured Woodpecker near Paraná, and Mr. Barrows found it resident in Entrerios, though not very abundant.

White speaks of this species as follows:—"These noisy birds, abundant in various parts of Misiones as well as in the rest of the north of the Republic, go about in flocks of eight or ten, and settle on the same tree, which they proceed to ascend very comically in a spiral or corkscrew fashion, each head touching the preceding tail. They are not seen in dense forests, but only out in the open, on some old, usually dead, tree, and I think I observed them as far south as the sierras of Cordoba."

259. COLAPTES LONGIROSTRIS, Cab.

(LONG-BILLED WOODPECKER.)

Colaptes longirostris, *Cabanis, Journ. f. Orn.* 1883, p. 97.

Description.—Similar to *C. rupicola*, d'Orb., but with the bill much longer.

Hab. Tucuman.

This is a southern form of the Brazilian *C. rupicola*, which has been recently described by Dr. Cabanis. Herr Schulz obtained a single male example of this species in Tucuman. Like *C. rupicola* it has red moustaches, but no red nape-band, whereas the more northern *C. pura* of Peru shows a red nape-band in both sexes.

260. COLAPTES AGRICOLA (Malh.).

(PAMPAS WOODPECKER.)

Colaptes agricola, *Scl. et Salv. Nomencl.* p. 101; *Hudson, P. Z. S.* 1872, p. 549 (Rio Negro); *Barrows, Auk*, 1884, p. 25 (Entrerios); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora).

Colaptes australis, *Burm. La-Plata Reise*, ii. p. 445 (Paraná). **Colaptes campestris**, *White, P. Z. S.* 1882, p. 618 (Misiones).

Description.—Above greyish white, transversely barred with blackish; wings black, with golden-yellow shafts, and white bars on the outer webs; rump white, with smaller black cross bars; crested head black; sides of head and whole neck in front yellow; malar stripe red; abdomen white, with regular transverse black bars; under wing-coverts yellowish white; bill and feet black: whole length 13.0 inches, wing 6.8, tail 4.9. *Female* similar, but no red malar stripe.

Hab. Argentina and Patagonia.

The species commonly called *Carpintero* in the Argentine country, and ranging south to Patagonia, is one of a group of the Picidæ of South America which diverge considerably in habits from the typical Woodpeckers. On trees they usually perch horizontally and crosswise, like ordinary birds, and only occasionally cling vertically to trunks of trees, using the tail as a support. They also seek their food more on the ground than on trees, in some cases not at all on trees, and they also breed oftener in holes in banks or cliffs than in the trunks of trees. As Darwin remarks in 'The Origin of Species,' in his chapter on Instinct, these birds have, to some slight extent, been modified structurally in accordance with their less arboreal habits, the beak being weaker, the rectrices less stiff, and the legs longer than in other Woodpeckers. In South Brazil and Bolivia the *Colaptes campestris* represents this group, in Chili *C. pitius*, and in the Argentine country *C. agricola*.

Azara's description, under the heading *El Campestre*, probably refers to the Brazilian species, but agrees so well in every particular with the pampas Woodpecker that I cannot do better than to quote it in full.

"Though this name (*Campestre*) seems inappropriate for any Woodpecker, no other better describes the present species, since it never enters forests, nor climbs on trunks to seek for insects under the bark, but finds its aliment on the open plain, running with ease on the ground, for its legs are longer than in the others. There it forcibly strikes its beak into the matted turf, where worms or insects lie concealed, and when the ant-hills are moist it breaks into them to feed on the ants or their larvæ. It also perches on trees, large or small, on the trunks or branches, whether horizontal or upright, sometimes in a clinging position and sometimes crosswise in the manner common to birds. Its voice is powerful, and its cry uttered frequently both when flying and perching. It goes with its mate or family, and is the most common species in all these countries. It lays two to four eggs, with white and highly polished shells, and breeds in holes which it excavates in old walls of mud or of unbaked brick, also in the banks of streams; and the eggs are laid on the bare floor without any lining."

- 25 -

In Patagonia, where I have found this bird breeding in the cliffs of the Rio Negro, its habits are precisely as Azara says; but on the pampas of Buenos Ayres, where the conditions are different, there being no cliffs or old mud-walls suitable for breeding-places, the bird resorts to the big solitary ombú tree (*Pircunia dioica*), which has a very soft wood, and excavates a hole 7 to 9 inches deep, inclining upwards near the end, and terminating in a round chamber.

This reversion to an ancestral habit, which (considering the modified structure of the bird) must have been lost at a very remote period in its history, is exceedingly curious. Formerly this Woodpecker was quite common on the pampas. I remember that when I was a small boy quite a colony lived in the ombú trees growing about my home; now it is nearly extinct, and one may spend years on the plains without meeting with a single example.

Mr. Barrows speaks as follows of this species:—"Abundant and breeding at all points visited. At Concepcion, where it is resident, it is by far the commonest Woodpecker. The ordinary note very much resembles the reiterated alarm-note of the Greater Yellow-legs (*Totanus melanoleucus*), but so loud as to be almost painful when close at hand, and easily heard a mile or more away. They spend much time on the ground, and I often found the bills of those shot quite muddy. They are very tough and hard to kill, and a wounded one shows about as many sharp points as a Hawk. A nest found near Concepcion, November 6, 1880, was in the hollow trunk of a tree, the entrance being through an enlarged crack at a height of some three feet from the ground. The five white eggs were laid on the rubbish at the bottom of the cavity, perhaps a foot above the ground. In the treeless region about the Sierra de la Ventana we saw this bird about holes on the banks of the streams, where it doubtless had nests."

Order IV. COCCYGES.

- 26 -

The Kingfishers, which form the subject of an excellent illustrated Monograph by Mr. Sharpe¹, are but feebly represented in the New World. Out of the many varied generic forms which make up the family, only a single genus, with about eight species, is met with in the whole of the American Continent. This genus (*Ceryle*) is of wide diffusion, having also representatives in Africa and Asia. There is thus a great contrast with the Old World, where at least 120 species of Kingfishers are met with.

1 A Monograph of the Alcedinidæ, or Family of Kingfishers. By R. B. Sharpe. London, 1868-71.

261. CERYLE TORQUATA (Linn.).

(RINGED KINGFISHER.)

Ceryle torquata, *Scl. et Salv. Nomencl.* p. 103; *Barrows, Auk* 1884, p. 26 (Entrerios); *Sharpe, Mon. Alc.* pl. xxii. p. 73; *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora). **Megaceryle torquata**, *Burm. La-Plata Reise*, ii. p. 446 (Paraná).

Description.—Above bluish grey, with narrow black shaft-stripes and some small round spots of white; wings black, with a large portion of the inner webs towards the base white, coverts like the back; tail black, crossed by white bars, central rectrices edged with bluish grey; beneath chestnut-red; throat, centre of belly, and crissum white: whole length 15·0 inches, wings 7·7, tail 5·5. *Female* similar, but with a broad bluish-grey pectoral band.

Hab. Central and South America.

This beautiful bird, the largest of the American Kingfishers, is found throughout the greater portion of South and Central America. In the Argentine Republic it is somewhat rare, though widely distributed, and ranging as far south as Buenos Ayres. Dr. Döring mentions *Ceryle torquata* amongst the species collected by him on the Rio Negro, in Patagonia; but it is possible that the closely allied *C. stellata* is meant, as this form represents the larger and more brightly-coloured bird in the Magellanic district.

Notwithstanding its wide distribution and great beauty, little has been recorded of the habits of this species. In Amazonia, Bartlett says:—"It breeds in company with *Ceryle amazona*. The nest, however, is placed very much deeper in the bank than in the case of the last-named bird, the hole being from 4 to 6 feet in depth, with a chamber at the end sufficiently large for the young birds when nearly full-grown."

262. CERYLE AMAZONA (Lath.).

(AMAZONIAN KINGFISHER.)

Ceryle amazona, *Scl. et Salv. Nomencl.* p. 103; *White, P. Z. S.* 1883, p. 40 (Cordova); *Barrows, Auk*, 1884, p. 26 (Entrerios); *Sharpe, Mon. Alc.* pl. xxiv. p. 83. **Chloroceryle amazona**, *Burm. La-Plata Reise*, ii. p. 446 (Paraná).

Description.—Above dark green, with a white neck-band: beneath white, with a broad chestnut pectoral band; flanks striped with green; under surface of wings white; tail beneath slaty, with white bars on the inner webs: whole length 11·0 inches, wing 5·3, tail 3·4. *Female* without the red pectoral band, which is incompletely replaced by dark green.

Hab. South America.

This Kingfisher was found by White at Cosquin, where it is usually met with along the *acequias*, or canals made for the purpose of irrigating the cultivated lands. These canals are in places bordered with brushwood and trees, and are tolerably deep, with a swiftly flowing current, and abound in small fishes, so that this bird seems to prefer them as hunting-grounds to the rocky river-bed.

In Entrerios Mr. Barrows tells us this Kingfisher is not uncommon along the Lower Uruguay, and sometimes ascends the smaller streams a short distance. It is much more easily approached than *C. torquata*.

C. amazona is also found as far south as Buenos Ayres, where I have always seen them singly or in pairs. Its usual cry is exceedingly loud, hard, and abrupt, and so rapidly reiterated as to give it a sound resembling that of a policeman's rattle. But this is not its only language, and I was greatly surprised one day at hearing one *warbling* long clear notes, somewhat flute-like in quality, as it flew from tree to tree along the borders of a stream. It seems very strange that there should be a melodious Kingfisher; but Mr. Barrows also heard the allied *Ceryle americana* sing, much to his surprise. My belief is, that the birds of this group possess a singing faculty, but very rarely exercise it; with *C. americana* I am well acquainted, yet I never heard it utter any note except its hard, rattling cry, resembling that of *C. amazona*, but less powerful.

263. CERYLE AMERICANA (Gm.).

(LITTLE KINGFISHER.)

Ceryle americana, *Scl. et Salv. Nomencl.* p. 103; *Durnford, Ibis*, 1877, p. 185 (Buenos Ayres); *Salvin, Ibis*, 1880, p. 361 (Salta); *Barrows, Auk*, 1884, p. 26 (Entrerios); *Sharpe, Mon. Alc.* pl. xxvi. p. 89. **Chloroceryle americana**, *Burm. La-Plata Reise*, ii. p. 447 (Paraná).

Description.—Above bronzy green; line along sides of head and neck-collar white; wings spotted with white; tail above green, beneath blackish, barred with white on the inner webs; throat white; breast chestnut-red; belly and crissum white, flanks with bronzy-green spots; bill and feet black: whole length 7·0 inches, wing 3·1, tail 2·5. *Female* similar, but no chestnut on the breast, which is crossed by a bronzy-green band.

- 28 -

Hab. South America.

This is the smallest of our three Kingfishers, and nearly resembles *C. amazona* in plumage. Durnford found it "not uncommon" about the creeks and streams at the mouth of the Paraná, and also obtained specimens in the north of the Republic near Salta, during his last journey. Prof. Burmeister met with it at Paraná and Tucuman.

Mr. Barrows gives us the following notes on this Kingfisher:—

"Resident through the year at Concepcion, but especially abundant in winter, when it haunts the main river, the island-shores, and all the streams, big and little. It is not in the least shy, and one once perched in some willows directly over my boat and not 10 feet away, while he swallowed a tiny fish he had just captured; after which he twitted such a hearty little song that I really felt as if his proper place must be among the *Oscines*, in spite of all anatomical defects. On the Pampas, we found this a rather common bird on the small streams, and its presence on some streams whose waters are entirely absorbed by the desert before they can reach either sea or lake, first called my attention to the presence, even in these streams, of numbers of a small fish which is found in many of the pools as well all over the Pampas. Although both this and the preceding species must nest about Concepcion, I did not succeed of learning anything of the nest or eggs."

Fam. XXV. TROGONIDÆ, OR TROGONS.

The Trogons, a family peculiar among all zygodactyle birds for having the inner toe instead of the outer toe reversed in position, are found in the Old World as well as in the New. But they are much more abundant in the Tropics of America, where they number some thirty species, and attain an astonishing development of ornamental plumage in the celebrated Quézal (*Pharomacrus*) of Guatemala. In Argentina two stray species only have, as yet, been recorded as met with in the northern provinces.

The Trogons are purely arboreal in habits, and frequent the larger trees of the denser forests, feeding mainly on insects.

264. TROGON VARIEGATUS, Spix.

(PURPLE-BREASTED TROGON.)

Trogon variegatus, *Scl. et Salv. Nomencl.* p. 104; *White, P. Z. S.* 1882, p. 618 (Salta); *Gould, Mon. Trog.* ed. 2, pl. xix.

Description.—Above shining bronzy green; head purplish; wings blackish; coverts grey, finely vermiculated with black; tail—two middle feathers like the back, but tipped with black, next two pairs black, edged with green; three outer pairs white with broad black bars and white tips: beneath, breast dark purple, separated from the rosy-red abdomen by a narrow white band: whole length 9·0 inches, wing 5·0, tail 5·0. *Female*: above dark grey; wing-coverts and secondaries with transverse bars of black and white; tail, blackish, two middle feathers grey tipped with black, three outer pairs broadly edged externally and tipped with white: beneath, breast dark grey, separated from the rosy-red abdomen by a white band.

Hab. Brazil and N. Argentina.

White obtained examples of this Trogon at Campo Colorado, near Oran, where it frequents the topmost branches of the loftiest forest-trees, and is very difficult to discover. It is said to have a peculiar mournful cry.

- 29 -

265. TROGON SURUCURA, Vieill.

(AZARA'S TROGON.)

Trogon surucura, *Scl. et Salv. Nomencl.* p. 104; *White, P. Z. S.* 1882, p. 619 (Misiones); *Gould, Mon. Trog.* ed. 2, pl. xxv.

Description.—Above bronzy green, head purplish; wings black, coverts and outer secondaries grey, finely vermiculated with black; tail—two middle feathers like the back, but tipped with black; others black, but three outer pairs with most of the outer webs and broad tips white: beneath, breast purple, abdomen red: whole length 11·0 inches, wing 5·3, tail 5·7. *Female*:

grey; belly rosy red; wing-coverts and outer secondaries black, with white bars.

Hab. S. Brazil, Paraguay, and N. E. Argentina.

This is the only *Trogon* included by Azara in his Birds of Paraguay. He calls it "Surucuá," and states that it is confined to the larger forests of that country.

White obtained a single example of this species in the forests of Misiones, near Concepcion, in June 1881.

Fam. XXVI. BUCCONIDÆ, OR PUFF-BIRDS.

- 30 -

The Bucconidæ, or Puff-birds, are entirely restricted to the Neotropical Region, and are most numerous in the great forests of Amazonia and Colombia, where most of the 43 known species have been met with. These birds seem to pass their lives sitting upon the topmost or outermost branches of the larger trees, looking out for insects, which are captured flying and constitute their only food. Southwards of the great forest-districts of South America, Puff-birds become very scarce. One species only is as yet known to occur in Paraguay, and some uncertainty prevails as to the single member of this family stated to be found near Tucuman.

266. BUCCO MACULATUS (Gm.).

(SPOTTED PUFF-BIRD.)

Bucco maculatus, *Scl. Jacamars and Puff-birds*, p. 99, pl. xxxii.; *Scl. et Salv. Nomencl.* p. 106.

Capito maculatus, *Burm. La-Plata Reise*, ii. p. 446.

Description.—Above blackish, spotted with brown; lores, superciliaries, and neck-collar pale cinnamomeous white; beneath white, fore neck clear reddish cinnamon; breast and belly covered with round black spots; chin and middle of belly whitish; tail black, with transverse bars of pale brown; under wing-coverts and under surface of wings white; bill red, with the culmen and base blackish; feet plumbeous: whole length 8·0 inches, wing 3·2, tail 2·8. *Female* similar.

Hab. S.E. Brazil.

Dr. Burmeister records the occurrence of this species of Puff-bird near Tucuman, and it must therefore be placed in our list on his authority. But it is possible that the species which he met with may have been the nearly allied *B. striatipectus* of the Bolivian frontier of Brazil, which is more likely to extend into Northern Argentina than the true *B. maculatus*. *B. striatipectus* (figured and described in Sclater's 'Monograph of the Jacamars and Puff-birds,' pl. xxxiii. p. 101) is very similar to *B. maculatus*, but has the spots on the belly elongated into long striations.

It is again possible that the *Bucco* of Tucuman may be the Paraguayan *B. chacuru* of Vieillot, founded upon the "*Chacuru*" of Azara, which is another species not remotely allied to *B. maculatus*.

Fam. XXVII. CUCULIDÆ, OR CUCKOOS.

- 31 -

The Cuckoos form an extensive and rather varied family of zygodactyle birds with a somewhat wide distribution, being found in all parts of the world except in the extreme north, where their insect-food would not be abundantly met with. The true *Cuculi*, so remarkable for their parasitic habits, are not found in the New World, but several genera of arboreal Cuckoos (*Coccyzus*, *Piaya*, &c.), and others of terrestrial habits (*Crotophaga*, *Geococcyx*, and *Saurothera*), are met with, chiefly in the Neotropical Region, and number altogether some thirty species. Of these, eight are known to occur within the confines of the Argentine Republic.

267. CROTOPHAGA ANI, Linn.

(BLACK ANI.)

Crotophaga ani, *Scl. et Salv. Nomencl.* p. 107; *White, P. Z. S.* 1882, p. 619 (Salta).

Description.—Black, glossed with bronzy and purplish; bill and feet black; bill with the culmen much elevated, compressed and cultrate: whole length 13·0 inches, wing 5·5, tail 7·0. *Female* similar.

Hab. Veragua and South America down to Northern Argentina.

This strange Cuckoo, with the plumage and some of the habits of a Crow, is of a nearly uniform black, glossed with bronze, dark green, and purple. Its most peculiar feature is the beak, which is greater in depth than in length, and resembles an immense Roman nose, occupying the whole face, and with the bridge bulging up above the top of the head. The Ani

is found only in the northern portion of the Argentine territory. According to Azara it is very common in Paraguay, and goes in flocks, associating with the Guira Cuckoo, which it resembles in its manner of flight, in being gregarious, in feeding on the ground, and in coming a great deal about houses; in all which things these two species differ widely from most Cuckoos. He also says that it has a loud disagreeable voice, follows the cattle about in the pastures like the Cow-bird, and builds a large nest of sticks lined with leaves, in which as many as twenty or thirty eggs are frequently deposited, several females laying together in one nest. His account of these strange and disorderly breeding-habits has been confirmed by independent observers in other parts of the continent. The eggs are oval and outwardly white, being covered with a soft white cretaceous deposit; but this can be easily scraped off, and under it is found a smooth hard shell of a clear beautiful blue colour.

268. GUIRA PIRIRIGUA (Vieill.).

(GUIRA CUCKOO.)

Guira piririgua, *Sci. et Salv. Nomencl.* p. 107; *Durnford, Ibis*, 1877, p. 185 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 8 (Buenos Ayres); *White, P. Z. S.* 1882, p. 619 (Buenos Ayres); *Barrows, Auk*, 1884, p. 26 (Entrerios); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora). *Ptiloleptis guira*, *Burm. La-Plata Reise*, ii. p. 443.

Description.—Above dark brown, with white shaft-stripes; head brown; wings reddish brown, passing into blackish brown on the outer secondaries; rump white; tail white, at the base ochraceous, crossed by a very broad black band, except the two central feathers, which are uniform brown: beneath sordid white, throat and upper breast with long linear black shaft-stripes; bill and feet yellow: whole length 15·0 inches, wing 7·0, tail 8·0. *Female* similar.

Hab. Brazil, Paraguay, and Argentina.

"*Piririgua*," the specific term adopted by naturalists for this bird, is, according to Azara, the vernacular name of the species in Paraguay. He says that in that country it is abundant, but scarce in the Plata district. No doubt it has greatly increased and extended its range southwards during the hundred years which have elapsed since his time, as it is now very common in Buenos Ayres, where its vernacular name is *Urraca* (Magpie). In the last-named country it is not yet quite in harmony with its environment. Everywhere its habit is to feed exclusively on the ground, in spite of possessing feet formed for climbing; but its very scanty plumage, slow laborious flight, and long square tail, so unsuitable in cold boisterous weather, show that the species is a still unmodified intruder from the region of perpetual summer many degrees nearer to the equator.

The Guira Cuckoo is about sixteen inches long, has red eyes and blue feet, and an orange-red beak. The crown of the head is deep rufous, and the loose hair-like feathers are lengthened into a pointed crest. The back and rump are white, the wings and other upper parts very dark fuscous, marked with white and pale brown. Under surface dull white, with hair-like black marks on the throat and breast. The tail is square, 9 to 10 inches long; the two middle feathers dark brown, the others three-coloured—yellow at the base, the middle portion dark glossy green, the ends white; and when the bird is flying the tail, spread out like a fan, forms a conspicuous and beautiful object.

During the inclement winter of Buenos Ayres the Guira Cuckoo is a miserable bird, and appears to suffer more than any other creature from cold. In the evening the flock, usually composed of from a dozen to twenty individuals, gathers on the thick horizontal branch of a tree sheltered from the wind, the birds crowding close together for warmth, and some of them roosting perched on the backs of their fellows. I have frequently seen them roosting three deep, one or two birds at the top to crown the pyramid; but with all their huddling together a severe frost is sure to prove fatal to one or more birds in the flock; and sometimes several birds that have dropped from the branch stiff with cold are found under the trees in the morning. If the morning is fair the flock betakes itself to some large tree, on which the sun shines, to settle on the outermost twigs on the northern side, each bird with its wings drooping, and its back turned towards the sun. In this spiritless attitude they spend an hour or two warming their blood and drying the dew from their scanty dress. During the day they bask much in the sun, and towards evening may be again seen on the sunny side of a hedge or tree warming their backs in the last rays. It is owing, no doubt, to fecundity, and to an abundance of food that the Guira Cuckoo is able to maintain its existence so far south in spite of its terrible enemy the cold.

With the return of warm weather this species becomes active, noisy, and the gayest of birds; the flock constantly wanders about from place to place, the birds flying in a scattered desultory manner one behind the other, and incessantly uttering while on the wing a long complaining cry. At intervals during the day they also utter a kind of song, composed of a series of long modulated whistling notes, two-syllabled, the first powerful and vehement, and becoming at each repetition lower and shorter, then ending in a succession of hoarse internal sounds like the stertorous breathing of a sleeping man. When approached all the birds break out into a chorus of alarm, with notes so annoyingly loud and sustained, that the intruder, be it man or beast, is generally glad to hurry out of ear-shot. As the breeding-season approaches they are heard, probably the males, to utter a variety of soft low chattering notes, sounding sometimes like a person laughing and crying together: the flock then breaks up into pairs, the birds becoming silent and very circumspect in their

movements. The nest is usually built in a thorn-tree, of rather large sticks, a rough large structure, the inside often lined with green leaves plucked from the trees. The eggs are large for the bird, and usually six or seven in number; but the number varies greatly, and I have known one bird lay as many as fourteen. They are elliptical in form and beautiful beyond comparison, being of an exquisite turquoise-blue, the whole shell roughly spattered with white. The white spots are composed of a soft calcareous substance, apparently deposited on the surface of the shell after its complete formation: they are raised, and look like snow-flakes, and when the egg is fresh laid may be easily washed off with cold water, and are so extremely delicate that their purity is lost on the egg being taken into the hand. The young birds hatched from these lovely eggs are proverbial for their ugliness, *Pichon de Urraca* being a term of contempt commonly applied to a person remarkable for want of comeliness. They are as unclean as they are ugly, so that the nest, usually containing six or seven young, is pleasant neither to sight nor smell. There is something ludicrous in the notes of these young birds, resembling, as they do, the shrill half-hysterical laughter of a female exhausted by over-indulgence in mirth. One summer there was a large brood in a tree close to my home, and every time we heard the parent bird hastening to her nest with food in her beak, and uttering her plaintive cries, we used to run to the door to hear them. As soon as the old bird reached the nest they would burst forth into such wild extravagant peals and continue them so long, that we could not but think it a rare amusement to listen to them.

- 34 -

According to Azara the Guira Cuckoo in Paraguay has very friendly relations with the Ani (*Crotophaga ani*), the birds consorting together in one flock, and even laying their eggs in one nest; and he affirms that he has seen nests containing eggs of both species. These nests were probably brought to him by his Indian collectors, who were in the habit of deceiving him, and it is more than probable that in this matter they were practising on his credulity; though it is certain that birds of different species do sometimes lay in one nest, as I have found—the Common Teal and the Tinamou for instance. I also doubt very much that the bird is ever polygamous, as Azara suspected; but it frequently wastes eggs, and its procreant habits are sometimes very irregular and confusing, as the following case will show:—

A flock numbering about sixteen individuals passed the winter in the trees about my home, and in spring scattered about the plantation, screaming and chattering in their usual manner when about to breed. I watched them, and found that after a time the flock broke up into small parties of three or four, and not into couples, and I could not detect them building. At length I discovered three broken eggs on the ground, and on examining the tree overhead found an incipient nest composed of about a dozen sticks laid crossways and out of which the eggs had been dropped. This was in October, and for a long time no other attempt at a nest was made; but wasted eggs were dropped in abundance on the ground, and I continued finding them for about four months. Early in January another incipient nest was found, and on the ground beneath it six broken eggs. At the end of that month two large nests were made, each nest by one pair of birds, and in the two fourteen or fifteen young birds were reared.

When taken young the Guira Cuckoos become very tame, and make bold, noisy, mischievous pets, fond of climbing over and tugging at the clothes, buttons, and hair of their master or mistress. They appear to be more intelligent than most birds, and in a domestic state resemble the Magpie. I knew one tame that would carry off and jealously conceal bits of bright-coloured ribbon, thread, or cloth. In a wild state their food consists largely of insects, which they sometimes pursue running and flying along the ground. They also prey on mice and small reptiles, and carry off the fledglings from the nests of Sparrows and other small birds, and in spring they are frequently seen following the plough to pick up worms.

- 35 -

269. DIPLOPTERUS NÆVIUS (Gm.).

(BROWN CUCKOO.)

Diplopterus nævius, *Sci. et Salv. Nomencl.* p. 107. *Diplopterus galeritus*, *Barrows, Auk*, 1884, p. 27 (Entrerios).

Description.—Above ashy brown, with large black shaft-spots; head rufous, striated with black; wings blackish, edged with brown; tail similar, but with slight white tips to the feathers, and the upper tail-coverts much elongated: beneath dirty white: whole length 11·5 inches, wing 4·5, tail 5·5. *Female* similar.

Hab. Mexico, and Central and South America down to Argentina.

The Brown Cuckoo, called "Crispin," is found throughout the hot portion of South America, and in different districts varies considerably in size and colouring. It is about 12 inches long, the beak much curved; the prevailing colour of the upper parts is light brown, the loose feathers on the head, which form a crest, deep rufous. The upper tail-coverts are long loose feathers of very unequal length, the longest reaching nearly to the end of the tail. The under surface is dirty white, or dashed with grey.

Azara says it is called *Chochi* in Paraguay, and has a clear sorrowful note of two syllables, which it repeats at short intervals during the day, and also at night during the love-season. It is solitary, scarce, and excessively shy, escaping on the opposite side of the tree when approached, and when seen having the head and crest raised in an attitude of alarm. In the northern part of the Argentine country it is called *Crispin*, from its note which clearly

pronounces that name. Mr. Barrows found it common at Concepcion on the Uruguay river, and has written the following notes about it:—

“Several were taken in open bushy places, and many others were heard. It is a plain but attractive Cuckoo with a few-feathered crest, and long soft flowing upper tail-coverts. The note is very clear and penetrating, sounding much like the word ‘crispin’ slowly uttered, and with the accent on the last syllable. The birds are very shy, and I followed one for nearly an hour before I saw it at all, and nearly twice that time before any chance of a shot was offered. There is some peculiarity in the note which makes it impossible to tell whether the bird is in front of or behind you—even when the note itself is distinctly heard. I know nothing of nest or eggs.”

From personal observation I can say nothing about this species, as I never visited the district where it is found; but with the fame of the Crispin I have always been familiar, for concerning this Cuckoo the Argentine peasants have a very pretty legend. It is told that two children of a woodcutter, who lived in a lonely spot on the Uruguay, lost themselves in the woods—a little boy named Crispin and his sister. They subsisted on wild fruit, wandering from place to place, and slept at night on a bed of dry grass and leaves. One morning the little girl awoke to discover that her brother had disappeared from her side. She sprung up and ran through the woods to seek for him, but never found him; but day after day continued wandering in the thickets calling “*Crispin, Crispin,*” until at length she was changed into a little bird, which still flies through the woods on its never-ending quest, following every stranger that enters them, calling after him “*Crispin, Crispin,*” if by chance it should be her lost brother.

270. PIAYA CAYANA (Linn.).

(CHESTNUT CUCKOO.)

Piaya cayana, *Scl. et Salv. Nomencl.* p. 108; *Salvin, Ibis*, 1880, p. 361 (Tucuman); *White, P. Z. S.* 1882, p. 619 (Misiones).

Description.—Above deep chestnut-red; beneath pale grey, passing into blackish on the crissum; throat and neck pale chestnut-brown; tail-feathers beneath brown, more or less blackish, and, except the middle pair which are like the back, broadly tipped with white: whole length 16·0 inches, wing 5·5, tail 10·5. *Female* similar.

Hab. Central and South America.

This is a widely-spread form of Cuckoo in Central and South America, and reaches the northern territories of the Argentine Republic, having been obtained by Durnford near Tucuman, and by White in Misiones. The whole bird is about 18 inches long, and the tail very long in proportion, about 11 inches. The entire plumage, except the breast and belly, which are grey, is chestnut colour. The beak is very strong, and yellowish green in colour; the irides, ruby-red, the eyelids scarlet.

In Colombia this Cuckoo is said to be called *Pajaro ardilla* (Squirrel-bird), from its chestnut tint. It seems to feed chiefly, if not altogether, on the ground, and when perched always appears awkward and ill-at-ease. On a branch it sits motionless, until approached, and then creeps away through the leaves and escapes on the opposite side of the tree. This, however, is a habit common to most Cuckoos. Its language is a loud screaming cry, on account of which the Brazilians call it *Alma do gato*, implying that it possesses the soul of a cat. It is a very shy retiring bird, and in this respect is more like a *Coccyzus* than a *Guira*.

For these facts we are indebted to Léotaud, Fraser, Forbes, White, and others; each of these observers having contributed a few words to a history of this interesting bird's habits.

271. COCCYZUS AMERICANUS (Linn.).

(YELLOW-BILLED CUCKOO.)

Coccyzus americanus, *Scl. et Salv. Nomencl.* p. 108; *Sclater, P. Z. S.* 1872, p. 490 (Buenos Ayres); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora).

Description.—Above grey; ear-coverts blackish; wings in interior rufous, which shows more or less externally: beneath white, greyish on the throat; tail-feathers, except the two central which are like the back, black broadly tipped with white; bill with the lower mandible orange-yellow, except at the tip: whole length 12·0 inches, wing 5·7, tail 5·7. *Female* similar.

Hab. North and Central America and Colombia; occasional in Brazil and Argentina.

This is a well-known inhabitant of the United States, where it is a regular summer visitant, passing the winter months in Central America and the West Indies, and being also occasionally met with during this season in Brazil. In the Argentine Republic it is very rare, and the few specimens found were all seen late in the autumn, after other summer visitors had left. I can only account for the lateness of these birds on the supposition that, being low fliers, excessively shy, and eminently forest birds, they shrunk from traversing the wide open plains which offer no kind of shelter or protection, and so remained in the isolated plantations which rise like little islands of greenery in the sea-like level of the pampas.

272. COCCYZUS MELANOCORYPHUS, Vieill.

- 38 -

(BLACK-BILLED CUCKOO.)

Coccyzus melanocoryphus, *Scl. et Salv. Nomencl.* p. 108; *Durnford, Ibis*, 1877, p. 186 (Buenos Ayres); *Barrows, Auk*, 1884, p. 28 (Entrerios); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora).

Coccyzus seniculus, *Burm. La-Plata Reise*, ii. p. 444 (Paraná, Tucuman).

Description.—Above pale greyish brown; head cinereous; a black stripe through the eyes: beneath white, more or less tinged with ochraceous; tail black, tipped with white; two central rectrices like the back; bill black: whole length 11·5 inches, wing 4·7, tail 5·7. *Female* similar.

Hab. South America.

The "Cocou," so called from its note, is the commonest species of the genus in the Argentine Republic, and has an extensive range in South America. In September it migrates south, and a pair or a few individuals reappear faithfully every spring in every orchard or plantation on the pampas. At intervals its voice is heard amidst the green trees—deep, hoarse, and somewhat human-like in sound, the song or call being composed of a series of notes, like the syllables *cou-cou-cou*, beginning loud and full and becoming more rapid until at the end they run together. It is a shy bird, conceals itself from prying eyes in the thickest foliage, moves with ease and grace amongst the closest twigs, and feeds principally on large winged insects, for which it searches amongst the weeds and bushes near the ground.

The nest is the flimsiest structure imaginable, being composed of a few dry twigs, evidently broken by the bird from the trees and not picked up from the ground. They are laid across each other to make a platform nest, but so small and flat is it that the eggs frequently fall out from it. That a bird should make no better preparation than this for the great business of propagation seems very wonderful. The eggs are three or four in number, elliptical in form, and of a dull sea-green colour.

273. COCCYZUS CINEREUS, Vieill.

(CINEREOUS CUCKOO.)

[PLATE XIII.]



COCCYZUS CINEREUS.

Coccyzus cinereus, *Scl. et Salv. Nomencl.* p. 108; *Hudson, P. Z. S.* 1870, p. 88 (Buenos Ayres); *White, P. Z. S.* 1882, p. 620 (Buenos Ayres); *Barrows, Auk*, 1884, p. 28 (Entrerios); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora).

Description.—Above cinereous, wings blackish; tail above blackish, beneath cinereous; lateral rectrices tipped with white: beneath, throat and breast pale cinereous, passing into white in the middle of the belly; under wing-coverts, flanks, and crissum ochraceous; bill black: whole length 9·0 inches, wing 4·5, tail 4·5. *Female* similar.

- 39 -

Hab. Paraguay and Argentine Republic.

The Cinereous Cuckoo is smaller than the preceding species, and also differs in having a square tail and a more curved beak. The beak is black, and the irides blood-red, which contrasts well with the blue-grey of the head, giving the bird a bold and striking appearance.

This species is not common, but it is, I believe, slowly extending its range southwards, as

within the last few years it has become much more common than formerly. Like other Cuckoos, it is retiring in its habits, concealing itself in the dense foliage, and it cannot be attracted by an imitation of its call, an expedient which never fails with the Coucou. Its language has not that deep mysterious, or *monkish* quality, as it has been aptly called, of other *Coccyzi*. Its usual song or call, which it repeats at short intervals all day long during the love-season, resembles the song of our little dove (*Columbula picui*), and is composed of several long monotonous notes, loud, rather musical, but not at all plaintive. It also has a loud harsh cry, which one finds it hard to believe to be the voice of a Cuckoo, as in character it is more like the scream of a Dendrocolaptine species.

The figure (Plate XIII.) is taken from a specimen of this species obtained by Mr. Frank Withington in the Lomas de Zamora, and now in Sclater's collection.

274. COCCYZUS PUMILUS, Strickl.

(DWARF CUCKOO.)

Coccyzus pumilus, *Scl. et Salv. Nomencl.* p. 108; *Barrows, Auk*, 1884, p. 28, (Entrerios).

Description.—Above brownish cinereous, head grey; tail like the back, but tail-end black with narrow white tips: beneath, throat and breast chestnut-red; abdomen white; under wing-coverts and crissum ochraceous: whole length 9·0 inches, wing 4·0, tail 4·2. *Female* similar.

Hab. South America.

Of this little Cuckoo, the smallest of the genus *Coccyzus*, specimens were obtained by Mr. Barrows at Concepcion in Entrerios, in the month of December. The species was only previously known to occur in Venezuela and Colombia.

Fam. XXVIII. RHAMPHASTIDÆ, OR TOUCANS.

- 40 -

In the second edition of his 'Monograph of the Toucans,' Gould admits 51 species of this fine and peculiar group, which are scattered over the forests of Tropical America, from Southern Mexico to Northern Argentina. Several others have been since described.

The Toucans are large birds exclusively arboreal in their habits, and feeding mostly, if not entirely, upon fruit. A single species of wide distribution reaches its southern limit in the forests of the northern Argentine provinces.

275. RHAMPHASTOS TOCO, Gm.

(TOCO TOUCAN.)

Rhamphastos toco, *Gould, Mon. Rhamphast.* ed. 2, pl. i.; *Scl. et Salv. Nomencl.* p. 108; *White, P. Z. S.* 1882, p. 620 (Oran and Misiones).

Description.—Above black; rump white, with a small scarlet patch on each side: beneath black, throat white; crissum scarlet; bill yellow, with a black blotch at the end of the upper mandible; feet brown: whole length 22·0 inches, wing 9·5, tail 6·5. *Female* similar.

Hab. Guiana, Amazonia, Brazil, Paraguay, and N. Argentina.

White met with this Toucan among the lofty forest trees at Campo Colorado, near Oran, where it was found in flocks. In Misiones it was more abundant, and was said to commit great havoc among the orange-groves.

Order V. PSITTACI.

Fam. XXIX. PSITTACIDÆ, OR PARROTS.

Dr. Finsch's history of the Parrot tribe, published in 1867, included accounts of about 350 species, to which at least 50 more have been added during these last twenty years, so that upwards of 400 Parrots are now known to science. Of these, about 150 belong to the New World, mostly to the intertropical portion, though Parrots are found as far north as the U.S., and as far south as Chili and Patagonia.

In the Argentine Republic the presence of ten species of Psittacidæ has been recorded, but only two of these are found in the vicinity of Buenos Ayres, the remaining eight being restricted to the more northern and western portions of the country.

276. CONURUS PATAGONUS (Vieill).

(PATAGONIAN PARROT.)

- 41 -

Conurus patagonus, *Burm. La-Plata Reise*, ii. p. 441; *Scl. et Salv. Nomencl.* p. 111; *Scl. P. Z. S.* 1872, p. 549 (Rio Negro), et 1873, p. 761; *Durnford, Ibis*, 1877, p. 186 (Buenos Ayres), et 1878, p. 396 (Chupat); *White, P. Z. S.* 1882, p. 620 (Catamarca); *Barrows, Auk*, 1884, p. 28 (Bahia Blanca). **Conurus patachonicus**, *Darwin, Zool. Beagle*, iii. p. 113 (Bahia Blanca).

Description.—Above dark olive-green, forehead darker; wings edged with bluish, lower back yellow; beneath olive-green, darker on throat; band across the neck whitish; belly yellow, with a large patch in the middle and the thighs red: whole length 18·0 inches, wing 9·2, tail 10·5. *Female* similar.

Hab. Argentina and Patagonia.

This Parrot, called in La Plata the Bank- or Burrowing-Parrot, from its nesting-habits, is the only member of its order found so far south as Patagonia. In habits it differs somewhat from most of its congeners, and it may be regarded, I think, as one of those species which are dying out—possibly owing to the altered conditions resulting from the settlement of the country by Europeans. It was formerly abundant on the southern pampas of La Plata, and being partially migratory its flocks ranged in winter to Buenos Ayres, and even as far north as the Paraná river. When, as a child, I lived near the capital city (Buenos Ayres), I remember that I always looked forward with the greatest delight to the appearance of these noisy dark-green winter visitors. Now they are rarely seen within a hundred miles of Buenos Ayres; and I have been informed by old gauchos that half a century before my time they invariably appeared in immense flocks in winter, and have since gradually diminished in numbers, until now in that district the Bank-Parrot is almost a thing of the past. Two or three hundred miles south of Buenos Ayres city they are still to be met with in rather large flocks, and have a few ancient breeding-places, to which they cling very tenaciously. Where there are trees or bushes on their feeding-ground they perch on them; they also gather the berries of the *Empetrum rubrum* and other fruits from the bushes; but they feed principally on the ground, and, while the flock feeds, one bird is invariably perched on a stalk or other elevation to act as sentinel. They are partial to the seeds of the giant thistle (*Carduus marianus*), and the wild pumpkin, and to get at the latter they bite the hard dry shell into pieces with their powerful beaks. When a horseman appears in the distance they rise in a compact flock, with loud harsh screams, and hover above him, within a very few yards of his head, their combined dissonant voices producing an uproar which is only equalled in that pandemonium of noises, the Parrot-house in the Zoological Gardens of London. They are extremely social, so much so that their flocks do not break up in the breeding-season; and their burrows, which they excavate in a perpendicular cliff or high bank, are placed close together; so that when the gauchos take the young birds—esteemed a great delicacy—the person who ventures down by means of a rope attached to his waist is able to rifle a whole colony. The burrow is three to five feet deep, and four white eggs are deposited on a slight nest at the extremity. I have only tasted the old birds, and found their flesh very bitter, scarcely palatable.

The natives say that this species cannot be taught to speak; and it is certain that the few individuals I have seen tame were unable to articulate.

Doubtless these Parrots were originally stray colonists from the tropics, although now resident in so cold a country as Patagonia. When viewed closely, one would also imagine that they must at one time have been brilliant-plumaged birds; but either natural selection, or the direct effect of a bleak climate, has given a sombre shade to their colours—green, blue, yellow, and crimson; and when seen flying at a distance, or in cloudy weather, they look as dark as crows.

277. CONURUS ACUTICAUDATUS (Vieill.).

(SHARP-TAILED PARROT.)

Conurus acuticaudatus, *Scl. et Salv. Nomencl.* p. 111; *White, P. Z. S.* 1882, p. 621 (Catamarca).

Conurus fugax, *Burm. La-Plata Reise*, ii. p. 441. **Conurus glaucifrons** *Leybold, Leopoldina*, Heft viii. p. 52 (1873).

Description.—Above and beneath green; top of head and cheeks bluish; inner margins of wing-feathers yellowish grey; inner webs of tail-feathers at their bases red; upper mandible pale whitish, lower black: whole length 13·0 inches, wing 7·5, tail 7·0. *Female* similar.

Hab. Bolivia, Paraguay, and N. Argentina.

White obtained specimens of this Parrot near Andalgala in Catamarca in September 1880. He tells us that it is not very abundant in that district, and flies very swiftly in flocks of seven or eight, screeching continually when on the wing.

278. CONURUS MITRATUS, Tsch.

(RED-HEADED PARROT.)

Conurus mitratus, *Tsch. Faun. Per., Av.* p. 272, t. xxvi. f. 2; *Scl. et Salv. Nomencl.* p. 112. **Conurus hilaris**, *Burm. La-Plata Reise*, ii. p. 442 (Tucuman); *id. Wieg. Arch.* 1879, pt. i. p. 100; *id. P. Z. S.* 1878, p. 75.

Description.—Bright green; front and sides of head red: beneath rather paler; under wing-coverts green; lower surface of tail yellowish; in some specimens with irregular patches of red on the neck and breast; bill pale; feet brown: whole length 14·0 inches, wing 8·0, tail 7·0.

Hab. Peru, Bolivia, and Northern Argentina.

Dr. Burmeister met with this Parrot near Tucuman, where he found it “very common, especially in winter.” At first he made a new species of it, but afterwards recognized its identity with *Conurus mitratus* of Tschudi.

Dr. Burmeister has kindly sent two specimens of this bird to Sclater, for his collection. Sclater has also examples of the same species procured by Schulz near Cordova, and in Bolivia by Bridges.

279. CONURUS MOLINÆ, Mass. et Souanc.

(MOLINA'S PARROT.)

[PLATE XIV.]



CONURUS MOLINÆ.

Conurus molinæ, *Scl. et Salv. Nomencl.* p. 112; *White, P. Z. S.* 1882, p. 621 (Salta).

Description.—Above green; crown brown; nape bluish; cheeks green; wings edged with blue; tail coppery red: beneath green, breast and sides of neck whity brown, with dark cross bars; middle of belly dull red: whole length 9·5 inches, wing 5·0, tail 5·3. *Female* similar.

Hab. Bolivia, S. Brazil, and N. Argentina.

White met with this Parrot in the dense forests of Campo Colorado near Oran, where it is found in flocks of about twenty, “their flight being limited, for the most part, to the clear aisles beneath the branches.” White’s specimen in Sclater’s collection, from which our figure (Plate XIV.) is taken, agrees with others of the species obtained by Natterer in Mato Grosso.

280. BOLBORHYNCHUS MONACHUS (Bodd.).

(GREEN PARRAKEET.)

Conurus murinus, *Burm. La-Plata Reise*, ii. p. 441; *Darwin, Zool. Beagle*, iii. p. 112 (Paraná).

Bolborhynchus monachus, *Scl. et Salv. Nomencl.* p. 113; *Durnford, Ibis*, 1877, p. 186 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 3 (Buenos Ayres); *White, P. Z. S.* 1882, p. 621 (Catamarca, Santiago del Estero); *Barrows, Auk*, 1884, p. 28 (Entrerios); *Burm. P. Z. S.* 1878, p. 77.

Description.—Green; front grey, with paler margins to the feathers; wings blackish, with slight bluish edgings: beneath grey, with lighter margins to the breast-feathers; under wing-coverts, flanks, and crissum pale green; bill whitish: whole length 11·0 inches, wing 5·5, tail 5·3. *Female* similar.

Hab. Paraguay, Uruguay, and Argentina.

The Common Green Parrakeet, called *Cotorra* or *Catita* in the vernacular, is a well-known resident species in the Argentine Republic. It is a lively restless bird, shrill-voiced, and exceedingly vociferous, living and breeding in large communities, and though it cannot learn

to speak so distinctly as some of the larger Parrots, it is impossible to observe its habits without being convinced that it shares in the intelligence of the highly-favoured order to which it belongs.

In Buenos Ayres it was formerly very much more numerous than it is now; but it is exceedingly tenacious of its breeding-places, and there are some few favoured localities where it still exists in large colonies, in spite of the cruel persecution all birds easily killed are subjected to in a country where laws relating to such matters are little regarded, and where the agricultural population is chiefly Italian. At Mr. Gibson's residence near Cape San Antonio, on the Atlantic coast, there is still a large colony of these birds inhabiting the Tala woods (*Celtis tala*), and I take the following facts from one of his papers on the ornithology of the district.

He describes the woods as being full of their nests, with their bright-coloured talkative denizens and their noisy chatter all day long drowning every other sound. They are extremely sociable and breed in communities. When a person enters the wood their subdued chatter suddenly ceases, and during the ominous silence a hundred pairs of black beady eyes survey the intruder from the nests and branches; and then follows a whirring of wings and an outburst of screams that spreads the alarm throughout the woods. The nests are frequented all the year, and it is rare to find a large one unattended by some of the birds any time during the day. In summer and autumn they feed principally on the thistle; first the flower is cut up and pulled to pieces for the sake of the green kernel, and later they eat the fallen seed on the ground. Their flight is rapid, with quick flutters of the wings, which seem never to be raised to the level of the body. They pay no regard to a *Polyborus* or *Milvago*, but mob any other bird of prey appearing in the woods, all the Parrakeets rising in a crowd and hovering about it with angry screams.

- 45 -

The nests are suspended from the extremities of the branches, to which they are firmly woven. New nests consist of only two chambers, the porch and the nest proper, and are inhabited by a single pair of birds. Successive nests are added, until some of them come to weigh a quarter of a ton, and contain material enough to fill a large cart. Thorny twigs, firmly interwoven, form the only material, and there is no lining in the breeding-chamber, even in the breeding-season. Some old forest trees have seven or eight of these huge structures suspended from the branches, while the ground underneath is covered with twigs and remains of fallen nests. The entrance to the chamber is generally underneath, or if at the side is protected by an overhanging eave to prevent the intrusion of opossums. These entrances lead into the porch or outer chamber, and the latter communicates with the breeding-chamber. The breeding-chambers are not connected with each other, and each set is used by one pair of birds.

The number of pairs does not exceed a dozen, even with the largest nests. Repairs are carried on all the year round, but new nests are only added at the approach of spring. Opossums are frequently found in one of the higher chambers, when the entrance has been made too high, but though they take up their abode there they cannot reach the other chambers, and the Parrakeets refuse to go away. A species of Teal (probably *Querquedula brasiliensis*) also sometimes occupies and breeds in their chambers, and in one case Mr. Gibson found an opossum domiciled in an upper chamber, Parrakeets occupying all the others except one, in which a Teal was sitting on eggs.

The breeding-season begins about November 1, and as many as seven or eight eggs are laid; these are dull white, very thin-shelled, elongated, and have the greatest diameter exactly equidistant from the two ends.

Mr. Barrows speaks as follows of this species in Entrerios:—"An abundant and familiar bird in the neighbourhood of Concepcion through the entire year. It is commonly seen in flocks of twenty and upwards, visiting grain-fields, gardens, &c., and sometimes, if I was correctly informed, it has appeared in flocks of tens of thousands, completely stripping the grain-fields. They nest in communities, many pairs uniting in the building of a large common nest or mass of nests. I only saw these nests on two occasions, and had no opportunity of examining their structure. They were placed on high trees, and appeared from below to be simply irregular masses, six or eight feet in diameter, formed of small sticks and twigs. Where the nests are abundant the natives destroy the young by hundreds, and the 'squabs' when nearly grown are said to be very fine eating. The young are easily tamed, and may be taught to articulate a few simple words."

- 46 -

281. BOLBORHYNCHUS AYMARA (d'Orb.).

(AYMARA PARRAKEET.)

[PLATE XV.]



BOLBORHYNCHUS AYMARA.

Conurus aymara, *Burm. La-Plata Reise*, ii. p. 442 (Mendoza). **Bolborhynchus aymara**, *Scl. et Salv. Nomencl.* p. 113; *White, P. Z. S.* 1883, p. 40 (Cordova). **Conurus bruniceps**, *Burm. Journ. f. Orn.* 1860, p. 243.

Description.—Above green; head earthy brown: beneath pale grey, nearly white on the sides of the head; under wing-coverts, flanks, lower belly, and crissum pale green; under surface of wings and tail blackish; beak whitish: whole length 7·0 inches, wing 3·9, tail 4·0. *Female* similar.

Hab. Bolivia and N. Argentina.

Prof. Burmeister found this Parakeet not uncommon on the borders of the sierra near Mendoza. White met with it near Cosquin in the province of Cordova, in flocks on the mountain-tops, about 3500 feet above the sea-level. He says it is called “*Catita de las sierras*,” and that it never descends to the valleys. Its flight is very swift, and is accompanied by a sort of chirping.

The figure (Plate XV.) is taken from a specimen in Sclater’s collection, obtained by Buckley in Bolivia.

282. BOLBORHYNCHUS RUBRIROSTRIS (Burm.).

(RED-BILLED PARRAKEET.)

Conurus rubrirostris, *Burm. La-Plata Reise*, ii. p. 442; *id. P. Z. S.* 1878, p. 77. **Bolborhynchus rubrirostris**, *Scl. et Salv. Nomencl.* p. 113.

Description.—Uniform green; wing-feathers blackish, edged with blue; bill rosy red: whole length 7·0 inches, wing 5·0, tail 2·8.

Hab. Argentina.

Prof. Burmeister discovered this little Parrot, of which we have never seen specimens, in the ravines of the Sierra of Uspallata, and also met with it in the Sierra of Cordova. It lives in small flocks, which fly away screaming when approached.

283. CHRYSOTIS VINACEA (Max.).

(VINACEOUS AMAZON.)

Chrysotis vinacea, *Scl. et Salv. Nomencl.* p. 113; *White, P. Z. S.* 1882, p. 621 (Misiones).

Description.—Above green, feathers of neck and back edged with blackish; front, lores, and wing-spot scarlet; beneath paler, throat and breast vinaceous, feathers edged with blackish; bend of wing and base of tail-feathers scarlet: whole length 14·0 inches, wing 7·2, tail 4·7. *Female* similar.

Hab. S. Brazil, Paraguay, and N. Argentina.

This Parrot, which is enumerated by Azara among the birds of Paraguay, was also found by White in the adjoining district of Misiones in the Argentine Republic. White gives us the following notes on its habits:—“Both in Concepcion and San Javier these Parrots are found in incredible numbers feeding in the orange-groves which cover and enclose the extensive

Jesuit ruins of those parts of Misiones. They seem to be very voracious, as they feed all day long; and the inhabitants shoot them for food; but they are not easily scared, for on hearing a shot they only fly up in clouds to descend again, meanwhile making the air resound with their shrill cries. They can be taught to talk tolerably well if taken young."

284. CHRYSOTIS ÆSTIVA (Linn.).

(BLUE-FRONTED AMAZON.)

Chrysotis æstiva, *Scl. et Salv. Nomencl.* p. 114; *Salvin, Ibis*, 1880, p. 361 (Salta). **Psittacus amazonicus**, *Burm. La-Plata Reise*, ii. p. 443 (?). **Chrysotis amazonica**, *White, P. Z. S.* 1882, p. 621 (?).

Description.—Above green, feathers edged with blackish; crown yellow; front blue; wing-patch scarlet; beneath green, cheeks and throat yellow; bend of wings and inner base of tail scarlet: whole length 15·0 inches, wing 8·5, tail 5·0. *Female* similar.

Hab. Brazil, Paraguay, and N. Argentina.

Durnford obtained a specimen of this Parrot near Salta in the province of Oran, which has been identified by Mr. Salvin. It is probable that the birds referred to *C. amazonica* by Prof. Burmeister and White may belong to this same species.

285. PIONUS MAXIMILIANI (Kuhl).

(PRINCE MAXIMILIAN'S PARROT.)

Pionus maximiliani, *Scl. et Salv. Nomencl.* p. 114; *White, P. Z. S.* 1882, p. 622 (Salta).

Description.—Dark green; lores blackish; feathers of nape dirty white margined with green; front and cheeks bluish; beneath dusky green, crissum scarlet: whole length 9·0 inches, wing 6·5, tail 3·2. *Female* similar.

Hab. Brazil and N. Argentina.

White obtained a single specimen of this Parrot in the dense forests of the Rio Vermejo, near Oran, in November 1880.

Order VI. STRIGES.

About 40 different species of the nocturnal birds of prey are known to occur in the Neotropical Region. Six of them have been recorded as being found more or less frequently within the limits of the Argentine Republic. Of these, the Burrowing-Owl (*Pholeoptynx cunicularia*) is one of the most characteristic inhabitants of the Argentine Pampas, while two others, the Barn-Owl and the Short-eared Owl, are very widely diffused species, also well known in England.

Fam. XXX. STRIGIDÆ, OR BARN-OWLS.

286. STRIX FLAMMEA, Linn.

(COMMON BARN-OWL.)

Strix flammea, *Scl. et Salv. Nomencl.* p. 116; *Durnford, Ibis*, 1877, p. 187 (Buenos Ayres); *White, P. Z. S.* 1882, p. 622 (Misiones); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora); *Sharpe, Cat. B.* ii. p. 291. **Aluco flammeus**, *Barrows, Auk*, 1884, p. 29 (Entrerios). **Strix perlata**, *Burm. La-Plata Reise*, ii. p. 440; *Döring, Exp. al Rio Negro*, p. 49.

Description.—Above orange-brown, marbled with ashy and white, and dotted with black spots with central white points; wings and tail crossed by four or five blackish bands; face silvery white, with a posterior and inferior border of orange-brown and black; beneath white, more or less suffused with tawny, except on the lower belly, and dotted with distinct rounded black spots; bill yellowish; tarsus feathered; toes slightly bristled; claws long and sharp: whole length 15·0 inches, wing 12·5, tail 5·0. *Female* similar.

Hab. Old and New Worlds.

This widely distributed species is found throughout South America; and in its habits and sepulchral voice, as well as in its pretty reddish buff, grey, and white plumage, is identical with the European bird. D'Orbigny expressed astonishment that this Owl, which is never seen in uninhabited places, invariably appears to keep company with man wherever a settlement is formed, even in the most lonely and isolated spots. Probably it is much more numerous than most people imagine, sheltering itself everywhere in caverns and hollow trees, so that it is always present, and ready to take early advantage of the commodious church-tower or other large building raised by man. On the level pampas, where there are no hills or suitable hiding-places, it is rarely seen: it is exclusively a town bird.

Nothing more need be said of the habits of a species so well known, and about which there is so much recorded in general works of Natural History.

Fam. XXXI. BUBONIDÆ, OR OWLS.

287. ASIO BRACHYOTUS (Forst.).

(SHORT-EARED OWL.)

Otus palustris, Darwin, *Zool. Beagle*, iii. p. 33. **Otus brachyotus**, *Scl. et Salv. Nomencl.* p. 116; *Burm. La-Plata Reise*, ii. p. 439 (Rosario); *Hudson, P. Z. S.* 1870, p. 800 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 186 (Buenos Ayres), et 1878, p. 396 (Patagonia). **Asio brachyotus**, *Gibson, Ibis*, 1879, p. 423 (Buenos Ayres); *White, P. Z. S.* 1882, p. 622 (Buenos Ayres); *Withington, Ibis*, 1888, p. 468 (Lomas de Zamora). **Asio accipitrinus**, *Sharpe, Cat. B.* ii. p. 234.

Description.—Above streaked and variegated with fulvous and blackish brown; face whitish, with a large central blotch of blackish round the eye; wings pale tawny white, with several irregular broad blackish cross bars; tail whitish, with four or five broad black cross bands: beneath as above, but much whiter on the belly, which is only slightly streaked, and without markings on the crissum and thighs; bill black; tarsi and toes densely feathered: whole length 15·0 inches, wing 13·0, tail 6·0. *Female* similar, but rather larger.

Hab. Old and New Worlds.

The Short-eared Owl is found throughout the Argentine country, where it is commonly called *Lechuzon* (big Owl) in the vernacular. Like the species last described—the Barn-Owl—it has an exceedingly wide range. It is found throughout the continent of Europe; it also inhabits Asia and Africa, many of the Pacific Islands, and both Americas, from Canada down to the Straits of Magellan. Such a very wide distribution would seem to indicate that it possesses some advantage over its congeners, and is (as an Owl) more perfect than others. It is rather more diurnal in its habits than most Owls, and differs structurally from other members of its order in having a much smaller head. It is also usually said to be a weak flier; but this I am sure is a great mistake, for it seems to me the strongest flier amongst Owls, and very migratory in its habits, or, at any rate, very much given to wandering. Probably its very extensive distribution is due in some measure to a greater adaptability than is possessed by most species; also to its better sight in the daytime, and to its wandering disposition, which enables it to escape a threatened famine, and to seize on unoccupied or favourable ground.

The bird loves an open country, and sits by day on the ground concealed amongst the herbage or tall grass. An hour before sunset it quits its hiding-place, and is seen perched on a bush or tall stalk, or sailing about a few feet above the ground with a singularly slow, heron-like flight; and at intervals while flying it smites its wings together under its breast in a quick sudden manner. It is not at all shy, the intrusion of a man or dog in the field it frequents only having the effect of exciting its indignation. An imitation of its cry will attract all the individuals within hearing about a person, and any loud unusual sound, like the report of a gun, produces the same effect. When alarmed or angry it utters a loud hiss, and at times a shrill laugh-like cry. It also has a dismal scream, not often heard; and at twilight hoots, this part of its vocal performance sounding not unlike the distant baying of a mastiff or a bloodhound. It breeds on the ground, clearing a circular spot, and sometimes, but not often, lining it with a scanty bed of dry grass. The eggs are three or four, white, and nearly spherical.

The Short-eared Owl was formerly common everywhere on the pampas, where the coarse indigenous grasses afforded the shelter and conditions best suited to it. When in time this old rough vegetation gave place to the soft perishable grasses and clovers, accidentally introduced by European settlers, the Owl disappeared from the country, like the large Tinamou (*Rhynchotis rufescens*), the Red-bellied Finch (*Embernagra platensis*), and various other species; for the smooth level plains afforded it no shelter. Now, however, with the spread of cultivation, it has reappeared, and is once more becoming a common bird in the more thickly-settled districts.

288. BUBO VIRGINIANUS (Gm.).

(VIRGINIAN OWL.)

Bubo virginianus, *Scl. et Salv. Nomencl.* p. 116; *Scl. P. Z. S.* 1872, p. 549 (Rio Negro); *White, P. Z. S.* 1883, p. 433 (Cordova); *Barrows, Auk*, 1884, p. 29 (Guauguaychú). **Bubo crassirostris**, *Burm. La-Plata Reise*, ii. p. 439 (Mendoza). **Bubo magellanicus**, *d'Orb. Voy. Ois.* p. 137; *Salv. Ibis*, 1880, p. 361 (Salta); *Sharpe, Cat. B.* ii. p. 29.

Description.—Above dull tawny buff, more or less densely mottled with blackish brown; ear-tufts long, blackish, mixed with tawny buff; wings tawny buff, with about seven blackish cross bands; tail tawny buff, tipped with whitish, and with about seven blackish cross bands: beneath dull ochraceous buff, with dusky brown cross lines; throat-collar whitish: whole length 19·5 inches, wing 14·5, tail 8·5. *Female* similar, but rather larger.

Hab. North and South America.

This bird, eagle-like in its dimensions, and the largest of our Owls, is found throughout both Americas, though some authors, relying on certain trivial variations in size and colour, have separated the southern from the northern form, and called it *Bubo magellanicus*. In the Argentine Republic it is well known by its Indian name "Ñacurutú"; also in Paraguay according to Azara, who says:—"It pronounces its own name in tones which scare such as pass by night through the deep woods, which are its palaces."

The habits of the Virginian Owl are too well known to need to be rewritten in this place: the ornithologists of North America have supplied several biographies of it, that by Audubon being specially familiar.

289. SCOPS BRASILIANUS (Gm.).

(CHOLIBA OWL.)

Scops brasilianus, *Scl. et Salv. Nomencl.* p. 117; *White, P. Z. S.* 1883, p. 41 (Cordova); *Barrows, Auk*, 1884, p. 29 (Entrerios); *Sharpe, Cat. B.* ii. p. 108.

Description.—Above brown, vermiculated with darker brown, and spotted and streaked more or less distinctly with black; neck-collar lighter; wings dark brown, regularly barred across with sandy rufous; tail dark brown, with about ten regular cross bars of sandy rufous: beneath dirty white, washed with buff, densely crossed with narrow zigzag lines of blackish brown: whole length 9·5 inches, wing 6·2, tail 3·7. *Female* similar, but rather larger.

Hab. South America.

Azara and d'Orbigny have described the habits of this Owl, which is common in Paraguay and in the Argentine State of Corrientes, the name for it in both countries being *Choliba*. It is a bird of the woods, strictly nocturnal, lives in pairs, and spends the day in a thick-foliaged tree, the male and female sitting close together. At night it comes a great deal about houses, where it diligently explores every corner in search of cockroaches and other vermin, and in this way commends itself to the country people, who esteem it highly, and often keep it tame in their homes. Its hoot, described as sounding like *tururú-tú-tú*, is not unpleasant to the ear, and is a familiar sound to all who traverse the woody paths by night. It breeds in deep woods, and lays three white eggs in a hollow tree without any nest.

Barrows found it common in Corrientes along the wooded water-courses, and says it has a soft tremulous cry. He tells us there are two varieties of it in colour, red and grey, and gives *Caburé* as the native name.

290. SPEOTYTO CUNICULARIA (Mol.).

(BURROWING-OWL.)

Athene cunicularia, *Darwin, Zool. Beagle*, iii. p. 31. **Noctua cunicularia**, *Burm. La-Plata Reise*, ii. p. 440; *Durnford, Ibis*, 1877, p. 38, et 1878, p. 397 (Patagonia). **Pholeoptynx cunicularia**, *Scl. et Salv. Nomencl.* p. 117; *Hudson, P. Z. S.* 1874, p. 308 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 186 (Buenos Ayres); *Gibson, Ibis*, 1879, p. 423 (Buenos Ayres); *White, P. Z. S.* 1882, p. 622 (Catamarca, Misiones). **Speotyto cunicularia**, *Sharpe, Cat. B.* ii. p. 142; *Barrows, Auk*, 1884, p. 30 (Entrerios); *Withington, Ibis*, 1888, p. 469 (Lomas de Zamora).

Description.—Above dark sandy brown, with large oval spots of white and smaller spots and freckles of pale brown; wings and tail dark brown, with broad whitish cross bars; facial disk greyish brown, surrounded by white: beneath white, sides of breast marked with broad bars of brown, which become fainter on the belly; lower belly, thighs, and crissum pure white; tarsi feathered; toes slightly bristled: whole length 10·0 inches, wing 7·5, tail 3·5. *Female* similar, but rather larger.

Hab. North and South America.

The Burrowing-Owl is abundant everywhere on the pampas of Buenos Ayres and avoids woods, but not districts abounding in scattered trees and bushes. It sees much better than most Owls by day, and never affects concealment nor appears confused by diurnal sounds and the glare of noon. It stares fixedly—"with insolence," Azara says—at a passer-by, following him with the eyes, the round head turning about as on a pivot. If closely approached it drops its body or bobs in a curious fashion, emitting a brief scream, followed by three abrupt ejaculations; and if made to fly goes only fifteen or twenty yards away, and alights again with face towards the intruder; and no sooner does it alight than it repeats the odd gesture and scream, standing stiff and erect, and appearing beyond measure astonished at the intrusion. By day it flies near the surface with wings continuously flapping, and invariably before alighting glides upwards for some distance and comes down very abruptly. It frequently runs rapidly on the ground, and is incapable of sustaining flight long. Gaucho boys pursue these birds for sport on horseback, taking them after a chase of fifteen or twenty minutes. They live in pairs all the year, and sit by day at the mouth of their burrow or on the Vizcacha's mound, the two birds so close together as to be almost touching; when alarmed they both fly away, but sometimes the male only, the female diving into the burrow. On the pampas it may be more from necessity than choice that they always sit on the ground, as they are usually seen perched on the summits of bushes where such abound, as in Patagonia.

These are the commonest traits of the Burrowing-Owl in the settled districts, where it is excessively numerous and has become familiar with man; but in the regions hunted over by the Indians it is a scarce bird and has different habits. Shy of approach as a persecuted game fowl, it rises to a considerable height in the air when the approaching traveller is yet far off, and flies often beyond sight before descending again to the earth. This wildness of disposition is, without doubt, due to the active animosity of the pampas-tribes, who have all the ancient wide-spread superstitions regarding the Owl. Sister of the Evil Spirit is one of their names for it; they hunt it to death whenever they can, and when travelling will not stop to rest or encamp on a spot where an Owl has been spied. Where the country is settled by Europeans the bird has dropped its wary habits and become extremely tame. They are tenacious of the spot they live in, and are not easily driven out by cultivation. When the fields are ploughed up they make their kennels on their borders, or at the roadsides, and sit all day perched on the posts of the fences.

Occasionally they are seen preying by day, especially when anything passes near them, offering the chance of an easy capture. I have often amused myself by throwing bits of hard clay near one as it sat beside its kennel; for the bird will immediately give chase, only discovering its mistake when the object is firmly clutched in its talons. When there are young to be fed, they are almost as active by day as by night. On hot November days multitudes of a large species of *Scarabæus* appear, and the bulky bodies and noisy bungling flights of these beetles invite the Owls to pursuit, and on every side they are seen pursuing, and striking down the beetles, and tumbling upon them in the grass. Owls have a peculiar manner of taking their prey: they grapple it so tightly in their talons that they totter and strive to steady themselves by throwing out their wings, and, sometimes losing their balance, fall prostrate and flutter on the ground. If the animal captured be small they proceed after a while to dispatch it with the beak; if large they usually rise laboriously from the ground and fly to some distance with it, thus giving time for the wounds inflicted by the claws to do their work.

At sunset the Owls begin to hoot; a short followed by a long note is repeated many times with an interval of a second of silence. There is nothing dreary or solemn in this performance; the voice is rather soft and sorrowful, somewhat resembling the lowest notes of the flute in sound. In spring they hoot a great deal, many individuals responding to each other.

- 54 -

In the evening they are often seen hovering at a height of forty feet above the surface, and continuing to do so fully a minute or longer without altering their position. They do not drop the whole distance at once on their prey, but descend vertically, tumbling and fluttering as if wounded, to within ten yards of the earth, and then, after hovering a few seconds more, glide obliquely on to it. They prey on every living creature not too large to be overcome by them. Sometimes when a mouse is caught they tear off the head, tail, and feet, devouring only the body. The hind quarters of toads and frogs are almost invariably rejected; and inasmuch as these are the most fleshy and succulent parts, this is a strange and unaccountable habit. They make an easy conquest of a snake eighteen inches long, and kill it by dealing it blows with the beak, hopping briskly about it all the time, apparently to guard themselves with their wings. They prey largely on the common *Coronella anomala*, but I have never seen one attacking a venomous species. When they have young many individuals become destructive to poultry, coming about the houses and carrying off the chickens and ducklings by day. In seasons of plenty they destroy far more prey than they can devour; but in severe winters they come, apparently starving, about the houses, and will then stoop to carry off any dead animal food, though old and dried up as a piece of parchment. This I have often seen them do.

Though the Owls are always on familiar terms with the Vizcachas (*Lagostomus trichodactylus*) and occasionally breed in one of their disused burrows, as a rule they excavate a breeding-place for themselves. The kennel they make is crooked, and varies in length from four to twelve feet. The nest is placed at the extremity, and is composed of wool or dry grass, often exclusively of dry horse-dung. The eggs are usually five in number, white, and nearly spherical; the number, however, varies, and I have frequently found six or seven eggs in a nest. After the female has begun laying the birds continue carrying in dry horse-dung, until the floor of the burrow and a space before it is thickly carpeted with this material. The following spring the loose earth and rubbish is cleared out, for the same hole may serve them two or three years. It is always untidy, but mostly so during the breeding-season, when prey is very abundant, the floor and ground about the entrance being often littered with excrements, green beetle-shells, pellets of hair and bones, feathers of birds, hind quarters of frogs in all stages of decay, great hairy spiders (*Mygale*), remains of half-eaten snakes, and other unpleasant creatures that they subsist on. But all this carrion about the little Owl's disordered house reminds one forcibly of the important part the bird plays in the economy of nature. The young birds ascend to the entrance of the burrow to bask in the sun, and receive the food their parents bring; when approached they become irritated, snapping with their beaks, and retreat reluctantly into the hole; and for some weeks after leaving it they make it a refuge from danger. Old and young birds sometimes live together for four or five months. I believe that nine-tenths of the Owls on the pampas make their own burrows, but as they occasionally take possession of the forsaken holes of mammals to breed in, it is probable that they would always observe this last habit, if suitable holes abounded, as on the North-American prairies inhabited by the marmot. Probably our Burrowing-Owl

- 55 -

originally acquired the habit of breeding in the ground in the open level regions it frequented; and when this habit (favourable as it must have been in such unsheltered situations) had become ineradicable, a want of suitable burrows would lead it to clean out such old ones as had become choked up with rubbish, to deepen such as were too shallow, and ultimately to excavate for itself. The mining instinct varies greatly in strength, even on the pampas. Some pairs, long mated, only begin to dig when the breeding-season is already on them; others make their burrows as early as April—that is six months before the breeding-season. Generally both birds work, one standing by and regarding operations with an aspect of grave interest, and taking its place in the pit when the other retires; but sometimes the female has no assistance from her partner, and the burrow then is very short. Some pairs work expeditiously and their kennel is deep and neatly made; others go about their task in a perfunctory manner, and begin, only to abandon, perhaps half a dozen burrows, and then rest two or three weeks from their unprofitable labours. But whether industrious or indolent, by September they all have their burrows made. I can only account for Azara's unfortunate statement, repeated since by scores of compilers, that the Owl never constructs its own habitations, by assuming that a century ago, when he lived and the country was still very sparsely settled, this Owl had not yet become so abundant or laid aside the wary habit the aborigines had taught it, so that he did not become very familiar with its habits.

291. GLAUCIDIUM NANUM (King).

(PYGMY OWL.)

Glauclidium nanum, *Scl. et Salv. Nomencl.* p. 117; *Burm. La-Plata Reise*, ii. p. 441; *Scl. P. Z. S.* 1872, p. 549 (Rio Negro); *White, P. Z. S.* 1883, p. 41 (Cordova); *Döring, Exp. al Rio Negro*, p. 49 (Rio Negro); *Sharpe, Cat. B.* ii. p. 190.

Description.—Above dull reddish brown, mottled with concealed spots and bars of ochraceous buff; scapulars with an ashy tinge; head more rufous and longitudinally streaked; whitish collar on the hind neck; wings dark brown, banded with rufous; tail dark brown, with about ten rufous bars, and tipped with whitish; cheeks and chin pure white, the latter divided by a dark brown throat-band from the white fore neck; abdomen white, streaked with dark brown: whole length 8·0 inches, wing 3·8, tail 2·9. *Female* similar, but rather larger.

Hab. La Plata, Patagonia, and Chili.

This diminutive Owl, which barely reaches eight inches in length, and is light brown and grey in colour, was discovered by Captain King in 1827 in the neighbourhood of the Straits of Magellan. I met with it on the Rio Negro in Patagonia, but saw very little of it. It struck me that, like the Burrowing-Owl, it is not very strictly nocturnal, for I observed it in the daytime perched in exposed situations.

In 1882 White met with it in Cosquin, in Cordova, and made the following important note on its habits:—"It causes the naturalist much amusement to watch the habits of this pretty little Owl, that, perched perfectly motionless on a branch, utters such a sirenic cry as to attract little birds in great numbers. They are observed to cluster round it, all the while fluttering and in great excitement, charmed by some fascination. After waiting a while the Owl suddenly pounces upon the nearest for its victim."

I also observed little birds mobbing it, when it perched in a conspicuous place in the daytime, as they always mob small birds of prey, but was not so fortunate as to hear the "sirenic cry" with which the Cordova bird fascinates its victims. One has heard this yarn of a "sirenic cry" before, of other species, for it is a very common myth. That an Owl should now be fitted with the old melodious cap seems strange; and Mr. White is in error when he says that this habit in our bird "causes the *naturalist* much amusement."

Order VII. ACCIPITRES.

Fam. XXXII. FALCONIDÆ, OR FALCONS.

The diurnal birds of prey of the family Falconidæ found in the Neotropical Region number about 110 species, of which 22 are at present known to occur within the limits of the present work. It is probable, however, that many additional species of this group will be hereafter added to the Argentine list.

As is usually the case with the Accipitres, most of the species have an extensive distribution.

292. CIRCUS CINEREUS (Vieill.).

(CINEREOUS HARRIER.)

Circus cinereus, *Sharpe, Cat. B.* i. p. 56; *Scl. et Salv. P. Z. S.* 1868, p. 143 (Buenos Ayres); *iid. Nomencl.* p. 118; *Burm. La-Plata Reise*, ii. p. 439 (Mendoza); *Scl. P. Z. S.* 1872, p. 536 (Rio

Negro); *Durnford, Ibis*, 1877, p. 38 (Patagonia) et p. 187 (Buenos Ayres), et 1878, p. 397 (Patagonia); *Gibson, Ibis*, 1879, p. 411 (Buenos Ayres); *Barrows, Auk*, 1884, p. 30 (Bahia Blanca); *Withington, Ibis*, 1888, p. 469 (Lomas de Zamora).

Description.—Above bluish grey, with darker mottlings; wing-coverts with obsolete whitish edgings; primaries blackish; tail grey, with four black cross bands, and tipped with white: beneath, throat and neck like the back; abdomen thickly banded with white and rufous bars; under wing-coverts white; bill black; feet yellow; nails black: whole length 18·0 inches, wing 12·0, tail 8·2. *Female*: rather larger; above dark brown, with lighter brown spots and edgings; throat and fore neck like the back; wings beneath with black cross bands.

Hab. Southern portion of South America.

This Harrier is found throughout the Argentine Republic, and is also common in Patagonia and the Falkland Islands. On the pampas it is, I think, the most common bird of prey, after the excessively abundant *Milvago chimango*. Like the Chimango, it also prefers an open unwooded country, and resembles that bird not a little in its general appearance, and when in the brown stage of plumage may be easily mistaken for it. In the Falklands it has even acquired the Carrion Hawk's habits, for Darwin distinctly saw one feeding on a carcass there, very much to his surprise. On the pampas I have always found it a diligent bird-hunter, and its usual mode of proceeding is to drive up the bird from the grass and to pursue and strike it down with its claws. Mr. Gibson's account of its habits agrees with mine, and he says that "it will raise any small bird time after time, should the latter endeavour to conceal itself in the grass, preferring, as it would seem, to strike it on the wing." He further says:—"Its flight is low and rather rapid, while if its quarry should double it loses no ground, for it turns something in the manner of a Tumbler Pigeon, going rapidly head over heels in the most eccentric and amusing fashion."

Probably this Harrier has a partial migration, as a great many are always seen travelling across the pampas in the autumn and spring; many individuals, however, remain all winter.

The nest is made on the ground among long grass, or in reed-beds in marshy places, and the eggs are white blotched with dark red.

293. CIRCUS MACROPTERUS, Vieill.

(LONG-WINGED HARRIER.)

Circus macropterus, *ScL. et Salv. Nomencl.* p. 118; *iid. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Döring, Exp. al Rio Negro*, p. 50 (Rio Colorado). *Buteo macropterus*, *d'Orb. Voy., Ois.* p. 112 (Buenos Ayres). *Circus maculosus*, *Sharpe, Cat. B. i.* p. 62. *Circus megaspilus*, *Gould, Zool. Voy. Beagle*, iii. p. 29 (Uruguay).

Description.—Above black; frontal band, superciliaries, and upper tail-coverts white; edge of facial ruff spotted with white; wing- and tail-feathers grey, with black cross bands: beneath white, chest and throat black, with some white streaks; under wing-coverts white, with narrow blackish cross bands: whole length 20·0 inches, wing 17·0, tail 10·0. *Female* similar, but larger.

Hab. South America.

This Harrier is also found in the Republic, but is not so common as the former species.

294. ASTURINA PUCHERANI, Verr.

(PUCHERAN'S HAWK.)

Asturina pucherani, *ScL. et Salv. Ex. Orn.* pl. 89, p. 177; *iid. Nomencl.* p. 118; *iid. P. Z. S.* 1869, p. 634 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 187 (Buenos Ayres); *Barrows, Auk*, 1884, p. 30 (Entrerios); *Withington, Ibis*, 1888, p. 469 (Lomas de Zamora); *Sharpe, Cat. B. i.* p. 205.

Description.—Above dark brown; upper tail-coverts fulvous barred with brown; wings deep chestnut, barred and broadly tipped with black; tail fulvous, with four blackish cross bands: beneath, abdomen pale ochraceous, barred across with rufous; throat blackish, with slight white stripes; breast ochraceous, with narrow black shaft-stripes; thighs ochraceous, narrowly barred with orange-rufous; bill black; feet dark yellow: whole length 18·0 inches, wing 11·0, tail 8·2. *Female* similar, but rather larger.

Hab. South Brazil, Paraguay, and Argentina.

This brown-plumaged, short-winged, and exceedingly vociferous Hawk is common in the woods along the shores of the Plata and its tributaries, and is never found far removed from water. It perches on the summit of a tree, and sits there motionless for hours at a time, and at intervals utters singularly long loud cries, which become more frequent and piercing when the bird is disturbed, as by the approach of a person. Its flight is rapid and irregular, the short blunt wings beating unceasingly, while the bird pours out a succession of loud vehement broken screams.

Mr. Barrows observed it on the Lower Uruguay, and writes:—"It feeds largely if not exclusively on fish, nearly every specimen having their remains (and nothing else) in their stomachs." It would be very interesting to learn how it captures its prey.

295. BUTEO SWAINSONI, Bp.

(SWAINSON'S BUZZARD.)

[PLATE XVI.]



BUTEO SWAINSONI.

Buteo swainsoni, *Scl. et Salv. Nomencl.* p. 118; *Withington, Ibis*, 1888, p. 469 (Lomas de Zamora); *Baird, Brew., et Ridgw. N. A. B.* iii. p. 263. **Buteo obsoletus**, *Sharpe, Cat. B.* i. p. 184. **Buteo albicaudatus**, *Scl. et Salv. P. Z. S.* 1869, p. 634 (Buenos Ayres).

Description.—Above blackish brown; scapulars slightly variegated with rufous; upper tail-coverts white, tinged with rufous; tail dark greyish brown, crossed by several ill-defined blackish bars; beneath white or pale ochraceous; a broad band covering the whole breast reddish brown; bill black; feet yellow; claws black: whole length 20·0 inches, wing 15·0, tail 8·5. *Female* similar, but larger.

Hab. North and South America.

The figure given herewith (Plate XVI.) represents a fine adult female specimen of this Buzzard, obtained by Mr. Frank Withington at Lomas de Zamora, on the 4th of February, 1886, and now in Sclater's collection.

Swainson's Buzzard is a North-American species, which has only recently been ascertained to occur in the southern part of the Western Hemisphere. Full details concerning it are given in the standard work on "North-American Land-birds," to which we have referred above. Messrs. Baird, Brewer, and Ridgway divide the species into two subspecies, "*swainsoni*" and "*oxypterus*" to the latter of which they refer the southern specimens, but they acknowledge that it is "difficult to express points of absolute difference" between these subspecies.

It appears from what these authorities say (*l. c.* p. 268) that a young specimen procured by Hudson at Conchitas in 1860, and referred by Messrs. Salvin and Sclater with doubt to *B. albicaudatus*, really belongs to *B. swainsoni*. A second undoubtedly Argentine example is that procured by Mr. Withington and now figured.

Like other Buzzards, *B. swainsoni* varies much in plumage, and occasionally assumes a melanistic form, under which it was described and figured by Sclater in 1858 as *Buteo fuliginosus* (*cf.* *P. Z. S.* 1858, p. 356, and *Trans. Zool. Soc.* vol. iv. p. 267, pl. lxii.). Mr. Gurney is of opinion that d'Orbigny's *Buteo unicolor* is also referable to this form of *B. swainsoni* (*cf.* *Ibis*, 1889, p. 134).

A well-known writer on North-American birds (Capt. C. E. Bendire) gives the following account of the nesting of *Buteo swainsoni* in Arizona:—

"This species is by far the commonest Hawk in the vicinity of Fort Huachuca, and a resident throughout the year. Lieutenant Benson found not less than forty-one of their nests containing eggs between May 14 and June 18, 1887. These were all placed in low mesquite trees and bushes, from 3 to 15 feet from the ground. Only six of these nests contained three eggs each, twenty-one nests contained two eggs, the remaining fourteen but a single egg. Many of the latter were undoubtedly laid by birds that had been robbed before, especially where the same nest was used again, which was frequently the case, and a few were uncompleted sets. Two eggs is the usual number laid by these birds, in Arizona at least. The

nests were bulky platforms, composed of sticks of various sizes, with but a slight depression in the centre, and sparingly lined with a few bunches of dried grass. Lieutenant Benson writes me that after the Arkansas King-birds (*Tyrannus verticalis*, Say) began to build he invariably found one of their nests in any tree that contained a Swainson's Hawk's nest. In one case, a pair of these birds had placed their nest directly under, and but 8 or 9 inches from that of the Hawk. A pair of White-rumped Shrikes (*Lanius ludovicianus excubitoroides*) built also immediately below one of these Hawk's nests.

"When not closely looked at, many of the eggs of Swainson's Hawk appear to be unspotted, but on careful examination there are in reality but very few that are immaculate. Out of a series of sixty-nine specimens sent by Lieutenant Benson there are but three unspotted ones. The ground-colour of these eggs when fresh is a very distinct greenish white, which in course of time fades into a dull yellowish white, even if the eggs are not exposed to light. They are more or less heavily spotted and blotched, varying in colour from burnt-umber to tawny olive, and in some of the lighter coloured specimens from a French grey to a drab-grey. Their shape ranges from a short ovate to an oval, and they average about 2.23 by 1.71 inches in length and width."

296. BUTEO ALBICAUDATUS (Vieill.).

(WHITE-TAILED BUZZARD.)

Buteo albicaudatus, *Durnford, Ibis*, 1877, p. 187 (Buenos Ayres); *Döring, Exp. al Rio Negro*, p. 51 (Rio Negro); *Withington, Ibis*, 1888, p. 469 (Lomas de Zamora). **Tachytriorchis albicaudatus**, *Sharpe, Cat. B. i. p.* 162. **Buteo pterocles**, *Scl. et Salv. Nomencl.* p. 119; *Barrows, Auk*, 1884, p. 109 (Gualeguaychú); *White, P. Z. S.* 1882, p. 622 (Buenos Ayres).

Description.—Above greyish black, scapulars and upper wing-coverts ferruginous; rump and tail white, the latter with a broad black subapical band, and with slight narrow transverse slaty bars: beneath, throat black, abdomen white, flanks more or less barred with brown; bill black; feet dirty yellow: whole length 21.0 inches, wing 18.0, tail 8.0. *Female* similar, but rather larger.

Hab. Southern and Central America.

This Buzzard does not breed on the pampas, where I have observed it, but appears there in the spring and autumn, irregularly, when migrating, and in flocks which travel in a loitering, desultory manner. The flocks usually number from thirty or forty to a hundred birds, but sometimes many more. I have seen flocks which must have numbered from one to two thousand birds. When flying the flock is very much scattered, and does not advance in a straight line, but the birds move in wide circles at a great height in the air, so that a person on horseback travelling at a canter can keep directly under them for two or three hours. On the ground one of these large flocks will sometimes occupy an area of half a square league, so widely apart do the birds keep. I have dissected a great many and found nothing but coleopterous insects in their stomachs; and indeed they would not be able to keep in such large companies when travelling if they required a nobler prey.

At the end of one summer a flock numbering about two hundred birds appeared at an estancia near my home, and though very much disturbed they remained for about three months, roosting at night on the plantation trees, and passing the day scattered about the adjacent plain, feeding on grasshoppers and beetles. This flock left when the weather turned cold; but at another estancia a flock appeared later in the season and remained all winter. The birds became so reduced in flesh that after every cold rain or severe frost numbers were found dead under the trees where they roosted; and in that way most of them perished before the return of spring.

297. BUTEO ERYTHRONOTUS (King).

(RED-BACKED BUZZARD.)

Buteo erythronotus, *Sharpe, Cat. B. i. p.* 172; *Scl. et Salv. Nomencl.* p. 119; *Scl. P. Z. S.* 1872, p. 536 (Rio Negro); *Durnford, Ibis*, 1877, p. 38, et 1878, p. 397 (Patagonia); *Salvin, Ibis*, 1880, p. 362 (Salta); *Barrows, Auk*, 1884, p. 109 (Azul); *Withington, Ibis*, 1888, p. 469 (Lomas de Zamora). **Buteo tricolor**, *Burm. La-Plata Reise*, ii. p. 436 (Mendoza and Tucuman).

Description.—Above slaty blue; wing-feathers slaty, with narrow transverse bars of black; upper tail-coverts and tail white, the latter with a broad black subapical band and numerous narrow grey cross bars: beneath white, with slight grey cross bars on the belly; bill black; feet dirty yellow: whole length 25 inches, wing 18.5, tail 10.0. *Female* similar, but back deep chestnut.

Hab. Southern portion of South America.

This is a fine bird—the king of South-American Buzzards. In the adult female the three colours of the plumage are strongly contrasted; the back being rusty rufous, the rest of the upper parts grey, the whole under surface pure white. It is occasionally met with in the northern provinces of the Argentine Republic, but is most common in Patagonia; and it has been said that in that region it takes the place of the nearly allied *Buteo albicaudatus* of Brazil. In habits, however, the two species are as different as it is possible for two raptors

to be; for while the northern bird has a cowardly spirit, is, to some extent, gregarious, and feeds largely on insects, the Patagonian species has the preying habits of the Eagle, and lives exclusively, I believe, or nearly so, on covies and other small mammals. When Captain King first discovered it in 1827, he described it as "a small beautiful Eagle." In Patagonia it is very abundant, and usually seen perched on the summit of a bush, its broad snowy-white bosom conspicuous to the eye at a great distance—one of the most familiar features in the monotonous landscape of that grey country. The English colonists on the Chupat, Durnford says, call it the "white horse," owing to its conspicuous white colour often deceiving them when they are out searching for strayed horses in the hills. It is a wary bird, and when approached has the habit of rising up in widening circles to a vast height in the air. When sailing about in quest of prey it usually maintains a height of fifty or sixty yards above the surface. The stomachs of all the individuals I have examined contained nothing but the remains of covies (*Cavia australis*).

The nest is built on the top of a thorn bush, and is a large structure of sticks, lined with grass, fur, dry dung, and other materials. "The eggs are greyish white in colour, blotched and marked, principally towards the large end, with two shades of umber-brown" (*Gould*).

298. ANTENOR UNICINCTUS (Temm.).

(ONE-BANDED BUZZARD.)

Asturina unicincta, *Burm. La-Plata Reise*, ii. p. 436 (Mendoza). *Urubitinga unicincta*, *ScL et Salv. Nomencl.* p. 119; *Gibson, Ibis*, 1879, p. 411 (Buenos Ayres); *Salvin, Ibis*, 1880, p. 362 (Salta); *Withington, Ibis*, 1888, p. 469 (Lomas de Zamora). *Antenor unicinctus*, *Ridgw. N. A. B.* iii. p. 249 (1874). *Erythrocnema unicincta*, *Sharpe, Cat. B. i.* p. 85.

Description.—Above black, upper wing-coverts chestnut; upper tail-coverts white; tail black, concealed base and tip white; beneath black; thighs deep ferruginous; crissum white: whole length 23·0 inches, wing 14·5, tail 9·5. *Female* similar, but larger.

Hab. North and South America.

This is the Common Buzzard of the Plata region. It differs from the species previously described in its greater length of wing, and in the habit of flying near the ground when in search of prey; resembling in this respect a Harrier, only its flight is slower and more loitering. It prefers an open country, but on the pampas, like all large Hawks, it meets with great persecution from the ever-vigilant, fierce-tempered Spur-winged Lapwing. I once saw one of these Buzzards, while being so persecuted, make a conquest which greatly surprised me. It was sailing over the plain, about twenty feet from the surface, harried by several Lapwings, when suddenly, just as one Lapwing swept downwards past it in the usual way, apparently missing the head of the Hawk with its sharp wing-spurs by a hair's breadth, the Buzzard struck at and seized it in its claws and bore it to the ground. The screams of the captive and its fellows quickly brought to the spot a cloud of two or three hundred Lapwings, all hovering and screaming their loudest. I ran to the spot to aid in the rescue, when seeing me coming the Buzzard rose heavily from the ground, still carrying the Plover, and flew away beyond reach.

299. HETEROSPIZIAS MERIDIONALIS (Lath.).

(BROWN BUZZARD.)

Urubitinga meridionalis, *ScL et Salv. Nomencl.* p. 119; *id. P. Z. S.* 1869, p. 634 (Buenos Ayres); *Salvin, Ibis*, 1880, p. 362 (Salta). *Heterospizias meridionalis*, *Sharpe, Cat. B. i.* p. 160; *Barrows, Auk*, 1884, p. 109 (Entrerios). *Asturina rutilans*, *Burm. La-Plata Reise*, ii. p. 436 (Tucuman).

Description.—Above slaty grey, passing into ferruginous rufous on the head, and blackish on the lower tail-coverts; wing-feathers chestnut, with narrow transverse black bars and long black ends; tail black, with a broad median white band and white tip; beneath clear ferruginous red, with narrow transverse black bars; bill black, yellow at the base; feet yellowish brown: whole length 20·0 inches, wing 16·5, tail 8·3. *Female* similar, but larger.

Hab. South America.

This Buzzard inhabits the northern portion of the Argentine Republic, and is also found in the woods and marshes along the Plata basin, ranging south to Buenos Ayres. The wings are larger and the flight slower than in the last species. The plumage is nearly of a uniform dark brown.

At Concepcion, in Entrerios, Mr. Barrows tells us it is not unfrequently seen in cold weather. In July 1880, during an almost unprecedented rise of the river, it was quite abundant. The stomach of a gorged female examined contained only young grasshoppers.

300. GERANOAËTUS MELANOLEUCUS (Vieill.).

(CHILIAN EAGLE.)

Haliaëtus melanoleucus, *Burm. La-Plata Reise*, ii. p. 435 (Paraná, Tucuman, Pampas).

Geranoaëtus melanoleucus, *Scl. et Salv. Nomencl.* p. 119; *Hudson, P. Z. S.* 1872, p. 536 (Rio Negro); *Durnford, Ibis*, 1877, p. 38, et 1878, p. 397 (Patagonia); *Gibson, Ibis*, 1879, p. 409 (Buenos Ayres); *Barrows, Auk*, 1884, p. 110 (Entrerios and Ventana). **Buteo melanoleucus**, *Sharpe, Cat. B. i.* p. 168.

Description.—Above black, wings grey, with narrow transverse black bars; tail black: beneath, throat grey; breast black, with slight round whitish spots; abdomen white, faintly barred across with grey; bill plumbeous; feet yellow, claws black: whole length 26·0 inches, wing 19·0, tail 10·5. *Female* similar, but larger.

Hab. Whole southern half of South America, and western portion of northern half.

The Grey or Chilian Eagle, like most diurnal birds of prey, undergoes many changes of colour, the plumage at different periods having its brown, black, and grey stages: in the old birds it is a uniform clear grey, and the under surface white. Throughout the Argentine country this is the commonest Eagle, and I found it very abundant in Patagonia. D'Orbigny describes it with his usual prolixity—pardonably so in this case, however, the bird being one of the very few species with which he appears to have become familiar from personal observation. He says that it is a wary bird; pairs for life, the male and female never being found far apart; and that it soars in circles with a flight resembling that of a Vulture, and that the form of its broad blunt wings increases its resemblance to that bird. Cavies and small mammals are its usual prey; and in the autumn and winter, when the Pigeons congregate in large numbers, it follows their movements. During the Pigeon-season, he has counted as many as thirty Eagles in the course of a three leagues' ride; and he has frequently seen an Eagle swoop down into a cloud of Pigeons, and invariably reappear with one struggling in its talons. It is seldom found far from the shores of the sea or of some large river; and on the Atlantic coast, in Patagonia, it soars above the sands at ebb-tide, looking out for stranded fish, carcasses of seals, and other animal food left by the retiring waters, and quarrels with Condors and Vultures over the refuse, even when it is quite putrid. It acts as a weather prognostic, and before a storm is seen to rise in circles to a vast height in the air, uttering piercing screams, which may be heard after it has quite disappeared from sight.

- 65 -

The nest of this species is usually built on the ledge of an inaccessible rock or precipice, but not unfrequently on a tree. Mr. Gibson describes one, which he found on the top of a thorn-tree, as a structure of large sticks three feet in diameter, the hollow cushioned with dry grass. It contained two eggs, dull white, marked with pale reddish blotches.

Mr. Gibson compares its cry to a "wild human laugh," and also writes:—"Its whereabouts may often be detected by an attendant flock of Caranchos (*Polyborus tharus*), particularly in the case of a young bird. As soon as it rises from the ground or from a tree, these begin to persecute it, ascending spirally also, and making dashes at it, while the Eagle only turns its head watchfully from side to side, the mere action being sufficient to avert the threatened collision."

Gay, in his 'Natural History of Chili,' describes the affectionate and amusing habits of an Eagle of this species which he had tamed. It took great delight in playing with his hand, and would seize and pretend to bite one of his fingers, but really with as much tenderness as a playful dog displays when pretending to bite its master. It used also to amuse itself by picking up a pebble in its beak, and with a jerk of its head toss it up in the air, then seize it in its claws when it fell, after which it would repeat the performance.

301. HARPYHALIAËTUS CORONATUS (Vieill.).

(CROWNED HARPY.)

Harpyhaliaëtus coronatus, *Scl. et Salv. Nomencl.* p. 119; *Hudson, P. Z. S.* 1872, p. 536 (Rio Negro); *Sharpe, Cat. B. i.* p. 221.

Description.—Above ashy brown, with a long occipital crest of darker feathers; wings grey with blackish tips; tail black, with a broad white median band and white tip: beneath paler ashy brown, thighs blackish: whole length 33 inches, wing 22·0, tail 13·5. *Female* similar, but larger.

Hab. South America.

I met with this fine Eagle on the Rio Negro, in Patagonia, where d'Orbigny also found it; the entire Argentine Territory comes, however, within its range. Having merely seen it perched on the tall willows fringing the Rio Negro, or soaring in wide circles far up in the sky, I cannot venture to speak of its habits, while the account of them which d'Orbigny built up is not worth quoting, for he does not say how he got his information. One of his statements would, if true, be very important indeed. He says that his attention was drawn to a very curious fact concerning the Crowned Harpy, which was, that this bird preys chiefly on the skunk—an animal, he very truly adds, with so pestilential an odour that even the most carnivorous of mammals are put to flight by it; that it is the only bird of prey that kills the skunk, and that it does so by precipitating itself from a vast height upon its quarry, which it then quickly despatches. It would not matter at all whether the Eagle dropped from a great or a moderate height, for in either case the skunk would receive its enemy with the usual pestilent discharge. D'Orbigny's account is, however, pure conjecture, and though he does not tell us what led him to form such a conclusion, I have no doubt that it was because the Eagle or Eagles he obtained had the skunk-smell on their plumage. Most of the Eagles I shot

- 66 -

in Patagonia, including about a dozen Chilian Eagles, smelt of skunk, the smell being in most cases old and faint. Of two Crowned Harpies obtained, only one smelt of skunk. This only shows that in Patagonia Eagles attack the skunk, which is not strange, considering that it is of a suitable size and conspicuously marked; that it goes about fearlessly in the daytime and is the most abundant animal, the small cavy excepted, in that sterile country. But whether the Eagles *succeed* in their attacks on it is a very different matter. The probability is that when an Eagle, incited by the pangs of hunger, commits so great a mistake as to attack a skunk, the pestilent fluid, which has the same terribly burning and nauseating effects on the lower animals as on man, very quickly makes it abandon the contest. It is certain that pumas make the same mistake as the Eagles do, for in some that are caught the fur smells strongly of skunk. It might be said that the fact that many Eagles smell of skunk serves to show that they do feed on them, for otherwise they would learn by experience to avoid so dangerous an animal, and the smell of a first encounter would soon wear off. I do not think that hungry birds of prey, in a barren country like Patagonia, would learn from one repulse, or even from several, the fruitlessness and danger of such attacks; while the smell is so marvellously persistent that one or two such attacks a year on the part of each Eagle would be enough to account for the smell on so many birds. If skunks could be easily conquered by Eagles, they would not be so numerous or so neglectful of their safety as we find them.

- 67 -

A fine example of this bird was brought alive from the Argentine Republic to England by Mr. E. W. Goodlake in 1863, and lived for several years in the Zoological Society's Gardens.

302. GERANOSPIZIAS CÆRULESCENS (Vieill.).

(GREY CRANE-HAWK.)

Geranospiza cærulescens, *Sci. et Salv. Nomencl.* p. 121; *White, P. Z. S.* 1882, p. 623 (Salta).
Geranospizias cærulescens, *Sharpe, Cat. B. i.* p. 81.

Description.—Above plumbeous, nape and upper tail-coverts slightly mottled with white; wing-feathers black, with a large white spot on the inner webs of the primaries; tail black, with two broad ochraceous white bars and white tip: beneath plumbeous, abdomen and under wing-coverts with irregular white cross bands; bill plumbeous; feet yellow: whole length 16·5 inches, wing 9·5, tail 8·0. *Female* similar, but not so distinctly coloured, and larger.

Hab. South America.

White obtained an example of this species at Campo Colorado, near Oran, and another on the Upper Uruguay.

303. FALCO PEREGRINUS, Linn.

(PEREGRINE FALCON.)

Falco peregrinus, *Sci. et Salv. Nomencl.* p. 121; *Withington, Ibis*, 1888, p. 470. *Falco communis*,
Sharpe, Cat. B. i. p. 376.

Description.—Above plumbeous, lighter on the rump, more or less distinctly barred with blackish; head and cheeks blackish: beneath white, tinged with cinnamomeous, abdomen and thighs sparingly traversed by narrow black cross bands; under surface of wings white, regularly banded with ashy black; bill plumbeous; cere yellow; feet yellow, nails black: whole length 20 inches, wing 14·0, tail 6·7. *Female* similar, but larger.

- 68 -

Hab. Old and New Worlds.

The Peregrine Falcon is found throughout the Argentine Republic, but is nowhere numerous, and is not migratory; nor is it "essentially a duck-hawk," as in India according to Dr. Anderson, for, it preys chiefly on land birds. It is solitary, and each bird possesses a favourite resting-place or *home*, where it spends several hours every day, and also roosts at night. Where there are trees it has its chosen site where it may always be found at noon; but on the open treeless pampas a mound of earth or the bleached skull of a horse or cow serves it for a perch, and here for months the bird may be found every day on its stand. It sits upright and motionless, springs suddenly into the air when taking flight, and flies in a straight line, and with a velocity which few birds can equal. Its appearance always causes great consternation amongst other birds, for even the Spur-winged Lapwing, the spirited persecutor of all other Hawks, flies screaming with terror from it. It prefers attacking moderately large birds, striking them on the wing, after which it stoops to pick them up. While out riding one day, I saw a Peregrine sweep down from a great height and strike a Burrowing-Owl to the earth, the Owl having risen up before me. It then picked it up and flew away with it in its talons.

The Peregrine possesses one very curious habit. When a plover, pigeon, or duck is killed, it eats the skin and flesh of the head and neck, picking the vertebræ clean of the flesh down to the breast-bone, and also eating the eyes, but leaving the body untouched. I have found scores of dead birds with head and neck picked clean in this way; and once I watched for some months a Peregrine which had established itself near my home, where it made havoc among the Pigeons; and I frequently marked the spot to which it carried its prey, and on going to the place always found that the Pigeon's head and neck only had been stripped of flesh. The Burrowing-Owl has an analogous habit, for it invariably rejects the hind quarters

of the toads and frogs which it captures.

At the approach of the warm season the Peregrines are often seen in twos and threes violently pursuing each other at a great height in the air, and uttering shrill piercing screams, which can be heard distinctly after the birds have disappeared from sight.

304. FALCO FUSCO-CÆRULESCENS, Vieill.

(ORANGE-CHESTED HOBBY.)

Falco femoralis, *Burm. La-Plata Reise*, ii. p. 437 (Pampas). **Hypotriorchis femoralis**, *Scl. et Salv. Nomencl.* p. 121; *iid. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Hudson, P. Z. S.* 1872, p. 536 (Rio Negro); *Durnford, Ibis*, 1877, p. 187, (Buenos Ayres), et 1878, p. 398 (Patagonia); *Salvin, Ibis*, 1880, p. 362 (Salta); *Gibson, Ibis*, 1879, p. 412 (Buenos Ayres); *White, P. Z. S.* 1883, p. 41 (Cordova); *Withington, Ibis*, 1888, p. 470 (Lomas de Zamora). **Falco fusco-cærulescens**, *Sharpe, Cat. B.* p. 400.

Description.—Above dull slaty blackish, rump variegated with white; superciliaries lengthened and joined behind on the nape rufous: beneath, throat and breast pale cinnamomeous with black shaft-stripes on the breast; broad band across the belly black, with slight white transverse lines; lower belly and thighs clear cinnamomeous; wings and tail blackish with transverse white bars; bill yellow with black tip; feet orange, claws black: whole length 13·5 inches, wing 10·0, tail 7·0. *Female* similar, but larger.

Hab. Central and South America.

The Orange-chested Hobby is found throughout South and Central America, but the form met with here differs, to some extent, in habits from its representatives of the hotter region. It is a Patagonian bird, the most common Falcon in that country, and is migratory, wintering in the southern and central Argentine provinces. In its winter home it is solitary, and fond of hovering about farm-houses, where it sits on a tree or post and looks out for its prey. Compared with the Peregrine it has a very poor spirit, and I have often watched it give chase to a bird, and just when it seemed about to grasp its prey, give up the pursuit and slink ingloriously away. It never boldly and openly attacks any bird, except of the smallest species, and prefers to perch on an elevation from which it can dart down suddenly and take its prey by surprise.

The nest is a slovenly structure of sticks on a thorny bush or tree. The eggs, which I have not seen, Darwin describes as follows:—"Surface rough with white projecting points; colour nearly uniform dirty wood-brown; general appearance as if it had been rubbed in brown mud."

305. TINNUNCULUS CINNAMOMINUS (Sw.).

(CINNAMOMEOUS KESTREL.)

Falco sparverius, *Burm. La-Plata Reise*, ii. p. 437 (Mendoza, Tucuman); *Barrows, Auk*, 1884, p. 110 (Entrerios). **Tinnunculus sparverius**, *Darwin, Zool. 'Beagle,'* iii. p. 29 (Rio Negro); *Scl. et Salv. Nomencl.* p. 121; *iid. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Hudson, P. Z. S.* 1872, p. 536 (Rio Negro); *Durnford, Ibis*, 1877, p. 39 (Chupat), p. 188 (Buenos Ayres), et 1878, p. 398 (Centr. Patagonia); *Gibson, Ibis*, 1879, p. 412 (Buenos Ayres). **Cerchneis cinnamomina**, *Sharpe, Cat. B.* i. p. 439. **Tinnunculus cinnamominus**, *Withington, Ibis*, 1888, p. 470 (Lomas de Zamora).

Description.—Above cinnamon-red, with irregular black cross bands on the back; head bluish grey; front and sides of head white; nape and stripes on the sides of the neck black; wings bluish grey with black central spots; remiges black, with numerous white cross bars on the inner webs; tail cinnamon-red, with a broad subterminal black band and white tip: beneath white, with buffy tinge and irregular oval black spots: whole length 10·5 inches, wing 7·7, tail 5·0. *Female* similar, but rather larger; upper surface regularly barred across; beneath buffy white with brown shaft-stripes; tail with numerous cross bars.

Hab. South America.

The habits of this little Falcon closely resemble those of *Falco fusco-cærulescens*, and like that bird it is common in Patagonia and migrates north in winter. Many individuals, however, do not migrate, as I found when residing at the Rio Negro, where some pairs remained at the breeding-place all the year. Many pairs are also found resident and breeding in other parts of the Argentine country, but it is common only in Patagonia.

It nests in holes in cliffs and also on trees, and sometimes builds its own nest on the large nest of a Dendrocolaptine bird or of a Parroquet. It lays four eggs, large for the size of the bird, oval in shape, and white in colour, thickly blotched with dull red.

The preying habits of the Little Kestrel are similar to those of the Orange-chested Hobby; it haunts farm-houses and plantations, and spends a great deal of time perched on some elevation watching for its prey, and making sudden dashes to capture it by surprise. But though not bold when seeking its food, it frequently makes violent unprovoked attacks on species very much larger than itself, either from ill-temper or in a frolicsome spirit, which is more probable.

Thus I have seen one drive up a flock of Glossy Ibises and pursue them some distance,

striking and buffeting them with the greatest energy. I saw another pounce down from its perch, where it had been sitting for some time, on a female skunk quietly seated at the entrance of her burrow, with her three half-grown young frolicking around her. I was watching them with intense interest, for they were leaping over their parent's tail, and playing like kittens with it, when the Hawk dashed down, and after striking at them quickly three or four times, as they tumbled pell-mell into their kennel, flew quietly away, apparently well satisfied with its achievement.

306. ELANUS LEUCURUS (Vieill.).

(WHITE-TAILED KITE.)

Elanus leucurus, *Scl. et Salv. Nomencl.* p. 121; *iid. P. Z. S.* 1869, p. 160 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 188 (Buenos Ayres); *White, P. Z. S.* 1882, p. 623 (Buenos Ayres); *Barrows, Auk*, 1884, p. 111 (Entrerios); *Döring, Exp. al Rio Negro*, p. 50 (Pampas); *Sharpe, Cat. B. i.* p. 339; *Withington, Ibis*, 1888, p. 470 (Lomas de Zamora).

Description.—Above grey; lesser wing-coverts and scapulars black; tail white, two central rectrices grey; beneath white; bill black; feet yellow; claws yellow: whole length 14·5 inches, wing 11·0, tail 7·0. *Female* similar, but rather larger.

Hab. Central and South America.

This interesting Hawk is found throughout the Argentine Republic, but is nowhere numerous. It also inhabits Chili, where, Gay says, it is called *Bailarin* (dancer) on account of its aerial performances. It is a handsome bird, with large ruby-red irides, and when seen at a distance its snow-white plumage and buoyant flight give it a striking resemblance to a gull. Its wing-power is indeed marvellous. It delights to soar, like the Martins, during a high wind, and will spend hours in this sport, rising and falling alternately, and at times, seeming to abandon itself to the fury of the gale, is blown away like thistle-down, until, suddenly recovering itself, it shoots back to its original position. Where there are tall poplar trees these birds amuse themselves by perching on the topmost slender twigs, balancing themselves with outspread wings, each bird on a separate tree, until the tree-tops are swept by the wind from under them, when they often remain poised almost motionless in the air, until the twigs return to their feet.

When looking out for prey, this Kite usually maintains a height of sixty or seventy feet above the ground, and in its actions strikingly resembles a fishing gull, frequently remaining poised in the air with body motionless and wings rapidly vibrating for fully half a minute at a stretch, after which it flies on or dashes down upon its prey.

The nest is placed on the topmost twigs of a tall tree, and is round and neatly built of sticks, rather deep, and lined with dry grass. The eggs are eight in number, nearly spherical, the ground-colour creamy white, densely marked with longitudinal blotches or strips of a fine rich red, almost like coagulated blood in hue. There is, however, great variety in the shades of the red, also in the disposition of the markings, these in some eggs being confluent, so that the whole shell is red. The shell is polished and exceedingly fragile, a rare thing in the eggs of a raptor.

An approach to the nest is always greeted by the birds with long distressful cries, and this cry is also muttered in the love-season, when the males often fight and pursue each other in the air. The old and young birds sometimes live together until the following spring.

307. ROSTRHAMUS SOCIABILIS (Vieill.).

(SOCIABLE MARSH-HAWK.)

Rostrhamus sociabilis, *Scl. et Salv. Nomencl.* p. 121; *iid. P. Z. S.* 1869, p. 160 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 188 (Buenos Ayres); *Gibson, Ibis*, 1879, p. 413 (Buenos Ayres); *Withington, Ibis*, 1888, p. 470 (Lomas de Zamora). **Rostrhamus leucopygus**, *Sharpe, Cat. B. i.* p. 328. **Rostrhamus hamatus**, *Burm. La-Plata Reise*, ii. p. 435 (Rio Paraná).

Description.—Blackish slate-colour; head and wing-feathers black; rump white; tail white, with a broad band occupying the apical half, but leaving the tail end greyish; bill orange, apical half black; feet orange-brown, claws black: whole length 17·0 inches, wings 13·0, tail 7·5. *Female* similar, but rather larger.

Hab. South America.

This Hawk in size and manner of flight resembles a Buzzard, but in its habits and the form of its slender and very sharply hooked beak it differs widely from that bird. The name of Sociable Marsh-Hawk, which Azara gave to this species, is very appropriate, for they invariably live in flocks of from twenty to a hundred individuals, and migrate and even breed in company. In Buenos Ayres they appear in September and resort to marshes and streams abounding in large water-snails (*Ampullaria*), on which they feed exclusively. Each bird has a favourite perch or spot of ground to which it carries every snail it captures, and after skilfully extracting the animal with its curiously modified beak, it drops the shell on the mound. When disturbed or persecuted by other birds they utter a peculiar cry, resembling the shrill neighing of a horse. In disposition they are most peaceable, and where they are

abundant all other birds soon discover that they are not as other Hawks are and pay no attention to them. When soaring, which is their favourite pastime, the flight is singularly slow, the bird frequently remaining motionless for long intervals in one place; but the expanded tail is all the time twisted about in the most singular manner, moved from side to side, and turned up until its edge is nearly at a right angle with the plane of the body. These tail-movements appear to enable it to remain stationary in the air without the rapid vibratory wing-motions practised by *Elanus leucurus* and other hovering birds; and I should think that the vertebræ of the tail must have been somewhat modified by such a habit.

Concerning its breeding-habits Mr. Gibson writes:—"In the year 1873 I was so fortunate as to find a breeding colony in one of our largest and deepest swamps. There were probably twenty or thirty nests, placed a few yards apart, in the deepest and most lonely part of the whole 'cañadon.' They were slightly built platforms, supported on the rushes and two or three feet above the water, with the cup-shaped hollow lined with pieces of grass and water-rush. The eggs never exceeded three in a nest; the ground-colour generally bluish white, blotched and clouded very irregularly with dull red-brown, the rufous tint sometimes being replaced with ash-grey."

- 73 -

308. SPIZIAPTERYX CIRCUMCINCTUS (Kaup).

(SPOT-WINGED FALCON.)

Falco circumcinctus, *Scl. Ibis*, 1862, p. 23, pl. ii. **Spizapteryx circumcinctus**, *Scl. et Salv. Nomencl.* p. 122; *White, P. Z. S.* 1882, p. 623 (Catamarca); *Sharpe, Cat. B.* i. p. 371. **Falco punctipennis**, *Burm. J. f. O.* 1860, p. 242. **Hemiiërax circumcinctus**, *Burm. La-Plata Reise*, ii. p. 438.

Description.—Above brown, with black shaft-stripes; head black, with brown stripes and white superciliaries, which join round the nape, forming an ill-defined nuchal band; rump pure white; wings black, with white oval spots on the outer and white bars on the inner webs; tail black, all the lateral rectrices crossed by five or six broad white bars: beneath white, breast regularly striped with narrow black shaft stripes; bill plumbeous, lower mandible yellow, except at the tip; feet greenish, nails black: whole length 11 inches, wing 6·5, tail 5·0. *Female* similar, but rather larger.

Hab. Argentina.

This small Hawk is sometimes met with in the woods of La Plata, near the river; it is rare, but owing to its curious violent flight, with the short blunt wings rapidly beating all the time, it is very conspicuous in the air and well known to the natives, who call it *Rey de los Pajaros* (King of the Birds), and entertain a very high opinion of its courage and strength. I have never seen it taking its prey, and do not believe that it ever attempts to capture anything in the air, its short blunt wings and peculiar manner of flight being unsuited for such a purpose. Probably it captures birds by a sudden dash when they mob it on its perch; and I do not know any raptor more persistently run after and mobbed by small birds. I once watched one for upwards of an hour as it sat on a tree attended by a large flock of Guira Cuckoos, all excitedly screaming and bent on dislodging it from its position. So long as they kept away five or six feet from it the Hawk remained motionless, only hissing and snapping occasionally as a warning; but whenever a Cuckoo ventured a little nearer and into the charmed circle, it would make a sudden rapid dash and buffet the intruder violently back to a proper distance, returning afterwards to its own stand.

- 74 -

309. MILVAGO CHIMANGO (Vieill.).

(CHIMANGO CARRION-HAWK.)

Milvago chimango, *Scl. et Salv. Nomencl.* p. 122; *Durnford, Ibis*, 1877, p. 40 (Chupat), et p. 188 (Buenos Ayres), et 1878, p. 398 (Centr. Patagonia); *Gibson, Ibis*, 1879, p. 420 (Buenos Ayres); *Barrows, Auk*, 1884, p. 111 (Entrerios); *Withington, Ibis*, 1888, p. 470 (Lomas de Zamora). **Ibycter chimango**, *Sharpe, Cat. B.* i. p. 41. **Milvago pezoporos**, *Burm. La-Plata Reise*, ii. p. 434 (La Plata).

Description.—Above reddish brown, with ashy edgings to the feathers; rump greyish white; greater wing-coverts white, with slight brown cross bars; primaries dark brown, externally at their bases freckled with grey; inner webs at their bases white; tail greyish white, with numerous freckles and narrow bands of brownish grey: beneath grey, deeply tinged with rufous on the throat and breast; crissum nearly white; under wing-coverts deep rufous; bill pale yellowish; feet olive: whole length 15·0 inches, wing 11·0, tail 6·5. *Female* similar.

Hab. Southern half of South America.

Azara says of the Carancho (*Polyborus tharus*):—"All methods of subsistence are known to this bird: it pries into, understands, and takes advantage of everything." These words apply better to the Chimango, which has probably the largest bill of fare of any bird, and has grafted on to its own peculiar manner of life the habits of twenty diverse species. By turns it is a falcon, a vulture, an insect-eater, and a vegetable-eater. On the same day you will see one bird in violent hawk-like pursuit of its living prey, with all the instincts of rapine hot within it, and another less ambitious individual engaged in laboriously tearing at an old cast-off shoe, uttering mournful notes the while, but probably more concerned at the tenacity of

the material than at its indigestibility.

A species so cosmopolitan in its tastes might have had a whole volume to itself in England; being only a poor foreigner, it has had no more than a few unfriendly paragraphs bestowed upon it. For it happens to be a member of that South-American subfamily of which even grave naturalists have spoken slightly, calling them vile, cowardly, contemptible birds; and the Chimango is nearly least of them all—a sort of poor relation and hanger on of a family already looked upon as bankrupt and disreputable. Despite this evil reputation, few species are more deserving of careful study; for throughout an extensive portion of South America it is the commonest bird we know; and when we consider how closely connected are the lives of all living creatures by means of their interlacing relations, so that the predominance of any one kind, however innocuous, necessarily causes the modification, or extinction even, of surrounding species, we are better able to appreciate the importance of this despised fowl in the natural polity. Add to this its protean habits, and then, however poor a creature our bird may seem, and deserving of strange-sounding epithets from an ethical point of view, I do not know where the naturalist will find a more interesting one.

- 75 -

The Chimango has not an engaging appearance. In size and figure it much resembles the Hen-harrier, and the plumage is uniformly of a light sandy brown colour; the shanks are slender, claws weak, and beak so slightly hooked that it seems like the merest apology of the Falcon's tearing weapon. It has an easy loitering flight, and when on the wing does not appear to have an object in view, like the Hawk, but wanders and prowls about here and there, and when it spies another bird it flies after him to see if he has food in his eye. When one finds something to eat the others try to deprive him of it, pursuing him with great determination all over the place; if the foremost pursuer flags, a fresh bird takes its place, until the object of so much contention—perhaps after all only a bit of skin or bone—is dropped to the ground, to be instantly snatched up by some bird in the tail of the chase; and he in turn becomes the pursued of all the others. This continues till one grows tired and leaves off watching them without seeing the result. They are loquacious and sociable, frequently congregating in loose companies of thirty or forty individuals, when they spend several hours every day in spirited exercises, soaring about like Martins, performing endless evolutions, and joining in aerial mock battles. When tired of these pastimes they all settle down again, to remain for an hour or so perched on the topmost boughs of trees or other elevations; and at intervals one bird utters a very long leisurely chant, with a falling inflection, followed by a series of short notes, all the other birds joining in chorus and uttering short notes in time with those of their soloist or precentor. The nest is built on trees or rushes in swamps, or on the ground amongst grass and thistles. The eggs are three or four in number, nearly spherical, blotched with deep red on a white or creamy ground; sometimes the whole egg is marbled with red; but there are endless varieties. It is easy to find the nest, and becomes easier when there are young birds, for the parent when out foraging invariably returns to her young uttering long mournful notes, so that one has only to listen and mark the spot where it alights. After visiting a nest I have always found the young birds soon disappear, and as the old birds vanish also I believe that the Chimango removes its young when the nest has been discovered—a rare habit with birds.

- 76 -

Chimangos abound most in settled districts, but a prospect of food will quickly bring numbers together even in the most solitary places. On the desert pampas, where hunters, Indian and European, have a great fancy for burning the dead grass, the moment the smoke of a distant fire is seen there the Chimangos fly to follow the conflagration. They are, at such times, strangely animated, dashing through clouds of smoke, feasting amongst the hot ashes on roasted cavies and other small mammals, and boldly pursuing the scorched fugitives from the flames.

At all times and in all places the Chimango is ever ready to pounce on the weak, the sickly, and the wounded. In other regions of the globe these doomed ones fall into the clutches of the true bird of prey; but the salutary office of executioner is so effectually performed by the Chimango and his congeners where these false Hawks abound, that the true Hawks have a much keener struggle to exist here. This circumstance has possibly served to make them swifter of wing, keener of sight, and bolder in attack than elsewhere. I have seen a Buzzard, which is not considered the bravest of the Hawks, turn quick as lightning on a Cayenne Lapwing, which was pursuing it, and grappling it bear it down to the ground and despatch it in a moment, though a hundred other Lapwings were uttering piercing screams above it. Yet this Plover is a large, powerful, fierce-tempered bird, and armed with sharp spurs on its wings. This is but one of numberless instances I have witnessed of the extreme strength and daring of our Hawks.

When shooting birds to preserve I used to keep an anxious eye on the movements of the Chimangos flying about, for I have had some fine specimens carried off or mutilated by these omnipresent robbers. One winter day I came across a fine *Myiotheretes rufiventris*, a pretty and graceful Tyrant-bird, rather larger than the Common Thrush, with a chocolate and silver-grey plumage. It was rare in that place, and, anxious to secure it, I fired a very long shot, for it was extremely shy. It rose up high in the air and flew off apparently unconcerned. What, then, was my surprise to see a Chimango start off in pursuit of it! Springing on to my horse, I followed, and before going half a mile noticed the Tyrant-bird beginning to show signs of distress. After avoiding several blows aimed by the Chimango, it flew down and plunged into a cardoon bush. There I captured it, and when skinning it to

- 77 -

preserve found that one small shot had lodged in the fleshy portion of the breast. It was a very slight wound, yet the Chimango with its trained sight had noticed something wrong with the bird from the moment it flew off, apparently in its usual free buoyant manner.

On another occasion I was defrauded of a more valuable specimen than the Tyrant-bird. It was on the east coast of Patagonia, when one morning, while seated on an elevation, watching the waves dashing themselves on the shore, I perceived a shining white object tossing about at some distance from land. Successive waves brought it nearer, till at last it was caught up and flung far out on to the shingle, fifty yards from where I sat; and instantly, before the cloud of spray had vanished, a Chimango dashed down upon it. I jumped up and ran down as fast as I could, and found my white object to be a Penguin, apparently just killed by some accident out at sea, and in splendid plumage; but, alas! in that moment the vile Chimango had stripped off and devoured the skin from its head, so that as a specimen it was hopelessly ruined.

As a rule, strong healthy birds despise the Chimango; they feed in his company; his sudden appearance causes no alarm, and they do not take the trouble to persecute him; but when they have eggs or young he is not to be trusted. He is not easily turned from a nest he has once discovered. I have seen him carry off a young Tyrant-bird (*Milvulus tyrannus*), in the face of such an attack from the parent birds that one would have imagined not even an Eagle could have weathered such a tempest. Curiously enough, like one of the boldest of our small Hawks (*Tinnunculus cinnamominus*), they sometimes attack birds so much too strong and big for them that they must know the assault will produce more annoyance than harm. I was once watching a flock of Coots feeding on a grassy bank, when a passing Chimango paused in its flight, and, after hovering over them a few moments, dashed down upon them with such impetuosity that several birds were thrown to the ground by the quick successive blows of its wings. There they lay on their backs, kicking, apparently too much terrified to get up, while the Chimango deliberately eyed them for some moments, then quietly flew away, leaving them to dash into the water and cool their fright. Attacks like these are possibly made in a sportive spirit, for the Milvago is a playful bird, and, as with many other species, bird and mammal, its play always takes the form of attack.

Its inefficient weapons compel it to be more timid than the Hawk, but there are many exceptions, and in every locality individual birds are found distinguished by their temerity. Almost any shepherd can say that his flock is subject to the persecutions of at least one pair of lamb-killing birds of this species. They prowl about the flock, and watch till a small lamb is found sleeping at some distance from its dam, rush upon it, and, clinging to its head, eat away its nose and tongue. The shepherd is then obliged to kill the lamb; but I have seen many lambs that have been permitted to survive the mutilation, and which have grown to strong, healthy sheep, though with greatly disfigured faces. One more instance I will give of the boldness of a bird of which Azara, greatly mistaken, says that it might possibly have courage enough to attack a mouse, though he doubts it. Close to my house, when I was a boy, a pair of these birds had their nest near a narrow path leading through a thicket of giant thistles, and every time I traversed this path the male bird, which, contrary to the rule with birds of prey, is larger and bolder than the female, would rise high above me, then dashing down, strike my horse a violent blow on the forehead with its wings. This action it would repeat till I was out of the path. I thought it very strange the bird never struck *my* head; but I presently discovered that it had an excellent reason for what it did. The gauchos ride by preference on horses never properly tamed, and one neighbour informed me that he was obliged every day to make a circuit of half a mile round the thistles, as the horses he rode became quite unmanageable in the path, they had been so terrified with the attacks of this Chimango.

Where the intelligence of the bird appears to be really at fault is in its habit of attacking a sore-backed horse, tempted thereto by the sight of a raw spot, and apparently not understanding that the flesh it wishes to devour is an inseparable part of the whole animal. Darwin has noticed this curious blunder of the bird; and I have often seen a chafed saddle-horse wildly scouring the plain closely pursued by a hungry Chimango determined to dine on a portion of him.

In the hot season, when marshes and lagoons are drying up, the Chimango is seen associating with Ibises and other waders, standing knee-deep in the water and watching for tadpoles, frogs, and other aquatic prey. He also wades after a very different kind of food. At the bottom of pools, collected on clayey soil after a summer shower, an edible fungus grows of a dull greenish colour and resembling gelatine. He has found out that this fungus is good for food, though I never saw any other creature eating it. In cultivated districts he follows the plough in company with the black-headed gulls, Molothri, Guira cuckoos, and tyrant-birds, and clumsily gleans amongst the fresh-turned mould for worms and larvæ. He also attends the pigs when they are rooting on the plain to share any succulent treasure-trove turned up by their snouts; for he is not a bird that allows dignity to stand between him and his dinner. In the autumn, on damp, sultry days, the red ants, that make small conical mounds on the pampas, are everywhere seen swarming. Rising high in the air they form a little cloud or column, and hang suspended for hours over the same spot. On such days the Milvagos fare sumptuously on little insects, and under each cloud of winged ants several of them are to be seen in company with a few Flycatchers, or other diminutive species, briskly running about to pick up the falling manna, their enjoyment undisturbed by any sense of

incongruity.

Before everything, however, the Chimango is a vulture, and is to be found at every solitary rancho sharing with dogs and poultry the offal and waste meat thrown out on the dust-heap; or, after the flock has gone to pasture, tearing at the eyes and tongue of a dead lamb in the sheepfold. When the hide has been stripped from a dead horse or cow on the plains, the Chimango is always first on the scene. While feeding on a carcass it incessantly utters a soliloquy of the most lamentable notes, as if protesting against the hard necessity of having to put up with such carrion fare—long, querulous cries, resembling the piteous whines of a shivering puppy chained up in a bleak backyard and all its wants neglected, but infinitely more doleful in character. The gauchos have a saying comparing a man who grumbles at good fortune to the Chimango crying on a carcass; an extremely expressive saying to those who have listened to the distressful wailings of the bird over its meat. In winter a carcass attracts a great concourse of the Black-backed Gulls; for with the cold weather these vultures of the sea abandon their breeding-places on the Atlantic shores to wander in search of food over the vast inland pampas. The dead beast is quickly surrounded by a host of them, and the poor Chimango crowded out. One at least, however, is usually to be seen perched on the carcass tearing at the flesh, and at intervals with outstretched neck and ruffled up plumage uttering a succession of its strange wailing cries, reminding one of a public orator mounted on a rostrum and addressing harrowing appeals to a crowd of attentive listeners. When the carcass has been finally abandoned by foxes, armadillos, gulls, and caracaras, the Chimango still clings sorrowfully to it, eking out a miserable existence by tearing at a fringe of gristle and whetting his hungry beak on the bones.

Though an inordinate lover of carrion, a wise instinct has taught it that this aliment is unsuited to the tender stomachs of its fledglings; these it feeds almost exclusively on the young of small birds. In November the Chimangos are seen incessantly beating over the cardoon bushes, after the manner of Hen-harriers; for at this season in the cardoons breeds the *Synallaxis hudsoni*. This bird, sometimes called *Téru-réru del campo* by the natives, is excessively shy and mouse-like in its habits, seldom showing itself, and by means of strong legs and a long, slender, wedge-like body is able to glide swiftly as a snake through and under the grass. In summer one hears its long melancholy trilling call-note from a cardoon bush, but if approached it drops to the ground and vanishes. Under the densest part of the cardoon bush it scoops out a little circular hollow in the soil, and constructs over it a dome of woven grass and thorns, leaving only a very small aperture: it lines the floor with dry horse-dung, and lays five buff-coloured eggs. So admirably is the nest concealed that I have searched every day for it through a whole breeding-season without being rewarded with a single find. Yet they are easily found by the Chimango. In the course of a single day I have examined five or six broods of young Chimangos, and by pressing a finger in their distended crops, made them disgorge their food, and found in every instance that they had been fed on nothing but the young of the *Téru-réru*. I was simply amazed at this wholesale destruction of the young of a species so secret in its nesting-habits; for no eye, even of a Hawk, can pierce through the leafage of a cardoon bush, ending near the surface in an accumulated mass of the dead and decaying portions of the plant. The explanation of the Chimango's success is to be found in the loquacious habit of the fledglings it preys on, a habit common in the young of Dendrocolaptine species. The intervals between the visits of the parent birds with food they spend in conversing together in their high-pitched tones. If a person approaches the solid fabric of the Ovenbird (*Furnarius rufus*), when there are young in it, he will hear shrill laughter-like notes and little choruses, like those uttered by the old birds, only feebler; but in the case of that species no harm can result from the loquacity of the young, since the castle they inhabit is impregnable. Hovering over the cardoons, the Chimango listens for the stridulous laughter of the fledglings, and when he hears it the thorny covering is quickly pierced and the dome broken into.

Facts like this bring before us with startling vividness the struggle for existence, showing what great issues in the life of a species may depend on matters so trivial, seemingly, that to the uninformed mind they appear like the merest dust in the balance, which is not regarded. And how tremendous and pitiless is that searching law of the survival of the fittest in its operations when we see a species like this *Synallaxis*, in the fashioning and perfecting of which nature seems to have exhausted all her art, so exquisitely is it adapted in its structure, coloration, and habits to the one great object of concealment, yet apparently doomed to destruction through this one petty oversight—the irrepressible garrulity of the fledglings in their nest! It is, however, no oversight at all; since the law of natural selection is not prophetic in its action, and only preserves such variations as are beneficial in existing circumstances, without anticipating changes in the conditions. The settlement of the country has, no doubt, caused a great increase of Chimangos, and in some indirect way probably has served to quicken their intelligence; thus a change in the conditions which have moulded this *Synallaxis* brings a danger to it from an unexpected quarter. The situation of the nest exposes it, one would imagine, to attacks from snakes and small mammals, from bird-killing spiders, beetles, and crickets, yet these subtle ground foes have missed it, while the baby-laughter of the little ones in their cradle has called down an unlooked-for destroyer from above. It might be answered that this must be a very numerous species, otherwise the Chimango could not have acquired the habit of finding the nests; that when they become rarer the pursuit will be given over, after which the balance will readjust itself. But in numbers there is safety, especially for a feeble hunted species, unable from its peculiar structure to vary its manner of life. To such, the remark made by Darwin, that "rarity is the

precursor to extinction," applies with peculiar force.

310. POLYBORUS THARUS (Mol.).

(CARANCHO CARRION-HAWK.)

Polyborus vulgaris, *Burm. La-Plata Reise*, ii. p. 434 (La Plata); *Durnford, Ibis*, 1877, p. 40 (Chupat).

Polyborus tharus, *Scl. et Salv. Nomencl.* p. 123; *Durnford, Ibis*, 1877, p. 188 (Buenos Ayres), et 1878, p. 398 (Centr. Patagonia); *Gibson, Ibis*, 1879, p. 415 (Buenos Ayres); *White, P. Z. S.* 1883, p. 41 (Cordova); *Barrows, Auk*, 1884, p. 111 (Entrerios); *Sharpe, Cat. B. i.* p. 31. **Polyborus brasiliensis**, *Darwin, Zool. Beagle*, iii. p. 9.

Description.—Above dark brown with whitish mottlings; head blackish; wings and tail greyish white, with numerous greyish-brown cross bars and blackish tips; beneath dark brown, varied with white; throat and sides of head fulvous white; bill yellow, bluish at the base; cere orange; feet brown; claws black: whole length 20 inches, wing 15.5, tail 9.0. *Female* similar.

Hab. South America.

This bird, which combines the raptorial instincts of the Eagle with the base carrion-feeding propensities of the Vulture, has already had so many biographers that it might seem superfluous to speak again at any great length of it; only it happens to be one of those very versatile species about which there is always something fresh to be said; and, besides, I do not altogether agree with the very ignoble character usually ascribed to it by travellers. It is, however, probable that it varies greatly in disposition and habits in different districts. In Patagonia I was surprised at its dejected appearance and skulking cowardly manner, so unlike the bird I had been accustomed to see on the pampas. I shot several, and they were all in a miserably poor condition and apparently half-starved. It struck me that in that cold sterile country, where prey is scarce, the Carancho is altogether out of place; for it there has to compete with Eagles and Vultures in large numbers; and these, it is almost needless to say, are, in their separate lines, stronger than the composite and less specialized Carancho. In Patagonia he is truly a "miserable bird," with a very frail hold on existence. How different on that illimitable grassy ocean further north, where he is the lord of the feathered race, for Eagles and Vultures, that require mountains and trees to breed and roost on, do not come there to set him aside; there the conditions are suited to him and have served to develop in him a wonderfully bold and savage spirit. When seen perched on a conical ant-hill, standing erect above the tall plummy grass, he has a fine, even a noble, appearance; but when flying he is not handsome, the wings being very bluntly rounded at the extremities and the flight low and ungraceful. The plumage is blackish in the adult, brown in the young. The sides of the head and breast are creamy white, the latter transversely marked with black spots. The crown is adorned with a crest or top-knot. The beak is much larger than in Eagles and Vultures, and of a dull blue colour; the cere and legs are bright yellow.

- 82 -

The species ranges throughout South America, and from Paraguay northwards is called everywhere, I believe, "Caracara." South of Paraguay the Spanish name is "Carancho," possibly a corruption of "Keanché," the Puelche name for the allied *Milvago chimango*, in imitation of its peevish cry. The Indian name for the Carancho in these regions is *Trarú* (from its harsh cry), misspelt *tharú* by Molina.

The Caranchos pair for life, and may therefore be called social birds; they also often live and hunt in families of the parent and young birds until the following spring; and at all times several individuals will readily combine to attack their prey, but they never live or move about in flocks. Each couple has its own home or resting-place, which they will continue to use for an indefinite time, roosting on the same branch and occupying the same nest year after year; while at all times the two birds are seen constantly together and seem very much attached. Azara relates that he once saw a male pounce down on a frog, and carrying it to a tree call his mate to him and make her a present of it. It was not a very magnificent present, but the action seems to show that the bird possesses some commendable qualities which are seldom seen in the raptorial family.

In uninhabited places I have always found the Caranchos just as abundant as in the settled districts; and after a deer has been pulled down by the dogs I have seen as many as seventy or eighty birds congregate to feed on its flesh within half an hour, although not one had been previously visible. D'Orbigny describes the bird as a parasite on man, savage and civilized, following him everywhere to feed on the leavings when he slays wild or domestic animals, and as being scarcely able to exist without him. No doubt the bird does follow man greatly to its advantage, but this is only in very thinly settled and purely pastoral and hunting districts, where a large proportion of the flesh of every animal slain is given to the fowls of the air. Where the population increases the Carancho quickly meets with the fate of all large species which are regarded as prejudicial.

- 83 -

Without doubt it is a carrion-eater, but only, I believe, when it cannot get fresh provisions; for when famished it will eat anything rather than study its dignity and suffer hunger like the nobler Eagle. I have frequently seen one or two or three of them together on the ground under a column of winged ants, eagerly feasting on the falling insects. To eat putrid meat it must be very hungry indeed; it is, however, amazingly fond of freshly-killed flesh, and when a cow is slaughtered at an estancia-house the Carancho quickly appears on the scene to claim his share, and catching up the first thing he can lift he carries it off before the dogs

can deprive him of it. When he has risen to a height of five or six yards in the air he drops the meat from his beak and dexterously catches it in his claws without pausing or swerving in his flight. It is singular that the bird seems quite incapable of lifting anything from the ground with the claws, the beak being invariably used, even when the prey is an animal which it might seem dangerous to lift in this way. I once saw one of these birds swoop down on a rat from a distance of about forty feet, and rise with its struggling and squealing prey to a height of twenty feet, then drop it from its beak and gracefully catch it in its talons. Yet when it pursues and overtakes a bird in the air it invariably uses the claws in the same way as other Hawks. This I have frequently observed, and I give the two following anecdotes to show that even birds which one would imagine to be quite safe from the Carancho are on some occasions attacked by it.

While walking in a waste field near my home one day I came on a Pigeon feeding, and at once recognized it as one which had only begun to fly about a week before; for although a large number of Pigeons were kept, this bird happened to be of the purest unspotted white, and for a long time I had been endeavouring to preserve and increase the pure white individuals, but with very little success, for the Peregrines invariably singled them out for attack. A Carancho was circling about at some distance overhead, and while I stood still to watch and admire my Pigeon it stooped to within twenty yards of the surface and remained hovering over my head. Presently the Pigeon became alarmed and flew away, whereupon the Hawk gave chase—a very vain chase I imagined it would prove. It lasted for about half a minute, the Pigeon rushing wildly round in wide circles, now mounting aloft and now plunging downwards close to the surface, the Carancho hotly following all the time. At length, evidently in great terror, the hunted bird flew down, alighting within a yard and a half of my feet. I stooped to take hold of it, when, becoming frightened at my action, it flew straight up and was seized in the talons of its pursuer close to my face and carried away.

- 84 -

In the next case the bird attacked was the Spur-winged Lapwing, the irreconcilable enemy of the Carancho and its bold and persistent persecutor. The very sight of this Hawk rouses the Lapwings to a frenzy of excitement, and springing aloft they hasten to meet it in mid-air screaming loudly, and continue to harry it until it leaves their ground, after which they return, and, ranged in triplets, perform their triumphal dances, accompanied with loud drumming notes. But if their hated foe alights on the ground, or on some elevation near them, they hover about him, and first one, then another, rushes down with the greatest violence, and gliding near him turns the bend of its wing so that the spur appears almost to graze his head. While one bird is descending, others are rising upwards to renew their charges; and this persecution continues until they drive him away, or become exhausted with their fruitless efforts. The Carancho, however, takes little notice of his tormentors; only when the Plover comes very close, evidently bent on piercing his skull with its sharp weapon, he quickly dodges his head, after which he resumes his indifferent demeanour until the rush of the succeeding bird takes place.

While out riding one day a Carancho flew past me attended by about thirty Lapwings, combined to hunt him from their ground, for it was near the breeding-season, when their jealous irascible temper is most excited. All at once, just as a Lapwing swept close by and then passed on before it, the Hawk quickened its flight in the most wonderful manner and was seen in hot pursuit of its tormentor. The angry hectoring cries of the Lapwings instantly changed to piercing screams of terror, which in a very short time brought a crowd numbering between two and three hundred birds to the rescue. Now, I thought, the hunted bird will escape, for it twisted and turned rapidly about, trying to lose itself amongst its fellows, all hovering in a compact cloud about it and screaming their loudest. But the Carancho was not to be shaken off; he was never more than a yard behind his quarry, and I was near enough to distinguish the piteous screams of the chased Lapwing amidst all the tumult, as of a bird already captive. At the end of about a minute it was seized in the Carancho's talons, and, still violently screaming, borne away. The cloud of Lapwings followed for some distance, but presently they all returned to the fatal spot where the contest had taken place; and for an hour afterwards they continued soaring about in separate bodies, screaming all the time with an unusual note in their voices as of fear or grief, and holding excited conclaves on the ground, too all appearance as greatly disturbed in their minds as an equal number of highly emotional human beings would be in the event of a similar disaster overtaking them.

- 85 -

It is not often, however, that the Carancho ventures singly to attack adult and vigorous birds, except Tinamous; they prey by preference on the young or ailing, on small lambs and pigs left at a distance by their dams; and they also frequently attack and kill old and weakly sheep. Where anything is wrong with bird or beast they are very quick to detect it, and will follow a sportsman to pick up the wounded birds, intelligently keeping at a safe distance themselves. I once shot a Flamingo in the grey stage of plumage and had some trouble to cross the stream, on the opposite side of which the bird, wounded very slightly, was rapidly stalking away. In three or four minutes I was over and found my Flamingo endeavouring to defend itself against the assaults of a Carancho which had marked it for its own, and was striking it on the neck and breast in the most vigorous and determined way, sometimes from above, at other times alighting on the ground before it and springing up to strike like a game-cock. A spot of blood on the plumage of the wounded bird, which had only one wing slightly damaged, had been sufficient to call down the attack; for to the Carancho a spot of blood, a drooping wing, or any irregularity in the gait, quickly tells its tale.

When several of these birds combine they are very bold. A friend told me that while voyaging on the Paraná river a Black-necked Swan flew past him hotly pursued by three Caranchos; and I also witnessed an attack by four birds on a widely different species. I was standing on the bank of a stream on the pampas watching a great concourse of birds of several kinds on the opposite shore, where the carcass of a horse, from which the hide had been stripped, lay at the edge of the water. One or two hundred Hooded Gulls and about a dozen Chimangos were gathered about the carcass, and close to them a very large flock of Glossy Ibises were wading about in the water, while amongst these, standing motionless in the water, was one solitary White Egret. Presently four Caranchos appeared, two adults and two young birds in brown plumage, and alighted on the ground near the carcass. The young birds advanced at once and began tearing at the flesh; while the two old birds stayed where they had alighted, as if disinclined to feed on half-putrid meat. Presently one of them sprung into the air and made a dash at the birds in the water, and instantly all the birds in the place rose into the air screaming loudly, the two young brown Caranchos only remaining on the ground. For a few moments I was in ignorance of the meaning of all this turmoil, when, suddenly, out of the confused black and white cloud of birds the Egret appeared, mounting vertically upwards with vigorous measured strokes. A moment later and first one, then the other, Carancho also emerged from the cloud, evidently pursuing the Egret, and only then the two brown birds sprung into the air and joined in the chase. For some minutes I watched the four birds toiling upwards with a wild zigzag flight, while the Egret, still rising vertically, seemed to leave them hopelessly far behind. But before long they reached and passed it, and each bird as he did so would turn and rush downwards, striking at the Egret with his claws, and while one descended the others were rising, bird following bird with the greatest regularity. In this way they continued toiling upwards until the Egret appeared a mere white speck in the sky, about which the four hateful black spots were still revolving. I had watched them from the first with the greatest excitement, and now began to fear that they would pass from sight and leave me in ignorance of the result; but at length they began to descend, and then it looked as if the Egret had lost all hope, for it was dropping very rapidly, while the four birds were all close to it striking at it every three or four seconds. The descent for the last half of the distance was exceedingly rapid, and the birds would have come down almost at the very spot they started from, which was about forty yards from where I stood, but the Egret was driven aside, and sloping rapidly down struck the earth at a distance of two hundred and fifty yards from the starting point. Scarcely had it touched the ground before the hungry quartette were tearing it with their beaks. They were all equally hungry no doubt, and perhaps the old birds were even hungrier than their young; and I am quite sure that if the flesh of the dead horse had not been so far advanced towards putrefaction they would not have attempted the conquest of the Egret.

- 86 -

I have so frequently seen a pure white bird singled out for attack in this way, that it has always been a great subject of wonder to me how the two common species of snow-white Herons in South America are able to maintain their existence; for their whiteness exceeds that of other white Waterfowl, while, compared with Swans, Storks, and the Wood-Ibis, they are small and feeble. I am sure that if these four Caranchos had attacked a Glossy Ibis they would have found it an easier conquest; yet they singled out the Egret, purely, I believe, on account of its shining white conspicuous plumage.

- 87 -

This wing-contest was a very splendid spectacle, and I was very glad that I had witnessed it, although it ended badly for the poor Egret; but in another case of a combined attack by Caranchos there was nothing to admire except the intelligence displayed by the birds in combining, and much to cause the mind to revolt against the blindly destructive ferocity exhibited by Nature in the instincts of her creatures. This scene was witnessed by a beloved old Gaucho friend of mine, a born naturalist, who related it to me. It was in summer, and he was riding in a narrow bridle-path on a plain covered with a dense growth of giant thistles, nine or ten feet high, when he noticed some distance ahead several Caranchos hovering over one spot; and at once conjectured that some large animal had fallen there, or that a traveller had been thrown from his horse and was lying injured amongst the thistles. On reaching the spot, he found an open space of ground about forty yards in diameter, surrounded by the dense wall of close-growing thistles, and over this place the birds were flying, while several others were stationed near, apparently waiting for something to happen. The attraction was a large male Rhea squatting on the ground, and sheltering with its extended wings a brood of young birds. My friend was not able to count them, but there were not fewer than twenty-five or thirty young birds, small tender things, only a day or so out of the shell. As soon as he rode into the open space of ground, the old Ostrich sprung up, and with lowered head, clattering beak, and broad wings spread out like sails, rushed at him; his horse was greatly terrified, and tried to plunge into the dense mass of thistles, so that he had the greatest difficulty in keeping his seat. Presently the Ostrich left him, and casting his eyes round he was astonished to see that all the young Ostriches were running about, scattered over the ground, while the Caranchos were pursuing, knocking down, and killing them. Meanwhile the old Ostrich was frantically rushing about trying to save them; but the Caranchos, when driven from one bird they were attacking, would merely rise a few yards and drop on the next one a dozen yards off; and as there were about fifteen Caranchos all engaged in the same way, the slaughter was proceeding at a great rate. My friend, who had been vainly struggling to get the better of his horse, was then forced to leave the place, and did not therefore see the end of the tragedy in which he had acted an involuntary part; but before going he saw that at least half the young birds were dead, and that these were all torn and

- 88 -

bleeding on the small of the neck just behind the head, while in some cases the head had been completely wrenched off.

The Gauchos, when snaring Partridges (Tinamous), frequently bribe the Caranchos to assist them. The snarer has a long slender cane with a small noose at the extremity, and when he sights a Partridge he gallops round it in circles until the bird crouches close in the grass; then the circles are narrowed and the pace slackened, while he extends the cane, and lowers it gradually over the bewildered bird until the small noose is dropped over its head and it is caught. Many Partridges are not disposed to sit still to be taken in this open barefaced way; but if the snarer keeps a Carancho hovering about by throwing him an occasional gizzard, the wariest Partridge is so stricken with fear that it will sit still and allow itself to be caught.

In the love-season the male Caranchos are frequently seen fighting; and sometimes, when the battle is carried on at a great height in the air, the combatants are seen clasped together and falling swiftly towards the earth; but in all the contests I have witnessed the birds have not been so blinded with passion as to fall the whole distance before separating. Besides these single combats, in which unpaired or jealous males engage in the love-season, there are at all times occasional dissensions amongst them, the cause of which it would be difficult to determine. Here again, as often in hunting, the birds combine to punish an offender, and in some cases the punishment is death.

Their cry is exceedingly loud and harsh, a short abrupt note, like *cruk*, repeated twice; after which, if the bird is violently agitated, as when wounded or fighting, it throws its head backwards until the crown rests on the back, and rocks it from side to side, accompanying the action with a prolonged piercing cry of great power. This singular gesture of the Carancho, unique among birds, seems to express very forcibly a raging spirit, or, perhaps, rage mingled with despair.

The nest is built in a variety of situations: on trees, where there are any, but on the treeless pampas, where the Carancho is most at home, it is made on the ground, sometimes among the tall grass, while a very favourite site is a small islet or mound of earth rising well out of the water. When a suitable place has been found, the birds will continue to use the same nest for many consecutive years. It is a very large slovenly structure of sticks, mixed with bones, pieces of skin, dry dung, and any portable object the bird may find to increase the bulk of his dwelling. The eggs are three or four, usually the last number, slightly oval, and varying greatly in colour and markings, some having irregular dark red blotches on a cream-coloured ground, while others are entirely of a deep brownish red, with a few black marks and blotches.

Fam. XXXIII. CATHARTIDÆ, OR CONDORS.

- 89 -

The American Vultures, or Condors as it is better to call them, are now universally admitted to be quite distinct from the rest of the Accipitres and to constitute a family apart. They differ from the Falconidæ in having the hind toe inserted at a higher level than the others, and in the nostrils being pervious, owing to the absence of the bony septum, besides in other important characters².

The Cathartidæ are few in number, only some six or seven species being accurately known. Of these, three occur within the limits of the Argentine Republic.

² Cf. Standard Nat. Hist. vol. iv., Birds, p. 266 (Boston, 1885).

311. CATHARTES AURA (Linn.).

(TURKEY-VULTURE.)

Cathartes aura, *Sci. et Salv. Nomencl.* p. 123; *White, P. Z. S.* 1882, p. 624 (Misiones); *Burm. La-Plata Reise*, ii. p. 433 (Mendoza, Catamarca, Tucuman). **Enops aura**, *Sharpe, Cat. B.* i. p. 25. **Rhinogryphus aura**, *Baird, Brew., et Ridgw. N. A. B.* iii. p. 344.

Description.—Plumage black, the feathers above edged more or less with dull brown; head and neck bare, bright red in life: whole length 30·0 inches, wing 21·5, tail 11·5. *Female* similar.

Hab. Temperate and Tropical America, and south to Chili and the Falkland Islands.

In Argentina the Turkey-Vulture appears only to occur in the northern and western provinces. Dr. Burmeister noticed it occasionally in Mendoza, Catamarca, and Tucuman. In Misiones, White found it abundant at Concepcion. I met with it in Patagonia, but it is by no means common there, and is only seen singly or in pairs.

312. CATHARTES ATRATUS (Bartram).

(BLACK VULTURE.)

Cathartes foetans, *Burm. La-Plata, Reise*, ii. p. 433 (Mendoza, Tucuman). **Cathartes atratus**, *Darwin, Zool. Beagle*, iii. p. 7 (Rio Negro); *Scl. et Salv. Nomencl.* p. 123; *Sclater, P. Z. S.* 1872, p. 536 (Rio Negro); *Barrows, Auk*, 1884, p. 113 (Pampas). **Catharista atrata**, *Baird, Brew., et Ridgw. N. A. B.* iii. p. 351.

Description.—Plumage black; head bare, black: whole length 25·0 inches, wing 17·5, tail 8·5. *Female* similar.

Hab. Eastern U.S., and Central and Southern America to Chili and the Rio Negro of Patagonia. - 90 -

According to Dr. Burmeister the Black Vulture is found throughout the Argentine Pampas, but is commoner in the east and north. It is known as the "*Gallinazo*" at Mendoza, and "*Cuervo*" in Tucuman. Mr. Barrows tells us that he did not see it during his residence at Concepcion, but was told of its former abundance in times of drought, when dead sheep were numerous. It was, however, met with by him in small numbers during his excursion through the Sierras of the Pampas south of Buenos Ayres.

On the Rio Negro of Patagonia I found these Vultures abundant, especially near the settlement of El Carmen, where, attracted by the refuse of the cattle-slaughtering establishments, they congregated in immense numbers, and were sometimes seen crowded together in thousands on the trees, where they roosted. Darwin observed them at the same place, and has described their soaring habits at considerable length.

The following account of the nesting-habits of this species is given by Mr. John J. Dalglish (*Proc. Roy. Phys. Soc. Edinb.* vi. p. 237):—"The eggs seldom, if ever, exceed two in number, and are usually laid in a hollow tree or on the ground. Their average weight is about a pound. They are slightly larger than those of the Turkey-Buzzard, although the latter is a bigger bird. The ground-colour is of a yellowish white, with blotches of dark reddish brown, and smaller markings of a lilac shade. These markings are generally more numerous at the larger end."

313. SARCORHAMPHUS GRYPHUS (Linn.).

(GREAT CONDOR.)

Sarcorhamphus gryphus, *Darwin, Zool. Beagle*, iii. p. 1 (Rio Negro); *Scl. et Salv. Nomencl.* p. 123; *Burm. La-Plata Reise*, ii. p. 433 (Cordova); *Durnford, Ibis*, 1877, p. 40 (Chupat), et 1878, p. 398 (Central Patagonia).

Description.—General plumage glossy black; greater wing-coverts margined with ashy; neck-ruff white; head, neck, and centre of chest bare; head, with a large caruncle, black; throat wattled; chest with a pendent wattle: whole length 38·0 inches, wing 29·0, tail 14·0. *Female* similar, but without the wattles on the head and neck.

Hab. Andes of South America, and adjacent ranges in La Plata.

Dr. Burmeister tells us that he has seen the Condor in the Sierras of Cordova and Aconquija, though it is more prevalent in the districts of the Western Cordillera. - 91 -

In the territory of Chupat, Durnford met with it at Ninfas Point in November, and tells us that when the colonists are hunting in the neighbourhood of the sea-coast the Condor is the first of the bird-scavengers to make its appearance after game has been killed.

During his subsequent excursion to the Sengel river in the interior, the Condor was commonly observed throughout the journey wherever the rocks were high and steep. Several pairs were noticed nesting on Nov. 16th, but the nests could not be reached.

My own experience of the Condor is restricted in seeing one individual, flying above the sea-shore, south of the Rio Negro.

Order VIII. STEGANOPODES.

Fam. XXXIV. PHALACROCORACIDÆ, OR CORMORANTS.

The only family of the Steganopodes that can at present be inserted in the Argentine list is that of the Cormorants, though doubtless other forms of this Order (*Sula*, *Phaethon*, and *Fregata*) will be hereafter found to occur on the coast with more or less frequency.

One Cormorant only has yet been positively determined as occurring within the Argentina area.

314. PHALACROCORAX BRASILIANUS (Gm.).

(BRAZILIAN CORMORANT.)

Phalacrocorax brasilianus, *Scl. et Salv. Nomencl.* p. 124; *iid. P. Z. S.* 1868, p. 146 (Buenos Ayres);

Durnford, Ibis, 1877, p. 188 (Buenos Ayres), et 1878, p. 399 (Patagonia); *White, P. Z. S.* 1882, p. 624 (Buenos Ayres); *Barrows, Auk*, 1884, p. 270 (Entrerios). ***Haliaeetus brasiliensis***, *Burm. Syst. Ueb.* iii. p. 460; *id. La-Plata Reise*, ii. p. 520 (Rio Paraná).

Description.—Black; feathers edged with metallic green; bill and naked skin of the face yellow: whole length 30·0 inches, wing 12·0, tail 6·0. *Female* similar. *Young* brown; chin and cheeks whitish; neck greyish, with the tips of the feathers black; breast white, with blackish-brown mottlings; belly black.

Hab. Sea-coasts and inland waters of Central and South America.

This appears to be the only Cormorant met with on the coasts and inland waters of South America north of Buenos Ayres; but two other species are found in Southern Chili and Patagonia, which may probably likewise occur in the southern provinces of the Republic³.

Azara tells us that this Cormorant is not uncommon in Paraguay, and Mr. Barrows found it an "abundant resident" at Concepcion in Entrerios.

In the vicinity of Buenos Ayres several well-known authorities have met with it, and Durnford found it common and resident in Chupat.

The name of Brazilian Cormorant, which naturalists have bestowed on this species, is certainly inappropriate and misleading, since the bird is very abundant in La Plata, where the native name for it is *Viguá*; and it is also very common in the Patagonian rivers. It is always seen swimming, sinking its heavy body lower and lower down in the water when approached, until only the slanting snake-like head and neck are visible; or else sitting on the bank, or on a dead projecting branch, erect, and with raised beak, and never moving from its statuesque attitude until forced to fly. It always rises reluctantly and with great labour, and has a straight rapid flight, the wings beating incessantly. By day it is a silent bird, but when many individuals congregate to roost on the branches of a dead tree overhanging the water they keep up a concert of deep, harsh, powerful notes all night long, which would cause any person not acquainted with their language to imagine that numerous pigs or peccaries were moving about with incessant gruntings in his neighbourhood.

³ Namely, *P. imperialis*, King, and *P. albiventris* (Lesson). See *Zool. Chall., Birds*, p. 121. It was probably one of these two species that Durnford found nesting on Tombo Point, south of Chupat (*cf. Ibis*, 1878, p. 399).

Order IX. HERODIONES.

Fam. XXXV. ARDEIDÆ, OR HERONS.

About thirty different species of the fish-eating family Ardeidæ occur within the limits of the Neotropical Region. Of these, eight or nine are found in greater or less abundance in the provinces of the Argentine Republic. Five of these species are widely distributed in North and South America; the others are restricted to the southern portions of the New World.

315. ARDEA COCOI, Linn.

(COCOI HERON.)

Ardea cocoi, *Burm. La-Plata Reise*, ii. p. 508 (Paraná, Tucuman, Cordova); *Scl. et Salv. Nomencl.* p. 125; *Hudson, P. Z. S.* 1875, p. 625 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 189 (Buenos Ayres), et 1878, p. 399 (Patagonia); *Gibson, Ibis*, 1880, p. 158 (Buenos Ayres); *White, P. Z. S.* 1883, p. 41 (Cordova); *Barrows, Auk*, 1884, p. 271 (Entrerios).

Description.—Above grey; head above, wings, and tail plumbeous black; beneath white, neck and sides of belly striped with black: whole length 36·0 inches, wing 18·0, tail 7·0. *Female* similar.

Hab. North and South America.

In size, form, and colour the Cocoi closely resembles the Common Heron of Europe; in flight, language, and feeding-habits the two species are identical, albeit inhabiting regions so widely separated. In the southern part of South America it is not seen associating with its fellows, nor does it breed in heronries; but this may be owing to the circumstance that in the temperature countries it is very thinly distributed, and it is highly probable, I think, that in the hotter regions, where it is more abundant, its habits may not appear so unsocial. Though they are always seen fishing singly, they pair for life, and male and female are never found far apart, but haunt the same stream or marsh all the year round. Azara says that in Paraguay, where it is very scarce, it goes in pairs and breeds on trees. On the pampas it makes its solitary nest amongst the rushes, and lays three blue eggs.

The following general remarks on the Heron apply chiefly to the *Ardea cocoi*, and to some extent also to other species of the Heron family.

I have observed Herons a great deal, and think that there is much to be said in support of Buffon's opinion that they are wretched, indigent birds, condemned by the imperfection of their organs for a perpetual struggle with misery and want.

Much as the different species vary in size, from the *Ardea cocoi* to the diminutive Variegated Heron of Azara (*Ardetta involucris*), no bigger than a Snipe, there is yet much sameness in their conformation, language, flight, nesting and other habits. They possess a snake-like head and neck, and a sharp taper beak, with which they transfix their prey as with a dart—also the serrate claw, about which so much has been said, and which has been regarded as an instance of pure adaptation. A curious circumstance has come under my observation regarding Herons. Birds in poor condition are very much infested with vermin; whether the vermin are the cause or effect of the poor condition, I do not know; but such is the fact. Now in this region (the Argentine Republic) Herons are generally very poor, a good-conditioned bird being a very rare exception; a majority of individuals are much emaciated and infested with intestinal worms; yet I have never found a bird infested with lice, though the Heron would seem a fit subject for them, and in the course of my rambles I have picked up many individuals apparently perishing from inanition. I do not wish to insinuate a belief that this immunity from vermin is due to the pectinated claw; for though the bird does scratch and clean itself with the claw, it could never rid the entire plumage from vermin by this organ, which is as ill adapted for such a purpose as for "giving a firmer hold on its slippery prey."

- 94 -

The Spoonbill has also the serration, and is, unlike the Heron, an active vigorous bird and usually fat; yet it is much troubled with parasites, and I have found birds too weak to fly and literally swarming with them.

I merely wish to call the attention of ornithologists to the fact that in the region where I have observed Herons they are exempt in a remarkable degree from external parasites.

Much has also been said about certain patches of dense, clammy, yellowish down under the loose plumage of Herons. These curious appendages may be just as useless to the bird as the tuft of hair on its breast is to the Turkey-cock; but there are more probabilities the other way, and it may yet be discovered that they are very necessary to its well-being. Perhaps these clammy feathers contain a secretion fatal to the vermin by which birds of sedentary habits are so much afflicted, and from which Herons appear to be so strangely free. They may even be the seat of that mysterious phosphorescent light which some one has affirmed emanates from the Heron's breast when it fishes in the dark, and which serves to attract the fish, or to render them visible to the bird. Naturalists have, I believe, dismissed the subject of this light as a mere fable without any foundation of fact; but real facts regarding habits of animals have not unfrequently been so treated. Mr. Bartlett's interesting observations on the Flamingoes in the Society's Gardens show that the ancient story of the Pelican feeding its young on its own blood is perhaps only a slightly embellished account of a common habit of the bird.

I have not observed Herons fishing by night very closely, but there is one fact which inclines me to believe it probable that some species might possess the light-emitting power in question. I am convinced that the *Ardea cocoi* sees as well by day as other diurnal species; the streams on the level pampas are so muddy that a fish two inches below the surface is invisible to the human eye, yet in these thick waters the Herons fish by night and by day. If the eye is adapted to see well with the bright sun shining, how can it see at night and in such unfavourable circumstances without some such extraneous aid to vision as the attributed luminosity?

- 95 -

Hérons, of all birds, have the slowest flight; but though incapable of progressing rapidly when flying horizontally, when pursued by a Hawk the Heron performs with marvellous ease and grace an aerial feat unequalled by any other bird, namely, that of rising vertically to an amazing height in the air. The swift vertical flight with which the pursued ascends until it becomes a mere speck in the blue zenith, the hurried zigzag flight of the pursuer, rising every minute above its prey, only to be left below again by a single flap of the Heron's wings, forms a sight of such grace, beauty, and power, as to fill the mind of the spectator with delight and astonishment.

When the enemy comes to close quarters, the Heron instinctively throws itself belly up to repel the assault with its long, crooked, cutting claws. Raptorial species possess a similar habit; and the analogous correlation of habit and structure in genera so widely separated is very curious. The Falcon uses its feet to strike, lacerate, and grasp its prey; the Heron to anchor itself firmly to its perch; but for weapons of defence they are equally well adapted, and are employed in precisely the same manner. The Heron, with its great length of neck and legs, its lean unballasted body, large wings, and superabundance of plumage, is the least suited of birds to perch high; yet the structure of the feet renders it perfectly safe for the bird to do so. Thus the Heron is enabled to sit on a smooth enamelled rush or on the summit of a tree, and doze securely in a wind that, were its feet formed like those of other Waders, would blow it away like a bundle of dead feathers.

Another characteristic of Herons is that they carry the neck, when flying, folded in the form of the letter S. At other times the bird also carries the neck this way; and it is, indeed, in all long-necked species the figure the neck assumes when the bird reposes or is in the act of watching something below it; and the Heron's life is almost a perpetual watch. Apropos of this manner of carrying the neck, so natural to the bird, is it not the cause of the extreme

wariness observable in Herons? Herons are, I think, everywhere of a shy disposition; with us they are the wildest of water-fowl, yet there is no reason for their being so, since they are never persecuted.

Birds ever fly reluctantly from danger; and all species possessing the advantage of a long neck, such as the Swan, Flamingo, Stork, Spoonbill, &c., will continue with their necks stretched to their utmost capacity watching an intruder for an hour at a time rather than fly away. But in the Herons it must be only by a great effort that the neck can be wholly unbent; for even if the neck cut out from a dead bird be forcibly straightened and then released, it flies back like a piece of india-rubber to its original shape. Therefore the effort to straighten the neck, invariably the first expression of alarm and curiosity, must be a painful one; and to keep it for any length of time in that position is probably as insupportable to the bird as to keep the arm straightened vertically would be to a man. Thus the Heron flies at the first sight of an intruder, whilst the persecuted Duck, Swan, or other fowl continues motionless, watching with outstretched neck, participating in the alarm certainly, but not enduring actual physical pain.

- 96 -

Doubtless in many cases habits react upon and modify the structure of parts; and in this instance the modified structure has apparently reacted on and modified the habits. In seeking for and taking food, the body is required to perform certain definite motions and assume repeatedly the same attitudes; this is most frequently the case in birds of aquatic habits. A facility for assuming at all times, and an involuntary falling into, these peculiar attitudes and gestures appears to become hereditary; and the species in which they are the most noticeable seem incapable of throwing the habit or manner off, even when placed in situations where it is useless or even detrimental. *Tringæ* rapidly peck and probe the mud as they advance; Plovers peck and run, peck and run again. Now I have noticed scores of times that these birds cannot possibly lay aside this habit of pecking as they advance; for even a wounded Plover running from his pursuer over dry barren ground goes through the form of eating by pausing for a moment every yard or so, pecking the ground, then running on again.

The Paraguay Snipe, and probably other true Snipes, possesses the singular habit of striking its beak on the ground when taking flight. In this instance has not the probing motion, performed instinctively as the bird moves, been utilized to assist it in rising?

Grebes on land walk erect like Penguins and have a slow awkward gait; and whenever they wish to accelerate their progress they throw themselves forward on the breast and strike out the feet as in swimming.

The Glossy Ibis feeds in shallow water, thrusting its great sickle beak into the weeds at the bottom at every step. When walking on land it observes these motions, and seems incapable of progressing without plunging its beak downwards into imaginary water at every stride.

The Spoonbill wades up to its knees and advances with beak always immersed, and swaying itself from side to side, so that at each lateral movement of the body the beak describes a great semicircle in the water; a flock of these birds feeding reminds one of a line of mowers mowing grass. On dry ground the Spoonbill seems unable to walk directly forward like other birds, but stoops, keeping the body in a horizontal position, and, turning from side to side, sweeps the air with its beak, as if still feeding in the water.

- 97 -

In the foregoing instances (and I could greatly multiply them), in which certain gestures and movements accompany progressive motion, it is difficult to see how the structure can be in any way modified by them; but the preying attitude of the Heron, the waiting motionless in perpetual readiness to strike, has doubtless given the neck its very peculiar form.

Two interesting traits of the Heron (and they have a necessary connexion) are its tireless watchfulness and its insatiable voracity; for these characters have not, I think, been exaggerated even by the most sensational of ornithologists.

In birds of other genera, repletion is invariably followed by a period of listless inactivity during which no food is taken or required. But the Heron digests his food so rapidly that, however much he devours, he is always ready to gorge again; consequently he is not benefited by what he eats, and appears in the same state of semi-starvation when food is abundant as in times of scarcity. An old naturalist has suggested, as a reason for this, that the Heron, from its peculiar manner of taking its prey, requires fair weather to fish—that during spells of bad weather, when it is compelled to suffer the pangs of famine inactive, it contracts a meagre consumptive habit of body, which subsequent plenty cannot remove. A pretty theory, but it will not hold water; for in this region spells of bad weather are brief and infrequent; moreover, all other species that feed at the same table with the Heron, from the little flitting Kingfisher to the towering Flamingo, become excessively fat at certain seasons, and are at all times so healthy and vigorous that, compared with them, the Heron is the mere ghost of a bird. In no extraneous circumstances, but in the organization of the bird itself, must be sought the cause of its anomalous condition; it does not appear to possess the fat-elaborating power, for at no season is any fat found on its dry starved flesh; consequently there is no provision for a rainy day, and the misery of the bird (if it is miserable) consists in its perpetual, never-satisfied craving for food.

316. ARDEA EGRETTA (Gm.).

(WHITE EGRET.)

Ardea egretta, *Scl. et Salv. Nomencl.* p. 125; *Durnford, Ibis*, 1877, p. 189 (Buenos Ayres), et 1878, p. 399 (Centr. Patagonia); *Gibson, Ibis*, 1880, p. 156 (Buenos Ayres); *White, P. Z. S.* 1882, p. 624 (Salta); *Barrows, Auk*, 1884, p. 271 (Entrerios, Pampas). *Ardea leuce*, *Burm. Syst. Ueb.* iii. p. 416; *id. La-Plata Reise*, ii. p. 509. *Herodias egretta*, *Baird, Brew., et Ridgw. Water-B. N. A.* i. p. 23.

Description.—White above and beneath; bill yellow; legs black; head not crested; side-plumes lengthened and decomposed: whole length 35·0 inches, wing 15·0, tail 6·0. *Female* similar, but rather smaller.

Hab. North and South America.

The White Egret inhabits America from Nova Scotia to Patagonia, and is everywhere common, so that its breeding and other habits are very well known. On the pampas, owing to the absence of forests, its nesting-habits have been modified, for there it makes its nest amongst the reeds; as do also other species which elsewhere in America, North and South, build on trees. The following interesting account of a heronry on the pampas is from a paper by Mr. Gibson:—

“In November of 1873 I found a large breeding-colony of *Ardea egretta*, *A. candidissima*, and *Nycticorax obscurus* in the heart of a lonely swamp. The rushes were thick, but had been broken down by the birds in a patch some fifty yards in diameter. There were from 300 to 400 nests, as well as I could judge; of these three fourths were of *A. egretta*, and the remainder, with the exception of two or three dozen of *N. obscurus*, belonged to *A. candidissima*. Those of the first-mentioned species were slight platforms, placed on the tops of broken rushes, at a height of from two to three feet above the water, and barely a yard apart.

“The nests of *A. candidissima* were built up from the water to the height of a foot or a foot and a half, with a hollow on the top for the eggs; they were very compactly put together, of small dry twigs of a water-plant. A good many were distributed amongst those of *A. egretta*; but the majority were close together, at one side of the colony, where the reeds were taller and less broken.

“The nests of *N. obscurus* much resembled the latter in construction and material; but very few were interspersed amongst those of the other two species, being retired to the side opposite *A. candidissima*, on the borders of some channels of clear water; there they were placed amongst the high reeds, and a few yards apart from each other.

“The larger Egrets remained standing on their nests till I was within twenty yards of them, and alighted again when I had passed. In this position they looked much larger than when flying. The smaller Egrets first flew up onto the reeds above the nests, and then immediately took to flight, not returning; while *N. obscurus* rose and sailed away, uttering a deep *squawk, squawk*, long before one came near the nest.

“At one side of the colony a nest of *Ciconia maguari*, with two full-grown young, seemed like the reigning house of the place.

“It certainly was one of the finest ornithological sights I ever saw: all around a wilderness of dark green rushes, rising above my head as I sat on horseback; the cloud of graceful snow-white birds perched everywhere, or reflected in the water as they flew to and fro overhead; and the hundreds of blue eggs exposed to the bright sunlight.

“*A. egretta* and *A. candidissima* lay four eggs each, though the former rarely hatches out more than three. *N. obscurus* lays and hatches out three. The eggs of all three species are of the same shade of light blue.”

317. ARDEA CANDIDISSIMA, Gm.

(SNOWY EGRET.)

Ardea candidissima, *Scl. et Salv. Nomencl.* p. 125; *Durnford, Ibis*, 1877, p. 189 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 158 (Buenos Ayres); *Barrows, Auk*, 1884, p. 271 (Entrerios). *Garzetta candidissima*, *Baird, Brew., et Ridgw. Water-B. N. A.* i. p. 28. *Ardea nivea*, *Burm. La-Plata Reise*, ii. p. 509.

Description.—White above and beneath; adult with a long occipital crest of decomposed feathers and dorsal plumes lengthened; lores and toes yellow; bill black, yellow at base; legs black, behind yellowish at the lower part: whole length 24·0 inches, wing 9·5, tail 4·0. *Female* similar.

Hab. North and South America.

The Snowy Egret is common on the pampas, and throughout all the warm portions of North and South America; but does not range so far south as *Ardea egretta*. It is a very pretty bird in its dazzling white plumage, and is more active and social in its habits than most Herons, being usually seen in small flocks, and often associates with Ibises and other aquatic species. An account of its breeding-habits has already been given.

318. ARDEA CÆRULEA, Linn.

(BLUE HERON.)

Ardea cærulea, *Burm. La-Plata Reise*, ii. p. 509. *Florida cærulea*, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 43.

Description.—Dark bluish plumbeous; head and neck purplish chestnut; bill blue, blackish at the end; feet black: whole length 20·0 inches, wing 9·0, tail 3·6. *Female* similar.

- 100 -

Hab. North and South America.

This well-known North-American Heron extends far to the south. Natterer obtained examples at several places in the province of Sao Paulo, Brazil. Dr. Burmeister tells us that he met with it on the Rio Negro, and also near Mercedes in the Argentine Republic.

319. ARDEA SIBILATRIX, Temm.

(WHISTLING HERON.)

Ardea sibilatrix, *Temm. Pl. Col.* 271; *Sci. et Salv. Nomencl.* p. 125; *iid. P. Z. S.* 1869, p. 634 (Buenos Ayres); *White, P. Z. S.* 1882, p. 624 (Salta); *Barrows, Auk*, 1884, p. 271 (Entrerios).

Description.—Above grey; cap, occipital crest, and wing-feathers greyish black; large patch behind the eye rufous; upper wing-coverts rufous, striped with grey: beneath white, breast tinged with yellowish; bill reddish, tip black; feet black: whole length 22·0 inches, wing 11·5, tail 4·5, tarsus 3·4. *Female* similar.

Hab. South America.

This is a beautiful bird, with plumage as soft as down to the touch. Its colours are clear blue-grey and pale yellow, the under surface being nearly white. In some specimens that I have obtained the rump and tail-coverts had a pure primrose hue. There is a chestnut mark on the side of the head; the eye is white, and the legs dark green in life.

Azara named this Heron "*Flauta del Sol*" (flute of the sun), a translation of the Indian term *Curahí-remimbí*, derived from the popular belief that its whistling notes, which have a melodious and melancholy sound, prophesy changes in the weather.

It comes as far south as Buenos Ayres, but is only a summer visitor there, and very scarce. Having seen but little of it myself, I can only repeat Azara's words concerning it. He says it is common in Paraguay, going in pairs or families, and perches and roosts on trees, and when flying flaps its wings more rapidly than other Herons. It makes its nest on a tree, and lays two clear blue eggs.

On the Lower Uruguay, Mr. Barrows likewise found this species "not common." It was only seen a few times in November. "Though most resembling the Night-Heron they were active by day, and when disturbed flew rapidly away from the streams and swamps towards the dry woods and hills."

320. BUTORIDES CYANURUS (Vieill.).

(LITTLE BLUE HERON.)

Butorides cyanurus, *Sci. et Salv. Nomencl.* p. 125; *iid. P. Z. S.* 1868, p. 145 (Buenos Ayres); *Durnford, Ibis*, 1878, p. 62 (Buenos Ayres); *Barrows, Auk*, 1884, p. 271 (Entrerios). *Butorides striata*, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 50.

Description.—Glaucous grey; beneath ashy; crown crested, black, with greenish gloss; neck beneath with a band of ferruginous spots, more or less mixed with black; wings greenish cinereous; wing-coverts edged with whitish; bill dusky green, feet ashy yellowish: whole length 14·0 inches, wing 6·5, tail 2·5. *Female* similar.

Hab. South America.

The Little Blue Heron, though widely distributed, is not anywhere a common bird. I have always seen them singly, for it loves a hermit-life, and the feeding-ground it prefers is a spot on the borders of a marshy stream shut in and overshadowed on all sides by trees and tall rushes. There the bird sits silent and solitary on a projecting root or dead branch; or stands motionless and knee-deep in the water, intent on the small fry it feeds on. For whole months it will be found every day in the same place. When intruded on in its haunt it erects the feathers of its head and neck, looking strangely alarmed or angry, and flies away uttering a powerful harsh grating cry.

Its nesting-habits I do not know; but Mr. Barrows says that it undoubtedly breeds near Concepcion on the Lower Uruguay, where it is abundant in spring and summer.

- 101 -

321. ARDETTA INVOLUCRIS (Vieill.).

(VARIEGATED HERON.)



ARDETTA INVOLUCRIS.

Ardetta involucris, *Sci. et Salv. Nomencl.* p. 125; *id. P. Z. S.* 1869, p. 634; *Hudson, P. Z. S.* 1875, p. 624 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 189, et 1878, p. 62 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 159 (Buenos Ayres); *Barrows, Auk*, 1884, p. 271 (Entrerios).

Description.—Above pale fulvous; narrow stripe on the nape black; front, stripe on the back of the neck, bend of wing, and outer secondaries chestnut-red; back striped with black; wing-feathers dark cinereous with red tips: beneath paler, nearly white on the belly; neck, breast, and flanks with brown stripes, darker in the centres; bill yellow; feet brown: whole length 13·0 inches, wing 5·0, tail 1·5.

Hab. Paraguay and Argentina.

The Variegated Heron is the least of the family to which it belongs, its body being no bigger than that of the Common Snipe; but in structure it is like other Herons, except that its legs are a trifle shorter in proportion to its size and its wings very much shorter than in other species. The under plumage is dull yellow in colour, while all the other parts are variegated with marks of fuscous and various shades of brown and yellow. The body is extremely slim, and the lower portion of the neck covered with thick plumage, giving that part a deceptively massive appearance. The perching faculty, possessed in so eminent a degree by all Herons, probably attains its greatest perfection in this species, and is combined with locomotion in a unique and wonderful manner. It inhabits beds of rushes growing in rather deep water; very seldom, and probably only accidentally, does it visit the shore, and only when driven up does it rise above the rushes; for its flight, unlike that of its congeners, is extremely feeble. The rushes it lives amongst rise, smooth as a polished pipe-stem, vertically from water too deep for the bird to wade in; yet it goes up to the summit and down to the surface, moving freely and briskly about amongst them, or runs in a straight line through them almost as rapidly as a Plover can run over the bare level ground. Unless I myself had been a witness of this feat, I could scarcely have credited it; for how does it manage to grasp the smooth vertical stems quickly and firmly enough to progress so rapidly without ever slipping down through them?

The Variegated Heron is a silent solitary bird, found everywhere in the marshes along the Plata, as also in the reed-beds scattered over the pampas. It breeds amongst the rushes, and lays from three to five spherical eggs, of a rich lively green and beautiful beyond comparison. The nest is a slight platform structure about a foot above the water, and so small that there is barely space enough on it for the eggs, which are large for the bird. When one looks down on them they cover and hide the slight nest, and being green like the surrounding rushes they are not easy to detect.

When driven up the bird flies eighty or a hundred yards away, and drops again amongst the rushes; it is difficult to flush it a second time, and a third time it is impossible. A curious circumstance is that where it finally settles it can never be found. As I could never succeed in getting specimens when I wanted them, I once employed some Gaucho boys, who had dogs trained to hunt young Ducks, to try for this little Heron. They procured several specimens, and said that without the aid of their dogs they could never succeed in finding a bird, though they always marked the exact spot where it alighted. This I attributed to the slender figure it makes, and to the colour of the plumage so closely assimilating to that of the dead yellow and brown-spotted rushes always found amongst the green ones; but I did not know for many years that the bird possessed a marvellous instinct that made its peculiar

conformation and imitative colour far more advantageous than they could be of themselves.

One day in November 1870, when out shooting, I noticed a Variegated Heron stealing off quickly through a bed of rushes thirty or forty yards from me; he was a foot or so above the ground, and went so rapidly that he appeared to glide through the rushes without touching them. I fired, but afterwards ascertained that in my hurry I missed my aim. The bird, however, disappeared at the report; and thinking I had killed him, I went to the spot.

It was a small isolated bed of rushes I had seen him in; the mud below and for some distance round was quite bare and hard, so that it would have been impossible for the bird to escape without being perceived; and yet, dead or alive, he was not to be found. After vainly searching and researching through the rushes for a quarter of an hour I gave over the quest in great disgust and bewilderment, and, after reloading, was just turning to go, when, behold! there stood my Heron on a reed, no more than eight inches from, and on a level with, my knees. He was perched, the body erect, and the point of the tail touching the reed grasped by its feet; the long slender tapering neck was held stiff, straight and vertically; and the head and beak, instead of being carried obliquely, were also pointing up. There was not, from his feet to the tip of his beak, a perceptible curve or inequality, but the whole was the figure (the exact counterpart) of a straight tapering rush: the loose plumage arranged to fill inequalities, and the wings pressed into the hollow sides, made it impossible to see where the body ended and the neck began, or to distinguish head from neck or beak from head. This was, of course, a front view; and the entire under surface of the bird was thus displayed, all of a uniform dull yellow, like that of a faded rush. I regarded the bird wonderingly for some time; but not the least motion did it make. I thought it was wounded or paralyzed with fear, and, placing my hand on the point of its beak, forced the head down till it touched the back; when I withdrew my hand, up flew the head, like a steel spring, to its first position. I repeated the experiment many times with the same result, the very eyes of the bird appearing all the time rigid and unwinking like those of a creature in a fit. What wonder that it is so difficult, almost impossible, to discover the bird in such an attitude! But how happened it that while repeatedly walking round the bird through the rushes I had not caught sight of the striped back and the broad dark-coloured sides? I asked myself this question, and stepped round to get a side view, when, *mirabile dictu*, I could still see nothing but the rush-like front of the bird! His motions on the perch, as he turned slowly or quickly round, still keeping the edge of the blade-like body before me, corresponded so exactly with my own that I almost doubted that I had moved at all. No sooner had I seen the finishing part of this marvellous instinct of self-preservation (this last act making the whole complete), than such a degree of delight and admiration possessed me as I have never before experienced during my researches, much as I have conversed with wild animals in the wilderness, and many and perfect as are the instances of adaptation I have witnessed. I could not finish admiring, and thought that never had anything so beautiful fallen in my way before; for even the sublime cloud-seeking instinct of the White Egret and the typical Herons seemed less admirable than this; and for some time I continued experimenting, pressing down the bird's head and trying to bend him by main force into some other position; but the strange rigidity remained unrelaxed, the fixed attitude unchanged. I also found, as I walked round him, that, as soon as I got to the opposite side and he could no longer twist himself on his perch, he whirled his body with great rapidity the other way, instantly presenting the same front as before.

Finally I plucked him forcibly from the rush and perched him on my hand, upon which he flew away; but he flew only fifty or sixty yards off, and dropped into the dry grass. Here he again put in practice the same instinct so ably that I groped about for ten or twelve minutes before refinding him, and was astonished that a creature to all appearance so weak and frail should have strength and endurance sufficient to keep its body rigid and in one attitude for so long a time.

Our figure of this species (Plate XVII.) is taken from a skin in Sclater's collection, which was procured by Mr. F. Withington in the Lomas de Zamora in 1883.

322. TIGRISOMA MARMORATUM (Vieill.).

(MARBLED TIGER-BITTERN.)

Garza jaspeada, Azara, *Apunt.* iii. p. 100. *Ardea marmorata*, Vieill. *Nouv. Dict.* xiv. p. 415.

Tigrisoma marmoratum, Berl. *J. f. O.* 1887, p. 30. *Tigrisoma fasciatum*, Salvin, *Ibis*, 1880, p. 363 (Salta)? *Tigrisoma brasiliense*, White, *P. Z. S.* 1882, p. 624 (Corrientes)?

Description.—Above greenish grey, finely crossed by narrow fulvous vermiculations; head and neck uniform rusty red; beneath greyish fulvous; breast flammulated with white; flanks and under wing-coverts black with white cross bars: whole length 18·0 inches, wing 10·5, tail 4·0.

Hab. Paraguay and N. Argentina.

Graf v. Berlepsch has recently shown that the Tiger-Bittern of Paraguay differs from *Tigrisoma brasiliense* (which it generally resembles in plumage) in having the base of the lower mandible partly feathered as in *T. fasciatum*. It is probable that the Argentine Tiger-Bittern belongs to the same form, but we have not yet met with adult specimens of it. It occurs in the northern provinces of the Republic, and was obtained by White in Corrientes, and by Durnford in Salta.

323. NYCTICORAX OBSCURUS, Bp.

(DARK NIGHT-HERON.)

Nycticorax obscurus, *Scl. et Salv. Nomencl.* p. 126; *Durnford, Ibis*, 1878, p. 03 (Buenos Ayres), et p. 399 (Patagonia); *Gibson, Ibis*, 1880, p. 158 (Buenos Ayres). **Ardea gardeni**, *Burm. La-Plata Reise*, ii. p. 508 (Paraná). **Nycticorax gardeni**, *White, P. Z. S.* 1882, p. 624 (Buenos Ayres and Salta); *Barrows, Auk*, 1884, p. 271 (Entrerios).

Description.—Above cinereous; front white; head, nape, and scapulars greenish black; elongated nuchal plumes white; beneath paler, whitish on throat and middle of belly; bill black; feet flesh-colour: whole length 26·0 inches, wing 12·0, tail 4·8, tarsus 3·2. *Female* similar.

Hab. Southern half of South America.

In the Argentine Republic the Night-Heron lives in communities, and passes the hours of daylight perched inactive on large trees or in marshes on the rushes, and when disturbed by day they rise up with heavy flappings and a loud *qua-qua* cry. At sunset they quit their retreat, to ascend a stream or seek some distant feeding-ground, and travel with a slow flight, bird succeeding bird at long intervals, and uttering their far-sounding, hoarse, barking night-cry.

Where the flock lives amongst the rushes, in places where there are no trees, the birds, by breaking down the rushes across each other, construct false nests or platforms to perch on. These platforms are placed close together, usually where the rushes are thickest, and serve the birds for an entire winter.

The breeding-habits of the Night-Heron have already been described in the account of the *Ardea egretta*.

In the Falkland Islands, where Captain Abbott discovered a heronry (*cf. Ibis*, 1861, p. 157), their breeding-habits are the same as on the pampas.

Fam. XXXVI. CICONIIDÆ, OR STORKS.

- 106 -

The Storks constitute a small but well-defined family of the Order Herodiones, allied to the Ardeidæ, but distinguished by the elevated hallux, their non-pectinated middle claw, and the absence of powder-down patches in the plumage. They are divisible into two sub-families—the true Storks, and the Wood-Ibises (Tantalinae). Two of the former group and one of the latter occur within our limits, and two of these three species range throughout tropical America up to the Southern United States.

324. MYCTERIA AMERICANA, Linn.

(THE JABIRU.)

Mycteria americana, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 79; *Scl. et Salv. Nomencl.* p. 126; *Berl. J. f. O.* 1887, p. 32 (Paraguay).

Description.—Plumage white; bill, naked head, and neck and feet black; naked crop in life red: whole length 54·0 inches, wing 26·0, tail 9·5, tarsus 11·5. *Female* similar.

Hab. Texas and Central and South America to La Plata.

This is a majestic bird, the largest of the American Storks; it stands five feet high, and the wings have a spread of nearly eight feet. The entire plumage is pure white, the head and six inches of the neck covered with a naked black skin; from the black part extend two scarlet bands, the skin being glossy and exceedingly loose, and run narrowing down to the chest. When the bird is wounded or enraged, this loose red skin is said to swell out like a bladder, changing to an intensely fiery scarlet hue. The name "*Jabiru*" is doubtless due to this circumstance, for Azara (who gives the Guarani name of the Stork as *Aiaiai*) says that the Indian word *Yabirú* signifies blown out with wind.

The Jabiru is but rarely found near Buenos Ayres, but occurs more frequently in Misiones, and in other districts on the northern frontiers of the Republic. It nests on high trees, as has been recorded by Brown⁴, and is said to lay "blue-green" eggs.

⁴ Canoe and Camp-Life in British Guiana, p. 272.

325. EUXENURA MAGUARI (Gm.).

(MAGUARI STORK.)

Ciconia maguari, *Burm. La-Plata Reise*, ii. p. 509 (Tucuman); *Scl. et Salv. Nomencl.* p. 126; *Durnford, Ibis*, 1877, p. 189 (Buenos Ayres), et 1878, p. 399 (Centr. Patagonia); *Gibson, Ibis*, 1880, p. 153 (Buenos Ayres); *Barrows, Auk*, 1884, p. 271 (Entrerios). **Euxenura maguari**, *Baird*,

- 107 -

Description.—Plumage white; wings and upper tail-coverts black; naked lores and feet red; bill horn-colour, yellowish at the base: whole length 40·0 inches, wing 20·0, tail 8·0. *Female* similar.

Hab. South America.

The Maguari Stork is a well-known bird on the pampas, breeding in the marshes, and also wading for its food in the shallow water; but it is not nearly so aquatic in its habits as the Jabiru, and after the breeding-season is over it is seen everywhere on the dry plains. Here these birds prey on mice, snakes, and toads, but also frequently visit the cultivated fields in quest of food. When mice or frogs are exceptionally abundant on the pampas, the Storks often appear in large numbers, and at such times I have seen them congregating by hundreds in the evening beside the water; but in the daytime they scatter over the feeding-ground, where they are seen stalking along, intent on their prey, with majestic Crane-like strides. To rise they give three long jumps before committing themselves to the air, and like all heavy fliers make a loud noise with their wings. They are never seen to alight on trees, like the Jabiru, and are absolutely dumb, unless the clattering they make with the bill when angry can be called a language.

The laying-time is about the middle of August, and the nest is built up amongst the rushes, rising about two feet above the surface of the water. The eggs are rather long, three or four in number, and of a chalky white.

Mr. Gibson, of Buenos Ayres, furnishes the following lively account of a young Maguari:—"One, which I took on October 5, was about the size of a domestic fowl, in down, and, with the exception of the white tail, entirely black. It soon became very tame, and used to wander all over the premises, looking for food, or watching any work that was going on. Rats were swallowed whole; and the way it would gulp down a pound or two of raw meat would have horrified an English housekeeper. Snakes it seized by the nape of the neck, and passed them transversely through its bill by a succession of rapid and powerful nips, repeating the operation two or three times before being satisfied that life was totally extinct. It used often to do the same thing with dry sticks (in order not to forget the way, I suppose); while on one occasion it swallowed a piece of hard cowhide, a foot long, and consequently could not bend its neck for twenty-four hours after—till the hide softened, in fact. The story also went that 'Byles, the lawyer' (as he was called), mistook the tail of one of the pet lambs for a snake, and actually had it down his throat, but was 'brought up' by the body of the lamb! Byles inspired a wholesome respect in all the dogs and cats, but was very peaceable as a rule. One of our men had played some trick on him, however; and the result was that Byles generally went for him on every possible occasion, his long legs covering the ground like those of an Ostrich, while he produced a demoniacal row with his bill. It was amusing to see his victim dodging him all over the place, or sometimes, in desperation, turning on him with a stick; but Byles evaded every blow by jumping eight feet into the air, coming down on the other side of his enemy and there repeating his war dance; while he always threatened (though his threats were never fulfilled) to make personal and pointed remarks with his formidable bill.

"Shortly after his capture feathers began to appear; and the following is a description of the bird at the age of about two months:—Tail-feathers white, remainder of plumage glossy green-black; bill black; legs and feet grey. Spots and patches of white began to appear on head, back, and wings; these gradually extended, until, by the end of May, the adult plumage was all acquired. Then my interest in Byles ceased, and latterly he strayed away to his native swamps."

326. TANTALUS LOCULATOR, Linn.

(THE WOOD-IBIS.)

Tantalus loculator, *Burm. La-Plata Reise*, ii. p. 510 (Rio Paraná); *Scl. et Salv. Nomencl.* p. 126; *Barrows, Auk*, 1884, p. 272 (Entrerios); *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 81.

Description.—Plumage white, greater wing-coverts and wing- and tail-feathers black with bronzy reflexions; head and upper half of neck naked, dusky; vertex covered with a horny plate; bill yellowish brown; sides of head purplish; feet bluish: whole length 44·0 inches, wing 17·0, tail 6·0. *Female* similar.

Hab. North and South America.

Most people in the Plata region are familiar with this bird of the marshes, its lofty stork-like figure and white plumage making it a very conspicuous object.

On the pampas it is not uncommon in summer and autumn, and goes in flocks of a dozen or twenty. The birds are usually seen standing motionless in groups or scattered about in spiritless attitudes, apparently dozing away the time. On the wing it appears to better advantage, having a singularly calm stately flight; on a warm still day they are often seen soaring in circles very far up in the sky.

I have never heard of this bird nesting on the pampas, and am inclined to think that it only breeds in forest-regions, and visits the marshes in the treeless districts after the young have flown.

Its habits in North America, where it is called the "Wood-Ibis," are tolerably well known, and in the ornithological works of that country it is described as "a hermit standing listless and alone on the topmost limb of some tall decayed cypress, its neck drawn in upon its shoulders, and its enormous bill resting like a scythe upon its breast."

It there nests on tall trees, sometimes in company with Egrets, and lays three white eggs.

Fam. XXXVII. PLATALEIDÆ, OR IBISES.

The Spoonbills and Ibises constitute a homogeneous family of Herodiones, which have a wide distribution over the earth's surface, although mostly prevalent within intertropical limits. They fall naturally into two groups—the Ibises, distinguished by their elongated, compressed, and sickle-shaped bills; and the Spoonbills, at once known by the peculiar form of the same organ, which is much expanded at its termination. Of about twenty-five known species of Ibises, the Neotropical Region possesses eight or nine, and of these four occur in Argentina. Of the Spoonbills only one is Neotropical, and that is met with throughout the southern portion of South America.

327. PLEGADIS GUARAUNA (Linn.).

(WHITE-FACED IBIS.)

Plegadis guarauna, Baird, *Brew., et Ridgw. Water-B. N. A.* i. p. 97. **Falcinellus guarauna**, Elliot, *P. Z. S.* 1877, p. 505. **Ibis falcinellus**, Hudson, *P. Z. S.* 1870, p. 799 (Buenos Ayres). **Falcinellus igneus**, Durnford, *Ibis*, 1877, p. 189 (Buenos Ayres). **Plegadis falcinellus**, Gibson, *Ibis*, 1880, p. 155 (Buenos Ayres); Barrows, *Auk*, 1884, p. 272 (Entrerios). **Ibis chalcoptera**, Burm. *La-Plata Reise*, ii. p. 511 (Paraná, Mendoza).

Description.—Head, neck, and under surface purplish chestnut, with a white band round the base of the bill; back with metallic reflexions; wings and tail bright green, with bronzy reflexions; band across upper wing-coverts chestnut; bill reddish grey; feet brown: whole length 22·0 inches, wing 9·0, tail 3·0. *Female* similar.

Hab. Central and South America.

This form of the well-known "Glossy Ibis" of Europe is one of our most abundant waterfowl on the pampas, and appears in spring in flocks; but as their movements are somewhat irregular and many individuals remain with us through the winter, their migrations probably do not extend very far. In summer they are found beside every marsh and watercourse, briskly wading about in the shallow water and plunging their long curved beaks downwards at every step. When taking wing they invariably utter a loud *ha ha ha*, resembling hearty human laughter, but somewhat nasal in sound. They frequently leave the marshy places and are seen scattered about the grassy plains, feeding like land-birds; and on the pampas they often congregate about the carcass of a dead horse or cow, to feed on the larvæ of the flesh-fly in company with the Milvago and the Hooded Gull.

- 110 -

Their flight is singularly graceful; and during migration the flocks are seen to follow each other in rapid succession, each flock being usually composed of from fifty to a hundred individuals, sometimes of a much larger number. It is most interesting to watch them at such times, now soaring high in the air, displaying the deep chestnut hue of their breasts, then descending with a graceful curve towards the earth, as if to exhibit the dark metallic green and purple reflexions of their upper plumage. The flock is meanwhile continually changing its form or disposition, as if at the signal of a leader. One moment it spreads out in a long straight line; suddenly the birds scatter in disorder, or throw themselves together like a cloud of Starlings; as suddenly they again reform to continue their journey in the figure of a phalanx, half-moon, or triangle. The fanciful notion can scarcely fail to suggest itself to the spectator that the birds go through these unnecessary evolutions intelligently in order to attain a greater proficiency in them by practice, or, perhaps, merely to make a display of their aerial accomplishments. The Glossy Ibis has another remarkable habit when on the wing. At times the flock appears as if suddenly seized with frenzy or panic, every bird rushing wildly away from its fellows, and descending with a violent zigzag flight; in a few moments the mad fit leaves them, they rise again, reassemble in the air, and resume their journey.

328. THERISTICUS CAUDATUS (Bodd.).

(BLACK-FACED IBIS.)

Theristicus melanops, Darwin, *Zool. Beagle*, iii. p. 128 (Patagonia). **Geronticus melanopis**, *Sci. P. Z. S.* 1871, p. 261. **Theristicus melanopis**, *Sci. et Salv. Nomencl.* p. 127; Durnford, *Ibis*, 1877, p. 190 (Buenos Ayres), et 1878, p. 400 (Patagonia); Barrows, *Auk*, 1884, p. 272 (Azul). **Theristicus caudatus**, Elliot, *P. Z. S.* 1877, p. 498. **Ibis albicollis**, Burm. *La-Plata Reise*, ii. p. 510 (Paraná, Mendoza, Tucuman).

Description.—Sides of throat, and lores bare, skin black; top of head and lower part of neck in front reddish chestnut; neck white, a narrow line of feathers running up the centre of the throat to the chin; back and wings greyish brown, with green reflexions, feathers edged with

- 111 -

light brown or whitish; tertials and outer webs of secondaries for two thirds of their length white, remainder dark green; primaries dark green; rump and upper tail-coverts light bronzy green; tail dark bronze-green; underparts brownish black, with green reflexions: whole length 33·0 inches, wing 16·25, tail 9·75, bill along culmen 7·0, tarsus 3·5. *Female* similar.

Hab. Antarctic South America.

This very fine Ibis, called *Mandurria ó curucáu* by Azara and *Vanduria de Invierno* (winter Vanduria) in the vernacular, is one of the most interesting winter visitors from Patagonia to the pampas of Buenos Ayres. It is found in Chili, and has even been obtained as far north as Peru. On the east side of the continent it is most abundant (during the cold season) about latitude 37° or 38°. Its summer home and breeding-ground appears to be in the extreme south of the continent, its eggs having been obtained in the Straits of Magellan by Darwin, and recently by Dr. Cunningham, who only says of it that it is a shy and wary bird, that goes in flocks of from four to eight, and has a cry resembling *qua-qua, qua-qua*. But he might just as well have spelt it *quack-quack*, since *qua-qua* fails to give the faintest idea of the series of hard abrupt notes of extraordinary power the bird utters, usually when on the wing, which sound like blows of a powerful hammer on a metal plate. On the pampas this Ibis appears in May, frequents dry grassy situations, and goes in flocks of a dozen to forty or fifty individuals. They walk rapidly, stooping very much, and probing the ground with their long slender curved beaks, and appear to subsist principally on the larvæ of the large, horned beetle, with which their stomachs are usually found filled. So intent are they on seeking their food that the members of a flock often scatter in all directions and wander quite out of sight of each other; when this happens they occasionally utter loud vehement cries, as if to call their companions, or to inform each other of their whereabouts. Frequently one is seen to lift up its wings as if to fly, and, stretching them up vertically, to remain for fifteen or twenty seconds in this curious attitude. At sunset they all rise up clamouring, and direct their flight to the nearest watercourse, and often on their way thither go through a strange and interesting performance. The flock suddenly precipitates itself downwards with a violence wonderful to see, each bird rushing this way and that as if striving to outvie its fellows in every wild fantastic motion of which they are capable. In this manner they rise and descend again and again, sometimes massed together, then scattered wide apart in all directions. This exercise they keep up for some time, and while it lasts they make the air resound for miles around with their loud percussive screams.

- 112 -

In Patagonia I first observed this Ibis roosting on tall trees; and, according to Azara, it possesses the same habit in Paraguay. He says that all the flocks within a circuit of some leagues resort to one spot to sleep, and prefer tall dead trees bordering on the water, and if there is only one suitable tree all the birds crowd on to it, and in the morning scatter, each family or pair flying away to spend the day in its customary feeding-ground.

The egg obtained by Dr. Cunningham at Elizabeth Island is thus described by Prof. Newton (Ibis, 1870, p. 502)⁵:—"Dull surface of a pale greenish white with engrained blotches (mostly small) of neutral tint, and some few blotches, spots, and specks of dull deep brown; towards the larger end some hair-like streaks of a lighter shade of the same, and so far having an Ibirdine or Plataleine character."

⁵ See also figure, P. Z. S. 1871, pl. iv. fig. 8.

329. HARPIPRION CÆRULESCENS (Vieill.).

(PLUMBEOUS IBIS.)

Harpiprion cærulescens, *Scl. et Salv. Nomencl.* p. 127; *Gibson, Ibis*, 1880, p. 159 (Buenos Ayres).

Molybdophanes cærulescens, *Elliot, P. Z. S.* 1877, p. 503. *Ibis plumbea*, *Burm. La-Plata Reise*, ii. p. 510 (Entrerios). *Ibis cærulescens*, *Scl. et Salv. P. Z. S.* 1869, p. 635 (Buenos Ayres).

Description.—A white bar commencing above and behind the eye covers the forehead; top of head and lengthened nuchal crest dark brown, with a slight greenish tinge; throat and neck covered with long narrow feathers, light brown, in certain lights having a pinkish tinge; upper parts pale bronzy green; wings like the back, in some lights the feathers have a silvery gloss; primaries deep blue, greenish towards the edges of the outer webs; tail dark green; entire underparts brownish grey, with light pink reflexions in certain lights; bill black; feet yellow: whole length 33·0 inches, wing 15·5, tail 7·5, bill 6·5. *Female* similar.

Hab. South-east Brazil and Argentina.

This noble Ibis ranges from Brazil, south of the Amazons, to the pampas of Buenos Ayres. It is a bird of the marshes, nowhere abundant, and yet is exceedingly well known to most people in the Argentine country: it would be difficult indeed to overlook a species possessing so peculiar and powerful a voice. In the vernacular it is called *Vanduria*, with the addition of *aplomado*, or *barroso*, or *de las lagunas*, to distinguish it from the Winter Vanduria. The word is also frequently spelt *Manduria* or *Banduria*, but it does not come from *Bandada* (flock), as Mr. Barrows imagines when he gives this vernacular name to the Glossy Ibis; but from the Spanish stringed instrument called Vanduria. Possibly the instrument is obsolete now; not so the word, however, and it is sometimes used by the poets, instead of "harp" or

- 113 -

“lyre,” to symbolize poetic inspiration. Thus Iriarte:—

“Atencion! que la vanduria he templado.”

If one could get a banjo with brass strings so big that it could be heard a mile and a half away, a dozen strokes dealt in swift succession on one string would produce a sound resembling the call of this Ibis—a voice of the desolate marshes, which competes in power with the outrageous human-like shrieks of the Ypecaha Rail, the long resounding wails of the Crazy Widow or Courlan, and the morning song of the Crested Screamer.

The Vanduria is usually seen singly or in pairs, and sometimes, but rarely, in small companies of half a dozen birds. In its habits it is like a Tantalus, wading in the shallow water of the marshes, and devouring eels, frogs, fish, &c. After examining the well-filled stomachs of a few individuals, one is strongly tempted to believe that the beautiful long beak of this Ibis has “forgotten its cunning” as a probe. At intervals in the daytime it utters, standing on the ground, its resonant metallic cry. It is wary and has a strong easy flight, and is a great wanderer, but I am not able to say whether it possesses a regular migration or not.

The celebrated naturalist Natterer procured specimens of this Ibis in the lagoons of Caiçara, in the Brazilian Province of Matogrosso, in September and November, 1825, but it is not mentioned by general writers on the birds of S.E. Brazil.

330. PHIMOSUS INFUSCATUS (Licht.).

(WHISPERING IBIS.)

Ibis infuscata, *Burm. La-Plata Reise*, ii. p. 511 (Rio Paraná). *Phimosus infuscatus*, *Scl. et Salv. Nomencl.* p. 127; *Durnford, Ibis*, 1878, p. 63 (Buenos Ayres); *Salv. Ibis*, 1880, p. 363 (Salta); *Elliot, P. Z. S.* 1877, p. 495.

Description.—Plumage dark bronzy green, glossed with purple; fore part and sides of head and neck naked, red; bill and feet red: whole length 24·0 inches, wing 11·5, tail 6·0, bill 5·2. *Female* similar.

Hab. South America from Colombia south to Argentina.

Of this Ibis, which ranges from Colombia to the Argentine Republic, a few individuals come as far south as the pampas of Buenos Ayres.

The fore part of the head and throat being unfeathered, suggested to Azara the name of *Afeytado*, or “shaved,” but about its habits he has nothing to say, nor does he mention its peculiar voice, or, perhaps it would be more correct to say, its want of voice; for it seems quite silent unless one comes near to it and listens very intently, when he will be able to hear little sigh-like puffs of sound as the bird flies away. It seems strange that this member of a loquacious loud-voiced family should be reduced to speak, as it were, in whispers!

On two or three occasions I have seen as many as half a dozen individuals together; at other times I have seen one or two associating with the Glossy Ibis.

Azara’s name “Shaved” Ibis seems well enough in Spanish, just as his “Throat-cut” for a Starling with a scarlet throat does not strike one as at all shocking in that language; but for an English name I fancy that “Whispering Ibis,” from the whisper-like sound the bird emits, would be more suitable, or, at all events, better sounding.

It is possible that two races of this Ibis exist on the South-American continent; for in Brazil and further north it is said to have a loud cry, uttered when taking wing, as in the case of the Glossy Ibis; and one of its native names in the tropics—*curri-curri*—is said to be an imitation of its usual note.

331. AJAJA ROSEA, Reichenb.

(ROSEATE SPOONBILL.)

Platalea ajaja, *Burm. La-Plata Reise*, ii. p. 511; *Scl. et Salv. P. Z. S.* 1868, p. 145; *iid. Nomencl.* p. 127; *Hudson, P. Z. S.* 1876, p. 15 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 190 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 156 (Buenos Ayres); *Barrows, Auk*, 1884, p. 272 (Entrerios, Bahia Blanca). *Ajaja rosea*, *Baird, Brew., et Ridgw. Water-B. N. A.* i. p. 102.

Description.—Head bare; neck, back, and breast white; tail orange-buff, with the shafts deep pink and inner webs stained with pink; rest of plumage pale rose-pink; lesser wing-coverts and upper and lower tail-coverts intense carmine; neck with a tuft of twisted plumes, light carmine; sides of breast pale creamy buff; bill yellowish grey; head greenish, space round the eye and gular sac orange; feet pale pink: whole length 30·0 inches, wing 15·0, tail 5·0. *Female* similar. *Young* with the head completely feathered.

Hab. North and South America.

The Roseate Spoonbill is found in both Americas and ranges south to the Straits of Magellan, but in Patagonia it is, I think, rare, for on the Rio Negro I did not meet with it. On the pampas it is abundant, and I have been told that it breeds in the marshes there, but I

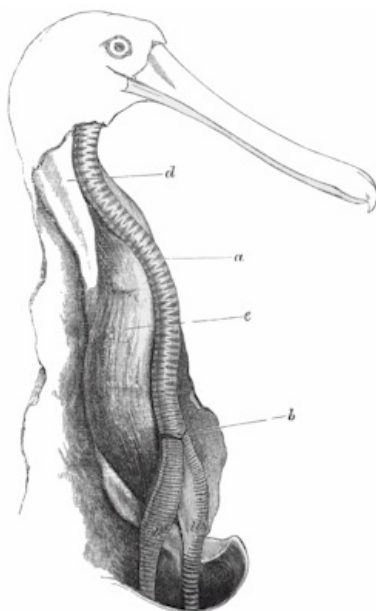
have never been able to find a nest. It is usually seen in small flocks of from half a dozen to twenty individuals, which all feed near together, wading up to their knees and sweeping their long flat beaks from side to side as they advance. An English acquaintance of mine kept one of these birds as a pet on his estancia for seven years. It was very docile, and would spend the day roaming about the grounds, associating with the poultry, but invariably presented itself in the dining-room at meal-time, where it would take its station at one end of the table, and dexterously catch in its beak any morsel thrown to it.

I believe that more than one species of Spoonbill inhabits South America, and that the common Spoonbill of the pampas is a distinct species from the well-known Ajaja. Some remarks of mine on this subject were printed in the 'Proceedings of the Zoological Society of London' about nine years ago; but I find that I am alone amongst ornithologists in this belief; I can, therefore, only repeat here what I have said before, and leave the question for time to decide.

The general belief is that the pale-plumaged birds, with feathered heads and black eyes (the Roseate Spoonbill having crimson eyes), and without the bright wing-spots, the tuft on the breast, horny excrescences on the beak, and other marks, are only immature birds. Now, for one bird with all these characteristic marks of the true *Platalea ajaja*, which has a yellow tail, we meet on the pampas with not less than two to three hundred examples of the pale-plumaged bird without any traces of such marks and with a rose-coloured tail; and the disparity in number between mature and immature birds of one species could not well be so great as that. I have shot one immature specimen of the true Ajaja—so immature that it seemed not long out of the nest; but the head was bare of feathers, and it had the knobs on the upper mandible, only they were so soft that they could be indented with the nail of the finger. Azara also mentions an immature bird which he obtained, but he does not say that the head was feathered; and even this negative evidence goes a great way, since it would have been very unlike him to see a Spoonbill with a feathered head and otherwise unlike *Ajaja rosea*, and not describe it as a distinct species.

There are also anatomical differences between the two birds; the pale-plumaged species having an ordinary trachea, while *A. rosea* has a very curiously-formed trachea, unlike that of any other bird, which has been described by Garrod as follows:—

"The trachea is simple, straight, of uniform calibre, and peculiarly short, extending only two thirds down the length of the neck, where the uncomplicated syrinx is situated and the bifurcation of the bronchi occurs. The usual pair of muscles, one on each side, runs to this syrinx from above, and ceases there. The bronchi are fusiformly dilated at their commencement, where the rings which encircle them are not complete, a membrane taking their place in that portion of each tube which is contiguous to its opposite neighbour. Each bronchus, lower down, is composed of complete cartilaginous rings."



Trachea of *Ajaja rosea*.—*a.* Trachea. *b.* Syrinx. *d.* Œsophagus.
e. Cervical muscles. *r.b.* Right bronchus. *l.b.* Left bronchus.
(From P. Z. S. 1875, p. 300.)

The woodcut of this curious structure is here reproduced by the kind permission of the Zoological Society. It is much to be wished that some one living in the Argentine Republic would devote himself to the further investigation of the history of this interesting bird, and settle the question whether there is more than one species of Argentine Spoonbill.

To conclude, I may mention that the pet bird my friend kept was of the pale-plumaged species, and never lost the feathers from its head, nor did it acquire any of the characteristic marks of *P. ajaja*.

Fam. XXXVIII. PHÆNICOPTERIDÆ, OR FLAMINGOES.

The very peculiar and isolated type of Flamingo is found in both the Old and New Worlds, and is, no doubt, of great antiquity. In the Neotropical Region three species of Flamingo are now known to occur, one of which is well known in the Argentine Provinces. Of the other two (*Phœnicopterus andinus* and *P. jamesi*⁶), which inhabit the Andes of Chili and Bolivia, one has also been ascertained to occur within the northern frontiers of the Argentine Republic. Both these last-named species belong to the three-toed section of the genus (*Phœnicoparra*). In *P. ignipalliatu*s the hind toe is present.

6 Cf. Sclater, P. Z. S. 1886, p. 399.

332. PHÆNICOPTERUS IGNIPALLIATUS, Geoffr. et d'Orb.

(ARGENTINE FLAMINGO.)

Phœnicopterus ignipalliatus, *Burm. La-Plata Reise*, ii. p. 512 (Mendoza, Paraná, Rosario, Buenos Ayres); *Scl. et Salv. Nomencl.* p. 127; *iid. P. Z. S.* 1868, p. 145 (Buenos Ayres); *Scl. P. Z. S.* 1872, p. 549 (Rio Negro); *Durnford, Ibis*, 1877, p. 41, et 1878, p. 400 (Patagonia); *Gibson, Ibis*, 1880, p. 156 (Buenos Ayres); *Barrows, Auk*, 1884, p. 272 (Pampas).

Description.—Hind toe present. Plumage rosy red; wing-coverts crimson; wing-feathers black; bill pale yellowish red, apical half black; feet dark violet-grey: whole length 39·0 inches, wing 15·0, tarsus 11·0. *Female* similar, but smaller.

Hab. Southern portions of South America.

The Argentine Flamingo inhabits the whole of the Argentine country, down to the Rio Negro in the south, where I found it very abundant. The residents told me of a breeding-place there—a shallow salt-lake—which, however, had been abandoned by the birds before my visit. The nest there, as in other regions, was a small pillar of mud raised a foot or eighteen inches above the surface of the water, and with a slight hollow on the top; and I was assured by people who had watched them on their nests that the incubating bird invariably sits with the hind part of the body projecting from the nest, and the long legs dangling down in the water, and not tucked up under the bird.

On the Rio Negro I found the birds most abundant in winter, which surprised me, for that there is a movement of Flamingoes to the north in the autumn I am quite sure, having often seen them passing overhead in a northerly direction in the migrating-season. I have also found the young birds, in the grey plumage, at this season in the marshes near to Buenos Ayres city, hundreds of miles from any known breeding-place. Probably the birds in the interior of the country, where the cold is far more intense than on the sea-coast, go north before winter, while those in the district bordering on the Atlantic have become stationary.

The Flamingo has a curious way of feeding: it immerses the beak, and by means of a rapid continuous movement of the mandibles passes a current of water through the mouth, where the minutest insects and particles of floating matter are arrested by the teeth. The stomach is small, and is usually found to contain a pulpy mass of greenish-coloured stuff, mixed with minute particles of quartz. Yet on so scanty a fare this large bird not only supports itself, but becomes excessively fat. I spent half a winter in Patagonia at a house built on the borders of a small lake, and regularly every night a small flock of Flamingoes came to feed in the water about 200 yards from the back of the house. I used to open the window to listen to them, and the noise made by their beaks was continuous and resembled the sound produced by wringing out a wet cloth. They feed a great deal by day, but much more, I think, by night.

Where they are never persecuted they are tame birds, and when a flock is fired into and one bird killed, the other birds, though apparently much astonished, do not fly away. They are silent birds, but not actually dumb, having a low hoarse cry, uttered sometimes at the moment of taking flight; also another cry which I have only heard from a wounded bird, resembling the gobbling of a turkey-cock, only shriller. They are almost invariably seen standing in the water, even when not feeding, and even seem to sleep there; on land they have a very singular appearance, their immense height, in proportion to their bulk, giving them an appearance amongst birds something like that of the giraffe amongst mammals. To the lakes and water-courses in the midst of the grey scenery of Patagonia they seem to give a strange glory, while standing motionless, their tall rose-coloured forms mirrored in the dark water, but chiefly when they rise and pass in a long crimson train or phalanx, flying low over the surface.

333. PHÆNICOPTERUS ANDINUS, Philippi.

(ANDEAN FLAMINGO.)

Phœnicopterus andinus, *Phillipi, Reise d. d. Wüste Atacama*, p. 164, tt. iv., v.; *Scl. et Salv. Nomencl.* p. 127; *Scl. P. Z. S.* 1886, p. 399; *Burm. P. Z. S.* 1872, p. 364 (Cordilleras of N.-West).

Description.—Hind toe absent. Plumage rosy white; lower neck and breast carmine; wings scarlet, with the tips of the quills black; bill at the base yellowish stained with red; apical half black; feet yellow: whole length 35·0 inches, wing 16·0, tarsus 9·0. *Female* similar, but smaller.

Hab. Andes of Bolivia and Northern Chili.

The Andean Flamingo, which is at once distinguishable from *P. ignipalliatu*s by the complete absence of the hind toe, is stated by Dr. Burmeister, on the authority of Herr Schickendantz, to be found on the north-western frontiers of the Argentine Republic, on the lagunes of the eastern valleys between the Cordilleras and the adjacent mountains.

Order X. ANSERES.

Fam. XXXIX. PALAMEDEIDÆ, OR SCREAMERS.

This singular Neotropical form is even more isolated than the Flamingo and more difficult to place satisfactorily in a linear series. It seems, however, that it is best arranged near the Anatidæ, as first suggested by Mr. Parker⁷, and that it may with least inconvenience be constituted an aberrant family of the Order Anseres.

Besides the typical form *Palamedea* (with one species found in Amazonia and the interior of Brazil) the present family contains only one other genus—*Chauna*—in which the head carries a feather-crest instead of the long horny wattle of *Palamedea*. One species of *Chauna* is met with in Argentina, the only other known species (*C. derbiana*) being confined to Colombia and Venezuela.

⁷ Cf. Proc. Zool. Soc. 1863, p. 511.

334. CHAUNA CHAVARIA (Linn.).

(CRESTED SCREAMER.)

Palamedea chavaria, *Burm. La-Plata Reise*, ii. p. 506 (Paraná). *Chauna chavaria*, *Sci. et Salv. Nomencl.* p. 128; *id. P. Z. S.* 1868, p. 145 (Buenos Ayres); *Durnford, Ibis*, 1878, p. 63 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 165 (Buenos Ayres); *Barrows, Auk*, 1884, p. 272 (Entrerios).

Description.—Slaty grey, blacker on the back; chin, neck, and cheeks whitish; a naked ring round the neck; nape crested; belly whitish; feet red: whole length 32·0 inches, wing 19·0, tail 8·0. *Female* similar.

- 120 -

Hab. Southern Brazil, Paraguay, and La Plata.

This majestic bird, called *Chajá* in the vernacular, is common throughout the Plata district, in marshes and on the open level country abounding in water and succulent grasses, and ranges south to the neighbourhood of Bahia Blanca. It is most abundant on the pampas south of Buenos Ayres city, and on that vast expanse of perfectly level, green country the bird is seen at its best; it is there an important feature in the landscape; its vocal performances are doubly impressive on account of the profound silence of nature, and its singularity—the contrast between its aerial habit and ponderous structure—strikes one more forcibly where the view is so unobstructed and the atmosphere so pure.

The Crested Screamer, like most of the larger birds and mammals in every part of the globe to which European emigration is attracted, is probably doomed to rapid extermination. My observations of the bird, in that portion of the pampas where it is most abundant, date back some years, to a time when the inhabitants were few and mainly of Spanish race, never the destroyers of bird-life. The conditions had become extremely favourable to this species. It is partially aquatic in its habits; and in desert places is usually found in marshes, wading in the shallow water, and occasionally swimming to feed on the seeds and succulent leaves of water-loving plants. After the old giant grasses of the pampas had been eaten up by the cattle, and the sweet grasses of Europe had taken their place, the Screamers took kindly to that new food, preferring the clovers, and seemed as terrestrial in their feeding-habits as Upland Geese. Their food was abundant, and they were never persecuted by the natives. Their flesh is very dark, is coarse-grained but good to eat, with a flavour resembling that of wild duck, and there is a great deal of meat on a bird with a body larger than that of a Swan. Yet no person ever thought of killing or eating the Chajá; and the birds were permitted to increase to a marvellous extent. It was a common thing a few years ago in the dry season to see them congregated in thousands; and so little afraid of man were they that I have often ridden through large scattered flocks without making the birds take wing.

A curious thing about the Screamer is that it pairs for life, and yet is one of the most social of birds. But if a large flock is closely looked at, the birds are invariably seen methodically ranged in pairs. Another curious thing is that, notwithstanding the formidable weapons they

- 121 -

possess (each wing being armed with two large spurs), they are extremely pacific in temper. I have never been able to detect even the slightest approach to a quarrel among them; yet it is hard to believe that they do not fight sometimes, since weapons of offence are usually found correlated with the disposition to use them. Captive birds, however, can be made to fight; and I have known Gauchos take them for the pleasure of witnessing their battles. They are very easily tamed, and in that state seem to show greater docility and intelligence than any of our domestic birds; and become so attached to their home that it is quite safe to allow them to fly about at will. They associate, but do not quarrel, with the poultry. They are quick to distinguish strangers from the people of the house, showing considerable suspicion of them, and sometimes raising a loud alarm at a stranger's approach. Towards dogs and cats they are often unfriendly; and when breeding it is dangerous for a strange person to approach the nest, as they will sometimes attack him with the greatest fury.

The Screamer is a very heavy bird, and rises from the ground laboriously, the wings, as in the case of the Swan, making a loud noise. Nevertheless, it loves soaring, and will rise in an immense spiral until it wholly disappears from sight in the zenith, even in the brightest weather; and considering its great bulk and dark colour, the height it ultimately attains must be very great. On sunny windless days, especially in winter and spring, they often spend hours at a time in these sublime aerial exercises, slowly floating round and round in vast circles, and singing at intervals. How so heavy and comparatively short-winged a bird can sustain itself for such long periods in the thin upper air to which it rises has not yet been explained.

The voice is very powerful. When disturbed, or when the nest is approached, both birds utter at intervals a loud alarm-cry, resembling in sound the anger-cry of the Peacock, but twice as loud. At other times its voice is exercised in a kind of singing performance, in which male and female join, and which produces the effect of harmony. The male begins, the female takes up her part, and then with marvellous strength and spirit they pour forth a torrent of strangely-contrasted sounds—some bassoon-like in their depth and volume, some like drumbeats, and others, long, clear, and ringing. It is the loudest animal-sound of the pampas, and its jubilant martial character strongly affects the mind in that silent melancholy wilderness.

The Screamers sing all the year round, at all hours, both on the ground and when soaring; when in pairs the two birds invariably sing together, and when in flocks they sing in concert. At night they are heard about nine o'clock in the evening, and again just before dawn. It is not unusual, however, to hear them singing at other hours.

The nest is a large fabric placed among the low rushes and water-lilies, and is sometimes seen floating on the water, away from its moorings. The eggs are five, pointed at one end, pure white, and in size like the eggs of the domestic goose. The young are clothed in yellow down like goslings, and follow the parents about from the date of hatching.

- 122 -

Fam. XL. ANATIDÆ, OR DUCKS.

The Anatidæ or Waterfowl are a well-known family of universal distribution over the earth's surface. As shown in an article published in the Zoological Society's 'Proceedings' for 1876⁸, upwards of 60 species of this group of birds are found in the Neotropical Region, and of these about 22 occur in the Argentine Republic. Amongst the Argentine species are some of the finest and most ornamental of the whole family, such as the Black-necked Swan, the Ashy-headed Goose, and the Chiloe Wigeon—all well known from their introduction and acclimatization in Europe.

It may be remarked that nearly all the Argentine members of this family belong to Antarctic forms, and are specifically different from those met with in North America.

⁸ "A Revision of the Neotropical Anatidæ," by P. L. Sclater and O. Salvin, P. Z. S. 1876, p. 358.

335. BERNICLA MELANOPTERA (Eyton).

(ANDEAN GOOSE.)

Chloëphaga melanoptera, *Burm. La-Plata Reise*, ii. p. 513 (Cordilleras). *Bernicla melanoptera*, *Burm. P. Z. S.* 1872, p. 365; *Sci. et Salv. P. Z. S.* 1876, p. 362; *iid. Nomencl.* p. 128.

Description.—White; wing-feathers black; scapulars and tail greenish black; greater wing-coverts externally purplish, forming a speculum; smaller wing-coverts white; anterior scapulars spotted with brown, posterior scapulars brown with a greenish tinge: whole length 30·0 inches, wing 17·5, tail 6·5. *Female* similar, but smaller.

Hab. Andes of Peru, Bolivia, and Northern Chili.

Dr. Burmeister met with this fine Goose on the Rio Blanco in the province of San Juan,

within the confines of the Argentine Republic. It is an inhabitant of the high Andes of Peru and Bolivia, and is also found throughout the central provinces of Chili, descending to the plains in the winter. Its native name is "*Piuquen*," and it is said to be so abundant on a lagoon near the Portello Pass between Mendoza and Santiago that the spot is called "Valle de los Piuquenes."

336. BERNICLA DISPAR, Ph. et Landb.

(BARRED UPLAND GOOSE.)

Bernicla dispar, *Burmeister*, *P. Z. S.* 1872, p. 366 (Sierra Tinta, Rio Negro). **Bernicla antarctica**, *Burm. La-Plata Reise*, ii. p. 514 (err.). **Chloephaga dispar**, *Scl. P. Z. S.* 1867, p. 334 (Chili). **Bernicla magellanica**, *Scl. P. Z. S.* 1872, p. 549 (Rio Negro); *Durnf. Ibis*, 1878, p. 400 (Chupat). **Chloephaga magellanica**, *Barrows, Auk*, 1884, p. 273 (Carhué).

Description.—White; neck behind and body beneath banded with black; primaries, greater wing-coverts, tertiaries, and scapulars cinereous; rump and tail-feathers ashy black; bill black; feet dark plumbeous: whole length 26·0 inches, wing 16·0, tail 5·5. *Female*: head and neck cinnamon-brown; abdomen similar, passing into white on the crissum, and altogether barred with black; upper back also barred; rump and tail-feathers brownish black.

Hab. Chili and Argentina.

This bird is a northern form of the well-known "Upland Goose" of the Falkland Islands and Southern Patagonia, from which it differs in the male being completely barred across with black on the lower surface. It was first described by Philippi and Landbeck from Chilian specimens, and in 1872 recognized by Dr. Burmeister as found near the Sierra Tandil and on the Rio Negro.

In April and May this Goose migrates northwards, along the eastern coast, as far as the pampas of Buenos Ayres, the migration ending about one hundred and fifty miles south of Buenos Ayres city. Further south they are at this season of the year excessively abundant in suitable localities. Their great camping-grounds are the valleys of the rivers Negro and Colorado, where they are often so numerous as to denude the low grounds of the tender winter clovers and grasses, and to cause serious loss to the sheep-breeders. They also visit the cultivated fields to devour the young wheat, and are intelligent enough to distinguish between a real human enemy and the ragged men of straw, miscalled scarecrows, set up by the farmers to frighten them. While committing their depredations they are exceedingly wary and difficult to shoot, but at night, when they congregate by the water-side, they give the sportsman a better chance. I have succeeded in killing as many as five at a shot by stalking them under cover of the darkness; and a more deliciously flavoured game-bird than this Goose I have never tasted.

- 124 -

They are social birds, always going in large flocks, and are very loquacious, the female having a deep *honking* note, while the male responds with a clear whistling, like the Sanderling's note etherealized.

337. BERNICLA POLIOCEPHALA, Gray.

(ASHY-HEADED GOOSE.)

Bernicla poliocephala, *Scl. et Salv. P. Z. S.* 1876, p. 366; *Burmeister*, *P. Z. S.* 1872, p. 366 (Bahia Blanca); *Scl. P. Z. S.* 1872, p. 549 (Rio Negro); *Durnford, Ibis*, 1878, p. 400 (Centr. Patagonia). **Chloephaga poliocephala**, *Scl. et Salv. Nomencl.* p. 128.

Description.—Head, neck, and scapulars greyish plumbeous; breast and upper back chestnut, banded across with black; abdomen, under wing-coverts, and bend of the wing white; primaries black; secondaries white; greater wing-coverts black, edged with shining green and tipped with white; lower back and tail black; flanks banded with white and black; crissum chestnut; bill black; feet on the outside yellow, on the inner side brownish black: whole length 24·0 inches, wing 13·5, tail 5·0. *Female* similar.

Hab. Patagonia, Southern Chili, and Southern Argentina.

This Patagonian Goose migrates northwards in winter, and appears on the Rio Negro and in the Buenos-Ayrean pampas in May, usually in small flocks, but sometimes as many as one or two hundred are seen together. The extreme limit of their winter migration appears to be about sixty miles south of Buenos Ayres city, on the plains near the river Sanborombon; probably they have before now been driven from this locality by the Duck-shooters, but it was formerly their favourite rendezvous, where they collected in large numbers, though further north scarcely one was ever seen.

Durnford tells us that this Goose is resident on Lake Colguape in the territory of Chupat, and breeds there abundantly.

338. CYGNUS NIGRICOLLIS, Gm.

(BLACK-NECKED SWAN.)



CYGNUS NIGRICOLLIS.

Cygnus nigricollis, *Burm. La-Plata Reise*, ii. p. 512 (Paraná); *Scl. et Salv. Nomencl.* p. 129; *id. P. Z. S.* 1876, p. 370; *Durnford, Ibis*, 1877, p. 191 (Buenos Ayres), et 1878, p. 400 (Centr. Patagonia); *Gibson, Ibis*, 1880, p. 33 (Buenos Ayres); *Barrows, Auk*, 1884, p. 273 (Entrerios).

Description.—White; head and neck black; postocular streak and chin white; lores naked; bill plumbeous; cere red; feet pale carneous: whole length 48·0 inches, wing 17·5, tail 5·5. *Female* similar.

- 125 -

Hab. Argentina, Chili, and Patagonia.

To my perhaps partial mind this species is preeminent for beauty among the Swans, although it is considerably smaller than the bird of the Old World, and does not, it must be admitted, comport itself so majestically. In questions of this kind it is natural for every one to be somewhat biassed in favour of the things of his own country; but it will be readily admitted by all, I think, that the black-necked bird is one of three species greatly surpassing all others of this genus in beauty—the other two being, of course, the domesticated Swan of Europe and the Australian Black Swan (perhaps the most graceful bird on the globe).

This Swan is very abundant on the pampas of Buenos Ayres and in Patagonia, and ranges south to the Magellan Straits and the Falklands. As a rule they are seen in small flocks, but sometimes as many as two or three hundred congregate together. They are heavy birds and rise with difficulty, and fly rapidly and with great violence, like all heavy-bodied short-winged species; but in no other very large bird with which I am acquainted do the wings produce so loud a rushing sound. In quiet places the beating of their wings can be heard distinctly when the birds are no longer in sight, although, owing to their large size, the eye can follow them very far. Gauchos sometimes capture them by suddenly charging down the wind upon them, uttering loud shouts which greatly terrify the birds, and when they attempt to rise with the wind they only flap along the ground and are easily knocked over. A Gaucho of my acquaintance one day caught three out of a flock of six in this way; but a very strong wind favoured him, and the birds were at some distance from the water, and allowed him to come near before making the sudden charge. As a rule, they are seen on the water, and when on land they keep very close to the margin.

According to Mr. Gibson, who has observed their breeding-habits, they begin to nest in July—just after the winter solstice. The nest is always placed among thick rushes growing in deep water, and the Swan invariably swims to and from her nest. It is built up from the bottom of the swamp, sometimes through four or five feet of water, and rises a foot and a half above the surface. The top of the nest measures about two feet across, with a slight hollow for the eggs, which are cream-coloured and have a smooth glossy shell. The number varies from three to five, and on one occasion six were found. Mr. Gibson has seen the parent bird swimming from the nest with the young on her back.

Our figure of this species (Plate XVIII.) is taken from the specimen now living in the Zoological Society's Gardens.

339. COSCOROBA CANDIDA (Vieill.).

(COSCOROBA SWAN.)

- 126 -

Cygnus coscoroba, *Burm. La-Plata Reise*, ii. p. 512 (Paraná); *Scl. et Salv. Nomencl.* p. 129; *id. P. Z. S.* 1876, p. 371; *Durnford, Ibis*, 1877, p. 191 (Buenos Ayres), et 1878, p. 400 (Centr. Patagonia); *Gibson, Ibis*, 1880, p. 36 (Buenos Ayres). **Coscoroba Candida**, *Reichenb. Nat. Syst.* p. x.

Description.—White; tips of the primaries black; bill coral-red; feet dull red: whole length 40·0 inches, wing 17·5, tail 5·8. *Female* similar.

Hab. Patagonia, Chili, Argentina, and Paraguay.

This Swan is considerably smaller than the black-necked species, and also inferior in beauty on account of its shorter neck. It is, nevertheless, a very handsome bird, being entirely of a pure white colour except the tips of the primaries, which are black. The beak and legs are bright rosy red. In its habits, language, and flight it also differs much from *Cygnus nigricollis*, and the country people call it *Ganso* (Goose), probably on account of its goose-like habit of sometimes feeding away from the water, or because its flesh has the flavour of Wild Goose. As a rule they go in small parties of five or six individuals, but sometimes flocks numbering two or three hundred are seen in the cold season. Their migrations are very irregular, and sometimes they are excessively abundant in a district one year and absent from it the next. When disturbed they utter a loud musical trumpeting cry, in three notes, the last with a falling inflection; and their wings being much longer proportionately than in the black-necked species, they rise with greater ease and have a much freer and an almost soundless flight.

Concerning their breeding-habits, Mr. Gibson observes that the nest is usually placed on the ground at some distance from the water. It is about a foot and a half high, made of mud and rushes; the hollow, which is rather deep, is lined with dry grass.

The eggs are eight or nine in number; smooth, white, and rounder than those of *Cygnus nigricollis*.

340. DENDROCYGNA FULVA (Gm.).

(FULVOUS TREE-DUCK.)

Dendrocygna fulva, *Burm. La-Plata Reise*, ii. p. 514 (Paraná); *id. P. Z. S.* 1872, p. 367; *Scl. et Salv. Nomencl.* p. 129; *id. P. Z. S.* 1869, p. 635 (Buenos Ayres), et 1876, p. 372; *Durnford, Ibis*, 1878, p. 63 (Buenos Ayres); *White, P. Z. S.* 1882, p. 625 (Buenos Ayres).

Description.—Chestnut-red, top of head darker, with black line down the nape; back black, on the upper portion banded with chestnut; wings and tail black; lesser wing-coverts dark chestnut; upper tail-coverts white; flank-plumes elongated, chestnut, banded with black and white; bill and feet black: whole length 18·0 inches, wing 8·5, tail 2·0. *Female* similar.

- 127 -

Hab. Mexico and South America.

This Duck, the well-known *Pato silvon* (Whistling Duck) of the eastern Argentine country, is found abundantly along the Plata and the great streams flowing into it, and northwards to Paraguay. Along this great waterway it is to some extent a migratory species, appearing in spring in Buenos Ayres in very large numbers, to breed in the littoral marshes and also on the pampas. They migrate principally by night, and do not fly in long trains and phalanxes like other Ducks, but in a cloud; and when they migrate in spring and autumn the shrill confused clangour of their many voices is heard from the darkness overhead by dwellers in the Argentine capital; for the Ducks, following the eastern shore of the sea-like river, pass over that city on their journey. Northwards this Duck extends to Central Brazil; from the northern half of the southern continent and from Central America it is absent, but it reappears in Mexico. Commenting on these facts Messrs. Sclater and Salvin write:—"Singular as this distribution is, it is still more remarkable when we consider that there appear to exist no tangible grounds for separating the American bird from that called *D. major* by Jerdon, which ranges throughout the peninsula of India and is also found in Madagascar!"

The Whistling Duck, in its chestnut and fulvous plumage, is a handsome bird and somewhat singular in appearance, especially when seen in a large body on the ground. When out of the water they crowd close together, and when disturbed stand up craning their necks, looking strangely tall on their long blue legs. While thus watching an intruder they are silent, and the sudden ringing chorus of whistling voices into which they burst at the moment of rising has a curious effect.

So extremely social are these Ducks that even when breeding they keep together in large flocks. The nest is made of stems and leaves, on the water among the reeds and aquatic plants; and sometimes large numbers of nests are found close together, as in a gullery. The eggs are pure white, and each bird lays, I believe, ten or twelve, but I am not sure about the exact number; and I have so frequently found from twenty to thirty eggs in a nest that I am pretty sure that it is a common thing for two or three females to occupy one nest.

341. DENDROCYGNA VIDUATA (Linn.).

(WHITE-FACED TREE-DUCK.)

- 128 -

Dendrocygna viduata, *Burm. La-Plata Reise*, ii. p. 515 (Tucuman); *id. P. Z. S.* 1872, p. 367; *Scl. et Salv. P. Z. S.* 1869, p. 160 (Buenos Ayres), et 1876, p. 376; *Durnford, Ibis*, 1878, p. 64 (Buenos Ayres).

Description.—Face and spot on the throat white; nape, neck in front, middle of abdomen, tail, rump, and wings black; hind neck chestnut; middle of back and scapulars brown, the feathers margined with ochraceous; wing-coverts olivaceous black; flanks banded with black and white; bill and feet black: whole length 17·0 inches, wing 9·0, tail 2·5. *Female* similar.

Hab. South America.

This Tree-Duck resembles that last described in size, form, and maroon-red plumage, but is of a darker tint, and may also be easily distinguished, even at a long distance, by its white face contrasted with the velvety black of the head and neck. Compared with *Dendrocygna fulva* it is a rare species, being usually found in pairs in the Plata district, although sometimes as many as half a dozen are seen together. When taking wing it also whistles, but differently from the allied species, having three long clear whistling notes, not unlike the three-syllabled cry of the Sandpiper, only the notes are more prolonged. Of its breeding-habits I know nothing.

342. SARCIDIORNIS CARUNCULATA (Licht.).

(CRESTED DUCK.)

Sarcidiornis regia, *Burm. La-Plata Reise*, ii. p. 513 (Tucuman); *id. P. Z. S.* 1872, p. 365.

Sarcidiornis carunculata, *Scl. et Salv. P. Z. S.* 1876, p. 377; *Sclater, P. Z. S.* 1876, p. 695, pl. lxxviii.

Description.—Head and neck white, spotted with black, hind neck almost black; base of neck and body beneath white; flanks black; back and wings black; secondaries glossed with bronze, the scapulars with purple; lower back grey; tail brown; bill, with caruncle on the culmen, and feet black: whole length 30·0 inches, wing 15·0, tail 6·0. *Female* similar, but rather smaller.

Hab. Brazil, Paraguay, and northern confines of Argentina.

Dr. Burmeister met with this Duck in the province of Tucuman, and it probably occurs also in other places on the northern frontiers of the Republic.

343. CAIRINA MOSCHATA (Linn.).

(MUSCOVY DUCK.)

Cairina moschata, *Burm. La-Plata Reise*, ii. p. 514 (Paraná, Santa Fé, Tucuman); *id. P. Z. S.* 1872, p. 367; *Scl. et Salv. Nomencl.* p. 120; *id. P. Z. S.* 1876, p. 378; *White, P. Z. S.* 1882, p. 625 (Salta).

Description.—Whole head and neck and body beneath brownish black; belly closely banded with narrow white lines; back greenish purple, with the feathers edged with black; scapulars and elongated tertials and tail bright shining green; secondaries edged with metallic blue; primaries black; upper and under wing-coverts and axillary plumes white; flanks slightly tinged with green; bill with caruncles red; feet black: whole length 29·0 inches, wing 15·0, tail 7·5. *Female* similar, but smaller.

Hab. Central and South America.

Everyone is familiar with this species in its domestic state, called in the Argentine country *Pato creollo* (Creole Duck); but the wild bird, called *Pato real*, is little known, although a few stragglers are seen as far south as Buenos Ayres, where I have met with eight or nine examples. Concerning the distribution and habits of this species Messrs. Sclater and Salvin write:—"The Muscovy Duck, so well known in a domestic state nearly all over the world, is a native of the hottest portion of tropical America. It is usually found in lowland swampy districts; and where there are extensive forests it not unfrequently abounds. During the day the birds remain in the forest-swamps; but towards evening numbers may be seen sitting on the lower boughs of trees standing on the margin of a clearing.

"Its extreme northern limit seems to be N. W. Mexico. Its southern range extends to the upper Paraná and Tucuman. It is not uncommon in Paraguay, according to Azara, although not found on the La Plata. It is to be seen usually in pairs or singly, but also in flocks of twenty or thirty. It always roosts in trees, usually resorting to the same trees night after night. The nest, in which from ten to fourteen eggs are deposited, is made in a hole or fork of a large tree at some elevation from the ground. It seeks its food not only in the rivers, but on moonlight nights resorts to the maize and corn-fields, and also plucks up the roots of mandioca.

"The native habitat of the Muscovy Duck was known to some of the earliest writers. The date of its introduction as a domesticated species into Europe and elsewhere does not appear to have been recorded, but doubtless dates back to soon after the Spanish conquests in America."

344. HETERONETTA MELANOCEPHALA (Vieill.).

(BLACK-HEADED DUCK.)

Heteronetta melanocephala, *Scl. et Salv. P. Z. S.* 1876, p. 382. **Anas melanocephala**, *Scl. et Salv. Nomencl.* p. 129; *Durnford, Ibis*, 1878, p. 64 (Buenos Ayres).

Description.—Above deep blackish brown, minutely vermiculated with rufous; head and neck black; narrow terminal band on the secondaries white; beneath dirty white, on the upper breast, flanks, and crissum freckled with rufous; bill blackish, with a basal spot on each side flesh-colour; feet horny brown: whole length 14·5 inches, wing 6·3, tail 2·3. *Female* similar, but head like the back; cheeks brown, freckled with black, and throat and superciliary stripe whitish.

Hab. Southern Brazil, Paraguay, Argentina, and Chili.

This small, obscurely coloured Duck extends from Southern Brazil over the pampas of Buenos Ayres into Chili. Near Buenos Ayres it is scarce. Durnford shot a pair in September 1876, in the reed-beds of Alvear, about twenty miles to the north-west of the city.

345. QUERQUEDULA CYANOPTERA (Vieill.).

(BLUE-WINGED TEAL.)

Anas cyanoptera, *Burm. La-Plata Reise*, ii. p. 516 (Mendoza, Paraná). **Querquedula cyanoptera**, *Scl. et Salv. Nomencl.* p. 129; *iid. P. Z. S.* 1869, p. 160 (Buenos Ayres), et 1876, p. 384; *Durnford, Ibis*, 1877, p. 191 (Buenos Ayres), et 1878, p. 400 (Patagonia); *White, P. Z. S.* 1882, p. 625 (Catamarca); *Barrows, Auk*, 1884, p. 273 (Pampas). **Pterocyanea cyanoptera**, *Burm. P. Z. S.* 1872, p. 368.

Description.—General plumage red; top of head black; middle of back and scapularies streaked with black; lesser wing-coverts blue; wing-speculum green, margined above with white; primary wing-feathers black, secondaries flammulated with white and buff; bill black; feet yellow: whole length 18·0 inches, wing 7·6, tail 3·0. *Female*: above blackish, feathers margined with whitish: beneath dirty white, variegated with brown; throat white, with blackish freckles.

Hab. North and South America.

This Teal has an exceedingly wide distribution in America, being found from California in the northern continent down to the Straits of Magellan and the Falkland Islands in the south. Its fine, strongly contrasted colours give it a very handsome appearance—the wings being clear grey-blue, the body deep maroon-red, the feet vivid yellow, beak black, and iris gold-colour. On the pampas it is common, and almost invariably seen in pairs at all seasons. Many of the Teals are quarrelsome in disposition; but this species, I think, exceeds them all in pugnacity, and when two pairs come together the males almost invariably begin fighting.

346. QUERQUEDULA FLAVIROSTRIS (Vieill.).

(YELLOW-BILLED TEAL.)

Anas flavirostris, *Burm. La-Plata Reise*, ii. p. 516 (Mendoza). **Querquedula flavirostris**, *Scl. et Salv. Nomencl.* p. 129; *iid. P. Z. S.* 1868, p. 146 (Buenos Ayres), et 1876, p. 386; *Durnford, Ibis*, 1877, p. 191 (Buenos Ayres), et 1878, p. 401 (Patagonia); *White, P. Z. S.* 1883, p. 42 (Cordova); *Burm. P. Z. S.* 1872, p. 367.

Description.—Above pale slaty brown; whole head barred across with narrow blackish bands; middle of back rufescent, with the centres of the feathers black and narrowly margined with brownish ochraceous; rump paler; a broad wing-speculum black, with a margin of ochraceous above and below, and a bronzy-green blotch in the centre; wing-feathers slaty, margins of secondaries on each side pale rufous; abdomen whitish, breast and belly distinctly spotted with black; bill yellow; culmen and tip black; feet horn-colour: whole length 15·0 inches, wing 7·5, tail 7·5. *Female* similar.

Hab. Argentina, Chili, and Patagonia.

In the southern part of the Argentine Republic this is one of the commonest species, and is almost invariably found in every marsh, stream, and pool of water on the pampas. It is resident, and usually goes in flocks of from a dozen to thirty individuals. It has a rapid flight, and is restless, lively, and extremely pugnacious in its habits. When a flock is on the water the birds are perpetually quarrelling. They are also highly inquisitive, and I have often shot them by first showing myself to the flock, and then standing or sitting still, when they would soon come wheeling about, flying in very close order. They quack and chatter in a variety of tones, and the male has also a clear whistling note in the love-season.

The nest of this Duck is always made at a distance from the water, sometimes as far as one or two miles. It consists of a slight hollow in the ground under a thistle-bush or tussock of long grass, and is lined with dry grass and a great deal of down, which is increased in quantity during incubation. The eggs are reddish cream-colour, and five is the usual number laid; but I have also found nests with six and seven.

347. QUERQUEDULA VERSICOLOR (Vieill.).

(GREY TEAL.)

Querquedula versicolor, *Scl. et Salv. Nomencl.* p. 129; *iid. P. Z. S.* 1868, p. 146 (Buenos Ayres), et 1876, p. 388; *Durnford, Ibis*, 1877, p. 191 (Buenos Ayres), et 1878, p. 401 (Patagonia); *Barrows, Auk*, 1884, p. 274 (Entrerios). **Anas maculirostris**, *Burm. La-Plata Reise*, ii. p. 516 (Mendoza). **Querquedula maculirostris**, *Burm. P. Z. S.* 1872, p. 367.

Description.—Above grey, with narrow black cross bands, which are more numerous and narrower on the rump; top of head smoky brown, sides of head and throat white; abdomen whitish, tinged with ochraceous and spotted with black on the breast, more whitish and with numerous cross bands on the belly; wings externally greyish brown; speculum purplish green, margined, with white above and below, also with a subterminal black band; flanks distinctly barred across with black and white; bill black, with an orange blotch each side at the base of the mandible; feet hazel: whole length 16·5 inches, wing 7·6, tail 3·4. *Female* similar, but colour duller and wing-speculum not so bright.

Hab. Paraguay, Argentina, Patagonia, and Chili.

This prettily variegated blue-grey Teal with its strongly marked bill is perhaps the most abundant of the genus in the Argentine Republic, especially in the southern portion. It is resident, and unites in much larger flocks than any other bird of this group in the country. Its note when disturbed or flying is very peculiar, resembling in sound the muffled stridulating of the mole-cricket. Durnford found it common and breeding at Baradero.

348. QUERQUEDULA TORQUATA (Vieill.).

(RING-NECKED TEAL.)

Querquedula torquata, *Scl. et Salv. Nomencl.* p. 129; *iid. P. Z. S.* 1869, p. 635 (Buenos Ayres), et 1876, p. 389; *Burm. P. Z. S.* 1872, p. 367 (Paraná).

Description.—Above earthy brown; head above and neck, which expands into a half-collar, together with the lesser wing-coverts, lower back, and tail above, black; scapulars pure chestnut; wings brownish black, with a large white blotch on the coverts of the secondaries, which are themselves bronzy green: beneath, sides of head and throat dirty white streaked with brown; breast tinged with rosy red and sparingly spotted with black; belly and flanks white, very narrowly barred with grey; crissum black, with a white blotch on each side: whole length 14·0 inches, wing 7·2, tail 2·7. *Female*: brown; superciliaries and stripe on each side of the head with the throat and sides of the neck white: beneath white, banded across with brown; wings and tail black; secondaries bronzy green; wings with a white blotch as in the male; bill reddish; feet brown.

Hab. Paraguay and Argentina.

This beautiful Duck, for our first knowledge of which we are indebted to Azara, is rather scarce in collections. Azara described the two somewhat dissimilar sexes under different names, the male being his *Pato collar negro*, and the female his *Pato ceja blanca*.

In the neighbourhood of Buenos Ayres the Ring-necked Teal is strictly migratory, and in the month of October appears in small flocks in the marshes along the river; but in the interior of the country it is seldom met with. They are extremely active birds, constantly flying about from place to place both by day and night; and in the love-season, when they alight in a pool of water, the males immediately engage in a spirited combat. While flying they utter a peculiar jarring sound, and occasionally a quacking note, rapidly repeated and sounding like a strange laugh; but on the water, especially in the evening, the male emits a long inflected note, plaintive and exquisitely pure in sound—a more melodious note it would be difficult to find even among the songsters.

349. QUERQUEDULA BRASILIENSIS (Gm.).

(BRAZILIAN TEAL.)

Anas brasiliensis, *Burm. La-Plata Reise*, ii. p. 517 (Paraná, Tucuman). **Querquedula brasiliensis**, *Scl. et Salv. Nomencl.* p. 129; *iid. P. Z. S.* 1869, p. 635 (Buenos Ayres), et 1876, p. 390; *Durnford, Ibis*, 1877, p. 192, et 1878, p. 64 (Buenos Ayres); *Barrows, Auk*, 1884, p. 273 (Entrerios); *Burm. P. Z. S.* 1872, p. 368.

Description.—Above brown; head more rufous; lower back, tail, and lesser wing-coverts black; wings brownish black; outer webs of the inner primaries and the secondaries shining bronzy green; broad tips of the outer secondaries white, divided from the green colour by a black band: beneath paler, washed on the breast with rusty red; throat whitish; belly slightly banded with brown; bill blackish; feet red: whole length 15·5 inches, wing 7·0, tail 3·3.

Hab. South America.

This richly coloured Teal, which is widely extended in South America from Guiana down to the Straits of Magellan, is usually met with in pairs near Buenos Ayres, although as many as five or six are sometimes seen together. In habits it is a tree duck, preferring water-courses in the neighbourhood of woods, and is frequently seen perched on horizontal branches. The flight is slow and with the wings very much depressed, as in a duck about to alight on the water; and the beautiful blue, green, and white speculum is thus rendered very conspicuous. The note of the male in the love-season is a long plaintive whistle, singularly pure and sweet in sound, and heard usually in the evening.

It is a rather curious coincidence that the vernacular name of this Teal in La Plata should be *Pato Portugues*, which means, as things are understood in that region, Brazilian Duck.

- 134 -

350. DAFILA SPINICAUDA (Vieill.).

(BROWN PINTAIL.)

Anas spinicauda, *Burm. La-Plata Reise*, ii. p. 515 (Paraná). *Anas oxyura*, *Burm. ibid.* (Mendoza).

Dafila spinicauda, *Scl. P. Z. S.* 1870, p. 666, pl. xxxviii.; *Scl. et Salv. Nomencl.* p. 130; *iid. P. Z. S.* 1868, p. 146 (Buenos Ayres), 1869, p. 157, et 1876, p. 392; *Durnford, Ibis*, 1878, p. 64 (Buenos Ayres) et p. 401 (Patagonia); *White, P. Z. S.* 1883, p. 42 (Buenos Ayres); *Barrows, Auk*, 1884, p. 274 (Entrerios).

Description.—Above brown; feathers black in the centre and margined with brown; head above bright rufous spotted with black; wings brown, with a large speculum of bronzy black, distinctly margined above and below with buff; beneath, throat dirty white, sparingly spotted with black; breast, flanks, and crissum tinged with rufous, the feathers with black centres; belly white, in the lower portion slightly varied with brown; bill black, at the base yellow; feet plumbeous: whole length 19·0 inches, wing 9·7, tail 5·5. *Female* similar.

Hab. Southern Brazil, Peru, Paraguay, Argentina, Chili, and Patagonia.

The Brown Pintail is the commonest Duck in the Argentine Republic, and unites in the largest flocks. It is also, according to Philippi and Landbeck, the commonest species in Chili. It ranges from South Brazil and Peru to the Magellan Straits and the Falklands; but is probably most abundant in the Plata district and in North Patagonia. In the autumn it sometimes visits the pampas in immense numbers, to feed on the seed of the giant thistle (*Carduus mariana*); and on these occasions I have known as many as sixty killed at one shot. The birds, however, soon become wary when feeding on the open plains in large flocks, and it then becomes impossible to approach them without a trained horse. The Ducks pay no attention to horses and cattle browsing near them; and the trained animal, with the gunner concealing his gun and person behind it, feeds quietly along, and gradually approaches the flock until within range. In the valley of the Rio Negro, in Patagonia, the Pintails sometimes cause serious damage to the farmers, coming up in clouds from the river by night to devour the ripe grain.

In favourable seasons the Pintail is a resident; but like the marsh-gulls, pigeons, the American golden plover, and all birds that live and move in immense bodies, it travels often and far in search of food or water. A season of scarcity will quickly cause them to disappear from the pampas; and sometimes, after an absence of several months, a day's rain will end with the familiar sound of their cry and the sight of their long trains winging their way across the darkening heavens.

Their nest is made on the ground, under the grass or thistles, at a distance from the water, and is plentifully lined with down plucked from the bosom of the sitting bird. The eggs are seven or eight in number and of a deep cream-colour.

- 135 -

351. DAFILA BAHAMENSIS (Linn.).

(BAHAMA PINTAIL.)

Anas bahamensis, *Burm. La-Plata Reise*, ii. p. 515 (Rio Uruguay). *Dafila bahamensis*, *Scl. et Salv. Nomencl.* p. 130; *iid. P. Z. S.* 1868, p. 146 (Buenos Ayres), et 1876, p. 393; *Durnford, Ibis*, 1877, p. 192 (Buenos Ayres); *Barrows, Auk*, 1884, p. 274 (Carhué, Pampas); *Burm. P. Z. S.* 1872, p. 367.

Description.—Above reddish, brown; feathers with their centres blackish; lower back blackish; upper tail-coverts and tail fawn-colour; wings dark slaty black; broad speculum bronzy green, margined above and below by a fawn-coloured band, the lower band with an interior black margin; edgings of the external secondaries fawn-colour: beneath brownish fawn-colour, entirely covered with obsolete black spots; throat and cheeks and front neck pure white; bill black, with a red spot at the base on each side; feet brown: whole length 18·0 inches, wing 8·4, tail 5·0. *Female* similar.

Hab. South America.

The Bahama Duck, as it is commonly called, though it is very doubtful whether it really occurs in the Bahama Islands, is found throughout South America from British Guiana to Patagonia; and Burmeister says that it is spread over the whole of Brazil, and that it is nearly the commonest species of Duck in that country.

On the pampas of Buenos Ayres this Duck is not a common bird. It is usually seen in pairs, or, on rare occasions, three or four together.

352. MARECA SIBILATRIX (Poebb.).

(CHILOE WIGEON.)

Anas chiloënsis, *Burm. La-Plata Reise*, ii. p. 517 (Mendoza). *Mareca chiloënsis*, *Scl. et Salv. P. Z. S.* 1869, p. 635 (Buenos Ayres); *iid. Nomencl.* p. 130. *Mareca sibilatrix*, *Scl. et Salv. P. Z. S.*

Description.—Above black, on the neck barred across with white; feathers of the back and scapularies margined with white; head above and cheeks pure white; nape and back of the neck shining greenish purple; wings brown, lesser wing-coverts white; secondaries velvety black, white at the base; beneath white, throat and fore neck blackish; upper breast black, with narrow white cross bands; flanks stained with rusty rufous; bill and feet black: whole length 20·0 inches, wing 10·3, tail 4·3. *Female* similar, but not so bright in colour.

Hab. Paraguay, Argentina, Chili, and Patagonia.

- 136 -

The Chiloe Wigeon, as this Duck has been usually called since its introduction and acclimatization in England, is the only species of the genus found in South America, and is most abundant on the pampas, where it is called by the country people *Pato picaso* or *Pato overo* (piebald duck), or *Chiriví* from its cry. It is a very handsome bird; the upper plumage variegated with black, white, and grey; forehead, speculum, and under surface white; head and neck dark glossy green. It is resident, and is usually seen in small flocks of from a dozen to twenty birds, but sometimes as many as one or two hundred congregate together. They are wary and loquacious, strong on the wing, and frequently engage in a peculiar kind of aerial pastime. A small flock will rise to a vast height, often until they seem mere specks on the sky, or disappear from sight altogether; and at that great altitude they continue hovering or flying, sometimes keeping very nearly in the same place for an hour or more, alternately separating and closing, and every time they close they slap each other on the wing so smartly that the sound may be heard distinctly even when the birds are no longer visible. While flying or swimming about they constantly utter their far-sounding cry—three or four long, clear, whistling notes, followed by another uttered with great emphasis and concluding with a kind of flourish.

The nest is made amongst the rushes in the marshes, and the eggs are pure white and eight or nine in number.

353. SPATULA PLATALEA (Vieill.).

(RED SHOVELLER.)

Anas platalea, *Burm. La-Plata Reise*, ii. p. 517 (Paraná, Buenos Ayres). *Spatula platalea*, *Scl. et Salv. P. Z. S.* 1868, p. 143 (Buenos Ayres), et 1876, p. 396; *iid. Nomencl.* p. 130; *Durnford, Ibis*, 1877, p. 41 (Chupat), et 1878, p. 65 (Buenos Ayres) et p. 401 (Central Patagonia); *Barrows, Auk*, 1884, p. 274 (Carhué, Pampas); *Burm. P. Z. S.* 1872, p. 368.

Description.—Above and beneath reddish, with round black spots; head and neck lighter and spots smaller; lower back blackish, barred with rufous, rump black; wings brownish black; lesser coverts blue; middle coverts white; secondaries bronzy black; outer secondaries and scapulars with white shaft-stripes; crissum black; tail brown, lateral rectrices edged with white; bill dark, feet yellow: whole length 20·0 inches, wing 8·0, tail 4·5. *Female*: above blackish brown, edged with rufous; lesser wing-coverts bluish; beneath buffy rufous, varied and spotted with blackish except on the throat.

Hab. Argentina, Patagonia, and Chili.

- 137 -

There is but one Shoveller Duck in South America, the present species, which is confined to the southern part of the continent, from Paraguay to Patagonia, and is familiar to sportsmen in the Plata as the Red Duck, or *Espatula*. It is seldom met with in flocks of more than twenty or thirty individuals, and a large number of birds appear to pair for life, as they are usually seen in pairs at all seasons of the year. In the autumn and winter months I have sometimes observed small flocks composed of males only, but these were perhaps young birds not yet paired. They feed in shallow water, where by plunging the head down they can reach the mud at the bottom; and when several are seen thus engaged, all with their heads and necks immersed, they look curiously like headless ducks floating on the water. When disturbed or flying the male emits a low sputtering sound, and this is its only language. They are resident and the least wary of ducks; never engage, like other species, in real or mock combats; and their flight is rapid and violent, the wings beating quickly.

354. METOPIANA PEPOSACA (Vieill.).

(ROSY-BILLED DUCK.)

Anas peposaca, *Burm. La-Plata Reise*, ii. p. 518 (Rio Paraná). *Metopiana peposaca*, *Scl. et Salv. P. Z. S.* 1868, p. 146 (Buenos Ayres), et 1876, p. 398; *iid. Nomencl.* p. 130; *Durnford, Ibis*, 1877, p. 192 (Buenos Ayres); *White, P. Z. S.* 1882, p. 625 (Buenos Ayres); *Barrows, Auk*, 1884, p. 274; *Scl. P. Z. S.* 1870, p. 666, pl. xxxvii.

Description.—Above black, very finely striated with white on the back; back of head and neck with a purplish tinge; secondaries of wings white with black ends, and covered with the black coverts, having a white speculum; primaries greyish white, the four outer ones on their outer webs and all on their extremities black; whole belly minutely vermiculated with grey and white; crissum white; bill rosy red, enlarged at the base; feet yellowish: whole length 19·0 inches, wing 9·4, tail 2·8. *Female*. Above brown, bend of wing and speculum white; beneath white, breast and flanks brownish; bill dark; feet horn-colour.

Hab. Paraguay, Argentina, Chili, and Patagonia.

The Rosy-billed Duck, usually called "Black Duck" in the Plata, inhabits the Argentine country from Paraguay to Patagonia, and also occurs in Uruguay and Chili, but does not extend to Brazil.

A peculiar interest attaches to this species owing to the fact that it is the only freshwater Duck in the subfamily Fuligininæ, in which it is classed. With the exception of the Loggerhead Duck (*Tachyeres cinereus*), found in the Falklands and the Magellan Straits, all the other sea-ducks of this division inhabit North and Central America; so that the Rosy-bill appears to have separated itself widely from its nearest relations geographically as well as in habits. In appearance it is a fine bird, the black plumage being frosted on the upper parts with white in a very delicate manner, while the rosy bill and large carmine caruncle and golden red iris contrast beautifully with the glossy purple head and neck. The speculum is white, the legs bright yellow. The plumage of the female is brown.

- 138 -

In marshy places on the pampas the Rosy-billed Duck is very abundant, and they sometimes congregate in very large flocks. They obtain their food from floating weeds in the water, and are never seen, like the Pintails and other kinds, feeding on the dry land. They rise heavily, the wings being comparatively small, and have a rapid, straight, violent flight; they are nevertheless able to perform long journeys and travel in long lines and at a considerable elevation. Their only language is a deep, hoarse, prolonged, raven-like note, uttered by the male in the love-season. The nest is made on swampy ground near the water, of dry rushes, and is, for a duck, a deep well-made structure; the eggs are oval in form, cream-coloured, and twelve in number.

355. ERISMATURA FERRUGINEA, Eyton.

(RUSTY LAKE-DUCK.)

Erismatura ferruginea, *Scl. et Salv. Nomencl.* p. 131; *iid. P. Z. S.* 1876, p. 404; *Sclater, P. Z. S.* 1872, p. 549 (Rio Negro); *Burmeister, P. Z. S.* 1872, p. 368 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 42 (Chupat), p. 192 (Buenos Ayres), et 1878, p. 401 (Central Patagonia).

Description.—Above chestnut-red, whole head and neck black; wings and tail brown: beneath dirty white, sprinkled with brown; breast and flanks chestnut; bill bluish; feet brown: whole length 16·0 inches, wing 5·5, tail 3·8.

Hab. Central Peru, Chili, and Argentina.

This Lake-Duck ranges from Central Peru and the north Argentine provinces to Patagonia in the south, but is in no place a very common bird. It inhabits interior lakes and streams, living almost as much in the water as a Grebe, which in habits it resembles, remaining motionless when disturbed, but gradually sinking lower in the water, and diving, when only the head and neck are visible above the surface.

356. NOMONYX DOMINICUS (Linn.).

(WHITE-WINGED LAKE-DUCK.)

Erismatura dominica, *Scl. et Salv. Nomencl.* p. 131; *Lee, Ibis*, 1873, p. 137 (Entrerios); *Barrows, Auk*, 1884, p. 274 (Pampas). *Nomonyx dominicus*, *Baird, Brew., et Ridgw. Water-B. N. A.* ii. 109.

Description.—Above ferruginous; top of head black; superciliaries and band beneath the eye with chin and cheeks whitish, with black freckles; wings brown, with a large white patch on the secondaries; tail black; abdomen dirty white, sprinkled with rufous; axillaries pure white; bill bluish; feet black: whole length 13·0 inches, wing 5·5, tail 3·8. *Female*: brownish black, back spotted with buffy; sides of head and body beneath ochraceous, with black cross bands.

- 139 -

Hab. West Indies and South America.

This Lake-Duck, which has an extensive range over the northern part of South America, was obtained by Mr. Lee in Entrerios, and by Mr. Barrows in the streams of the Pampas. Mr. Barrows found it associated with Rolland's Grebe, Coots, and Gallinules, usually in small parties of from three to six individuals.

Order XI. COLUMBÆ.

Fam. XLI. COLUMBIDÆ, OR PIGEONS.

The great and useful Order of Pigeons is generally diffused over the earth's surface, although most abundant within the tropics, and not met with in high Arctic or Antarctic latitudes. In the Neotropical Region from 60 to 70 species are found, and among these, although none of them can rival the Fruit-Pigeons of the Eastern Tropics, are some of remarkable beauty and grace. These brilliantly-coloured species are, however, mostly from

the northern portion of the Neotropical Region. The Columbæ of the Argentine Republic are in general modestly clad and fewer in number, only eight Pigeons being as yet included in the Argentine Ornis.

357. COLUMBA PICAZURO, Temm.

(PICAZURO PIGEON.)

Patagioenas maculosa, *Burm. La-Plata Reise*, ii. p. 496 (Mendoza, Cordova, Tucuman). **Columba picazuro**, *Scl. et Salv. Nomencl.* p. 132; *iid. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 193 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 6 (Buenos Ayres); *Barrows, Auk*, 1884, p. 274 (Entrerios).

Description.—Above pale brown; head and neck vinous; back of neck with white cross bands which are edged with black; lower back and tail plumbeous; wings plumbeous, larger coverts broadly edged with white; beneath pale vinaceous; flanks and crissum plumbeous; whole length 14·0 inches, wing 8·0, tail 4·5. *Female* similar.

- 140 -

Hab. S.E. Brazil, Paraguay, and Argentina.

The Picazuro or common Wood-Pigeon of the Argentine Republic is of about the size of the domestic Pigeon, but has longer wings, and differs greatly in colour and markings. In summer it inhabits woods, and is seen in pairs or small parties, but in winter unites in flocks of from twenty to one or two hundred individuals, and roams much over the open country. It is a wary bird, and when feeding walks on the ground in a slow and somewhat stately manner. In spring, its song resounds in the woods, and, when heard for the first time, fills the listener with wonder, so strangely human-like in tone are its long mournful notes. The notes are five, the last one long with a falling inflection, and profoundly sorrowful. The nest is a platform structure, frequently placed on a broad horizontal branch; the eggs are two, and closely resemble those of the common Rock-Pigeon of Europe.

358. COLUMBA MACULOSA, Temm.

(SPOT-WINGED PIGEON.)

Columba maculosa, *Scl. et Salv. Nomencl.* p. 132; *Sclater, P. Z. S.* 1872, p. 545 (Rio Negro); *Durnford, Ibis*, 1877, p. 42 (Chupat), et 1878, p. 401 (Centr. Patagonia); *White, P. Z. S.* 1882, p. 626 (Catamarca); *Barrows, Auk*, 1884, p. 274 (Entrerios).

Description.—Above pale vinaceous brown, profusely spotted on the back and wings with white apical spots; lower back and tail plumbeous; wings and tail slaty black, the former with narrow whitish margins; beneath plumbeous, with a strong vinaceous tinge; bill black; feet yellow; whole length 13·0 inches, wing 8·5, tail 4·5. *Female* similar.

Hab. Peru, Bolivia, Western Argentina, and Patagonia.

This Pigeon has a general resemblance to the Picazuro, but may be at once distinguished by its spotted back and wings. It ranges from South Peru through Bolivia and Western Argentina into Patagonia, where it appears to be a resident. In winter, the valley of the Rio Negro is visited by it in immense flocks, which are a great plague to the farmers, as they descend in clouds on the fields, and devour the wheat before it has time to sprout. While watching crowds of these birds feeding on the ground, I noticed that their manner was in striking contrast to that of the *C. picazuro*, which has slow and dignified motions; for it hurried about, and snatched up its food with such rapidity that the most animated motions of other birds that feed in flocks on the ground seemed languid by comparison. This excessively lively habit is, no doubt, directly caused by the conditions of life; the sterile soil and scanty vegetation of the region it inhabits require in a species going in large bodies, and subsisting exclusively on fallen seed, a greater activity than is necessary in the rich fertile region further north.

- 141 -

Its song is composed of notes equal in length and number to that of the Picazuro, but its voice is exceedingly hoarse, like that of the European Wood-Pigeon.

The great body of these birds retire, on the approach of summer, from the Rio Negro valley, a few only remaining to breed. Their nesting-habits and eggs are like those of the Picazuro.

359. ZENAIDA MACULATA (Vieill.).

(SPOTTED DOVE.)

Zenaida maculata, *Burm. La-Plata Reise*, ii. p. 497; *Scl. et Salv. Nomencl.* p. 132; *iid. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 193 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 8 (Buenos Ayres); *White, P. Z. S.* 1882, p. 626 (Catamarca); *Barrows, Auk*, 1884, p. 275 (Entrerios).

Description.—Above pale brown; nape plumbeous; outer wing-coverts and scapularies with a few black spots; wings dark grey, with fine white margins; tail plumbeous, broadly ended with white, and crossed by a subapical black band; middle rectrices like the back; beneath pale vinaceous, brighter on the breast, and whiter on the throat; bill black; feet yellow; whole length 9·0 inches, wing 5·5, tail 3·5. *Female* similar.

Hab. South America, from the Amazons to Chili and Buenos Ayres.

This is the commonest species of the Pigeon tribe in the Argentine country, and is known to every one as the *Torcasa*, probably a corruption of *Tortola*, Turtle-Dove. In autumn they often congregate in very large flocks, and are sometimes observed migrating, flock succeeding flock, all travelling in a northerly direction, and continuing to pass for several consecutive days. But these autumnal migrations are not witnessed every year, nor have I seen any return-migration in spring; while the usual autumn and winter movements are very irregular, and apparently depend altogether on the supply of food. When the giant thistle has covered the plains in summer incredible numbers of *Torcasas* appear later in the season, and usually spend the winter on the plains, congregating every evening in countless myriads wherever there are trees enough to form a suitable roosting-place.

On bright warm days in August, the sweet and sorrowful sob-like song of this Dove, composed of five notes, is heard from every grove—a pleasing, soft, murmuring sound, which causes one to experience by anticipation the languid summer feeling in his veins.

- 142 -

The nest, as in other Pigeons, is a simple platform of slender sticks; the eggs are oval, white, and two in number. The birds appear to breed by preference near a human habitation, and do so probably for the sake of the protection afforded them; for the Chimango and other birds of prey destroy their eggs and young to a large extent.

One summer a *Torcasa* laid an egg in the nest of one of my Pigeons, built on the large horizontal branch of a tree at some distance from the dove-cote. The egg was hatched, and the young bird feared by its foster-parents; and when able to fly it took up its abode along with the other Pigeons. The following spring it began to separate itself from its companions, and would fly to the porch, and sit there cooing by the hour every day. At length it went away to the plantation, having, I believe, found a mate, and we saw no more of it.

360. METRIOPELIA MELANOPTERA (Mol.).

(BLACK-WINGED DOVE.)

Metriopelia melanoptera, *Burm. La-Plata Reise*, ii. p. 496 (Cordilleras); *Scl. et Salv. Nomencl.* p. 132.

Description.—Above pale brown; wings and tail black; bend of wing white; wing-coverts like the back: beneath pale vinaceous; bill and feet black: whole length 8·0 inches, wing 5·0, tail 3·5. *Female* similar.

Hab. Andes of South America.

This Dove is widely diffused in Western South America from Ecuador to Chili. Dr. Burmeister tells us that it is found in the high valleys of the Cordilleras on the Argentine side, from 6000 to 12,000 feet in altitude, and along with *Phrygilus fruticeti* is one of the birds seen at the greatest altitudes by the traveller over the passes of the Andes. One of Dr. Burmeister's specimens is in the collection of Messrs. Salvin and Godman.

361. METRIOPELIA AYMARA (Knip et Prév.).

(AYMARA DOVE.)

Metriopelia aymara, *Scl. et Salv. Nomencl.* p. 132. *Columbina aurisquamata*, *Leybold, Leopoldina*, viii. p. 53 (1873).

Description.—Above pale brown; wings and tail black; wing-coverts like the back; some of the middle coverts with bright golden apical spots: beneath pale vinaceous; throat whitish; middle of belly and crissum pale cinnamonaceous; bill black; feet yellow: whole length 7·0 inches, wing 4·5, tail 2·5. *Female* similar.

- 143 -

Hab. Peru, Bolivia, and N.W. Argentina.

Dr. Leybold's collector obtained examples of this Dove in 1863, at Los Paramillos, a rocky district near Uspallata, on the Argentine slope of the Chilian Andes. Some of these specimens are in the collection of Messrs. Salvin and Godman.

The species is easily recognizable by the bright golden wing-spots.

362. COLUMBULA PICUI (Temm.).

(PICUI DOVE.)

Columbula picui, *Burm. La-Plata Reise*, ii. p. 496 (Mendoza, Paraná, Tucuman); *Scl. et Salv. Nomencl.* p. 133; *iid. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 193 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 7 (Buenos Ayres); *Barrows, Auk*, 1884, p. 275 (Entrerios).

Description.—Above brownish cinereous; head and neck plumbeous; wing-feathers black; coverts and outer secondaries like the back, but bordered with white on their outer edges, and with a band of bright blue across the tips of the lesser coverts; tail white, middle rectrices like the back, lateral rectrices more or less bordered with cinereous on the outer web, except the

outer pair, which are pure white: beneath pale vinaceous; throat, lower belly, and crissum white; under wing-coverts black; bill black; feet yellow: whole length 6·5 inches, wing 3·5, tail 2·0. *Female* similar, but duller; above nearly uniform brown.

Hab. Brazil, Paraguay, Argentina, and Chili.

This species, the smallest of our Doves, is common everywhere in the Plata district, where it is called *Tortolita* (Little Turtle-Dove), Azara's name *Picui* not being known to our countrymen.

It is usually seen with its mate, for many individuals seem to pair for life; but sometimes a dozen or twenty individuals unite in one flock. It is resident, comes a great deal about houses, and is familiar with man, and lively in its habits. It sings a great deal in summer, and even on warm days in winter; but its tones are wanting in the wild pathos which gives a charm to the melody of some of our larger species, the song consisting of a succession of long, rather loud, and somewhat monotonous notes, pleasant to hear, like most bird-music, but nothing more.

The nest is the usual slight structure of sticks; the eggs two, oval, and white. They breed twice, and sometimes three times, in one season, the last brood being hatched as late as April or even May.

363. CHAMÆPELIA TALPACOTI (Temm.).

(TALPACOTI DOVE.)

Chamæpelia talpacoti, *Scl. et Salv. Nomencl.* p. 133; *White, P. Z. S.* 1882, p. 626 (Salta).

Description.—Above deep reddish vinaceous; head plumbeous; wings black; coverts and outer secondaries like the back, but the latter spotted with elongated black bands on the outer webs; tail black, tipped with vinaceous; middle rectrices like the back: beneath similar, but not so dark, and whitish on the throat; bill black; feet yellow: whole length 6·5 inches, wing 3·5, tail 2·5. *Female* similar, but much duller and more brownish.

Hab. Brazil, Paraguay, and Northern Argentina.

The Talpacoti or Chocolate Dove is an inhabitant of Brazil, Bolivia, and Paraguay. In Argentina it occurs only on the northern frontiers, and was met with by White at Oran, in the province of Salta, in the month of November:—"These pretty chocolate-coloured Doves," he tells us, "fly in pairs, and at this date were found constructing their nests in the orange-groves. They are sometimes seen on the ground busily in quest of seeds, but are very wild and not at all common."

White also obtained specimens of this Dove at Concepcion in Misiones.

364. ENGYPTILA CHALCAUCHENIA (Scl. et Salv.).

(SOLITARY PIGEON.)

Peristera frontalis, *Burm. La-Plata Reise*, ii. p. 497 (Paraná, Tucuman). *Leptoptila megalura*, *White, P. Z. S.* 1882, p. 626 (Salta) (?). *Leptoptila chalcauchenia*, *Scl. et Salv. P. Z. S.* 1869, p. 633; *id. Nomencl.* p. 133; *Salvin, Ibis*, 1880, p. 363 (Salta); *Barrows, Auk*, 1884, p. 275 (Entrerios).

Description.—Above greyish brown; head and nape plumbeous; back of neck with the feathers edged with iridescent bronzy green; tail blackish, broadly tipped with white; central rectrices like the back: beneath pale vinaceous; middle of throat, belly, and crissum white; under surface of wings bright chestnut; bill black; feet yellowish: whole length 10·0 inches, wing 5·7, tail 4·8. *Female* similar.

Hab. Argentine Republic.

This Dove, which is a southern form of a widely distributed group of species of the genus *Engyptila*, formerly called *Leptoptila*, inhabits the woods of the Plata district, and never, like other Pigeons, seeks the open country to feed. It is solitary, although, where many birds live in close proximity, three or four may be sometimes seen in company. It spends a great deal of time on the ground, where it walks about under the trees rather briskly, searching for seeds and berries. Their song is a single uninflected and rather melodious note, which the bird repeats at short intervals, especially in the evening during the warm season. Where the birds are abundant the wood, just before sunset, becomes vocal with their curious far-sounding notes; and as this evening song is heard as long as the genial weather lasts, it is probably not related to the sexual instinct. The nest is a simple platform; the eggs are two and white, but more spherical in shape than those of most other Pigeons.

Order XII. GALLINÆ.

Fam. XLII. CRACIDÆ, OR CURASSOWS.

Of the great Order of Gallinaceous Birds, so useful to mankind, two forms only are found in South America—the Toothed Partridges (*Odontophorinæ*) and the Curassows (*Cracidæ*). No member of the former group has as yet been ascertained to occur in Argentina; and of the Curassow family (one of the most characteristic types of Neotropical forest-life) only four species are with certainty known to be found within our limits out of a total of some fifty known species. But the Cracidæ are essentially tree-birds, and can only be looked for in forest-countries.

365. CRAX SCLATERI, G. R. Gray.

(SCLATER'S CURASSOW.)

Crax alector, *Burm. La-Plata Reise*, ii. p. 500. **Crax sclateri**, *Gray, List of Gallinæ*, p. 14 (1867); *Scl. Trans. Zool. Soc.* ix. p. 28, pls. xlv. & xlv.; *Burm. P. Z. S.* 1871, p. 702.

Description.—Black; lower belly and tips of tail-feathers white; lores naked; cere and bill yellow; feet flesh-colour: whole length 32·0 inches, wing 14·0, tail 14·0. *Female*: above black, with buffy cross bars; crest white, barred with black: beneath, throat black, breast more or less barred with black; abdomen ochraceous; tail black, with buffy-white bars and tips.

Hab. Paraguay and N. Argentina.

Azara described both sexes of this Curassow under the name of "El Mitu" (*Apunt.* iii. p. 83), but, along with other authors, confounded it with the Crested Curassow of Guiana (*Crax alector*). In Paraguay it is said to be numerous, but in Argentina only occurs on the northern and eastern frontiers (in Tucuman and Misiones), where it frequents the forests.

- 146 -

366. PENELOPE OBSCURA, Temm.

(DARK GUAN.)

Penelope obscura, *Scl. et Salv. Nomencl.* p. 136; *iid. P. Z. S.* 1870, p. 525; *Barrows, Auk*, 1884, p. 275 (Entrerios). **Penelope boliviana**, *Burm. P. Z. S.* 1871, p. 701 (Tucuman)? **Penelope pileata**, *White, P. Z. S.* 1882, p. 627 (Catamarca)?

Description.—Dark bronzy green; lower back and abdomen chocolate-brown; feathers of upper back, wing-coverts, and body beneath down to the middle of the belly margined with white; feathers of front part of head edged with silvery white: whole length 25·0 inches, wing 11·5, tail 12·0. *Female* similar.

Hab. Paraguay, Northern Argentina, and Bolivia.

This Guan was first made known to us as an inhabitant of Paraguay by Azara, who described it in his 'Apuntamientos'⁹ under the name of "El Yacúhú" or "Pavo del Monte" (Wood-Turkey) of the Spaniards. The examination of skins of it obtained by Capt. J. T. Page, of the U.S. Navy, during his expedition up the Rio Paraguay and Rio Vermejo, enabled Messrs. Salvin and Sclater to make this identification.

In Entrerios, Mr. Barrows tells us, this species is limited to the borders and islands of the River Uruguay, where in heavy growths of timber it is not uncommon, though rarely seen. Here it builds a large nest in the trees and lays white eggs.

It is probable that the Guan of Tucuman called by Dr. Burmeister *Penelope boliviana* and that of Catamarca referred by White to *P. pileata* likewise belong to this species.

9 Vol. iii. p. 72, no. 335.

367. PIPILE CUMANENSIS (Jacq.).

(WHITE-HEADED GUAN.)

Penelope pipile, *Burm. La-Plata Reise*, ii. p. 499 (Tucuman). **Pipile cumanensis**, *Scl. et Salv. P. Z. S.* 1870, p. 529; *Burm. P. Z. S.* 1871, p. 702 (Tucuman).

Description.—Bronzy black; whole top of the head white, with narrow black shaft-stripes; wing-coverts and breast-feathers edged with white; a large blotch on the wing white; naked cheeks and throat-caruncle blue: whole length 27·0 inches, wing 13·0, tail 11·0. *Female* similar.

Hab. South America from Venezuela to Northern Argentina.

Dr. Burmeister tells us that this Guan, which is widely extended in South America, occurs in the forests of Tucuman.

- 147 -

368. ORTALIS CANICOLLIS, Wagl.

(HOARY-NECKED GUAN.)

Penelope canicollis, *Burm. La-Plata Reise*, ii, p. 499. **Ortalia canicollis**, *Scl. et Salv. P. Z. S.* 1870, p. 534; *iid. Nomencl.* p. 136; *Burm. P. Z. S.* 1871, p. 701. **Ortalis canicollis**, *Salvin, Ibis*, 1880, p. 303 (Tucuman). **Ortalia guttata**, *White, P. Z. S.* 1882, p. 627 (Salta)?

Description.—Above bronzy brown; top of head cinereous; beneath more ochraceous; throat and breast washed with bronzy; neck and breast slightly spotted with greyish; under wing-coverts, flanks, and crissum chestnut; tail bronzy green, five outer rectrices broadly tipped with chestnut; bill yellowish; feet pale hazel: whole length 22·0 inches, wing 9·8, tail 10·3. *Female* similar.

Hab. Paraguay and Northern Argentina.

For our first knowledge of this Guan we are also indebted to Azara, who described it in his 'Apuntamientos' (iii. p. 77) under the name *Yacú caraguata*, as found in the forests of Paraguay. Thence it extends into the wooded districts of the northern provinces of the Argentine Republic, where it was obtained by Dr. Burmeister in Tucuman and by Capt. Page's expedition on the Rio Paraná and Rio Vermejo. It is probable also that the Guan met with by White near Salta, and referred by him to *O. guttata*, was really of the present species.

Order XIV. GERANOMORPHÆ.

Fam. XLIII. RALLIDÆ, OR RAILS.

The Rallidæ are well represented in the Argentine Republic, eight Rails and Crakes, two Waterhens, and three Coots being met with within its limits, and it is highly probable that the list will be further augmented as discovery advances.

The presence of three species of Coots, all apparently in abundance, is a somewhat special peculiarity of the Argentine Ornithology. Most of the other Argentine Rallidæ have an extended range.

369. RALLUS MACULATUS, Bodd.

(SPOTTED RAIL.)

[PLATE XIX.]



RALLUS MACULATUS.

Rallus maculatus, *Scl. et Salv. Nomencl.* p. 139; *iid. P. Z. S.* 1868, p. 444; *Durnford, Ibis*, 1878, p. 65 (Buenos Ayres); *Barrows, Auk*, 1884, p. 276 (Entrerios); *Withington, Ibis*, 1888, p. 471 (Lomas de Zamora).

Description.—Above blackish; back and wings dark olive-brown, spotted all over with white; beneath barred across with white and black; chin and crissum white; bill yellow, with a bright red spot at the base; feet pale brown: whole length 11·0 inches, wing 5·2, tail 2·0. *Female* similar.

Hab. South America.

The Spotted Rail, which has a wide distribution in South America, occurs as far south as Buenos Ayres. Our figure is taken from an example of this species obtained by Mr. F. Withington in September 1885 in the Lomas de Zamora. Concerning its nesting-habits he sends the following note:—"It breeds amongst the reeds, and its nest is placed about 18

inches from the water. To reach it the birds collect a heap of reeds, grass, and other materials, and alongside form an inclined platform that answers the purpose of a staircase, by which the birds ascend or descend with ease. The usual clutch of eggs is seven, but I have taken fifteen from one nest, all good. These, of course, could not have been laid by one bird."

370. RALLUS ANTARCTICUS, King.

(ANTARCTIC RAIL.)

Rallus antarcticus, *Scl. et Salv. Nomencl.* p. 139; *iid. P. Z. S.* 1868, p. 445; *iid. Ex. Orn. t.* lxxxii. p. 163; *Barrows, Auk*, 1884, p. 276 (Carhué); *Withington, Ibis*, 1888, p. 471 (Lomas de Zamora).

Description.—Above brown, striped with black; wing-coverts rufous; remiges blackish: beneath plumbeous; flanks and under wing-coverts black, barred across with white: whole length 8·0 inches, wing 3·7, tail 1·5. *Female* similar.

Hab. Chili, Argentine Republic, and Patagonia.

This Rail is a small southern representative of the well-known Virginian Rail of the U.S. It is stated to be "rather common" at Carhué by Mr. Barrows, and Mr. Withington has recently sent us specimens from the Lomas de Zamora.

371. RALLUS RHYTIRHYNCHUS, Vieill.

(BLACK RAIL.)

Aramides rhytirhynchus, *Burm. La-Plata Reise*, ii. p. 504 (Paraná). **Rallus rhytirhynchus**, *Scl. et Salv. Nomencl.* p. 139; *iid. P. Z. S.* 1868, p. 145 (Buenos Ayres) et p. 446; *Hudson, P. Z. S.* 1870, p. 104 (Buenos Ayres); *Durnford, Ibis*, 1878, p. 65 (Buenos Ayres); *White, P. Z. S.* 1883, p. 42 (Cordova); *Barrows, Auk*, 1884, p. 276 (Entrerios). **Rallus nigricans**, *Durnford, Ibis*, 1877, p. 193.

Description.—Above greenish brown; beneath plumbeous; bill incurved, greenish, with a blood-red basal spot; feet red: whole length 12·0 inches, wing 5·4, tail 2·8. *Female* similar.

Hab. Southern Brazil, Peru, Paraguay, Argentina, Chili, and Patagonia.

This Rail differs from the other species in its beak, which is very long and curved, as in the Painted Snipe (*Rhynchæa*), and has three strongly contrasted colours—dark green, bright blue, and scarlet at the base. The blue and red tints become very vivid in the love-season. Without being anywhere abundant, the Black Rail is found throughout the Plata Region in every place where reeds and rushes grow. In the marshes along the Plata they are met with quite as frequently in winter as in summer; this fact surprised me greatly, since I know this species to be migratory, their unmistakable cries being heard overhead every night in spring and autumn, when they are performing their distant journeys. Probably all the birds frequenting the inland marshes on the south-western pampas migrate north in winter, and all those inhabiting the Plata marshes and the Atlantic sea-board, where there is abundant shelter and a higher temperature, remain all the year. On the Rio Negro of Patagonia I found the Black Rail a resident, but the winter of that district is singularly mild; moreover, the wide expanse of waterless country lying between the Rio Negro and the moist pampa region would make an annual migration from the former place difficult to such a feeble flier. Of this instinct we know at least that it is hereditary; and it becomes hard to believe that from every one of the reed-beds distributed over the vast country inhabited by this species a little contingent of migrants is drawn away annually to winter elsewhere, leaving a larger number behind. Such a difference of habit cannot exist among individuals of a species in one locality; but differences in the migratory as in other instincts, great as this, are found in *races* inhabiting widely separated districts.

It is difficult to flush the Black Rail; it rises in a weak fluttering manner, the legs dangling down, and, after flying thirty or forty yards, drops again into the reeds. Its language is curious: when alarmed, the bird repeats, at short intervals, a note almost painful from its excessive sharpness, and utters it standing on a low branch or other elevation, but well masked by reeds and bushes, and incessantly bobbing its head, jerking its tail, and briskly turning from side to side. It has, at such times, a very interesting appearance, while the long beak, brilliant with the nuptial colouring, the bright-red eye and vermilion legs, admirably contrasting with the fine deep slate plumage, give it considerable claims to beauty. At other times it has a hollow call-note with a puzzling ventriloquism in the sound, which is sometimes repeated at short intervals for an hour. While uttering it the bird stands, as usual, on a slight eminence, but drawn up in a listless attitude and without any of its nods and jerks and other frisky gestures. It has also a kind of song, which sounds not unlike the braying of a donkey; hence the vernacular name *Burrito* (little ass) by which the bird is known in the Plata. This song is heard both day and night, and is a confused performance, uttered without pause, and composed of several long shrill notes, modulated and mingled with others, hollow and booming. These notes can be heard a thousand yards away; but, far or near, they always sound remote.

372. RALLUS NIGRICANS, Vieill.

(PLUMBEOUS RAIL.)

Aramides nigricans, *Burm. La-Plata Reise*, ii. p. 504. *Rallus nigricans*, *Scl. et Salv. P. Z. S.* 1868, p. 446; *iid. Nomencl.* p. 139.

Description.—Above olivaceous brown; front, side of the head, and body beneath plumbeous; throat whitish; lower belly, thighs, and tail blackish; bill straight, uniform dark greenish: whole length 10·0 inches, wing 5·3, tail 2·8. *Female* similar.

Hab. South Brazil, Paraguay, and Northern Argentina.

This Rail is said by Dr. Burmeister to occur near Buenos Ayres, but the bird taken for this species by Durnford (*Ibis*, 1877, p. 193; 1878, p. 66) appears to have been *R. rhytirhynchus*.

373. ARAMIDES YPECAHA (Vieill.).

(YPECAHA RAIL.)

Aramides gigas, *Burm. La-Plata Reise*, ii. p. 504 (Paraná). *Aramides ypecaha*, *Scl. et Salv. Nomencl.* p. 139; *iid. P. Z. S.* 1868, pp. 144, 448; *Hudson, P. Z. S.* 1876, p. 105 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 194 (Buenos Ayres); *Barrows, Auk*, 1884, p. 276 (Entrerios).

Description.—Above olive-green; neck red; front cinereous; rump and tail black: beneath, throat white, breast and neck cinereous; abdomen rosy red, lower belly and thighs grey; flanks and crissum black; under wing-coverts rufous, with black cross bars; bill yellow; feet red: whole length 19·0 inches, wing 8·5, tail 3·3. *Female* similar.

Hab. Brazil, Paraguay, and Argentina.

"Ypecaha" is the Guarani name, preserved by Azara, of this highly interesting species; by the Spanish it is called "*Gallineta*," from its supposed resemblance to a fowl. Without any brilliant tints, there is yet something so pleasing to the eye in the various hues of its plumage—light brown and drab colour, grey, buff, and black—all these colours so harmoniously disposed, the effect heightened by the long straight yellow beak, golden-red eye, and vermilion legs, that I do not know a handsomer waterfowl.

These Rails are found as far south as the thirty-fifth parallel of latitude, and are abundant along the marshy borders of the Plata, frequenting the vast reed-beds and forests of water-loving *Erythrina crista-galli*. Where they are never persecuted they are bold pugnacious birds, coming out of the reeds by day and attacking the domestic poultry about the houses and even in the streets of the villages situated on the borders of their marshy haunts. But when compelled to place man on the list of their enemies, it is a difficult matter to get a sight of one; for, like all birds that rise laboriously, they are vigilant to excess, and keep themselves so well concealed that the sportsman may pass through their haunts every day of the year, and the Ypecaha still be to him no more than a "wandering voice." But even persecution does not entirely obliterate a certain inquisitive boldness which characterizes them. Usually they roam singly in quest of food, but have reunions in the evening and occasionally during the day, especially in gloomy weather. On misty days they often wander to a distance from the covert, walking with an easy, somewhat stately grace, jerking the tail at every stride, and running with a velocity no man can equal. Where there are woods they usually fly, when disturbed, into a tree; and it is in connexion with this habit that the Ypecaha sometimes makes a curious mistake in places where it has not been much shot at. One day, while pushing my way through a dense growth of rushes, I saw two Ypecahas not fifteen yards from me, on the horizontal branch of a tree, to which they had evidently flown for safety. I was anxious to secure them, but surprised at their temerity; and wishing to find out its cause, I approached them still nearer, and then stood for some time observing them. It was easy to see that they fancied themselves quite safe from me while off the ground. In the most unconcerned manner they continued strutting up and down along the branch, jerking their tails, and turning about this way and that, as if to tantalize their baffled enemy by ostentatiously displaying their graces.

When surprised on the open ground the Ypecaha lies close, like a Tinamou, refusing to rise until almost trodden upon. It springs up with a loud-sounding whirr, rushes violently through the air till, gaining the reeds, it glides a few yards and then drops: its flight is thus precisely like that of the Tinamou, and is more sounding and violent than that of the Grouse or Partridge. On spying an intruder it immediately utters a powerful cry, in strength and intonation not unlike that of the Pea-fowl. This note of alarm is answered by other birds at a distance as they hastily advance to the spot where the warning was sounded. The cry is repeated at irregular intervals, first on one side, then on the other, as the birds change their position to dog the intruder's steps and inspect him from the reeds. I have surprised parties of them in an open space, and shot one or more; but no sooner had the survivors gained their refuge than they turned about to watch and follow me, sounding their powerful alarm the whole time. I have frequently been followed half a mile through the rushes by them, and by lying close and mimicking their cries have always succeeded in drawing them about me.

But the Ypecaha's loudest notes of alarm are weak compared with the cries he utters at other times, when, untroubled with a strange presence, he pours out his soul in screams and shrieks that amaze the listener with their unparalleled power. These screams, in all their

changes and modulations, have a resemblance to the human voice, but of the human voice exerted to its utmost pitch, and expressive of agony, frenzy, and despair. A long piercing shriek, astonishing for its strength and vehemence, is succeeded by a lower note, as if in the first one the creature had well-nigh exhausted itself. The double scream is repeated several times; then follow other sounds, resembling, as they rise and fall, half-suppressed cries of pain and moans of anguish. Suddenly the unearthly shrieks are renewed in all their power. This is kept up for some time, several birds screaming in concert; it is renewed at intervals throughout the day, and again at set of sun, when the woods and marshes resound with the extravagant uproar. I have said that several birds unite in screaming; this is invariably the case. I have enjoyed the rare pleasure of witnessing the birds at such times; and the screams then seem a fit accompaniment to their disordered gestures and motions.

A dozen or twenty birds have their place of reunion on a small area of smooth clean ground surrounded by reeds; and by lying well concealed and exercising some patience, one is enabled to watch their proceedings. First one bird is heard to utter a loud metallic-sounding note, three times repeated, and somewhat like the call of the Guinea-fowl. It issues from the reeds, and is a note of invitation quickly responded to by other birds on every hand as they all hurriedly repair to the customary spot. In a few moments, and almost simultaneously, the birds appear, emerging from the reeds and running into the open space, where they all immediately whirl about and begin the exhibition.

- 153 -

Whilst screaming they rush from side to side as if possessed with frenzy, the wings spread and agitated, the beak wide open and raised vertically. I never observed them fight or manifest anger towards each other during these performances; and, knowing the pugnacious spirit of the Ypecahas, and how ready they are to seek a quarrel with birds of other species, this at first surprised me, for I was then under the mistaken impression that these gatherings were in some way related to the sexual instinct.

Whilst watching them I also remarked another circumstance. When concealing myself amongst the rushes I have been compelled to place myself so disadvantageously, owing to the wet ground, that any single bird straying accidentally into the open space would have discovered my presence immediately; yet the birds have entered and finished their performance without seeing me, so carried away are they by the emotion that possesses them during these moments. But no sooner has the wild chorus ended than, aware of my presence, they have fled precipitately into the reeds.

We frequently speak of our familiarity with the habits of the species we have long and carefully observed in a state of nature; yet the knowledge so gained must necessarily be exceedingly imperfect, for with many shy vigilant birds it is next to impossible to see them without being seen; and no bird, conscious of being watched, will act unconstrainedly any more than a human being with clouded reputation will comport himself naturally with the eyes of a detective on him. While we are observing the bird, the bird watches us: of all its curious doings when we are out of its sight and mind we see nothing. The only way to learn the habits of a species like the Ypecaha—wary, intelligent, and passing its life behind a screen of rushes—is to domesticate it; for although in this state some instincts are blunted and others remain in abeyance, they are not obliterated. It might surprise some that I speak of the Ypecaha as an intelligent bird, since it is a member of the “stupid family,” as Professor Parker has called the Rails; but in spite of the very profound admiration I feel for that illustrious anatomist, I believe he is wrong about these birds: there is, to my mind, very much more stupidity in the Auserine and Limicoline families, while the Ypecaha has always seemed to me a singularly intelligent bird.

Fortunately Azara was able to give an account of one of these birds in a domestic state, which shows that it makes a very sprightly and entertaining, although a mischievous pet. It was taken young and allowed to run about at liberty with the poultry at the house of a village doctor in Paraguay. When full-grown it was very domineering, and became the tyrant of the poultry-yard. Occasionally a cock had the courage to face it, and then a singular combat would ensue: the Ypecaha, moving with astonishing rapidity, putting its head low down, would charge, and, thrusting its head between the cock's legs, fling him instantly on his back, then rain a shower of blows on his breast before he could rise. It was fond of eggs, and always knew when a hen went off to lay, cautiously following her to the nest and then concealing itself at some distance to wait. As soon as the egg was dropped it would run, pick it up with its beak, and carry it away to a safe distance, and then, breaking a hole in the shell at one end, suck out the contents without spilling a drop. Sometimes, when the hen remained too long on the nest, it would lose its temper and, driving her off, pursue her with the greatest animosity about the grounds, administering correction with its sharp beak. Not satisfied with devouring all the eggs laid by the doctor's fowls, it visited all the neighbours' houses, doing so much damage that at length the poor doctor, afraid perhaps that his practice would suffer, had the troublesome bird put to death.

- 154 -

This Ypecaha would never allow any one to touch it, but it would come into the house and search through all the rooms for thimbles, scissors, and other small metal objects, and these it would carry away to conceal them among the weeds or else bury them in the mud. It was also a good mouser, and after killing a mouse with a blow from its beak would swallow it entire.

374. PORZANA LEUCOPYRRHA (Vieill.).

(RED-AND-WHITE CRAKE.)

Corethrura leucopyrrha, *Burm. La-Plata Reise*, ii. p. 505 (Tucuman). **Porzana leucopyrrha**, *Scl. et Salv. Nomencl.* p. 140; *iid. P. Z. S.* 1868, p. 454; *iid. Ex. Orn. pl.* lvi. p. 111.

Description.—Brownish olive, head reddish; wings, tail, and hind back darker: beneath white; sides of the head and of the neck and breast chestnut-red; flanks barred with white and black; crissum black in the middle, white on each side; bill olivaceous; feet yellowish: whole length 6·75 inches, wing 3·1, tail 1·9. *Female* similar.

Hab. S. Brazil, Paraguay, and N. Argentina.

This Crake is an inhabitant of Southern Brazil and Paraguay, but also occurs in the Northern Provinces of the Argentine Republic, where it was met with by Dr. Burmeister in Tucuman.

- 155 -

375. PORZANA SALINASI (Philippi).

(SPOT-WINGED CRAKE.)

Rallus salinasi, *Philippi, Wieg. Arch.* 1857, pt. i. p. 262 (Chili); *Burm. Ibis*, 1888, p. 285. **Porzana spiloptera**, *Durnford, Ibis*, 1877, p. 194, pl. iii. (Buenos Ayres).

Description.—Above olive-brown with black markings; wings with white cross bands; front, sides of head, and body beneath plumbeous; flanks dark grey, with transverse bars of white; under tail-coverts barred with black and white; beak dark horn-colour; feet rather lighter: whole length 5·5 inches.

Hab. Chili and Argentina.

In 1876 Durnford obtained a specimen of this Crake from the river-scrub near Belgrano in the province of Buenos Ayres, and described and figured it in 'The Ibis' under the MS. name "*spiloptera*," which had been given by Dr. Burmeister to an example of the same bird in the Buenos Ayres Museum.

Dr. Burmeister has, however, recently ascertained that the appellation which he proposed for this species must give way to that of *salinasi*, under which title it was described in 1857 by Dr. Philippi of Santiago.

Porzana salinasi, as we must therefore call it, is most nearly allied to *P. spilonota* of the Galapagos (*cf. Scl. et Salv. P. Z. S.* 1868, p. 456), but has the wings more distinctly striped, and the back olive-brown, with black markings, and not of a uniform ferruginous.

376. PORZANA NOTATA (Gould).

(MARKED CRAKE.)

Zapornia notata, *Gould, Zool. Voy. Beagle*, iii. p. 132, pl. xlvi. (La Plata). **Porzana notata**, *Scl. et Salv. Nomencl.* p. 140; *iid. P. Z. S.* 1868, p. 456; *Sclater, P. Z. S.* 1876, p. 255.

Description.—Above dark olive-brown, with small white spots: beneath black, barred across with white: whole length 5·5 inches, wing 3·0, tail 1·3.

Hab. Argentina and Patagonia.

The type specimen of this little Crake was obtained during the voyage of the 'Beagle,' on board the ship, when in the Rio Plata. Another specimen was captured off the coast of Uruguay and brought alive to England in 1876. An example of the same species in the Paris Museum was procured by d'Orbigny in Patagonia.

377. PORPHYRIOPS MELANOPS (Vieill.).

(LITTLE WATERHEN.)

Ortygometra melanops, *Burm. La-Plata Reise*, ii. p. 505 (R. Uruguay). **Porphyriops melanops**, *Scl. et Salv. Nomencl.* p. 140; *iid. P. Z. S.* 1868, p. 461, et 1869, p. 634 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 195 (Buenos Ayres).

Description.—Above olivaceous; head darker; wings brown; wing-coverts tinged with chestnut; outer secondaries more or less distinctly margined with white: beneath cinereous; middle of belly and crissum white; flanks olivaceous, spotted with white; bill dark olive, with the tip yellowish; feet hazel: whole length 9·0 inches, wing 5·0, tail 2·0. *Female* similar.

Hab. South America.

In the southern part of the Argentine country the Little Waterhen is a summer visitant, and very abundant in the marshes along the Plata. In language and habits it is like the Coots: it is not often seen on land, and feeds principally as it swims about in a jerky manner among the floating weeds. It appears in October, migrating exclusively, I think, by night; and after the autumnal departure an individual is rarely seen. By day they are shy and retiring, but scatter abroad in the evening, frequently uttering their hollow mysterious cry, called *the*

- 156 -

witch laugh by superstitious people, and resembling a sudden burst of hysterical laughter, the notes beginning loud and long, becoming brief and hurried as they die away.

378. GALLINULA GALEATA (Licht.).

(AMERICAN WATERHEN.)

Gallinula galeata, *Burm. La-Plata Reise*, ii. p. 505 (Rio Paraná); *Scl. et Salv. Nomencl.* p. 140; *iid. P. Z. S.* 1868, p. 462; *White, P. Z. S.* 1882, p. 627 (Buenos Ayres); *Barrows, Auk*, 1884, p. 277 (Entrerios).

Description.—Above grey; middle of back and wings olivaceous brown; beneath grey, whitish on the middle of the belly; bend of the wing, stripes on the flanks, and sides of crissum pure white; middle of crissum and tail black; frontal shield and bill red, the latter tipped with yellow; feet olive varied with yellow; naked portion of shank scarlet: whole length 15·0 inches, wing 7·5, tail 5·5. *Female* similar.

Hab. North and South America.

The American representative of our familiar Waterhen extends into the western provinces of the Argentine Republic. Mr. Barrows tells us it is abundant on the Lower Uruguay, and Dr. Burmeister met with it on the Paraná.

379. FULICA ARMILLATA, Vieill.

(RED-GARTERED COOT.)

Fulica armillata, *Burm. La-Plata Reise*, ii. p. 505 (Mendoza, Paraná); *Scl. et Salv. Nomencl.* p. 140; *iid. P. Z. S.* 1868, p. 145 (Buenos Ayres); *iid. Ex. Orn.* pl. lviii. p. 115; *Durnford, Ibis*, 1877, p. 195 (Buenos Ayres), et 1878, p. 401 (Centr. Patagonia); *Barrows, Auk*, 1884, p. 277 (Entrerios); *Withington, Ibis*, 1888, p. 471 (Lomas de Zamora).

Description.—Dark slaty; whole head blackish; bend of wing and outer margin of external primary white; crissum white, with a black median patch; bill yellow, with red basal spots; frontal shield large, oval, yellow, margined with red; feet large, yellowish olive; front of them and naked portion of tibiae red: whole length 16·0 inches, wing 7·8, tail 2·0. *Female* similar.

Hab. South Brazil, Paraguay, Argentina, Chili, and Patagonia.

This is the largest of the three Coots found within our limits, and further distinguishable by the great size of the feet and the bright red markings at the base of the yellow bill. It seems to be generally distributed over the lagoons of the Pampas. Dr. Burmeister obtained specimens at Mendoza and Paraná, Durnford near Buenos Ayres and in Chupat, and Mr. Barrows in Entrerios, where he says it is not uncommon in the cold weather. In general plumage this Coot closely resembles the Yellow-billed Coot, but differs in the base of the upper mandible being of a deep orange-red, this colour extending to the middle of the frontal shield, and in the absence of white on the secondaries. The naked part of the leg above the foot is also of a bright red, hence Azara's appropriate name of "Red-gartered Coot."

Durnford received the eggs of this Coot from a correspondent living to the south of Buenos Ayres, where it was said to be "quite common." He describes the eggs as being readily distinguishable from those of the two other species by their larger size.

380. FULICA LEUCOPYGA, Hartl.

(RED-FRONTED COOT.)

Fulica leucopyga, *Scl. et Salv. Nomencl.* p. 140; *iid. P. Z. S.* 1868, p. 467; *iid. Ex. Orn.* p. 120; *Durnford, Ibis*, 1877, p. 42 (Chupat), et 1878, p. 66 (Buenos Ayres) et p. 402 (Centr. Patagonia); *Withington, Ibis*, 1888, p. 471 (Lomas de Zamora).

Description.—Dark cinereous; head and neck black; crissum white, with a black median patch; bill and frontal shield scarlet; tip of bill yellow; feet olivaceous: whole length 15·0 inches, wing 6·8, tail 2·0. *Female* similar.

Hab. Uruguay, Argentina, Chili, and Patagonia.

The want of the white margin to the outer primary and the smaller and pointed head-shield distinguish this Coot from the preceding species. From *F. leucoptera* it may be at once known by the absence of the white tips to the secondaries.

Durnford found the Red-fronted Coot common, and breeding in the lagoons north of Buenos Ayres. The nests of this bird and of *F. leucoptera*, he tells us, are much alike, but those of the present species are perhaps rather the smaller. "They are formed of reeds, and placed in clumps of the same, the bottom just above the water. The eggs vary in number from six to eight, and also differ a good deal in colour. Their ground-colour is dark greyish brown, finely mottled and streaked with rufous and darker brown, some of the spots being of a considerable size."

381. FULICA LEUCOPTERA, Vieill.

(YELLOW-BILLED COOT.)

Fulica leucoptera, *Burm. La-Plata Reise*, ii. p. 505 (Paraná); *Scl. et Salv. Nomencl.* p. 140; *iid. P. Z. S.* 1868, p. 468; *iid. Ex. Orn.* pl. lx. p. 119; *Durnford, Ibis*, 1877, p. 195 (Buenos Ayres); *White, P. Z. S.* 1883, p. 42 (Cordova); *Barrows, Auk*, 1884, p. 277 (Carhué, Pampas); *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora).

Description.—Dark slaty; head and neck black; crissum white, with a black median patch; bend of wing and outer margin of external primary, also the tips of some of the secondaries, white; bill yellow; head-shield rounded behind; feet olivaceous: whole length 15·0 inches, wing 7·8, tail 2·0. *Female* similar.

Hab. Paraguay, Uruguay, Argentina, and Bolivia.

This is perhaps the most abundant species of *Fulica* in the Plata region, and certainly congregates in the largest numbers. The colour of the beak and shield is of a very delicate yellow; the legs and feet dull green; the head, neck, and part of the back velvet-black; all the rest of the plumage dark slate-colour, except the under coverts of the tail, which are white, and render the bird very conspicuous when it is swimming away with the tail raised vertically.

On the pampas, in large marshy lagoons, this Coot is sometimes seen in immense numbers; thousands of birds uniting in one flock, and spreading over the low shores to feed, they look like a great concourse of Rooks. But they are exceedingly timid, and at the sight of a bird of prey or other enemy they all scuttle back to the water, tumbling over each other in their haste to reach it. They rise in a peculiar manner, rapidly striking the surface of the water with their great lobed feet, often for a distance of twenty or thirty yards before they are fully launched in the air. They are loquacious birds, and when swimming about concealed among the thick rushes are heard answering each other in a variety of curious tones, some of their loud, hollow-sounding, reiterated cries resembling peals of laughter.

The nest is a slovenly structure of rushes lying on the water, with a very slight depression for the eggs, which are ten or twelve in number. These are long, pointed at one end, dull cream-colour, marked over the whole surface with small blackish and purple spots.

Fam. XLIV. ARAMIDÆ, OR COURLANS.

The Courlans are a peculiar American family, intermediate between the Cranes and the Rails. Of the two known species, which are nearly allied, one occurs in the Argentine Republic.

382. ARAMUS SCOLOPACEUS (Gm.).

(SOUTHERN COURLAN.)

Aramus scolopaceus, *Burm. La-Plata Reise*, ii. p. 504 (Paraná); *Scl. et Salv. Nomencl.* p. 141; *iid. P. Z. S.* 1869, p. 160; *Hudson, P. Z. S.* 1876, p. 102 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 196 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 160 (Buenos Ayres); *Barrows, Auk*, 1884, p. 277 (Entrerios).

Description.—Above brown; forehead, lores, and chin greyish white; neck striped with white; beneath similar; bill brown; legs greenish grey: whole length 24·0 inches, wing 13·0, tail 5·0. *Female* similar.

Hab. South America.

This curious bird has a blackish-brown plumage, glossed with bronze on the upper parts; its total length is about two feet and a half, and the wings, when spread, measure nearly four feet from tip to tip. It has been called "an abnormal relative of the Rails at most," and in its peculiar flight and many of its habits certainly differs very widely from the Rails.

The beak of this bird is nearly 5 inches long, straight, and of an iron hardness; the tip is slightly bent to one side, the lower mandible somewhat more than the upper. The tongue extends to the extremity of the beak; at the end it is of a horny toughness, and frayed or split into filaments. This beak is a most effective instrument in opening shells; for where mollusks abound the Courlan subsists exclusively on them, so that the margins of the streams which this bird frequents are strewn with innumerable shells lying open and emptied of their contents.

Every shell has an angular piece, half an inch long, broken from the edge of one valve. Mussels and clams close their shells so tightly that it would perhaps be impossible for a bird to insert his beak, however knife-like in shape and hardness, between the valves in order to force them open; therefore I believe the Courlan first feels the shell with his foot whilst wading, then with quick dexterity strikes his beak into it before it closes, and so conveys it to the shore. Otherwise it would be most difficult for the bird to lift the closed shell from the water and to carry it to land; but supposing it could do this, and afterwards succeed in drilling a hole through it with its beak, the hole thus made would have jagged edges and be

irregular in shape. But the hole is, as I have said, angular and with a clean edge, showing that the bird had just thrust his beak half an inch or an inch between the valves, then forced them open, breaking the piece out during the process, and probably keeping the shell steady by pressing on it with its feet.

By day the Courlan is a dull bird, concealing itself in dense reed-beds in streams and marshes. When driven up he rises laboriously, the legs dangling down, and mounts vertically to a considerable height. He flies high, the wings curved upward and violently flapped at irregular intervals; descending, he drops suddenly to the earth, the wings motionless, pointing up, and the body swaying from side to side, so that the bird presents the appearance of a falling parachute. On smooth ground he walks faster than a man, striking out his feet in a stately manner and jerking the tail, and runs rapidly ten or twelve yards before rising. At the approach of night he becomes active, uttering long clear piercing cries many times repeated, and heard distinctly two miles away. These cries are most melancholy, and, together with its mourning plumage and recluse habits, have won for the Courlan several pretty vernacular names. He is called the "Lamenting Bird" and the "Crazy Widow," but is more familiarly known as the "Carau."

Near sunset the Caraus leave the reed-beds and begin to ascend the streams to visit their favourite fishing-grounds. They are very active at night, retiring again at the approach of morning, and sometimes pass the day perched on trees, but more frequently concealed in dense reed-beds.

As the breeding-season draws near they become exceedingly clamorous, making the marshes resound day and night with their long wailing cries. The nest is built among the rushes, and contains ten or twelve eggs as large as Turkey's, slightly elliptical, sparsely marked with blotches of pale brown and purple on a dull white ground, the whole egg having a powdered or floury appearance. When the nest is approached the parent birds utter sharp angry notes as they walk about at a distance. The young and old birds live in one flock until the following spring.

The Carau is more nocturnal than the true Rails, and, having a far more powerful flight, takes to wing more readily; in its gestures and motions on the ground it resembles them, but differs strikingly from all Ralline birds in the habit it possesses of flying when disturbed to some open place, where it walks about conspicuously, watching the intruder.

- 161 -

Fam. XLV. CARIAMIDÆ OR CARIAMAS.

The Cariamas are another purely Neotropical family of which but two species are known. These peculiar birds, remarkable for their long legs and harsh voices, have been regarded by some authors as allied to the Cranes, and by others as akin to the Secretary-Vulture (*Serpentarius*), to which they have certainly considerable superficial resemblance. Dr. Burmeister, who has carefully investigated the osteology and anatomy of *Cariama cristata*, has come to the conclusion that the true place of this somewhat isolated form is near the Storks. But Huxley (P. Z. S. 1867, p. 457) has placed it along with the Cranes, though somewhat doubtful whether it should not rather form an Order apart; and we prefer to follow his decision.

383. CARIAMA CRISTATA (Linn.).

(CRESTED CARIAMA.)

La Saria, *Azara, Apunt.* iii. p. 101 (Paraguay). **Dicholophus cristatus**, *Burm. Syst. Ueb. Vög. Brasil.* iii. p. 401; *id. Abh. nat. Ges. Halle*, i. p. 11 (1854). **Cariama cristata**, *Sci. et Salv. Nomencl.* p. 141.

Description.—Plumage yellowish grey, with numerous narrow darker and lighter cross bands; lower belly not banded; wings and tail blackish brown, with broad white cross bands; breast with pale shaft-stripes: front crested; bill and feet reddish: whole length 32·0 inches, wing 14·0, tail 14·0. *Female* similar, but more yellowish.

Hab. Campos of S.E. Brazil and Paraguay.

The Crested Cariama is a native of the Campos of the interior of Brazil, where it is well known as the "*Seriema*." Hence it extends into the open districts of Paraguay, and, it is said, into the adjoining parts of the Argentine Republic, though we are not able at present to give any exact authority for this statement.

The Cariama lives on the ground among the high grasses of the Campos, where the traveller frequently hears its loud screaming cry as he rides along the tracks. It feeds principally upon insects and caterpillars, but also eats berries and fleshy fruits, and, it is said, snakes and other reptiles. It breeds in low bushes; and lays two roundish, spotted eggs, which in colour somewhat resemble those of the Crakes and Rails.

- 162 -

This bird is often brought alive to Europe, and examples may always be seen in the Gardens of the Zoological Society of London. Here they have paired and nested on more than one occasion, but have not succeeded in rearing their young. The frontispiece to the first volume

384. CHUNGA BURMEISTERI (Hartl.).

(BURMEISTER'S CARIAMA.)

Dicholophus burmeisteri, Hartl. *P. Z. S.* 1860, p. 335; *Burm. La-Plata Reise*, ii. p. 506 (Rioja, Catamarca, Tucuman). *Chunga burmeisteri*, *Scl. P. Z. S.* 1870, p. 666, pl. xxxvi.; *Scl. et Salv. Nomencl.* p. 141. *Cariama burmeisteri*, *Salvin, Ibis*, 1880, p. 364 (Tucuman).

Description.—A very slight frontal crest; plumage cinereous, the feathers crossed by very narrow bands of whitish and black; lores and long superciliary stripe white: beneath paler on the chest; lower belly and crissum fulvous white; wings brownish black, beneath with broad blackish bars; tail like the back, but with two broad black subterminal cross bands, except on the two middle rectrices; bill and feet black: whole length 28·0 inches, wing 12·0, tail 14·0. *Female* similar.

Hab. Northern Argentina.

This Cariama, which much resembles the Crested Cariama in general appearance though smaller in size, and distinguished by several structural characters, is one of the many discoveries of the distinguished naturalist whose name it appropriately bears. Dr. Burmeister first met with the "Chuñia," as this bird is called by the natives, in the province of Tucuman during his travels in the northern parts of the Argentine Republic in 1859.

The Chuñia, he tells us, is naturally friendly to mankind, and is often kept tame in the courtyards of houses along with the domestic fowls, amongst which it stalks about, eating remnants of flesh and large insects, especially grasshoppers. At night it roosts upon the roofs of the corridors.

In a free state the Chuñia lives in the forests, running about in the bush in the daytime, and roosting in the summit of the large trees. The nest is placed in bushes, not very high, and the young birds are often taken when half-fledged and become quickly accustomed to captivity.

Dr. Burmeister first met with this bird at La Invernada between Tucuman and Catamarca¹⁰, but tells us that it inhabits besides these two provinces the adjoining districts of La Rioja and Santiago del Estero. It is always easier to hear it than to see it, for its loud screaming voice may be recognized at a distance, but when approached in the bush it keeps a discreet silence.

Several examples of Burmeister's Cariama have been received alive in the Gardens of the Zoological Society of London, from one of which an excellent figure has been taken by Mr. Smit (see *P. Z. S.* 1870, plate xxxvi.). The frontispiece of the present volume is a reduction of that figure by the same artist.

¹⁰ See Burmeister, 'Reise durch die La Plata-Staaten,' ii. p. 195.

Order XV. LIMICOLÆ.

Fam. XLVI. PARRIDÆ, OR JACANAS.

The Jacanas are a tropical group of birds with a somewhat general resemblance to the Rails, but with their toes enormously elongated, so as to enable them to move with facility over water-plants on the surface of lakes and ponds. In essential structure, however, they are now ascertained to be most nearly allied to the Plovers.

One genus of Jacanas (*Parra*) is peculiar to America, and a single species of this genus occurs in the Argentine Republic.

385. PARRA JACANA (Linn.).

(COMMON JACANA.)

Parra jacana, *Burm. La-Plata Reise*, ii. p. 506 (Tucuman); *Scl. et Salv. Nomencl.* p. 142; *iid. P. Z. S.* 1868, p. 145 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 196 (Buenos Ayres); *White, P. Z. S.* 1882, p. 627 (Buenos Ayres); *Barrows, Auk*, 1864, p. 277 (Entrerios).

Description.—Head and neck purplish black; back and wings bright chestnut; primaries and secondaries pale greenish yellow tipped with brown; flanks dark chestnut; breast dark black; abdomen purplish; tail chestnut tipped with black; wattles on head and base of bill red, rest of bill yellow; feet olive: whole length 10·5 inches, wing 5·8, tail 2·2. *Female* similar.

Hab. South America from Venezuela down to Buenos Ayres.

The beautiful Jacana or Jassana, sometimes called *Alas-amarillas* in the vernacular, differs very widely from all the other members of the Limicoline Order in its appearance, which is most singular—the toes being enormously long, the head ornamented with red lobes, and the wings armed with spurs, these and the beak being of a bright yellow. The colouring of the plumage heightens the novelty of its appearance; the head, neck, and underparts being black; the shoulders, back, and wing-coverts chestnut; while the quills, which have a bright satiny lustre, are apple-green in colour, and in some lights appear golden yellow.

In the southern part of the Plata district the Jacana is migratory, arriving from the north in Buenos Ayres early in October, either singly or in small parties. In their migration they appear to follow the course of the Plata; and, though some individuals are found breeding inland, they are for the most part confined to the littoral marshes.

The Jacanas journey by very easy stages, frequently alighting to rest by the way; for they are so incapable of sustained flight that boys on the pampas occasionally take them, pursuing them on horseback till the birds drop down exhausted. I believe the migratory Rails travel in the same way—a matter not easily determined, as they migrate by night; but they are feeble-winged creatures, and when driven to rise flutter away as if wounded. I have observed the Jacanas migrating by day, but would not for this reason affirm that they do not journey by night, since the Bartram's Sandpiper and other species journey both day and night.

The Jacana flies swiftly, in a straight line and close to the surface: the wings flutter rapidly; and there are frequent intervals of gliding. When rising it presents a most novel appearance, as the lovely pale green of the wings is quite concealed when the bird is at rest; the beauty of its flight is thus greatly enhanced by the sudden display of a hue so rare and delicate. At a distance from the beholder, and in a strong sunshine, the wings appear of a shining golden yellow. Not only when flying does the Jacana make a display of its beautiful wings; without rising it has a way of exhibiting them, appearing to delight as much in them as the Cockatoo does in its crest or the Peacock in its train. When several of these birds live in company, occasionally they all in one moment leave their feeding, and with quick excited notes, and clustering together in a close group, go through a singular and pretty performance, all together holding their wings outstretched and agitated, some with a rapid fluttering, others with a slow-moving leisurely motion like that of a butterfly sunning itself. The performance over, the birds peaceably scatter again. I have never observed Jacanas fighting.

Shortly after arriving they pair, and build a simple nest with few materials, usually on the floating weeds. The eggs are four, in shape like Snipe's eggs, and have deep-brown spots on a pale yellowish-brown ground. During incubation the male keeps guard at some distance from the nest, and utters a warning cry at the approach of an intruder; the female instantly flies from the nest, but in rising renders herself very conspicuous. When the nest is approached the parent birds hover about, occasionally fluttering as if wounded, all the time keeping up a clamour of hurried angry notes somewhat resembling the barking cries of the Black-collared Stilt.

Fam. XLVII. CHARADRIIDÆ, OR PLOVERS.

Plovers are found all over the world's surface and in every degree of latitude, and some of the species have an almost cosmopolitan distribution. In the Neotropical Region about twenty Plovers are known, of which seven are found within our limits. Three of these are Antarctic species that visit Argentina during the winter, one arrives in the opposite season from the north, and the other three are more or less abundant residents.

386. VANELLUS CAYENNENSIS (Gm.).

(CAYENNE LAPWING.)

Vanellus cayennensis, *Burm. La-Plata Reise*, ii. p. 502; *Scl. et Salv. Nomencl.* p. 142; *iid. P. Z. S.* 1868, p. 144 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 42 (Chupat), p. 196; (Buenos Ayres), et 1878, p. 402 (Centr. Patagonia); *Gibson, Ibis*, 1880, p. 161 (Buenos Ayres); *Barrows, Auk*, 1884, p. 278 (Entrerios, Pampas); *Seebohm, Plovers*, p. 216. *Philomachus cayanus*, *Darwin, Zool. Voy. 'Beagle'*, iii. p. 127.

Description.—Wings with a large yellow spine. Above grey; broad front and thin vertical crest black; a patch on the scapulars bronzy purplish; upper tail-coverts white; primaries purplish black; greater coverts pure white, passing into greyish on the secondaries; lesser wing-coverts bronzy green; tail—basal half white, apical half purplish black tipped with white; beneath, chin, line down the middle of the throat and breast shining black; sides of neck grey, passing into white on the face; abdomen and under wing-coverts pure white; bill red, with black tip; feet flesh-colour: whole length 13·0 inches, wing 8·2, tail 4·2, tarsus 3·1. *Female* similar.



CAYENNE LAPWING.
(Seebohm's 'Plovers,' p. 216.)

Hab. Eastern South America.

The Lapwing of La Plata is considerably larger than the well-known Lapwing of the Old World, but closely resembles that bird in the general colour of the plumage, in the long, slender, black crest, and in general appearance. Throughout the Argentine country it is called *Téru-téru*, from its ever-repeated dissyllabic cry; west of the Andes the vernacular name is *Queltregue*, also in imitation of its notes. It has red legs, crimson irides, a rosy beak tipped with black, and coral-red wing-spurs; and these spots of bright colour add to its bold striking appearance. In size, beauty, and spirit it is a king among the Plovers, while its jealous aggressive disposition gives it the character of a tyrant amongst birds in general. On the pastoral pampas (the district from which the giant grasses have disappeared) it is excessively abundant; and it is there resident, although, as with most strong-winged resident species, some individuals do certainly migrate, small parties being occasionally seen in spring and autumn flying steadily at a great height, apparently performing a long journey. As a rule the birds pair for life, and remain always on the spot where they breed. They may be persecuted with guns, their eggs taken year after year, even the ground turned up with the plough, but they still refuse to be driven out. In regions having a broken surface—hills, woods, and sheltered hollows—birds naturally get attached to one spot, for each locality possesses its own features, and individuals frequenting it acquire a knowledge of its advantages. The vast pampas have a uniform level surface, and produce the same kinds of food in the same quantities. They are parched with droughts and flooded by rains alternately, and swept by dust-storms in summer and cold gales in winter—violent enough, one would imagine, to drive every winged creature away and obliterate all marks of home. Again, the powerful flight of this species would enable it to take long journeys, and, if unaffected by atmospheric changes, scarcity of food and water might be a temptation to seek new regions. But through all vicissitudes the *Téru-téru* clings to its chosen spot of ground.

In defence of its territory it wages perpetual war against most living creatures, the objects of its special abhorrence being men, dogs, rheas, and birds of prey generally. Its noisy cry and irascible temper are spoken of by most travellers and naturalists; for no person riding across the pampas could possibly overlook the bird, with its screaming protests against all trespassers perpetually ringing in his ears; but they have all omitted to mention the singular habit which this bird has of associating in sets of three for the purpose of amusement or play. Each couple, as I have said, live always together on their own pretty-well-defined plot of ground, which they jealously guard from intrusion. Yet if one watches a pair of them for a while he presently sees another—one of a neighbouring couple—rise up and fly to them, leaving his own mate to take care of home; and, instead of resenting this visit as an intrusion, they welcome it with notes and signs of manifest pleasure. Advancing to the visitor, they place themselves behind it, and then all three, keeping step, begin a rapid march, uttering loud drumming and rhythmical notes in time with their movements, the notes of the birds behind coming in a rapid stream, while the leading bird utters loud single notes at regular intervals. The march ceases, the leader stretches out his wings, still emitting loud notes, while the other two, with puffed-out plumage, standing exactly abreast, stoop forward until the tips of their beaks touch the ground, and, sinking their voices to a murmur, remain for some time in this singular posture. The performance is then over; the birds all resume their natural attitudes, and the visitor takes his leave. It is quite certain that this display has no connection with the sexual feeling, for it is indulged in all the year round, at all hours of the day, and also during moonlight nights. It is simply the bird's manner of expressing its joyous spirits; for most living creatures—birds especially—have more or less well-defined methods of playing; and playday with the *Téru* is every day, and at very brief intervals. And yet the grave pompous air of the birds, and the military precision of their movements, might easily lead an observer to attribute these displays to some more important motive. Play is not only indulged in with neighbours; there are many solitary *Térus* continually wandering about from place to place—probably young birds not yet settled in life—and when one of these vagrants passes near a pair he is immediately invited to join them, and, when he alights, all go through the performance together with great zest. In this

case, however, as soon as it is over, the strange bird is attacked with great spirit and chased away; and if by chance he comes down again near them, they hasten to drive him up with increased fury.

While watching their antics, which the Gauchos call the T^érus' quadrilles, a curious subject of inquiry suggested itself to my mind. It appeared to me that its manner of playing has had a reflex effect strong enough to mark the bird's whole character—language, bearing, and habits being coloured by it, and even the domestic relations interfered with. And with regard to the latter point, though it is the rule that each cock bird has only one hen, I have known several instances of a cock with two hens, the two females laying their eggs in one nest and taking turns in sitting on them. I have also found instances of two males to one female; and in one case, where I watched the birds, I noticed that when the female was on the nest the males stood over her, one on each side.

I once had my attention drawn to a large concourse of T^érus by the strange behaviour of two individuals amongst them, and I stayed to watch their proceedings. It was in the dry hot weather, and a great many birds had congregated to drink at a lagoon. Some hundreds of them were standing about, quietly preening their feathers, and in the middle of the flock two birds were conspicuously marching about, stiff and upright as a couple of soldiers engaged in some military exercise, and uttering loud notes full of authority. Every few minutes a fresh bird would arrive and alight at some distance from the water, on which the two noisy birds would bustle up, and, ranging themselves behind it, run it with loud drumming notes to the margin; then, standing close together, they would wait till its thirst was quenched, after which they would run it away to some distance from the water, of which they seemed to have made themselves dispensers. For over an hour I continued watching them, and every bird that arrived was conducted to and from the water in this ceremonious manner.

Occasionally several couples unite and soar about in a compact flock; they divide into sets of three birds each, then hover for some time, all waving their wings exactly in time and screaming their notes in unison, and these movements seem like an imitation in the air of the usual marching and drumming performance on the ground.

The breeding-season of the T^érus begins as early as the month of June in favourable seasons; severe cold, drought, or other causes sometimes delays it to August. The nest is a shallow circular hollow made by the bird on the level plain, and lined with broken grass-stems and small fragments of thistle-stalks; the eggs are four, rather sharply pointed at one end, and have an olive-green ground-colour spotted with black. The eggs in different nests vary greatly in size, ground-colour, and in the amount of black they are marked with, no two birds laying eggs exactly alike.

While the female is on the nest the male keeps watch at a distance of twenty or thirty yards, and utters a low warning cry in case of danger. The female leaves the nest sometimes by running, but oftener flies from it, and by marking the spot she rises from, it is easy to find the nest on the open level pampas. In the course of a morning's ride I have picked up as many as sixty-four eggs. During incubation the birds are excessively watchful and jealous, their irritability increasing with the growth of the chick in the shell; and at that time they will attack any bird of prey approaching the nest with amazing virulence. When approached by a human being they fly to meet him when he is still far from them, and hovering, with loud screams, over him, dash down at intervals, threatening to strike with their wing-spurs, coming very close to his head. Unable to intimidate the enemy with this show of violence, the bird changes its tactics, and, alighting at some distance, counterfeits the action of a bird seeking its nest. With well-acted caution and secrecy in its manner, it runs silently along, stooping low, and having found a slight nest-like depression on the surface, sits on it, half opens its wings, and begins gathering all the small sticks or straws within its reach and carefully arranges them about it, as most ground-breeding birds do when incubating. Sometimes also, like many other species, it tries to lead one away from the nest by feigning lameness; but the former instinct of seeking and sitting on an imaginary nest, which I have not observed in any other bird, seems far more complex and admirable.

When sheep in a flock pass over the nest, the bird stands on it to defend its eggs; and then its loud cries and outspread wings often serve to bring the sheep, from motives of curiosity, about it. Even with a dozen sheep clustered round it the bird stands undaunted, beating their faces with its wings; but, unhappily for it, if the shepherd is following, the loud cries of the bird bring him to the spot, and the eggs so bravely defended are taken.

387. CHARADRIUS DOMINICUS, Müller.

(AMERICAN GOLDEN PLOVER.)

Charadrius virginianus, *Burm. La-Plata Reise*, ii. p. 501. **Charadrius virginicus**, *Sci. et Salv. Nomencl.* p. 142; *Durnford, Ibis*, 1877, p. 197 (Buenos Ayres); *White, P. Z. S.* 1882, p. 628 (Buenos Ayres); *Barrows, Auk*, 1884, p. 313 (Bahia Blanca); *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora). **Charadrius dominicus**, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 139. **Charadrius fulvus americanus**, *Seebohm, Plovers*, p. 100.

Description.—Above brownish black, with numerous irregular spots of yellow; forehead, superciliary stripe, and sides of neck white; beneath black; crissum whitish; axillaries smoky grey; bill black; feet dark grey; whole length 10·5 inches, wing 7·0, tail 2·8. *Female* similar.

Young: beneath dirty white, with greyish freckles.

Hab. America.

This closely allied representative of the Golden Plover of Europe, from which it is distinguishable mainly by its rather larger size and smoky-grey axillaries, visits South America in autumn.

The American Golden Plover is abundant and well known to everyone by its native name *Chorlo* throughout Southern Argentina. Its wild clear notes are first heard about the last week in August; and among the first comers many individuals are seen still wearing the nuptial dress. After their long journey from the Arctic regions they are lean and not worth shooting; two months later they become excessively fat, and are then much appreciated by *gourmets*. But although so regular in their arrival they do not regularly visit the same localities every season; the bird may be abundant in a place one year and scarce or absent altogether the next. During the spring, from September to December, they prefer open plains with short grass and in the neighbourhood of wet or marshy ground; at the end of December, when the giant thistle (*Carduus mariana*), which often covers large areas of country, has been burnt up by the sun and blown to the ground, they scatter about a great deal in flocks of from one to four or five hundred. At noon, however, they all resort to a lagoon or marshy place containing water, congregating day after day in such numbers that they blacken the ground over an area of several acres in extent; and at a distance of a quarter of a mile the din of their united voices resembles the roar of a cataract. As population increases on the pampas these stupendous gatherings are becoming more and more rare. Twenty-five years ago it was an exceptional thing for a man to possess a gun, or to use one when he had it; and if Chorlos were wanted, a Gaucho boy, with a string a yard long with a ball of lead attached to each end, could knock down as many as he liked. I have killed them in this way myself, also with the *bola perdida*—a ball at the end of a long string thrown at random into a cloud of birds.

- 171 -

The habits, flight, and language of the Golden Plover need not be spoken of here, as this bird has been so often and exhaustively described by North-American ornithologists. The only peculiarity it possesses which I have not seen mentioned, is its faculty of producing a loud sound, as of a horn, when a few passing birds, catching sight of others of their kind on the ground below, descend violently and almost vertically to the earth with unmoving wings. This feat is, however, rarely witnessed; and on the first occasion when I heard the sound high above me, and looked up to see half a dozen Chorlos rushing down from the sky, the sight almost took my breath away with astonishment.

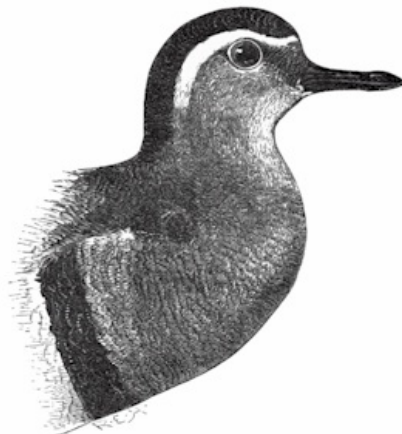
The Golden Plover appears to be most abundant on the pampas between the thirty-fourth and thirty-sixth parallels of latitude, but how far south its range extends has not yet been ascertained. The return migration begins early in March, and yet Mr. Barrows met with it in the neighbourhood of Bahia Blanca and on the Sierra de la Ventana from February 8 to March 19. During most of this time he says it was abundant in flocks of from twenty to two hundred birds, which appeared to be moving uniformly *south* or *south-west*.

388. EUDROMIAS MODESTA (Licht.).

(WINTER PLOVER.)

Vanellus modestus, *Burm. La-Plata Reise*, ii, p. 502 (Pampas). **Eudromias modesta**, *Scl. et Salv. Nomencl.* p. 143; *iid. P. Z. S.* 1868, p. 144 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 197 (Buenos Ayres), *et* 1878, p. 402 (Centr. Patagonia); *Barrows, Auk*, 1884, p. 313 (Entrerios); *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora). **Charadrius modestus**, *Seebohm, Plovers*, p. 105.

Description.—Above brownish cinereous; frontal band and superciliary stripe white; wings and central tail-feathers blackish; lateral tail-feathers white, the inner ones with an imperfect black subterminal band: beneath, throat cinereous, breast bright chestnut with a black band below; belly white; bill black, base of lower mandible yellowish; feet brown: whole length 7·5 inches, wing 5·3, tail 2·4. *Female* similar. *Young* without the rufous chest.



WINTER PLOVER.

Hab. Antarctic America.

This species in its gait, flight, and general appearance closely resembles the American Golden Plover, but is smaller than that bird, and its sober upper plumage is unrelieved with flecks of golden colour. It breeds in South Patagonia and the Falklands, and migrates north in autumn, appearing on the pampas in April, and being met with there throughout the winter; hence the vernacular name *Chorlito de invierno* (Little Winter Plover). In its winter dress the upper plumage is greyish drab colour; the breast dark brown; the belly white. It is shy and active in disposition, has a very rapid flight, and is seen in flocks varying greatly in number, from a dozen to two or three hundred individuals. When feeding the birds scatter very widely, running swiftly over the ground in all directions. When on the wing it frequently utters its cry, which has not the mellow tone of the Golden Plover's note, but it is wonderfully clear and far-reaching, and impresses the listener with its wildness and melancholy.

- 172 -

Their return migration takes place in August.

389. ÆGIALITIS FALKLANDICA (Lath.).

(PATAGONIAN SAND-PLOVER.)

Ægialitis falklandica, *Sci. et Salv. Nomencl.* p. 143; *iid. P. Z. S.* 1868, p. 144 (Buenos Ayres), et 1872, p. 549 (Rio Negro); *Durnford, Ibis*, 1878, p. 402 (Centr. Patagonia); *Gibson, Ibis*, 1880, p. 163 (Buenos Ayres); *Barrows, Auk*, 1884, p. 313 (Entrerios). **Charadrius falklandicus**, *Seebohm, Plovers*, p. 155.

Description.—Above brown; front white; band across forehead and sides of head black, bordered with rufous; wings black, with bright shafts and white edges to the base of some of the inner primaries; central tail-feathers black, lateral white, with a more or less distinct subterminal blackish band, except on the outer pair: beneath white, crossed by two broad blackish bands on the breast; bill and feet black: whole length 7·0 inches, wing 5·0, tail 2·1. *Female* similar.

- 173 -

Hab. Patagonia, Falkland Islands, Chili, and Argentina.

The pretty little Belted Plover inhabits the Falklands and South Patagonia, and migrates north in winter as far as Paraguay; but it is not anywhere common, and is seldom seen in parties exceeding half a dozen in number. It is extremely active, always preferring wet grounds to dry, and runs rapidly over the mud in search of food like a *Tringa*. Its only language is a low clicking note uttered when taking wing.

Some individuals remain to breed as far north as the pampas of Buenos Ayres. Mr. Gibson says the nest is always placed near the water, and is a slight scrape in the ground lined with dry grass. The eggs are three in number, have black spots on an olive ground; and in shape resemble Lapwing's eggs.

Durnford also found it breeding in the Chupat Valley in September 1877.

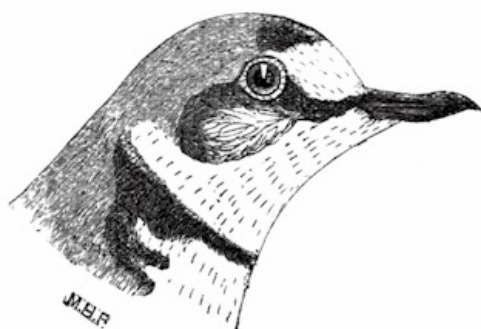
390. ÆGIALITIS COLLARIS (Vieill.).

(AZARA'S SAND-PLOVER.)

Charadrius azaræ, *Burm. La-Plata Reise*, ii. p. 501. *Ægialitis collaris*, *Sci. et Salv. Nomencl.* p. 143; *Durnford, Ibis*, 1878, p. 67 (Buenos Ayres); *id. Ibis*, 1880, p. 424 (Tucuman); *White, P. Z. S.* 1882, p. 628 (Buenos Ayres); *Barrows, Auk*, 1884, p. 313 (Entrerios). **Charadrius collaris**, *Seebohm, Plovers*, p. 173. "**Cinereous Plover**," *Hudson, P. Z. S.* 1871, p. 261.

Description.—Above brown; front white; fore half of head and line between bill and eyes black; top of head and sides of neck tinged with rusty red; primaries blackish with bright shafts and slight white edgings; tail with the central rectrices blackish brown, lateral rectrices white: beneath white; pectoral collar black; bill black; feet yellow: whole length 6·0 inches, wing 4·1, tail 2·0. *Female* similar.

- 174 -



AZARA'S SAND-PLOVER.
(Seebohm's 'Plovers,' p. 173.)

Hab. South and Central America.

Azara's Sand-Plover is distributed all over South America east of the Andes, and has been obtained by Mr. Salvin in Guatemala. It is a close ally of the Kentish Plover of Europe (*Æ. cantiana*), but has the black pectoral band complete in the adult form.

This Plover appears to be an inland species. Durnford observed it in October, December, and February in the neighbourhood of Buenos Ayres, on "dry sandy ground," frequenting the same sort of places as the Common Ring-Plover in England. He also met with it during his last journey to Tucuman, and Mr. Barrows found it "rather abundant" in small flocks all over the open country in Entrerios.

391. OREOPHILUS RUFICOLLIS (Wagl.).

(SLENDER-BILLED PLOVER.)

Oreophilus ruficollis, *Wagl., Scl. et Salv. Nomencl.* p. 143; *Durnford, Ibis*, 1877, p. 42 (Chupat), et 1878, p. 402 (Centr. Patagonia). *Oreophilus totanistrotris*, *Cab. J. f. O.* 1878, p. 199 (Sierra de Cordova). *Charadrius totanistrotris*, *Seebohm, Plovers*, p. 111.

Description.—Above grey, varied with yellowish brown, and striped with black on the back and wing-coverts; front and superciliaries yellowish brown; stripe through the eye blackish; wings blackish with white shafts, and slightly edged with white, their under surface white; tail grey, with a black subterminal bar on the lateral feathers: beneath grey, whole throat rusty reddish; large ventral patch black; sides of belly and crissum cinnamomeous white; bill black; feet yellowish: whole length 10·0 inches, wing 6·5, tail 3·0, bill from gape 1·5.



SLENDER-BILLED PLOVER.
(Seebohm's 'Plovers,' p. 111.)

Hab. Southern half of South America.

This pretty and curious Plover, with a Snipe-like beak, inhabits South Patagonia and the Falklands. In the autumn it migrates north, and during the cold season is found sparsely distributed throughout the Argentine States, and passes into Bolivia and Peru. On the pampas it is most abundant in April, but most of the birds seen during that month are travellers to warmer latitudes.

It is a shy and exceedingly active bird, somewhat larger than the Golden Plover in size, and in the Plata district is usually called *Chorlo canela*, from the prevailing cinnamon-red tint of the plumage. It is distinguished in the family it belongs to by the great length of its straight slender probe-like bill, unlike that of any other Plover; and it also has other structural peculiarities, the toes being exceptionally short and thick, the frontal bone curiously modified, and the eyes enormously large, like those of a nocturnal species. I do not think, however, that it migrates by night, as I have never heard its peculiar passage-cry after dark. A flock is usually composed of from a dozen to thirty individuals, and when on the ground they scatter widely, running more rapidly than any other Plover I am acquainted with. When they travel the flight is swift and high, the birds much scattered. They possess no mellow or ringing tones like other members of the Plover family; on the ground they are silent, but when taking wing invariably utter a long tremulous reedy note, with a falling inflection, and usually repeated three or four times. The sound may be imitated by striking on the slackened strings of a guitar. This cry is frequently uttered while the birds are migrating.

On the Rio Negro in Patagonia I observed this Plover only in the winter season; but Durnford found it nesting in the valley of the Sengel in Chupat in the month of December.

392. HÆMATOPUS PALLIATUS, Temm.

(AMERICAN OYSTER-CATCHER.)

Hæmatopus palliatus, *Scl. et Salv. Nomencl.* p. 143; *Durnford, Ibis*, 1878, p. 403 (Centr. Patagonia); *Seebohm, Plovers*, p. 305; *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 112.

Description.—Head and neck all round black; back and wing-coverts brown; upper tail-coverts, greater wing-coverts, and abdomen white; bill and feet orange: whole length 17·0 inches, wing 9·5, tail 3·5. *Female* similar.

Hab. America.

This Oyster-catcher is widely distributed along the coasts of North and South America, from Nova Scotia to Patagonia. Durnford found it nesting near Tombo Point in Central Patagonia in the month of December, but failed to obtain the eggs.

At the same place Durnford also observed the Black Oyster-catcher (*H. ater*), but that is an Antarctic species, which may probably not come further north.

Fam. XLVIII. THINOCORIDÆ, OR SEED-SNIPES.

The family Thinocoridæ, which embraces the two genera *Thinocorus* and *Attagis*, is a peculiar group of South-American birds of somewhat Partridge-like appearance, and associated by the older authors with the Gallinæ, but now known to be most nearly allied in essential structure to the Plovers. The Seed-Snipes are inhabitants of bare and desolate districts, being found in the northern parts of the continent only on the high Andes, but descending to the sea-level in Patagonia and the Falkland Islands. The species are few in number, only about six being known, of which two occur within Argentine limits.

393. THINOCORUS RUMICIVORUS, Eschsch.

(COMMON SEED-SNIPE.)

Thinocorus rumicivorus, *Burm. La-Plata Reise*, ii. p. 501 (Rosario); *Sci. et Salv. Nomencl.* p. 144; *id. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 42 (Chupat) et p. 197 (Buenos Ayres), et 1878, p. 403 (Centr. Patagonia); *Tacz. Orn. Pér.* iii. p. 283.

Description.—Above buffy brown, marbled and irregularly banded with black; wing-feathers black, edged with white, external secondaries like the back; tail black, broadly tipped with white, central rectrices like the back: beneath white; a broad line on each side of the throat uniting in the centre of the neck and expanding into a collar on the breast black; sides of neck greyish; bill dark brown; feet yellow; claws black: whole length 6·5 inches, wing 3·9, tail 1·9. *Female*: above like the male: beneath white, sides of neck and breast brown varied with blackish, with slight traces only of the black bar.

- 177 -

Hab. Western Peru, Bolivia, Chili, Patagonia, and Argentina.

This curious bird has the grey upper plumage and narrow, long, sharply-pointed wings of a Snipe, with the plump body and short strong curved beak of a Partridge. But the gallinaceous beak is not in this species correlated, as in the Partridges, with stout rasorial feet; on the contrary, the legs and feet are extremely small and feeble, and scarcely able to sustain the weight of the body. When alighting the Seed-Snipe drops its body directly upon the ground and sits close like a Goatsucker; when rising it rushes suddenly away with the wild hurried flight and sharp scraping alarm-cry of a Snipe. It is exclusively a vegetable-feeder. I have opened the gizzards of many scores to satisfy myself that they never eat insects, and have found nothing in them but seed (usually clover-seed) and tender buds and leaves mixed with minute particles of gravel.

These birds inhabit Patagonia, migrating north to the pampas in winter, where they arrive in April. They usually go in flocks of about forty or fifty individuals, and fly rapidly, keeping very close together. On the ground, however, they are always much scattered, and are so reluctant to rise that they will allow a person to walk or ride through the flock without taking wing, each bird creeping into a little hollow in the surface or behind a tuft of grass to escape observation. During its winter sojourn on the pampas the flock always selects as a feeding-ground a patch of whitish argillaceous earth, with a scanty withered vegetation; and here when the birds crouch motionless on the ground, to which their grey plumage so closely assimilates in colour, it is most difficult to detect them. If a person stands still close to or in the midst of the flock the birds will presently betray their presence by answering each other with a variety of strange notes, resembling the cooing of Pigeons, loud taps on a hollow ground, and other mysterious sounds, which seem to come from beneath the earth.

In the valley of Rio Negro I met with a few of these birds in summer, but could not find their nests.

Durnford, however, who found them breeding in Chupat at the end of October, tells us that the nest is a slight depression in the ground, sometimes lined with a few blades of grass. "The eggs have a pale stone ground-colour, very thickly but finely speckled with light and dark chocolate markings; they have a polished appearance, and measure 1·3 × ·8 inch" (*Ibis*, 1878, p. 403).

- 178 -

394. THINOCORUS ORBIGNYANUS, Geoffr. et Less.

(D'ORBIGNY'S SEED-SNIPE.)

Thinocorus orbignyianus, *Burm. La-Plata Reise*, ii. p. 500; *Scl. et Salv. Nomencl.* p. 144; *Tacz. Orn. Pér.* iii. p. 281.

Description.—Above yellowish brown, streaked and marbled with black; wing-feathers blackish with lighter edgings, inner secondaries like the back; back and sides of neck grey: beneath white; throat white, surrounded by a narrow black band; breast grey, joining the grey neck, and bordered beneath by a narrow black band; bill brown, tip black; feet yellow, claws black: whole length 8·0 inches, wing 5·5, tail 3·0. *Female*: above like the male, but without the grey neck: beneath white, sides of neck and breast like the back; throat white.

Hab. Western Peru, Bolivia, Chili, and Western Argentina.

Dr. Burmeister met with examples of this Seed-Snipe, which is easily distinguishable from the preceding species by its larger size, in the high valleys of the Sierra of Uspallata, at an elevation of about 6000 feet above the sea-level. It is called "Guancho" by the natives after its peculiar call-note, which, however, sounded more like "Tulco" to Dr. Burmeister, and is often heard at night-time.

This Seed-Snipe is also found in Peru at high elevations in the Puna region (12,000 to 14,000 feet), where M. Jelski obtained its eggs. A description of them with some interesting notes on the habits of the species are given in Taczanowski's 'Ornithologie du Pérou.'

Fam. XLIX. SCOLOPACIDÆ, OR SNIPES.

Like the Plovers, the Snipes are nearly universally distributed over the world's surface, though most abundant in northern regions. Of about 35 Neotropical species 15 are known to occur in the Argentine Republic, and many additions to the list of these wandering birds may be reasonably expected.

Of the fifteen Scolopacidæ already recognized as occurring within our limits, all but three are Arctic species, which only visit the far south during their migrations. The three exceptions are the Brazilian Stilt (*Himantopus brasiliensis*), the Paraguay Snipe (*Gallinago paraguaiæ*), and the Painted Snipe (*Rhynchæa semicollaris*), which are resident all the year in the Argentine Republic.

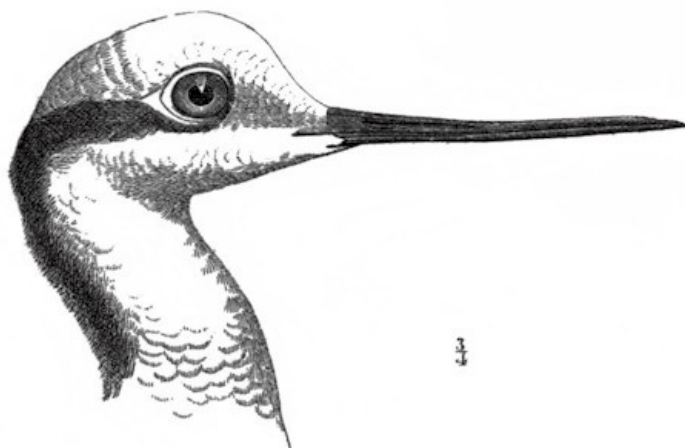
- 179 -

395. HIMANTOPUS BRASILIENSIS, Brehm.

(BRAZILIAN STILT.)

Himantopus nigricollis, *Burm. La-Plata Reise*, ii. p. 502 (Pampas); *Scl. et Salv. P. Z. S.* 1868, p. 144 (Buenos Ayres); *Barrows, Auk*, 1884, p. 314 (Entrerios, Azul, Pampas). **Himantopus brasiliensis**, *Scl. et Salv. Nomencl.* p. 144; *iid. P. Z. S.* 1873 p. 454; *Durnford, Ibis*, 1877, p. 198 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 162 (Buenos Ayres).

Description.—White; line behind each eye, nape, back of neck, interscapulum, and wings black; a narrow white band divides the black neck from the black upper back; bill black; feet orange: whole length 14·0 inches, wing 8·5, tail 3·3, bill from gape 2·5, tarsus 4·2. *Female* similar.



Head of BRAZILIAN STILT.
(P. Z. S. 1873, p. 454.)

Hab. South America.

This bird is resident and common in the Plata district, and is called in the vernacular *Téru-real*, also *Zancudo* (stilt). It frequents marshes and lagoons, and wades in search of food in the shallow water near the margin. It is lively in its movements, and notwithstanding the great length of its legs has a pretty, graceful appearance on the ground. On the wing, however, it is seen at its best, the flight being remarkably swift and free, while the sharply-pointed glossy-black wings contrast finely with the snow-white plumage of the body, and the red legs stretched out straight behind have the appearance of a long slender tail. Stilts are fond of aerial exercises, pursuing each other with marvellous velocity through the air, so

that a few moments after the spectator has almost lost sight of them in the sky above they are down again within a few yards of the surface. While pursuing each other they constantly utter their excited barking cries, which in tone remind one of the melodious barking of some hounds.

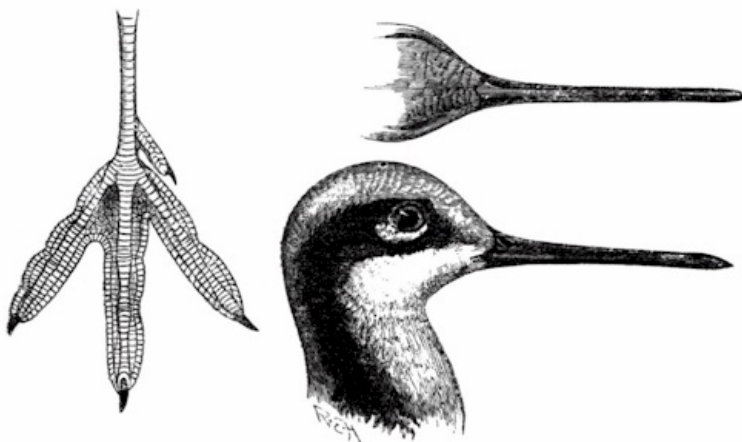
The nest is made on the low ground close to the water, and consists merely of a slight lining of dry grass and leaves gathered in a small depression on the surface; the eggs are four in number, pyriform, dark olive colour, spotted with brownish black, the spots being very thickly crowded at the large end. During incubation the male keeps guard and utters a warning note on the appearance of an enemy, whereupon the female quits the nest. They also counterfeit lameness to draw a person from the neighbourhood of the eggs or young; but in a manner peculiar to this species; for owing to the great length of their legs they cannot drag themselves along the ground, as ducks, plovers, partridges, and other birds do. Placing themselves at a distance of forty or fifty yards from the intruder, but with breast towards him, they flutter about a foot above the ground, their long legs dangling under them, and appear as if struggling to rise and repeatedly falling back. If approached they slowly retire, still fluttering just above the grass and without making any sound. After the young birds are able to fly they remain with the parents until the following spring; and sometimes two or three families associate together, raising the number of the flock to fifteen or twenty birds. The young have a sharp querulous cry of two notes; the plumage is brown and pale grey; the eyes black. After nine or ten months the adult plumage is acquired, not by moulting, but by a gradual change in the colours of the feathers. By the same gradual process the eye changes from black to crimson, the outer edge of the iris first assuming a dull reddish colour, which brightens and widens until the whole iris becomes of a vivid red.

396. PHALAROPUS WILSONI, Sabine.

(WILSON'S PHALAROPE.)

Phalaropus wilsoni, *Scl. et Salv. Nomencl.* p. 144; *Durnford, Ibis*, 1877, p. 42 (Chupat).
Steganopus wilsoni, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 335.

Description.—Above cinereous; head above and stripe down the neck clear greyish white; sides of head and neck black; middle of back grey, varied with dark maroon; rump and body beneath white; neck beneath stained with rufous; bill and feet black: whole length 8·5 inches, wing 5·5, tail 2·5. *Female* similar, but rather brighter. *Winter plumage*: above dark grey, beneath white.



WILSON'S PHALAROPE.
(Seebohm's 'Plovers,' p. 342.)

Hab. America, descending southwards during migration to Patagonia.

Wilson's Phalarope is a North-American species; which breeds in the north-west of that continent, and descends as far south as Chili and Patagonia during migration.

Durnford in 1876 met with this species in the Chupat Valley, "in the still pools formed by the eddies in the river and in the adjacent stagnant ditches." It was "usually seen in pairs." Leybold's collector obtained specimens of it near Mendoza.

397. GALLINAGO PARAGUAIAE (Vieill.).

(PARAGUAY SNIPE.)

Scolopax frenata, *Burm. La-Plata Reise*, ii. p. 503. **Gallinago paraguaiæ**, *Scl. et Salv. P. Z. S.* 1868, p. 144 (Buenos Ayres); *iid. Nomencl.* p. 144; *Durnford, Ibis*, 1877, p. 198 (Buenos Ayres); *Barrows, Auk*, 1884, p. 314 (Entrerios); *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora).
Scolopax frenata magellanica, *Seebohm, Plovers*, p. 496.

Description.—Above brown, striped and barred with black and pale fulvous; wings dark cinereous edged with white; tail of 16 rectrices, of which the outer pair are pin-shaped: beneath white, breast marbled with blackish and brown: whole length 10·5 inches, wing 5·1, tail 2·4, bill 2·8.

This familiar bird, called *Agachona* in the vernacular, from its habit of crouching close to the ground to escape observation when approached, is abundant in the Plata district and resident, although its sudden and total disappearance from all the open wet places where it is common in the winter gives one the impression that it is migratory. The bird, however, only retires to breed in the extensive lonely marshes. The nest is a slight depression on the moist ground close to the water, and lined with a little withered grass. The eggs are four, pear-shaped, and spotted with black on an olive-coloured ground.

After the summer heats are over Snipes suddenly appear again all over the country, and at this season they are frequently met with on the high and dry grounds among the withered grass and thistles. In favourable wet seasons they sometimes collect in large flocks, numbering not less than five or six hundred birds, and a flock of this kind will occasionally remain in one spot for several months without breaking up. They usually frequent an open spot of level ground where the water just covers the roots of the short grass; here the birds keep close together while feeding and are visible from a long distance; but they become extremely wary, all raising their heads in a very un-Snipe-like manner at the slightest alarm, and taking flight with the readiness of Wild Ducks. These flocks are, however, not often met with. Usually the Snipe is a solitary bird, crouches close when approached, and springs up suddenly when almost trodden on, loudly uttering its sharp scraping alarm-cry; after rising to a considerable height, flying in a wild erratic manner, it returns suddenly to the earth, often dropping into the grass within twenty yards of the spot it rose from.

It is, indeed, curious to see how these habits, characteristic of the Snipes all over the world, are so completely laid aside when the birds associate in large flocks.

Early and late in the day many individuals are usually on the wing engaged in their aerial pastimes, the singular grinding sounds caused by their feathers in their violent descent from a great height being distinctly audible at a distance of nearly a mile. It is heard throughout the winter at all hours of the day in mild damp weather, and on moonlight nights often until after midnight.

398. RHYNCHÆA SEMICOLLARIS (Vieill.).

(PAINTED SNIPE.)

Rhynchæa hilarii, *Burm. La-Plata Reise*, ii. p. 504 (Rio Paraná). *Rhynchæa semicollaris*, *Scl. et Salv. P. Z. S.* 1868, p. 144 (Buenos Ayres); *iid. Nomencl.* p. 145; *Durnford, Ibis*, 1877, p. 199 (Buenos Ayres), et 1878, p. 403 (Chupat); *Barrows, Auk*, 1884, p. 314 (Entrerios); *Seebohm, Plovers*, p. 459, pl. xix.; *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora).

Description.—Above dark brown; head black, with a central and two lateral longitudinal bands of buffy white; wings ashy blackish, spotted with buffy white and barred with black; coverts with large oval spots of clear white: beneath, throat and breast dark brownish, with a conspicuous white neck-collar on each side; belly white, flanks tinged with buffy; bill greenish, reddish at tip; feet flesh-colour: whole length 8·0 inches, wing 4·1, tail 2·0. *Female* similar, but slightly larger and more brightly coloured.

Hab. Southern parts of South America, from Peru to Patagonia.

In the Argentine provinces this bird is called *Dormilon* (Sleepy-head), in allusion to its dull habits, which are like those of a nocturnal species. It passes the daylight hours concealed in dense reed-beds, rising only when almost trodden on; the flight is feeble and erratic, the rapid wing-flutterings alternating with intervals of gliding, and after going a short distance the bird drops again like a Rail into the rushes. From its behaviour on the ground, also in flying, when it appears dazed with the light, I have no doubt that it is altogether nocturnal or crepuscular in its habits. It is solitary and resident, and may be met with in small numbers in every marsh or stream in the Plata district, where its favourite reed-beds afford it cover. It appears to have no cry or note of any kind, for even when frightened from its nest and when the eggs are on the point of hatching it utters no sound. The eggs never exceed two in number and are placed on the wet ground, often without any lining, among the close grass and herbage near the water. They are oblong and bluntly pointed at the smaller end, and have a white ground-colour, but so densely marked and blotched with black that in some cases they appear to be almost wholly of that colour, or like black eggs flecked with white.

399. TRINGA MACULATA, Vieill.

(PECTORAL SANDPIPER.)

Tringa maculata, *Scl. et Salv. Nomencl.* p. 145; *iid. P. Z. S.* 1873, p. 455; *Durnford, Ibis*, 1877, p. 43 (Chupat), et 1878, p. 68 (Buenos Ayres); *Barrows, Auk*, 1884, p. 314 (Entrerios); *Saunders, Yarrell's Birds*, iii. p. 368. *Actodromas maculata*, *Baird, Brew., et Ridgw. Water-B. N. A.* i. p. 232. *Tringa acuminata pectoralis*, *Seebohm, Plovers*, p. 443.

Description.—Above brown, varied with black; superciliaries whitish; rump and middle upper tail-coverts blackish, lateral upper tail-coverts white: beneath white; neck and breast pale greyish streaked with blackish: whole length 8·5 inches, wing 5·1, tail 2·4, bill 1·1. *Female* similar.



Tail-feathers of PECTORAL SANDPIPER.
(Seebohm's 'Plovers,' p. 443.)

Hab. Arctic America, migrating south to Patagonia in winter.

The Pectoral Sandpiper is a well-known North-American species that visits the south during migration. It breeds abundantly in Alaska, and descends in winter through Central and South America to Chili and Patagonia. Durnford found it abundant about the salt-lagoons of Chupat. Near the end of August it begins to arrive in La Plata, usually in very small flocks or singly; and among these first-comers there are some young birds so immature and weak in appearance that one can scarcely credit the fact that so soon after being hatched they have actually performed the stupendous journey from the northern extremity of the North-American continent to the Buenos-Ayorean pampas.

- 184 -

This species differs from other Sandpipers in being much more solitary and sedentary in its ways, feeding for hours in one spot, and in its Snipe-like habit of sitting close when approached and remaining motionless watching the intruder; also in its language, its low, soft, tremulous cry when flying being utterly unlike the sharp and clicking sounds emitted by other species. During the hot months, when water begins to fail, they occasionally congregate in flocks, sometimes as many as two or three hundred individuals being seen together; but at all times it is more usual to see them in very small flocks or singly.

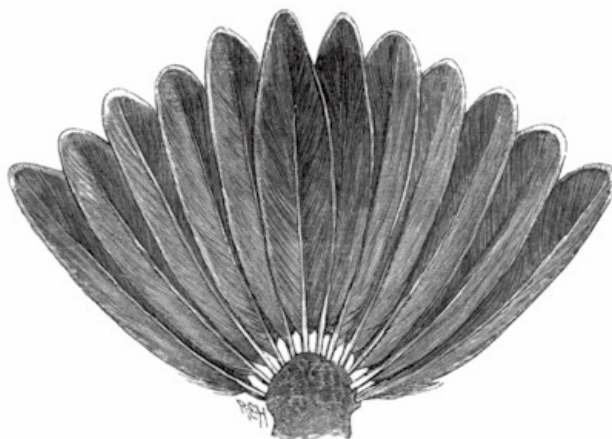
400. TRINGA BAIRDI (Coues).

(BAIRD'S SANDPIPER.)

Tringa dorsalis, *Burm. La-Plata Reise*, ii. p. 503 (Mendoza)? *Tringa bairdi*, *Sci. et Salv. Nomencl.* p. 145; *iid. P. Z. S.* 1868, p. 144, et 1873, p. 455 (Buenos Ayres); *Seebohm, Plovers*, p. 444.
Actodromas bairdi, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 230.

Description.—Above brown varied with blackish; rump and upper tail-coverts blackish: beneath white, neck and sides of breast pale fulvous-brown, with blackish shaft stripes; bill and feet black: whole length 6·8 inches, wing 4·5, tail 2·1. *Female* similar.

- 185 -



Tail-feathers of BAIRD'S SANDPIPER.
(Seebohm's 'Plovers,' p. 444.)

Hab. Arctic America, migrating south to Patagonia in winter.

This is likewise an Arctic-American species which visits South America in winter. I have met with it in small flocks near Buenos Ayres in April and May; and it has also been procured in Chili.

401. TRINGA FUSCICOLLIS, Vieill.

(BONAPARTE'S SANDPIPER.)

Tringa fuscicollis, *Scl. et Salv. Nomencl.* p. 145; *Durnford, Ibis*, 1878, p. 68 (Buenos Ayres) et p. 404 (Centr. Patagonia); *White, P. Z. S.* 1883, p. 42 (Buenos Ayres); *Barrows, Auk*, 1884, p. 314 (Entrerios); *Saunders, Yarrell's Birds*, iii. p. 373. **Tringa bonapartii**, *Scl. et Salv. P. Z. S.* 1868, p. 144, et 1873, p. 455 (Buenos Ayres); *Seebohm, Plovers*, p. 445. **Actodromas fuscicollis**, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 227.

Description.—Above brownish grey, varied and spotted with black; superciliaries white; rump grey, upper tail-coverts white; beneath white; breast and flanks spotted and streaked with blackish; whole length 7·0 inches, wing 4·8, tail 2·1. *Female* similar.

Hab. Arctic America, migrating south to Patagonia in winter.

Bonaparte's Sandpiper is a third of the same category of Arctic *Tringæ* that range far south after the breeding-season. Durnford found it common "in flocks" near Buenos Ayres, and again in the valley of the Sengel river in Central Patagonia in winter. White and Hudson also obtained specimens near Buenos Ayres, and Barrows in Entrerios near Concepcion.

- 186 -

402. CALIDRIS ARENARIA (Linn.).

(SANDERLING.)

Calidris arenaria, *Scl. et Salv. Nomencl.* p. 145; *Durnford, Ibis*, 1878, p. 404 (Tombo Point); *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 249; *Saunders, Yarrell's Birds*, iii. p. 420. **Tringa arenaria**, *Seebohm, Plovers*, p. 431.

Description.—No hind toe. Above in summer light rufous, in winter light greyish, spotted and striped with blackish and edged with whitish; beneath white; bill and feet black; whole length 7·5 inches, wing 5·5, tail 2·2. *Female* similar.

Hab. Arctic regions of both hemispheres, descending far south in winter.

The Sanderling is one of the most widely spread of all the Arctic Grallæ during its winter migration. Durnford obtained examples at Tombo Point, Central Patagonia, on the 30th December, 1877, so that it must necessarily pass through the Argentine Republic. It is only known to breed in the high Northern Polar lands.

403. TOTANUS MELANOLEUCUS (Gm.).

(GREATER YELLOWSHANK.)

Totanus melanoleucus, *Burm. La-Plata Reise*, ii. p. 503; *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 269; *Seebohm, Plovers*, p. 363; *Barrows, Auk*, 1884, p. 315 (Entrerios). **Gambetta melanoleuca**, *Scl. et Salv. Nomencl.* p. 145; *iid. P. Z. S.* 1868, p. 144 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 199 (Buenos Ayres); *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora). **Totanus chilensis**, *Philippi, Wieg. Arch.* 1857, pt. i. p. 264 (Chili).

Description.—Above brownish grey spotted with white; rump nearly white; beneath white; throat and neck with black streaks; bill black; feet yellow; whole length 14·0 inches, wing 7·5, tail 3·4. *Female* similar.

Hab. North and South America.

The Greater Yellowshank is best known as an Arctic American species, descending south during migration, and arriving in La Plata at the end of September or early in October, singly or in pairs, and sometimes in small flocks. Without ever being abundant the bird is quite common, and one can seldom approach a pool or marsh on the pampas without seeing one or more individuals wading near the margin, and hearing their powerful alarm-cry—a long clear note repeated three times.

- 187 -

These summer visitors leave us in March, and then, oddly enough, others arrive, presumably from the south, to winter on the pampas, and remain from April to August. Thus, notwithstanding that the Yellowshank does not breed on the pampas, we have it with us all the year round. Durnford's observations agree with mine, for he says that the bird is found throughout the year near Buenos Ayres; and Mr. Barrows writes that this species "occurs every month in the year (at Concepcion in Entrerios), but in increased numbers during August, September, October, and November."

404. TOTANUS FLAVIPES (Gm.).

(LESSER YELLOWSHANK.)

Totanus flavipes, *Burm. La-Plata Reise*, ii. p. 503 (Mendoza, Paraná); *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 273; *Seebohm, Plovers*, p. 364; *Saunders, Yarrell's Birds*, iii. p. 480; *Barrows, Auk*, 1884, p. 315 (Entrerios, Azul). **Gambetta flavipes**, *Scl. et Salv. Nomencl.* p. 145; *iid. P. Z. S.* 1868, p. 144 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 43 (Chupat) et p. 199 (Buenos Ayres), et 1878, p. 404 (Centr. Patagonia).

Description.—Above grey, spotted with white and black; upper tail-coverts white, slightly spotted; beneath white; breast greyish, with black specks; bill black; feet yellow; whole length 10·0 inches, wing 6·0, tail 2·6. *Female* similar.

Hab. Arctic America, descending south to Chili and Patagonia during migration.

This North-American species is likewise common throughout the year on the pampas, although not nearly so common in winter (June, July, and August) as in summer.

Durnford also found it abundant in Central Patagonia. In habits, language, and in general appearance, except in size, it closely resembles the Greater Yellowshank, and the two species, attracted or deceived by this likeness, are constantly seen associating together.

Mr. Barrows, who found it near Concepcion in Entrerios, usually in company with *Totanus melanoleucus*, did not observe it in May, June, or July in that locality.

405. RHYACOPHILUS SOLITARIUS (Wils.).

(SOLITARY SANDPIPER.)

Rhyacophilus solitarius, *Sci. et Salv. Nomencl.* p. 146; *Durnford, Ibis*, 1878, p. 68 (Buenos Ayres); *Barrows, Auk*, 1884, p. 315 (Entrerios, Azul); *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 278.
Totanus solitarius, *Seebohm, Plovers*, p. 367.

Description.—Middle toe nearly as long as tarsus. Above dark olivaceous grey, with blacker markings and slightly speckled with white; upper tail-coverts blackish, barred with white; tail white with blackish bars: beneath white; sides of neck and breast streaked and barred with dusky grey; under wing-coverts blackish, barred with white: whole length 8·5 inches, wings 5·0, tail 2·1. *Female* similar.

Hab. Arctic America, descending south to Buenos Ayres during migration.

The well-known and well-named Solitary Sandpiper arrives later than the other birds of its family in La Plata, and differs greatly from them in its habits, avoiding the wet plains and muddy margins of lagoons and marshes where they mostly congregate, and making its home at the side of a small pool well sheltered by its banks, or by trees and herbage, and with a clear margin on which it can run freely. As long as there is any water in its chosen pool, though it may be only a small puddle at the bottom of a ditch, the bird will remain by it in solitary contentment. When approached it runs rapidly along the margin, pausing at intervals to bob its head, in which habit it resembles the Tatlers or Yellowshanks, and emitting sharp little clicks of alarm. Finally, taking flight, it utters its peculiar and delightful cry, a long note thrice repeated, of so clear and penetrating a character that it seems almost too fine and bright a sound even for so wild and aerial a creature as a bird.

The flight is exceedingly rapid and wild, the bird rising high and darting this way and that, uttering its piercing trisyllabic cry the whole time and finally, dashing downwards, it suddenly drops again on to the very spot from which it rose.

I was once pleased and much amused to discover in a small sequestered pool in a wood, well sheltered from sight by trees and aquatic plants, a Solitary Sandpiper living in company with a Blue Bittern. The Bittern patiently watched for small fishes, and when not fishing dozed on a low branch overhanging the water; while its companion ran briskly along the margin snatching up minute insects from the water. When disturbed they rose together, the Bittern with its harsh grating scream, the Sandpiper daintily piping its fine bright notes—a wonderful contrast! Every time I visited the pool afterwards I found these two hermits, one so sedate in manner, the other so lively, living peacefully together.

406. ACTITURUS BARTRAMIUS (Wils.).

(BARTRAM'S SANDPIPER.)

Totanus bartramia, *Burm. La-Plata Reise*, ii. p. 503 (Mendoza). **Actiturus bartramius**, *Sci. et Salv. Nomencl.* p. 146; *Durnford, Ibis*, 1877, p. 199 (Buenos Ayres); *Barrows, Auk*, 1884, p. 315 (Entrerios); *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora). **Bartramia longicauda**, *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 296. **Totanus bartrami**, *Seebohm, Plovers*, p. 376.

Description.—Above blackish, feathers edged with yellowish brown; rump black; wing-coverts yellowish brown, barred with black; primaries blackish: beneath white; breast and flanks ochraceous, spotted and barred with black; under surface of wings barred with white and black; bill yellowish, tip black; feet yellow: whole length 10·0 inches, wing 6·3, tail 3·1. *Female* similar.

Hab. North America, migrating south to Buenos Ayres.

Bartram's Sandpiper is another of those species which breed in North America, and extend their winter-migrations far into the Southern Hemisphere. It differs, however, from its fellow-migrants, which visit the Argentine country, in its wide and even distribution over all that portion of the pampas where the native coarse grasses which once covered the country have disappeared, an area comprising not less than 50,000 square miles. It begins to arrive as early as September, coming singly or in small parties of three or four; and, extraordinary as the fact may seem when we consider the long distance the bird travels, and the monotonous nature of the level country it uses as a "feeding area," it is probable that every bird returns to the same spot year after year; for in no other way could such a distribution be maintained, and the birds appear every summer evenly sprinkled over so immense a

surface.

On the pampas the bird is called *Chorlo solo*, on account of its solitary habit, but more commonly "Batitú," an abbreviation of the Indian name Mbatuitui. In disposition it is shy, and prefers concealment to flight when approached, running rapidly away through the long grass or thistles, or concealing itself behind a tussock until the danger is past, or often, where the herbage is short, crouching on the ground like a Snipe. It runs swiftly and pauses frequently; and while standing still with head raised it jerks its long tail up and down in a slow measured manner. When driven up it springs aloft with a sudden wild flight, uttering its loud mellow-toned cry, composed of three notes, strongly accented on the first and last; and sometimes, when the bird is much alarmed, the first note is rapidly repeated several times like a trill. After flying a very short distance it drops to the ground again, agitating its wings in a tremulous manner as it comes down. In this motion of the wings, also in many of its gestures, on the ground, its skulking habits, and reluctance to fly it is more like a Rail than a Snipe. It also, Rail-like, frequently alights on trees and fences, a habit I have not remarked in any other Limicoline species.

- 190 -

It inhabits the pampas from September until March; but early in February the great return-migration begins, and then for two months the mellow cry of the Batitú is heard far up in the sky, at all hours, day and night, as the birds wing their way north. In some seasons stragglers are found throughout the month of April, but before the winter arrives not one is left.

407. TRYNGITES RUFESCENS (Vieill.).

(BUFF-BREASTED SANDPIPER.)

Tryngites rufescens, *Sci. et Salv. Nomencl.* p. 146; *Durnford, Ibis*, 1877, p. 200 (Buenos Ayres); *Baird, Brew., et Ridgw. Water-B. N. A.* i. p. 305; *Saunders, Yarrell's Birds*, iii. p. 435. **Tringa rufescens**, *Seebohm, Plovers*, p. 446.

Description.—Above dark brownish black, each feather widely edged with buff; wings blackish, narrowly tipped with white, the inner half of the inner web whitish reticulated with black; tail blackish, the outer rectrices lighter, each with subterminal black crescent and white terminal edge: beneath buff, darker on the throat and breast, and edged with whitish, lighter on flanks and belly; under primary-coverts barred and reticulated with black, like the inner web of the primaries, and forming a marked contrast with the rest of the under surface of the wing, which is pure white: whole length 7·7 inches, wing 5·3, tail 2·5. *Female* similar.

Hab. Arctic America, descending south to Buenos Ayres in winter.

This species is also an annual visitor to the pampas from the Arctic regions where it breeds. It begins to arrive, usually in small bodies, early in the month of October; and during the summer is seldom met with in flocks of any size on the pampas, but is usually seen on the dry open ground associating in small numbers with the Golden Plover, the Whimbrel, and other northern species. I, however, think it probable that it travels further south than its fellow-migrants from North America, and has its principal feeding-grounds somewhere in the interior of Patagonia; also that its northern journey takes place later than that of other species. In some seasons I have observed these birds in April and May, in flocks of two to five hundred, travelling north, the birds flying very low, flock succeeding flock at intervals of about fifteen minutes, and continuing to pass for several days.

408. LIMOSA HÆMASTICA (Linn.).

(HUDSONIAN GODWIT.)

Limosa hudsonica, *Sci. et Salv. Nomencl.* p. 146; *Durnford, Ibis*, 1877, p. 43 (Chupat) et p. 200 (Buenos Ayres); *White, P. Z. S.* 1883, p. 42 (Buenos Ayres); *Seebohm, Plovers*, p. 392. **Limosa hæmastica**, *Baird, Brew., et Ridgw. Water-B. N. A.* i. p. 260.

Description.—(*In summer.*) Above dark brownish black, mixed on the head with longitudinal streaks of whitish, on the neck with pale chestnut, and with many of the feathers of the back spotted or edged with pale chestnut; wings and tail blackish, the upper half of the inner webs of the primaries and secondaries, the basal part of the outer rectrices, and a broad band across the upper tail-coverts pure white: beneath, cheeks and throat whitish, becoming pale chestnut on the neck, longitudinally striped with blackish; rest of under surface deeper chestnut, transversely barred with blackish. (*In winter.*) Above uniform dull brownish; head, neck, and under surface dirty white or pale buff: whole length 14·3 inches, wing 8·5, tail 3·7.

Hab. Arctic America, descending south to Central Patagonia in winter.

The Hudsonian Godwit, Mr. Seebohm tells us, "breeds on the tundras of North America north of the forest-growth, from Alaska to Baffin's Bay, but is rare at the western extremity of its range." In winter it goes far south, like most of the other Grallæ.

Durnford found it "common from April to September about the lagoons and arroyos to the south of Buenos Ayres;" and states that in habits it much resembles the Bar-tailed Godwit of Europe (*Limosa lapponica*). He also met with it in Chupat, and obtained two specimens there on the 13th of November, 1876.

- 191 -

I have met with it in flocks during the summer of the Southern Hemisphere, and these birds, as well as those obtained at Chupat in November by Durnford, were undoubtedly visitors from the north; but invariably small flocks of half a dozen to thirty birds begin to appear on the pampas in April, and remain there, as Durnford says, until September, when the northern migrants are nearly due. These individuals must therefore breed near the extremity, or beyond the extremity, of South America. It is very curious, to say the least of it, that the Arctic and Antarctic regions of America should possess the same species, and that, at opposite seasons of the year, it should winter in the same district, so far from the breeding-place of one set of individuals, and so near to that of the other! Captain Abbott observed the Hudsonian Godwit in the Falkland Islands in flocks in the month of May (see *Ibis*, 1861, p. 156). These could not have been Alaskan birds, but were no doubt southern breeders on their way north, for that they could winter so far south seems incredible.

409. NUMENIUS BOREALIS (Forst.).

(ESQUIMO WHIMBREL.)

Numenius borealis, *Scl. et Salv. Nomencl.* p. 146; *Durnford, Ibis*, 1878, p. 404 (Centr. Patagonia); *Barrows, Auk*, 1884, p. 316 (Entrerios); *Seebohm, Plovers*, p. 333; *Baird, Brew., et Ridgw. Water-B. N. A. i.* p. 318.

Description.—Above dark brown, each feather edged or spotted with pale buff or dirty white, becoming most strongly marked on the rump and upper tail-coverts; wings uniform dusky brownish, narrowly edged with white; tail buffy brown, transversely barred with dusky: beneath, throat white; rest of under surface pale buff, with more or less V-shaped dusky markings on the breast, flanks, and under tail-coverts; axillaries and under wing-coverts pale chestnut, transversely barred with dusky: whole length 11·6 inches, wing 8·14, tail 3·3. *Female* similar.

Hab. Arctic America, extending south to Patagonia in winter.

The Esquimo Whimbrel, which, as Mr. Seebohm tells us, may be distinguished from all its congeners by having scarcely any traces of bars on its primaries and by the back of the tarsus being covered with hexagonal reticulations, migrates from the tundras of North America, where it breeds, to the southern extremity of South America.

Mr. Barrows noted its first arrival at Concepcion in Entrerios on September 9th, 1880, "in large flocks." After the middle of October none were seen there.

The same excellent observer saw it almost daily on the pampas between Azul and Bahia Blanca, "in company with the Golden Plover and Bartram's Sandpiper, until late in February."

From the 8th to the 10th of October, 1877, Durnford saw large flocks of this Whimbrel in the Chupat Valley flying south, and obtained two specimens. Capt. Packe and Capt. Abbott both procured examples in the Falkland Islands.

Order XVI. GAVIÆ.

Fam. L. LARIDÆ, OR GULLS.

The Gulls and Terns of the Rio de la Plata require more attention, and it is probable that several additions will have to be made to the list. At present we can enumerate only nine species as certainly found within our limits. The number of known Neotropical Laridæ is about thirty-three.

410. RHYNCHOPS MELANURA, Sw.

(BLACK-TAILED SKIMMER.)

Rhynchops nigra, *Burm. La-Plata Reise*, ii. p. 520 (Rio Paraná); *Scl. et Salv. P. Z. S.* 1869, p. 634 (Buenos Ayres); *iid. Nomencl.* p. 147; *Durnford, Ibis*, 1877, p. 209 (Buenos Ayres); *White, P. Z. S.* 1882, p. 628 (Buenos Ayres). **Rhynchops melanura**, *Saunders, P. Z. S.* 1882, p. 522.

Description.—Above brownish black; forehead and wing-band white; tail black: beneath white; bill, apical half black, basal half orange; feet red: whole length 19·0 inches, wing 15·0, tail 5·0. *Female* similar.

Hab. Coasts of South America.

The Black-tailed Skimmer, which is common on the coasts of Brazil, migrates south in spring, following the course of the Plata river in its journey, and appearing in pairs or small flocks in the neighbourhood of Buenos Ayres during the month of October. Its chief breeding-ground is on the extensive mud-banks and islets at Bahia Blanca on the Atlantic coast. The return-migration occurs in March.

Darwin met with the Scissor-bill during his excursion up the Paraná in October 1833, and speaks of it as follows (Nat. Journ. p. 161):—

"I here saw a very extraordinary bird, called the Scissor-beak (*Rhynchops nigra*). It has short legs, web feet, extremely long-pointed wings, and is of about the size of a Tern. The beak is flattened laterally, that is in a plane at right angles to that of a Spoonbill or Duck. It is as flat and elastic as an ivory paper-cutter, and the lower mandible, differently from every other bird, is an inch and a half longer than the upper. I will here detail all I know of the habits of the Scissor-beak. It is found both on the east and west coasts, between lat. 30° and 45°, and frequents either salt or fresh water. The specimen now at the Zoological Society was shot at a lake near Maldonado, from which the water had been nearly drained, and which, in consequence, swarmed with small fry. I there saw several of these birds, generally in small flocks, flying backwards and forwards, close to the surface of the lake. They kept their bills wide open, and with the lower mandible half buried in the water. Thus skimming the surface, they ploughed it in their course; the water was quite smooth, and it formed a most curious spectacle to behold a flock, each bird leaving its narrow wake on the mirror-like surface. In their flight, they frequently twist about with extreme rapidity, and so dexterously manage, that with their projecting lower mandible they plough up small fish, which are secured by the upper half of their scissor-like bill. This fact I repeatedly saw, as, like Swallows, they continued to fly backwards and forwards, close before me. Occasionally, when leaving the surface of the water their flight was wild, irregular, and rapid; they then also uttered loud, harsh cries. When these birds are fishing, the length of the primary feathers of the wings is seen to be quite necessary, in order to keep the latter dry. When thus employed, their forms resemble the symbol by which many artists represent marine birds. The tail is much used in steering their irregular course.

- 194 -

"These birds are common far inland along the course of the Rio Paraná; it is said they remain during the whole year, and breed in the marshes. During the day they rest in flocks on the grassy plains, at some distance from the water. Being at anchor, as I have said, in one of the deep creeks between the islands of the Paraná, as the evening drew to a close, one of these Scissor-beaks suddenly appeared. The water was quite still, and many little fish were rising. The bird continued for a long time to skim the surface, flying in its wild and irregular manner up and down the narrow canal, now dark with the growing night and the shadows of the overhanging trees. At Monte Video I observed that some large flocks during the day remained on the mud-banks at the head of the harbour, in the same manner as on the grassy plains near the Paraná; and every evening they took flight direct to seaward. From these facts, I suspect that the *Rhynchops* generally fishes by night, at which time many of the lower animals come most abundantly to the surface. M. Lesson states that he has seen these birds open the shells of the *Mactræ*, buried in the sand-banks on the coast of Chile; from their weak bills, with the lower mandible so much produced, their short legs and long wings, it is very improbable that this can be a general habit."

411. PHAËTHUSA MAGNIROSTRIS (Licht.).

(GREAT-BILLED TERN.)

Sterna magnirostris, *Burm. La-Plata Reise*, ii. p. 519 (Rio Paraná); *Saunders, P. Z. S.* 1876, p. 643; *Barrows, Auk*, 1884, p. 316 (Entrerios). *Phaëthusa magnirostris*, *Sci. et Salv. Nomencl.* p. 147; *iid. P. Z. S.* 1871, p. 567; *Durnford, Ibis*, 1877, p. 200 (Buenos Ayres).

Description.—Crown, ear-coverts, and nape black; mantle slate-grey, passing into white at the tips of the secondaries; wing-coverts white; quills black; tail slate-grey; lores and entire underparts glossy white; bill yellow, with a greenish tinge at the base of under mandible; legs and feet olive-yellow: whole length 14·5 inches, wing 11·5. In the young the crown is grey; the mantle browner grey.

Hab. Coasts and rivers of South America.

This large-billed Tern, "with a slightly forked tail, but amply developed feet," is occasionally seen near Buenos Ayres.

- 195 -

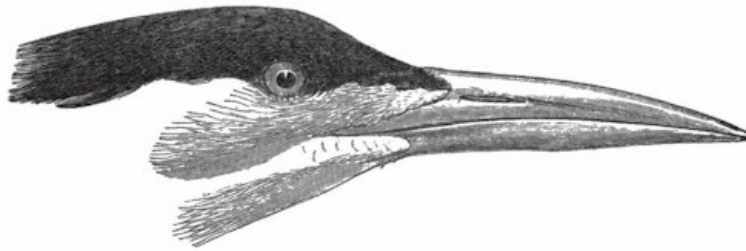
Durnford tells us that he found it common at Baradero in April in small parties, and watched one flock for some time. These individuals kept circling over a mill-pond, which evidently held a good supply of small fishes; for they constantly kept darting into the water. This species, Durnford adds, has a note quite unlike that of any other Tern; it is nearly similar to the cry of the "Tero-tero" (*Vanellus cayennensis*), for which he had often mistaken it.

412. STERNA MAXIMA, Bodd.

(GREAT TERN.)

Sterna maxima, *Sci. et Salv. Nomencl.* p. 147; *iid. P. Z. S.* 1871, p. 567; *Saunders, P. Z. S.* 1876, p. 655, et 1882, p. 521.

Description.—Crown and crested nape black; neck, lores, throat, and underparts pure white; black pale grey; quills darker grey, with white on most of the inner webs; tail pearl-white; bill orange; legs and feet black: whole length 18·0 inches, wing 14·5. *Young*: darker on upper parts.



Head of *Sterna maxima*.
(P. Z. S. 1871, p. 568.)

Hab. Coasts of America from Massachusetts to La Plata, and northwards to California.

This large Tern seems to occur on the Rio Paraná, according to Azara. It is certainly found in Southern Brazil, where Mr. Rogers obtained a series of specimens now in the collections of Messrs. Salvin and Godman and of Mr. H. Saunders.

413. STERNA TRUDEAUII, Aud.

(TRUDEAU'S TERN.)

Sterna trudeauii, *Scl. et Salv. Nomencl.* p. 147, *iid. P. Z. S.* 1871, p. 570; *Durnford, Ibis*, 1877, p. 200 (Buenos Ayres); *Saunders, P. Z. S.* 1876, p. 660. *Sterna frobenii*, *Phil. et Landb. Wiegman. Arch.* 1863, pt. i. p. 125 (Chili).

Description.—Above light grey; head white, with a dark transocular line on each side; rump white; beneath light grey; bill black, base and tip yellow; feet yellow: whole length 12·5 inches, wing 10·0. The young are pure white below, and have darker quills.

- 196 -

Hab. Coasts of S.E. Brazil, Argentina, and Chili.

This beautiful Tern, peculiar for its white head in the adult dress, was observed by Durnford on Flores Island in the Rio de la Plata, and in other places on the coast of the Argentine Republic. One was obtained near Punta Lara, in October 1876; and many more since by Mr. E. Gibson, Commander MacFarlane, and others.

414. STERNA HIRUNDINACEA, Less.

(CASSIN'S TERN.)

Sterna hirundinacea, *Saund. P. Z. S.* 1876, p. 647; *Durnford, Ibis*, 1878, p. 404 (Centr. Patagonia).
Sterna cassini, *Scl. et Salv. Nomencl.* p. 147; *iid. P. Z. S.* 1871, p. 570; *Durnford, Ibis*, 1877, p. 201 (Buenos Ayres).

Description.—Head and nape black; mantle and wings grey, darker on the quills; rump white; tail pearl-white, darker on the outer streamers; underparts greyish white; bill blood-red; feet orange-crimson: whole length 15·0 inches, wing 11·5. *Young:* streaked on the head and mottled on the upper parts with blackish.

Hab. Patagonia, Chili, Peru, Argentina, Brazil, and Falkland Islands, up to Rio.

This is a black-headed Tern with a blood-red bill, which is found abundantly on the coast of Patagonia, and extends up the Atlantic coast to Rio. It was noticed by Durnford near Buenos Ayres, and found breeding by the same excellent observer at Tombo Point, about sixty miles to the south of Chupat, in December 1877. He tells us:—

"I was prepared when I visited this place in December to see a considerable quantity of birds; but the number that met my eyes fairly staggered me. Their nests covered an area about 150 yards square. Allowing three nests and five eggs for every square yard (a very moderate computation, it being difficult to walk without treading on the eggs), we arrive at the extraordinary number of 67,500 nests, 135,000 birds, and 112,500 eggs; and, wonderful as these figures may appear, I feel sure that I have rather understated than overstated the numbers. The nests were mere hollows in the fine gravel or shingle, and contained one, two, and sometimes three eggs. The latter generally have the appearance of the eggs of the Sandwich Tern, though of course smaller; and out of many hundreds I did not see two alike."

415. STERNA SUPERCILIARIS, Vieill.

(EYEBROWED TERN.)

Sterna superciliaris, *Scl. et Salv. Nomencl.* p. 147; *iid. P. Z. S.* 1871, p. 571; *Durnford, Ibis*, 1877, p. 201 (Buenos Ayres); *White, P. Z. S.* 1882, p. 628 (Misiones); *Saunders, P. Z. S.* 1876, p. 662.
Sterna argentea, *Burm. La-Plata Reise*, ii. p. 519 (Paraná).

Description.—Forehead and underparts white; loreal stripe, head, and nape black; back, rump, inner primaries, and inner web of tail pale slate-grey; outer primaries blackish; bill yellow; legs and feet olive-yellow: whole length 8·5 inches, wing 7·0. In the young bird the crown is grey.

Hab. The large rivers and the coast on the east side of South America.

- 197 -

This is a little Tern, belonging to the same group as the European *Sterna minuta*, with a uniform pale yellow bill. Durnford met with it at Baradero, and says that it frequents shallow inland lagoons and small streams, but is also found on the Rio de la Plata. Dr. Burmeister obtained it on the Paraná, and White at Itapua, Misiones. Saunders shot it on the Huallaga, in Peru, 2800 miles inland.

416. LARUS DOMINICANUS, Licht.

(DOMINICAN GULL.)

Larus dominicanus, *Scl. et Salv. Nomencl.* p. 148; *iid. P. Z. S.* 1871, p. 576; *Durnford, Ibis*, 1877, p. 45 (Chupat) et p. 201 (Buenos Ayres), et 1878, p. 405 (Chupat); *Barrows, Auk*, 1884, p. 316 (Pampas); *Saunders, P. Z. S.* 1878, p. 180; *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora).
Larus vociferus, *Burm. La-Plata Reise*, ii. p. 518 (Buenos Ayres).

Description.—Mantle brownish-black; primaries black, with white tips, and a subapical patch in old birds; rest of plumage white; bill yellow, orange at angle of lower mandible; legs and feet olive: whole length 21·0-22·0 inches, wing 17·0-18·0. *Young* mottled brown.

Hab. Both coasts of South America, from Peru on the west and Rio on the east, to Patagonia and Falkland Islands.

The Dominican Gull, which belongs to the same section of the group as the well-known Black-backed Gulls of Europe, is common throughout the Plata district in winter, from April to August. During the summer months it confines itself to the Atlantic coast, and breeds in large numbers in the neighbourhood of Bahia Blanca, on the extensive sand-banks and mud-flats there; and in other suitable localities further south. Durnford found it nesting at Tombo Point, sixty miles south of the Chupat river.

At the approach of cold weather the Dominican Gulls leave the sea-shore and wander inland and northward. At this season they are exclusively flesh-eaters, with a preference for fresh meat; and when the hide has been stripped from a dead cow or horse they begin to appear, vulture-like, announcing their approach with their usual long hoarse pelagic cries, and occasionally, as they circle about in the air, joining their voices in a laughter-like chorus of rapidly-repeated notes. Their winter movements are very irregular; in some seasons they are rare, and in others so abundant that they crowd out the Hooded Gulls and Carrion-Hawks from the carcass; I have seen as many as five to six hundred Dominicans massed round a dead cow.

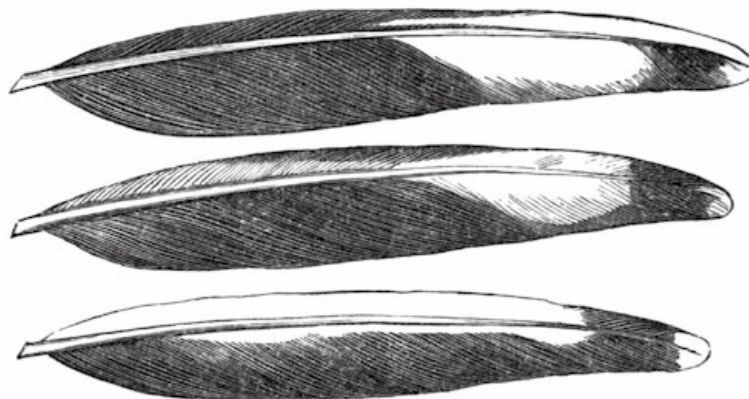
- 198 -

417. LARUS MACULIPENNIS, Licht.

(SPOT-WINGED GULL.)

Larus maculipennis, *Scl. et Salv. Nomencl.* p. 148; *Durnford, Ibis*, 1877, p. 202 (Buenos Ayres), et 1878, p. 405 (Centr. Patagonia); *White, P. Z. S.* 1882, p. 628 (Buenos Ayres); *Saunders, P. Z. S.* 1878, p. 201; *Withington, Ibis*, 1888, p. 472 (Lomas de Zamora). **Larus serranus**, *Burm. La-Plata Reise*, ii. p. 519. **Larus cirrhocephalus**, *Scl. et Salv. P. Z. S.* 1868, p. 146 (Buenos Ayres); *Hudson, P. Z. S.* 1871, p. 4.

Description.—Head and nape brownish-black (in breeding-dress); tail and underparts white; mantle pale grey; primaries black or dark grey, tipped with white, and with large elongated white patches on the outer portions of first to fifth, followed by a subapical *black bar* (in *L. glaucodes* the lower portion is *white*): underwing *pale grey*; bill, legs, and feet blood-red: length 16·0-17·0 inches, wing 11·5.



Three outer primaries of adult SPOT-WINGED GULL.
(P. Z. S. 1878, p. 202.)

Hab. Southern Brazil, Uruguay, and La Plata.

This common Black-hooded Gull is found throughout the Argentine country, down to Chupat in Patagonia, and is exceedingly abundant on the pampas of Buenos Ayres, where it is simply called *Gaviota*. In the month of October they congregate in their breeding-places—extensive inland marshes, partially overgrown with rushes. The nests are formed of weeds and rushes, placed just above the water and near together, several hundreds being sometimes found

- 199 -

within an area of less than one quarter of an acre. The eggs are four in number, large for the bird, obtusely pointed, of a pale clay-colour, thickly spotted at the big end and sparsely on the other parts with black.

Every morning, at break of day, the Gulls rise up from their nests and hover in a cloud over the marsh, producing so great a noise with their mingled cries that it can be heard distinctly at a distance of two miles. The eggs are considered a great delicacy, resembling those of the Plover in taste and appearance, and are consequently much sought after, so that when the locality near which a gullery is situated becomes inhabited the birds have no chance of rearing their young, as the boys in the neighbourhood ride into the marsh every morning to gather the eggs. The Gulls are, however, very tenacious of their old breeding-places, and continue even after years of persecution to resort to them.

The young birds are of a pale grey colour, mottled with dull brown, and have a whining querulous cry. The plumage becomes lighter through the autumn and winter, but it is not until the ensuing summer, when the dark brown nuptial hood is assumed, that the young birds acquire the perfect plumage—soft grey-blue above, and the white bosom with its lovely pink blush.

As soon as the young are able to fly the breeding-place is forsaken, the whole concourse leaving in a body, or scattering in all directions over the surrounding country; and until the following summer their movements depend entirely on food and water. If the weather is dry the Gulls disappear altogether; and if grasshoppers become abundant the country people wish for rain to bring the Gulls. When it rains then the birds quickly appear, literally from the clouds, and often in such numbers as to free the earth from the plague of devastating insects. It is a fine and welcome sight to see a white cloud of birds settle on the afflicted district; and at such times their mode of proceeding is so regular that the flock well deserves the appellation of an army. They sweep down with a swift graceful flight and settle on the earth with loud joyful cries, but do not abandon the order of attack when the work of devouring has begun. The flock often presents a front of over a thousand feet, with a depth of sixty or seventy feet; all along this line of battle the excited cries of the birds produce a loud continuous noise; all the birds are incessantly on the move, some skimming along the surface with expanded wings, others pursuing the fugitives through the air, while all the time the hindmost birds are flying over the flock to alight in the front ranks, so that the whole body is steadily advancing, devouring the grasshoppers as it proceeds. When they first arrive they seem ravenously hungry, and after gorging themselves they fly to the water, where after drinking they cast up their food and then go back to renew the battle.

- 200 -

In spring these Gulls come about the farms to follow the plough, filling the new-made furrows from end to end, hovering in a cloud over the ploughman's head and following at his heels, a screaming, fighting crowd. When feeding they invariably keep up a great noise. Wilson's expression in describing a northern species, that its cry "is like the excessive laugh of a negro," is also descriptive of the language of our bird. Its peculiar cry is lengthened at will and inflected a thousand ways, and interspersed with numerous short notes, like excited exclamations. After feeding they always fly to the nearest water to drink and bathe their feathers, after which they retire to some open spot in the neighbourhood where there is a carpet of short grass. They invariably sit close together with their bills toward the wind, and the observer will watch the flock in vain to see one bird out of this beautiful order. They do not stand up to fly, but rise directly from a sitting posture. Usually the wings are flapped twice or thrice before the body is raised from the ground.

In some seasons in August and September, after a period of warm wet weather, the larvæ of the large horned beetle rise to the surface, throwing up little mounds of earth as moles do; often they are so numerous as to give the plains, where the grass has been very closely cropped, the appearance of being covered with mud. These insects afford a rich harvest to the Spur-winged Lapwing (*Vanellus cayennensis*), which in such seasons of plenty are to be seen all day diligently running about, probing and dislodging them from beneath the fresh hillocks. The Gulls, unprovided with a probing beak, avail themselves of their superior cunning and violence to rob the Lapwings; and I have often watched their proceedings for hours with the greatest interest. Hundreds of Lapwings are perhaps visible running busily about on all sides; near each one a Gull is quietly stationed, watching the movements of its intended dupe with the closest attention. The instant a great snow-white grub is extracted the Gull makes a rush to seize it, the Lapwing flies, and a violent chase ensues. After a hundred vain doublings the Plover drops the prize, and slopes toward the earth with a disappointed cry; the pursuer checks his flight, hovers a moment watching the grub fall, then drops down upon it, gobbles it up, and hastens after the Lapwing to resume his watch.

Many of these Gulls haunt the estancias to feed on the garbage usually found in abundance about cattle-breeding establishments. When a cow is slaughtered they collect in large numbers and quarrel with the domestic poultry over the offal. They are also faithful attendants at the shepherd's hut; and if a dead lamb remains in the fold when the flock goes to pasture they regale on it in company with the Chimango. The great *Saladeros*, or slaughter-grounds, which were formerly close to Buenos Ayres, are also frequented by hosts of these neat and beautiful scavengers. Here numbers may be seen hovering overhead, and mingling their excited screams with the bellowing of half-wild cattle and the shouts of the slaughterers at their rough work; and at intervals, wherever a little space is allowed them, dropping themselves on to the ground, which reeks with blood and offal, and greedily

- 201 -

snatching up whatever morsels they can on the instant, and yet getting no stain or speck on their delicate dress of lily-white and ethereal blue.

On the open pampas their curiosity and anger seems greatly excited at the appearance of a person on foot; no sooner has the Gull spied him than it sweeps toward him with a rapid flight, uttering loud indignant screams that never fail to attract all of its fellows within hearing distance. These all pass and repass, hovering over the pedestrian's head, screaming all the time as if highly incensed, and finally retire, joining their voices in a kind of chorus and waving their wings upwards in a slow curious manner; but often enough, when they are almost out of sight, they suddenly wheel about and hurry back screaming, with fresh zeal, to go through the whole pretty but annoying performance again.

418. LARUS CIRRHOCEPHALUS, Vieill.

(GREY-CAPPED GULL.)

Larus cirrhocephalus, *Scl. et Salv. Nomencl.* p. 148; *iid. P. Z. S.* 1871, p. 578; *Durnford, Ibis*, 1877, p. 201 (Buenos Ayres); *Barrows, Auk*, 1884, p. 316 (Entrerios); *Saunders, P. Z. S.* 1878, p. 204.

Larus maculipennis, *Burm. La-Plata Reise*, ii. p. 518 (Paraná).

Description.—Head (in breeding-plumage) grey, deepening in colour on the nape and throat; tail and underparts white; mantle grey (darker than in *L. maculipennis*); primaries black, with small subapical white patches on first and second, and longer ones on the outer webs of third to fifth near the base; *underwing slate-grey*; bill, legs, and feet crimson to orange-red: length 16·0 to 17·0 inches, wing 12·25.

Hab. South Brazil, Uruguay, and La Plata, also coast of Peru.

The Grey-capped Gull is found on the Rio de la Plata, and as far north as Concepcion on the Uruguay in winter, where Mr. Barrows observed it in immense flocks frequenting the "Saladeros."

- 202 -

Durnford gives us the subjoined account of this species:—"I have not observed this bird to the south of Buenos Ayres, but have constantly seen it from March to July to the north of the city. Unlike *Larus maculipennis*, it never wanders inland, but frequents the shallow shores of the La Plata, feeding on dead fish or offal, and flocking round the fishermen when they are hauling their nets to get a share of the spoil. As a rule, this species does not mix with *Larus maculipennis*, though now and then they are seen together; but all the flocks or parties I have observed when flying from one spot to another have always been composed of birds of its own kind. Adults, after once attaining their pearl-grey hood, never lose it, though in winter it becomes rather lighter, and those with white heads are immature birds, which do not attain their full plumage till after their second moult. I have seen many birds throughout May and June of the present year with well-defined dark grey hoods. Some specimens, when first killed, have a delicate faint pink tinge on their underparts, also observed in *L. maculipennis*, which, however, quickly fades after death. The colour of the iris varies a good deal in different examples, being pale grey, grey with a tinge of yellow, and grey with a tinge of light wood-brown. This is probably attributable to age. The narrow rim of naked skin round the eye is dark coral-red; legs and feet the same, but of a duller shade; beak rather darker than the legs."

Order XVII. PYGOPODES.

Fam. LI. PODICIPEDIDÆ, OR GREBES.

The Grebes, although perhaps more especially a development of the Arctic lands, are sparingly represented all through the tropics, and reappear in augmented numbers south of the Antarctic circle. Within the Neotropical Region nine to eleven species are met with, of which five are found inside our limits. Three of these are peculiar Patagonian species, the other two are widely spread over America.

419. ÆCHMOPHORUS MAJOR (Bodd.).

(GREAT GREBE.)

Podiceps bicornis, *Burm. La-Plata Reise*, ii. p. 520 (Rio Paraná). **Æchmophorus major**, *Scl. et Salv. Nomencl.* p. 150; *Durnford, Ibis*, 1877, p. 203 (Buenos Ayres), et 1878, p. 405 (Centr. Patagonia); *Barrows, Auk*, 1884, p. 316 (Entrerios); *White, P. Z. S.* 1883, p. 433 (Buenos Ayres); *Withington, Ibis*, 1888, p. 473 (Lomas de Zamora). **Podiceps chilensis**, *Darwin, Zool. 'Beagle,'* iii. p. 137 (Buenos Ayres). **Podiceps major**, *Scl. et Salv. Ex. Orn.* p. 190; *Gibson, Ibis*, 1880, p. 164 (Buenos Ayres).

Description.—Above blackish; occipital crest divided, bronzy black; wide bar across the wing white: beneath white; chin dark ashy; neck, breast, and sides of belly (in adult) more or less red; bill yellowish; feet dark: whole length 21·0 inches, wing 8·0, tail 1·5.

- 203 -

Hab. South America.

This fine Grebe is said by Buffon to be from Cayenne, but we have never seen specimens from anywhere so far north. It was not obtained in Brazil by Natterer or Burmeister, but Azara met with it in Paraguay.

This Grebe is called in the vernacular *Macás cornudo*—the first word being the Indian generic name for the Grebes, while *cornudo* signifies horned, from the bird's habit of erecting, when excited, the feathers of the nape in the form of a horn. The species is found throughout Eastern Argentina, from its northern limits to Central Patagonia, where Durnford found it common and resident. On the Rio Negro I found it abundant, and it was formerly just as common along the Plata river, but owing to its large size and the great beauty of its lustrous under plumage it is very much sought after and is becoming rare.

It is impossible to make this Grebe leave the water, and when discovered in a small pool it may be pursued until exhausted and caught with the hand; yet it must occasionally perform long journeys on the wing when passing from one isolated lake to another. Probably its journeys are performed by night.

There is little diversity in the habits of Grebes, and only once have I seen one of these birds acting in a manner which seemed very unusual. This Grebe was swimming about and disporting itself in a deep narrow pool, and showed no alarm at my presence, though I sat on the margin within twenty-five yards of it. I saw it dive and come up with a small fish about three inches long in its beak; after sitting motionless for a little while, it tossed the fish away to a considerable distance with a sudden jerk of its beak, and then at the instant the fish touched the water it dived again. Presently it emerged with the same fish, but only to fling it away and dive as before; and in this way it released and recaptured it about fifteen times, and then, tired of play, dropped it and let it escape.

Mr. Gibson has the following note on the breeding-habits of the Great Grebe, as observed at Ajo, near the mouth of Rio de La Plata:—"P. major breeds about the end of August, placing its nest in the thickest rushes of the swamp. The nest, built of wet water-weeds, is raised just above the level of the water; and I have twice seen the sitting bird hastily draw some weeds over the eggs before leaving them, on my approach. The clutch consists of three; and these are of the usual Grebe colour, generally much soiled and stained. They average $2\frac{6}{40} \times 1\frac{7}{40}$, the length sometimes presenting a variation of $\frac{9}{40}$, even in eggs of the same nest."

- 204 -

420. PODICEPS CALIPARÆUS, Less.

(BRIGHT-CHEEKED GREBE.)

Podiceps caliparæus, Darwin, *Zool. Voy. 'Beagle,'* iii. p. 136; *Scl. et Salv. Nomencl.* p. 150; *iid. Ex. Orn.* p. 190; Durnford, *Ibis*, 1877, p. 45 (Chupat), et 1878, p. 405 (Centr. Patagonia); White, *P. Z. S.* 1883, p. 43 (Cordova).

Description.—Above dark greyish; front of head and neck behind pale cinereous; back of head and upper part of neck black; ear-coverts considerably elongated, golden brown; beneath, throat grey, paler than front of head; rest of under surface shining white; primaries greyish brown, the innermost tipped with white; secondaries more or less pure white, or dusky on outer webs: whole length 11·5 inches, wing 4·7. *Female* similar.

Hab. Antarctic America, north to Cordova.

Darwin obtained examples of this beautiful Grebe at Bahia Blanca, where, he says, "it lives in small flocks in the salt-water channels extending between the great marshes at the head of the harbour." Durnford procured specimens on both visits to Chupat, where he found it common in the lagoons in all the valleys. It is also found, though not so abundantly, in the northern provinces of the Argentine Republic. White obtained a single example at Cosquin, near Cordova, in September 1882.

421. PODICEPS ROLLANDI, Quoy et Gaim.

(ROLLAND'S GREBE.)

Podiceps rollandi, *Scl. et Salv. Nomencl.* p. 159; *iid. Ex. Orn.* p. 190; *iid. P. Z. S.* 1868, p. 146; *Scl. P. Z. S.* 1872, p. 549 (Rio Negro); Durnford, *Ibis*, 1877, p. 45 (Chupat); Gibson, *Ibis*, 1880, p. 164 (Buenos Ayres); White, *P. Z. S.* 1883, p. 43 (Cordova); Barrows, *Auk*, 1884, p. 317 (Bahia Blanca).

Description.—(*Summer plumage.*) Above brownish black, with dark green reflexions; all the feathers below the neck narrowly margined with rufous; ear-coverts elongated, white at base with black tips, and more or less covering the downy white feathers of the sides of the head; outer half of primaries brownish grey, darker at tip; inner half and secondaries more or less pure white, some of the outer webs brownish or buff; beneath, neck and throat blackish brown, shading into chestnut, burned with dusky on the lower breast and rest of under surface. (*Winter plumage.*) Above not so dark: beneath, throat white, neck dusky rufous; rest of under surface shining whitish buff, becoming dusky towards the vent. Whole length 11·8 inches, wing 5·4.

- 205 -

Hab. Antarctic America, north to Cordova.

Rolland's Grebe is said by Durnford to be "common in almost every pool and ditch" in Chupat. It is also common throughout Buenos Ayres, where the native name for it is *Macasito*.

Mr. Gibson gives the following details as to its nesting-habits:—" *Podiceps rollandi* nests during the latter half of September and beginning of October. The nest is a slight construction of water-weeds, floating on the surface of the water, and only kept stationary by the surrounding rushes. Like *P. major*, it covers the eggs before leaving them. Five is the largest clutch of eggs I have taken; they are originally of a bluish-white colour, but after some time become covered with a brown incrustation of a chalky nature. The average measurement is $1 \frac{30}{40} \times 1 \frac{9}{40}$; but there is a variation of $\frac{11}{40}$ in length and $\frac{7}{40}$ in breadth between my largest and smallest specimens."

Specimens of this Grebe were obtained near Cordova by White in 1882.

422. TACHYBAPTES DOMINICUS (Linn.).

(AMERICAN DABCHICK.)

Podiceps dominicus, *Burm. La-Plata Reise*, ii. p. 521 (Pampas); *Baird, Brew., et Ridgw. Water-B. N. A.* ii. p. 438. **Tachybaptus dominicus**, *Sci. et Salv. Nomencl.* p. 150; *Durnford, Ibis*, 1877, p. 203 (Buenos Ayres), et 1878, p. 405 (Centr. Patagonia); *White, P. Z. S.* 1882, p. 629 (Buenos Ayres); *Withington, Ibis*, 1888, p. 473 (Lomas de Zamora). **Sylbeocyclus dominicus**, *Sci. et Salv. Ex. Orn.* p. 190.

Description.—Above dark brown, with blackish mottlings; wings grey, inner secondaries and under wing-coverts white; beneath pale whitish cinereous, chin and throat pure white; neck in front brownish; bill plumbeous, at base yellowish; feet black; whole length 10·0 inches, wing 4·0, tail 1·0. *Female* similar, but not so bright.

Hab. Central and South America.

This representative of the well-known "Dabchick" of Europe is found throughout South and Central America. In the Argentine Republic, near Buenos Ayres, it is "resident and common in the lagoons and arroyos" (*Durnford, l. s. c.*), and likewise in the Territory of Chupat.

423. PODILYMBUS PODICEPS (Linn.).

(THICK-BILLED GREBE.)

Podilymbus podiceps, *Baird, Brew., et Ridgw. Water-B. N. A.* ii. p. 440; *Withington, Ibis*, 1888, p. 473.

Description.—Above dirty brown, varied with blackish; wings cinereous with white tips to some of the secondaries; beneath white, sprinkled with greyish on the breast and sides; chin and throat black; bill short, compressed, plumbeous, crossed by a black band; feet black; whole length 12·0 inches, wing 5·0, tail 1·0. *Female* similar.

Hab. North and South America.

The Thick-billed Grebe extends all through America, from Canada down to Patagonia and Chili. It does not seem to have been noticed in the Argentine Republic except by Mr. Withington, who sends us a single specimen from the Lomas de Zamora, near Buenos Ayres.

A second and larger species of this genus (*P. antarcticus*) occurs on the western side of America from Guatemala to Chili.

Order XVIII. IMPENNES.

Fam. LII. APTENODYTIDÆ, OR PENGUINS.

The Penguins are a peculiar group of oceanic birds which differ essentially from all other birds in the construction of their wings and feet, and should certainly form an Order apart. They are denizens of the Antarctic sea-shores and islands, but in the Pacific go as far north as the Galapagos. On the shores and islands of South America nine species occur, one of which has been met with within our limits.

424. SPHENISCUS MAGELLANICUS (Forst.).

(JACKASS PENGUIN.)

Spheniscus magellanicus, *Sci. et Salv. Nomencl.* p. 151; *Sci. Zool. Chall. Exp.* pt. viii. (Birds), p. 125, pl. xxviii. **Aptenodytes demersa**, *Abbott, Ibis*, 1860, p. 336.

Description.—Above bluish black; broad superciliary stripe descending on each side of the neck white; beneath white; throat and sides of neck, and two breast-bands, the lower narrower and produced down the sides of the belly, black; bill and feet plumbeous; whole length 16·0 inches,

Hab. Coasts of Antarctic America and Falkland Islands.

At the mouth of the Rio Negro Hudson once picked up a specimen of a Penguin, believed to have been of this species, which had apparently just met its death by some accident. The range of this bird, moreover, appears to extend much further north, as it is well known to the Gauchos along the coast, who call it "*Pajaro Niño*" (bird boy), from its fancied resemblance to a small human being when it stands erect on the shore.

Darwin (Nat. Voy. chap. iii.) speaks of having seen numerous Penguins in the estuary of the Rio de la Plata, when approaching Monte Video in the 'Beagle,' in July 1832; and Graf v. Berlepsch tells me he has an imperfect specimen of *Spheniscus magellanicus* from the coast of Rio Grande do Sul, where it was picked up dead.

The "Jackass Penguin" is a well-known species in the Falkland Islands, to which it resorts in thousands for the purpose of breeding. Capt. Abbott tells us it arrives at the latter end of September and commences laying in its breeding-holes, almost to a day, on October 17. Some of these birds, however, are found on the shores of the Falkland Islands throughout the year.

Order XIX. CRYPTURI.

Fam. LIII. TINAMIDÆ, OR TINAMOUS.

The Tinamous constitute one of the most singular and characteristic types of the Neotropical avifauna. Until late years they were usually associated with the Gallinæ or Game Birds, but differ very widely from them in the conformation of the skull and in other essential points of structure, and are now generally regarded as forming an Order of their own, to be placed at the base of the series of Carinatae. About forty species of Tinamous are known, of which eight occur within our limits.

425. CRYPTURUS OBSOLETUS, Temm.

(BROWN TINAMOU.)

Crypturus cinereus, White, P. Z. S. 1882, p. 629 (Salta) (?). *Ynambū azulado*, Azara, Apunt. iii. p. 52 (Paraguay). *Crypturus obsoletus*, Scl. et Salv. Nomencl. p. 152.

Description.—Above reddish brown; head blackish; sides of head pale cinereous: beneath chestnut-brown; chin pale cinereous; lower half of abdomen pale ochraceous, distinctly barred with undulating black bands; bill brown, yellowish at the base; feet dark flesh-colour: whole length 12·0 inches, wing 6·2, tail 1·8.

Hab. Southern Brazil, Paraguay, and Northern Argentina.

White refers a Tinamou which he shot at Oran in November 1880 to *Crypturus cinereus*. There can be little doubt, however, that the specimen in question really belonged to the allied species *C. obsoletus*, which is known to occur in Paraguay. The true *C. cinereus* is from a much more northern locality, and is not likely to be found in Argentina.

426. CRYPTURUS TATAUPA (Temm.).

(TATAUPA TINAMOU.)

Crypturus tataupa, Scl. et Salv. Nomencl. p. 152; *Salvin, Ibis*, 1880, p. 364 (Salta); White, P. Z. S. 1882, p. 629, (Oran). *Ynambū tatāupā*, Azara, Apunt. iii. p. 48.

Description.—Above chestnut-brown; head and neck dark cinereous: beneath cinereous; throat white; middle of belly white; flanks and crissum varied with undulating bars of black and white; bill yellowish; feet dark ashy: whole length 10·0 inches, wing 5·2, tail 1·8. *Female* similar.

Hab. South Brazil, Paraguay, and Northern Argentina.

The Tataupa Tinamou was first described by Azara as an inhabitant of Paraguay, whence it extends into the northern provinces of the Argentine Republic. White obtained specimens among the undergrowth in the dense forests of Campo Colorado, near Oran, and Durnford also met with it near Salta.

To Azara's interesting account of the Tataupa's habits nothing has been recently added. He says that this species inhabits woods and thickets, and also approaches houses where it finds cover—hence the Guarani name, which means a bird of the house. It lays four eggs of a fine purple colour; and when driven from the nest flutters along the ground, feigning lameness. It sings all the year round, and for power and brilliance of voice is preeminent among this class of birds. After the first note of its curious song there is an interval of eight seconds of silence; then the note is repeated with shorter and shorter intervals, until,

becoming hurried, they run into a trill, followed by a sound which may be written *chororó*, repeated three or four times. When sitting close it tips forward, pressing its breast on its legs, so that the rump is raised higher than the back, and opening the terminal feathers of the body, it spreads them in a semicircle over the back as if to conceal itself beneath them, and when looked at from behind nothing is visible except this fan of feathers. The feathers are concave with points inclining upward, and when thus disposed have a strange and beautiful appearance.

427. RHYNCHOTUS RUFESCENS (Temm.).

(GREAT TINAMOU.)

Rhynchotus rufescens, *Burm. La-Plata Reise*, ii. p. 498 (Paraná, Rosario, Tucuman); *Scl. et Salv. Nomencl.* p. 153; *Hudson, P. Z. S.* 1872, p. 546 (Buenos Ayres); *Durnford, Ibis*, 1877, p. 263 (Buenos Ayres); *Barrows, Auk*, 1884, p. 317 (Entrerios); *Withington, Ibis*, 1888, p. 473 (Lomas de Zamora).

Description.—Above cinereous; head, wings, and back crossed by black bars with pale ochraceous edgings; neck reddish; primaries chestnut; beneath pale cinereous, strongly tinged with rufous on the neck and breast; chin white; bill ashy, beneath at base yellowish; feet dark flesh-colour: whole length 14·0 inches, wing 9·5, tail 3·0. *Female* similar, but larger.

Hab. South Brazil, Paraguay, and Argentina.

This large Tinamou, known to the Argentines as the *Perdiz grande*, or "Great Partridge," is found on the pampas wherever long grasses abound, and extends as far south as the Colorado river, its place being taken in Patagonia by *Calodromas elegans*. It is never met with in woods or thickets, and requires no shelter but the giant grasses, through which it pushes like a Rail. Wherever the country becomes settled and the coarse indigenous grasses are replaced by those of Europe, it quickly disappears, so that it is already extinct over a great portion of the Buenos Ayrean pampas.

This species is solitary in its habits, conceals itself very closely in the grass, and flies with the greatest reluctance. I doubt if there is anywhere a bird with such a sounding flight as the Tinamou; the whirl of its wings can only be compared to the rattling of a vehicle driven at great speed over a stony road. From the moment it rises until it alights again there is no cessation in the rapid vibration of the wings; but, like a ball thrown by the hand, the bird flies straight away with extraordinary violence until the impelling force is spent, when it slopes gradually towards the earth, the distance it is able to accomplish at a flight being from 800 to 1500 yards. This flight it can repeat when driven up again as many as three times, after which the bird can rise no more.

The call of the Large Partridge is heard, in fine weather, at all seasons of the year, especially near sunset, and is uttered while the bird sits concealed in the grass, many individuals answering each other; for although I call it a solitary bird, it being a rare thing to see even two together, many birds are usually found living near each other. The song or call is composed of five or six notes of various length, with a mellow flute-like sound, and so expressive that it is, perhaps, the sweetest bird-music heard on the pampas.

The eggs are usually five in number, nearly round, highly polished, and of a dark-reddish-purple or wine colour; but this beautiful tint in a short time changes to a dull leaden hue. The nest is a mere scrape, insufficiently lined with a few grass-leaves. The young birds appear to leave the mother (or father, for it is probable that the male hatches the eggs) at a very early period. When still very small they are found living, like the adults, a solitary life, with their facilities, including those of flight and the melodious voice, in a high state of perfection.

428. NOTHOPROCTA PENTLANDI (Gray).

(PENTLAND'S TINAMOU.)

Rhynchotus pentlandii, *G. R. Gray, List of Gall. B. M.* p. 103 (1867). **Rhynchotus punctulatus**, *G. R. Gray, ibid.* (jr.). **Nothoprocta doeringi**, *Cab. J. f. O.* 1878, p. 198 (Cordova); *White, P. Z. S.* 1883, p. 432 (Cordova).

Description.—Above cinereous; head and back banded with black bars, which are bordered with ochraceous; back also varied with longitudinal whitish streaks; wings cinereous, with pale ochraceous cross bars on the outer webs; beneath pale cinereous; throat whitish; breast and sides of belly with rounded whitish spots; middle of belly creamy white; bill and feet reddish: whole length 8·0 inches, wing 5·5, tail 2·0.

Hab. Andes of Bolivia and Northern Argentina.

We have been able to compare a typical specimen of *Nothoprocta doeringi*, received from Dr. Doering of Cordova, with the series of specimens of this group in the British Museum, and find that Dr. Cabanis's name must give way to G. R. Gray's prior designation. Dr. Doering's specimens of this species were obtained in the Sierra de Cordova. The original example of *Nothoprocta pentlandi* was procured by Pentland, the well-known scientific traveller (after whom it is called), in the Andes of Bolivia.

429. NOTHOPROCTA CINERASCENS (Burm.).

(CINEREOUS TINAMOU.)

Nothura cinerascens, *Burm. La-Plata Reise*, ii. p. 498 (Cordova, Tucuman); *Salvin, Ibis*, 1880, p. 364 (Tucuman); *White, P. Z. S.* 1883, p. 43 (Cordova). **Nothoprocta cinerascens**, *Cab. J. f. O.* 1878, p. 198 (Cordova).

Description.—Above cinereous; head and whole back banded with black and pale brown and streaked with fulvous white; beneath pale ashy white; breast and flanks banded and freckled with blackish and cinereous; under wing coverts with black and fulvous cross bands; wings blackish, outer webs spotted with fulvous; bill horn-colour, lower mandible and feet yellowish; whole length 12·0 inches, wing 6·8, tail 2·6.

Hab. Northern Argentina.

This fine and distinct species was first obtained by Dr. Burmeister in Cordova and in Tucuman, where Durnford also obtained specimens of it during his last journey. It is larger than *N. pentlandi*, and has the breast thickly covered by somewhat rounded light spots upon a cinereous ground; these are mixed with black points and slight striations.

430. NOTHURA MACULOSA (Temm.)

(SPOTTED TINAMOU.)

Nothura maculosa, *Burm. La-Plata Reise*, p. 499; *Scl. et Salv. Nomencl.* p. 153; *iid. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Hudson, P. Z. S.* 1872, p. 547 (Rio Negro); *Durnford, Ibis*, 1877, p. 203 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 168 (Buenos Ayres); *White, P. Z. S.* 1882, p. 629 (Misiones); *Barrows, Auk*, 1884, p. 317 (Entrerios, Bahia Blanca); *Withington, Ibis*, 1888, p. 473 (Lomas de Zamora). **Nothura major**, *Darwin, Zool. 'Beagle'*, iii. p. 119.

Description.—Above pale yellowish brown, barred with black and brown and streaked with fulvous white; wing-feathers ashy black, crossed on both webs by fulvous bands; beneath rich yellowish brown; throat white; breast and flanks spotted and banded with brownish black; bill and feet yellowish brown: whole length 11·0 inches, wing 5·5, tail 1·6. *Female* similar, but larger.

Hab. Argentine Republic.

The *Perdiz comun* or Common Partridge of the pampas, as it is always called—the naturalist's name of Tinamou being utterly unknown in the southern part of South America—is much smaller than the "Perdiz grande," but in its form, slender curved beak, bare legs, and in the yellowish mottled plumage generally resembles it. It also inhabits the same kind of open grassy country, and is abundant everywhere on the pampas and as far south as the valley of the Rio Negro in Patagonia. It is solitary; but a number of individuals are usually found in proximity; and in lonely places on the pampas, where they are excessively abundant, I have seen three or four meet together and play in the manner of kittens, darting out from a place of concealment at each other, the pursued bird always escaping by turning off at right angles or by suddenly crouching down and allowing the pursuer to spring over it.

It is very tame in disposition, and flies so reluctantly that it is not necessary to shoot them where they are very abundant, as any number can be killed with a long whip or stick. It moves on the ground in a leisurely manner, uttering as it walks or runs a succession of low whistling notes. It has two distinct songs or calls, pleasing to the ear and heard all the year round; but with greater frequency in spring, and, where the birds are scarce and much persecuted, in spring only. One is a succession of twenty or thirty short impressive whistling notes of great compass, followed by half a dozen rapidly uttered notes, beginning loud and sinking lower till they cease: the other call is a soft continuous trill, which appears to swell mysteriously on the air, for the listener cannot tell whence it proceeds; it lasts several seconds, and then seems to die away in the distance.

It is an exceedingly rare thing to see this bird rise except when compelled. I believe the power of flight is used chiefly, if not exclusively, as a means of escape from danger. The bird rises up when almost trodden upon, rushing into the air with a noise and violence that fill one with astonishment. It continues to rise at a decreasing angle for fifty or sixty yards, then gradually nears the earth, till, when it has got to a distance of two or three hundred yards, the violent action of the wing ceases, and the bird glides along close to the earth for some distance, and either drops down or renews its flight. I suppose many birds fly in much the same way; only this Tinamou starts forward with such amazing energy that, until this is expended and the moment of gliding comes, the flight is just as ungovernable to the bird as the motion of a brakeless engine, rushing along at full speed, would be to the driver. The bird knows the danger to which this peculiar character of its flight exposes it so well, that it is careful to fly only to that side where it sees a clear course. It is sometimes, however, compelled to take wing suddenly, without considering the obstacles in its path; it also often miscalculates the height of an obstacle, so that for Tinamous to meet with accidents when flying is very common. In the course of a short ride of two miles, during which several birds sprang up before me, I have seen three of these Tinamous dash themselves to death against a fence close to the path, the height of which they had evidently misjudged. I have also seen a bird fly blindly against the wall of a house, killing itself instantly. A brother of mine told me of a very curious thing he once witnessed. He was galloping over the pampas, with a very

violent wind blowing in his face, when a Tinamou started up before his horse. The bird flew up into the air vertically, and, beating its wings violently, and with a swiftness far exceeding that of its ordinary flight, continued to ascend until it reached a vast height, then came down again, whirling round and round, striking the earth a very few yards from the spot where it rose, and crushing itself to a pulp with the tremendous force of the fall. It is very easy to guess the cause of such an accident: while the Tinamou struggled blindly to go forward, the violent wind, catching the under surface of the wings, forced it upwards, until the poor bird, becoming hopelessly confused, fell back to earth. I have often seen a swallow, gull, or hawk, soaring about in a high wind, suddenly turn the under surface of its wings to the wind and instantly shoot straight up, apparently without an effort, to a vast height, then recover itself, and start off in a fresh direction. The Tinamou, when once launched on the atmosphere, is at the mercy of chance; nevertheless, had this incident been related to me by a stranger, I should not have recorded it.

This Tinamou is frequently run down and caught by well-mounted Gaucho boys; the bird frequently escapes into a kennel in the earth, but when it sees no refuge before it and is hotly pursued, it sometimes drops dead. When caught in the hand they "feign death" or swoon, but on being released quickly recover their faculties.

The nest is a slight hollow scratched in the ground under a thistle or in the grass, and lined with a few dry leaves. The number of eggs laid varies from five to eight. These are elliptical, with polished shells, and as a rule are of a wine-purple colour; but the hue varies somewhat, some eggs having a reddish tinge and others a deep liver-colour.

431. NOTHURA DARWINI, Gray.

(DARWIN'S TINAMOU.)

[PLATE XX.]



NOTHURA DARWINI.

Nothura minor, Darwin, *Zool. Voy. 'Beagle,'* iii. p. 119 (Bahia Blanca). **Nothura darwini**, Gray, *List of Gall. B. M.* p. 104 (1867); *Sci. P. Z. S.* 1872. p. 547. **Nothura maculosa**, Durnford, *Ibis*, 1877, p. 45 (Chupat). **Nothura perdicaria**, Durnford, *Ibis*, 1878, p. 405 (Centr. Patagonia).

Description.—Above cinereous; feathers of head and back marked with narrow black and fulvous cross bands and margined with bright ashy-white edgings; wings ashy black, crossed on both webs by fulvous bands, except in the two outer primaries: beneath pale fulvous, throat white; breast more cinereous, and densely covered with indistinct black and brown cross bars and whitish-grey streaks; flanks and lower belly with irregular black cross bars; bill horn-colour; lower mandible and feet yellowish: whole length 8·5 inches, wing 5·4, tail 2·4.

Hab. Northern Patagonia.

This species, called *Perdiz chico* by the natives, is somewhat smaller and paler in colouring than the common Tinamou of the pampas, but very closely resembles the young of that species. It inhabits Patagonia, and is nowhere very numerous, but appears to be thinly and equally distributed on the dry sterile plains of that region, preferring places abounding in thin scrub. In disposition it is extremely shy, and when approached springs up at a distance ahead and runs away with the greatest speed and apparently much terrified. Sometimes when thus running it utters short whistled notes like the allied species. It rises more readily

and with less noise than the pampas bird, and has a much higher flight. It has one call-note, heard only in the love-season—a succession of short whistling notes, like those of the *N. maculosa*, but without the rapidly uttered conclusion.

The nest is made under a small scrubby bush, and contains from five to seven eggs, in form and colour like those of *N. maculosa*, except that the reddish-purple tint is paler.

The figure (Plate XX.) is taken from one of my specimens from the Rio Negro, now in the British Museum.

432. CALODROMAS ELEGANS (d'Orb. et Geoff.).

(MARTINETA TINAMOU.)

Eudromia elegans, *Burm. La-Plata Reise*, ii. p. 408 (San Luis, Mendoza); *Scl. P. Z. S.* 1872, p. 545 (Rio Negro). **Calodromas elegans**, *Scl. et Salv. Nomencl.* p. 153; *Durnford, Ibis*, 1877, p. 45 (Chupat), et 1878, p. 406 (Centr. Patagonia); *Barrows, Auk*, 1884, p. 318 (Bahia Blanca).

Description.—Above densely banded and spotted with black and pale fulvous; head cinereous, with black striations; a long recurved vertical crest of black feathers, partly edged with cinereous; two lateral stripes on the head above and beneath the eye and throat cinnamomeous white; beneath pale cinnamomeous, breast with numerous black cross bars and black shaft-spots; belly, flanks, and under tail-coverts with broad black cross bands; wings ashy black, with numerous cross bands of pale cinnamomeous; bill blackish; feet bluish grey: whole length 14·5 inches, wing 8·3, tail 3·0. *Female* similar.

Hab. Northern Patagonia and Western Argentina.

This fine game bird in its size and mottled plumage resembles the *Rhynchotus rufescens* of the pampas, which it represents in the Patagonian district south of the Rio Colorado. It differs externally in the more earthy hue of its plumage, which is protective and harmonizes admirably with the colour of its sterile surroundings; also in having a shorter beak, and in being adorned with a long slender black crest, which, when excited, the bird carries directed forwards like a horn. There is, however, an anatomical difference, which seems to show that the two species are not very near relations. The structure of the intestinal canal in the Martineta is most peculiar, and unlike that of any other bird I have ever dissected: the canal divides near the stomach into a pair of great ducts which widen towards the middle and extend almost the entire length of the abdominal cavity, and are thickly set with rows of large membranous claw-shaped protuberances.

- 215 -

The Martineta inhabits the elevated tablelands, and is found chiefly where patches of scattered dwarf scrub occur among the thorny thickets. Apparently they do not require water, as they are met with in the driest situations where water never collects. They are extremely fond of dusting themselves, and form circular, nest-like hollows in the ground for that purpose; these hollows are deep and neatly made, and are visited every day by the same birds throughout the year. They live in coveys of from half a dozen to twenty or thirty birds, and when disturbed do not as a rule take to flight at once, but jump up one after another and run away with amazing swiftness, uttering as they run shrill, squealing cries, as if in the greatest terror. Their flight, although violent, is not so sounding as that of the Pampas Tinamou (*Rhynchotus*), and differs remarkably in another respect. Every twenty or thirty yards the wings cease beating and remain motionless for a second, when the bird renews the effort; thus the flight is a series of rushes rather than a continuous rush like that of the *Rhynchotus*. It is also accompanied with a soft wailing note, which appears to die away and swell again as the flapping of the wings is renewed.

The call-note of the Martineta is never heard in winter; but in the month of September they begin to utter in the evening a long, plaintive, slightly modulated whistle, the birds sitting concealed and answering each other from bush to bush. As the season advances the coveys break up, and their call is then heard on every side, and often all day long, from dawn until after dark. The call varies greatly in different birds, from a single whistle to a performance of five or six notes, resembling that of *Rhynchotus*, but inferior in compass and sweetness. They begin to breed in October, making the nest in the midst of a small isolated bush. The eggs vary in number from twelve to sixteen; they are elliptical in form, of a beautiful deep green in colour, and have highly polished shells.

It is probable, I think, that this species possesses some curious procreant habits, and that more than one female lays in each nest; but owing to the excessive wariness of the bird in a state of nature it is next to impossible to find out anything about it. No doubt the day will come when naturalists will find the advantage of domesticating the birds the life-histories of which they wish to learn: may it come before all the most interesting species on the globe are extinct!

Order XX. STRUTHIONES.

- 216 -

Fam. LIV. RHEIDÆ, OR RHEAS.

The Order of Struthious Birds or Ostriches is represented in South America by the Nandu or Rhea, which is at once distinguished from the African Ostrich (*Struthio*) by having three toes instead of two, as also by many other important points of structure.

Both the known species of *Rhea* are found within our limits.

433. RHEA AMERICANA, Lath.

(COMMON RHEA.)

Rhea americana, Darwin, *Zool. Voy. 'Beagle,'* iii. p. 120; *Burm. La-Plata Reise*, ii. p. 500; *Scl. et Salv. Nomencl.* p. 154; *Sclater, Trans. Zool. Soc.* iv. p. 355, pl. lxxviii.; *Gadow, P. Z. S.* 1885, p. 308.

Description.—Above, head blackish; neck whitish, becoming black at the base of the neck and between the shoulders; rest slaty grey; beneath, throat and upper neck whitish, becoming black at the base of the neck, whence arise two black lateral crescents, one on either side of the upper breast; rest of under surface whitish; front of tarsus throughout covered with broad transverse scutes: whole length about 52·0 inches, tarsus 12·0; tarsus bare.



Head of *Rhea americana*.
(P. Z. S. 1860, p. 208.)

Hab. Pampas of S. America north of Rio Negro.

The Common Rhea (called “Ñandú” in the Guarani language, “Chueké” by the pampas Indians, and “Ostrich” by Europeans) is found throughout the Argentine Republic down to the Rio Negro in Patagonia, and, in decreasing numbers, and associating with Darwin’s Rhea, to a considerable distance south of that river. Until within very recent times it was very abundant on the pampas, and I can remember the time when it was common within forty miles of Buenos Ayres city. But it is now becoming rare, and those who wish to have a hand in its extermination must go to a distance of three or four hundred miles from the Argentine capital before they can get a sight of it.

The Rhea is peculiarly well adapted, in its size, colour, faculties, and habits, to the conditions of the level woodless country it inhabits; its lofty stature, which greatly exceeded that of any of its enemies before the appearance of the European mounted hunter, enables it to see far; its dim grey plumage, the colour of the haze, made it almost invisible to the eye at a distance, the long neck being so slender and the bulky body so nearly on a level with the tall grasses; while its speed exceeded that of all other animals inhabiting the same country. When watching the chase of Ostriches in the desert pampas, abounding in giant grasses, it struck me forcibly that this manner of hunting the bird on horseback had brought to light a fault in the Rhea—a point in which the correspondence between the animal and its environment is not perfect. The Rhea runs smoothly on the surface, and where the tall grass-tussocks are bound together, as is often the case, with slender twining plants, its legs occasionally get entangled, and the bird falls prostrate, and before it can struggle up again the hunter is close at hand and able to throw the *bolos*—the thong and balls, which, striking the bird with great force, wind about its neck, wings, and legs, and prevent its escape. When I questioned Ostrich-hunters as to this point they said that it was true that the Rhea often falls when running hotly pursued through long grass, and that the deer (*Cervus campestris*) never falls because it leaps over the large tussocks and all such obstructions. This small infirmity of the Rhea would not, however, have told very much against it if some moderation had been observed in hunting it, or if the Argentine Government had thought fit to protect it; but in La Plata, as in North America and South Africa, the licence to kill, which every one possesses, has been exercised with such zeal and fury that in a very few more years this noblest Avian type of the great bird-continent will be as unknown on the earth as the Moa and the *Æpyornis*.

The Rhea lives in bands of from three or four to twenty or thirty individuals. Where they are not persecuted they show no fear of man, and come about the houses, and are as familiar and tame as domestic animals. Sometimes they become too familiar. At one *estancia* I remember an old cock-bird that constantly came alone to feed near the gate, and that had so

great an animosity against the human figure in petticoats, that the women of the house could not go out on foot or horseback without a man to defend them from its attacks. When the young are taken from the parent bird they become, as Azara truly says, "domestic from the first day," and will follow their owner about like a dog. It is this natural tameness, together with the majesty and quaint grace of its antique form, which makes the destruction of the Rhea so painful to think of.

When persecuted, Rheas soon acquire a wary habit, and escape by running almost before the enemy has caught a sight of them; or else crouch down to conceal themselves in the long grass; and it then becomes difficult to find them, as they lie close, and will not rise until almost trodden on. Their speed and endurance are so great that, with a fair start, it is almost impossible for the hunter to overtake them, however well mounted. When running, the wings hang down like those of a wounded bird, but usually one wing is raised and held up like a great sail, for what reason it is impossible to say. When hard pressed, the Rhea doubles frequently and rapidly at right angles to its course; and if the pursuer's horse is not well trained to follow the bird in all its sudden turns without losing ground he is quickly left far behind.

In the month of July the love-season begins, and it is then that the curious ventriloquial bellowing, booming, and wind-like sounds are emitted by the male. The young males in the flock are attacked and driven off by the old cock-bird; and when there are two old males they fight for the hens. Their battles are conducted in a rather curious manner, the combatants twisting their long necks together like a couple of serpents, and then viciously biting at each other's heads with their beaks; meanwhile, they turn round and round in a circle, pounding the earth with their feet, so that where the soil is wet or soft they make a circular trench where they tread. The females of a flock all lay together in a natural depression in the ground, with nothing to shelter it from sight, each hen laying a dozen or more eggs. It is common to find from thirty to sixty eggs in a nest, but sometimes a larger number, and I have heard of a nest being found containing one hundred and twenty eggs. If the females are many the cock usually becomes broody before they finish laying, and he then drives them with great fury away and begins to incubate. The hens then drop their eggs about on the plains; and from the large number of wasted eggs found it seems probable that more are dropped out of than in the nest. The egg when fresh is of a fine golden yellow, but this colour grows paler from day to day, and finally fades to a parchment-white.

After hatching, the young are assiduously tended and watched over by the cock, and it is then dangerous to approach the Rhea on horseback, as the bird with neck stretched out horizontally and outspread wings charges suddenly, making so huge and grotesque a figure that the tamest horse becomes ungovernable with terror.

Eagles and the large Polyborus are the enemies the Rhea most fears when the young are still small, and at the sight of one flying overhead he crouches down and utters a loud snorting cry, whereupon the scattered young birds run in the greatest terror to shelter themselves under his wings.

434. RHEA DARWINI, Gould.

(DARWIN'S RHEA.)

Rhea darwini, Darwin, *Zool. Voy. 'Beagle,'* iii. p. 123, pl. xlvii.; Hudson, *P. Z. S.* 1872, p. 534; Sclater, *Trans. Zool. Soc.* iv. p. 357, pl. lxx.; Gadow, *P. Z. S.* 1885, p. 308. **Pterocnemis darwini**, *Sci. et Salv. Nomencl.* p. 154.

Description.—Above red or buff-brown, most of the feathers of the back with white shaft-stripes and wide white margins: beneath, throat and neck buff-brown; rest of under surface whitish; front of tarsus covered on the upper part by small reticulate scutes, on the lower part by transverse scutes: whole length about 36·0 inches, tarsus 11·0; tarsus partly feathered.



Head of *Rhea darwini*.
(*P. Z. S.* 1860, p. 209.)

Hab. Patagonia south of the Rio Negro.

Darwin's Rhea inhabits Patagonia from the Straits of Magellan to the Rio Negro, and is also met with occasionally north of that river. The Indians call it "Molú Chueké"—short or dwarf Chueké; its Spanish name is "*Avestruz petizo*." They were formerly very abundant along the Rio Negro; unhappily, some years ago their feathers commanded a very high price; Gauchos and Indians found that hunting the Ostrich was their most lucrative employment; consequently these noble birds were slaughtered in such numbers that they have been almost exterminated wherever the nature of the country admits of their being chased. When on the Rio Negro in 1871 I was so anxious to obtain specimens of this Rhea that I engaged several Indians by the offer of a liberal reward to hunt for me, but they failed to capture a single adult bird. I can only set down here the most interesting facts I was able to collect concerning its habits, which are very imperfectly known.

- 220 -

When pursued it frequently attempts to elude the sight by suddenly squatting down amongst the bushes, which have a grey foliage, to which the colour of its plumage closely assimilates. When hard pressed it possesses the same habit as the Common Rhea of raising the wings alternately and holding them up vertically; and also doubles suddenly like that species. Its speed is greater than that of the Common Rhea, but it is sooner exhausted. In running it carries its neck stretched forward almost horizontally, which makes it seem lower in stature than the allied species,—hence the vernacular name of "short Ostrich." It is found in flocks of from three or four to thirty or more individuals. It begins to lay at the end of July, that is a month before the *Rhea americana*. Several females lay in one nest, which is merely a slight depression lined with a little dry rubbish; as many as fifty eggs are sometimes found in one nest. A great many wasted or *huacho* eggs, as they are called, are also found at a distance from the nest. I examined a number of eggs brought in by the hunters, and found them vary greatly in shape, size, and colour. The average size of the eggs was the same as those of the Common Rhea; in shape they were more or less elliptical, scarcely any two being precisely alike. The shell has a fine polish, and when newly laid the colour is deep rich green. They soon fade, however, and the side exposed to the sun first assumes a dull mottled green; then this colour fades to yellowish, and again to pale stone-blue, becoming at last almost white. The comparative age of each egg in the nest may be known by the colour of the shell. The male incubates and rears the young; and the procreant habits seem altogether like those of *Rhea americana*.

The young are hatched with the legs feathered to the toes; these leg-feathers are not shed, but are gradually worn off as the bird grows old by continual friction against the stiff scrubby vegetation. In adults usually a few scattered feathers remain, often worn down to mere stumps; but the hunters told me that old birds are sometimes taken with the legs entirely feathered, and that these birds frequent plains where there is very little scrub. The plumage of the young is dusky grey, without white and black feathers. When a year old they acquire by moulting the mottled plumage of the adults, but do not attain their full size until the third year.

APPENDIX.

- 221 -

I. List of the principal Authorities upon the Ornithology of the Argentine Republic referred to in the present Work.

AZARA, DON FELIX DE.

Apuntamientos para la historia natural de los páxaros del Paragüay y Rio de la Plata. 3 vols. Madrid, 1802.

Although this celebrated work relates mainly to the neighbouring State of Paraguay, so many birds are common to Paraguay and La Plata that it has of course a most important bearing on the Ornithology of the latter country. Azara, unfortunately, gave only Spanish names to his birds, so that the Latin titles of them are mostly those of Vieillot, who translated Azara's remarks and gave scientific names to his birds in different volumes of the 'Nouveau Dictionnaire d'Histoire Naturelle' (Paris, 1816-19). A most useful Index to Azara's 'Apuntamientos' was published in 1847 by Dr. G. Hartlaub of Bremen¹¹. A more modern *résumé* of the Birds of Paraguay, in which much information is contained, has been recently written by Hans, Graf v. Berlepsch¹².

BARROWS, WALTER B.

Birds of the Lower Uruguay. Bulletin of the Nuttall Ornithological Club, vol. viii. pp. 82, 128, 198; and The Auk, 1884, pp. 20, 109, 270, and 313.

This excellent observer was resident at Concepcion del Uruguay in 1879 and 1880, and afterwards made an excursion from Buenos Ayres southwards to the Sierra de la Ventana. His notes, many of which are incorporated in the present work, relate to about 200 species.

BURMEISTER, DR. HERMANN.

- (1) Reise durch die La Plata-Staaten, mit besonderer Rücksicht auf die physische Beschaffenheit und den Culturzustand der Argentinischen Republik. Ausgeführt in den Jahren 1857, 1858, 1859, und 1860. 2 vols. Halle, 1861.

In a work on Argentine Ornithology it is hardly necessary to explain who Dr. Burmeister is. The Director of the Museo Publico is as well known in Europe as he is in Buenos Ayres. It should, however, be here mentioned that in the second volume of 'Reise durch die La Plata-Staaten' Dr. Burmeister has given an excellent systematic synopsis of the Vertebrate Animals of the Argentine Republic. Of the class of Birds 263 species are enumerated as having been met with within the limits of the Republic up to that date, and references, native names, and general observations as to habits and localities are attached to each species. This is in fact up to the present time the best, or, we might say, the only authority on the Birds of the Argentine Republic.

Besides this, Dr. Burmeister has published several other contributions towards our knowledge of Argentine Ornithology, namely:—

- (2) Sobre los Picafloros descriptos por D. Felix de Azara. Por Dr. German Burmeister. An. d. Mus. Publ. d. Buenos Aires, tomo i. p. 67 (1864).

[An essay on the eleven species of Trochilidæ, described by Azara, which appear reducible to six.]

- (3) Extract from a letter addressed to Mr. Sclater on the *Tyrannidæ* found near Buenos Ayres. P. Z. S. 1868, p. 2.

[Contains a list of 10 species of this family.]

- (4) Contributions to the Ornithology of the Argentine Republic and adjacent lands.—Part I. P. Z. S. 1868, p. 633.

[Notes on 13 species additional to those given in his Synopsis. *Pachyrhamphus albinucha* and *Synallaxis sulphurifera* are described as new.]

- (5) Letter from, containing remarks on the *Cracidæ* in the Museum of Buenos Ayres. P. Z. S. 1871, p. 701.

[Contains remarks on three Argentine species.]

- (6) Synopsis of the Lamellirostres of the Argentine Republic. P. Z. S. 1872, p. 364.

[Contains notices of 24 species, including 2 Flamingoes (*Phœnicopterus ignipalliatu*s and *P. andinus*).]

- (7) Notes on *Conurus hilaris* and other Parrots of the Argentine Republic. P. Z. S. 1878, p. 75.

[Describes *C. hilaris* at full length from specimens received from Tucuman, and gives critical notes on other species mentioned by Finsch.]

CABANIS, DR. JEAN.

The well-known Ornithologist of Berlin has made several important contributions to the Ornithology of the Argentine Republic, namely:—

- (1) Ueber eine Sammlung von Vögeln der Argentinischen Republik. Journ. f. Orn. 1878, pp. 194-199.

[Gives an account of 29 species, examples of which are in a collection made by Dr. A. Doering, of Cordova, in the Sierra of Cordova. *Furnarius tricolor*, *Synallaxis sclateri*, and *Nothoprocta doeringi* are described as new.]

- (2) Ueber neue Arten von Herrn Fritz Schulz im nordlichen Argentinien entdeckt. Journ. f. Orn. 1883.

[The reports of the meetings of the Deutsche Ornithologische Gesellschaft, published in the 'Journal für Ornithologie' for 1883, contain descriptions by Dr. Cabanis of the following 19 species discovered by Herr Schulz in Tucuman and in other parts of Northern Argentina:—*Colaptes longirostris* (t. c. p. 97), *Cinclus schulzi* (t. c. p. 102), *Phlœotomus schulzi* (t. c. p. 102), *Chloronerpes tucumanus* (t. c. p. 103), *Troglodytes (Uropsila) auricularis* (t. c. p. 105), *Scytalopus superciliaris* (t. c. p. 105), *Orospina pratensis* (t. c. p. 108), *Phrygilus dorsalis* (t. c. p. 109), *Buarremon (Atlapetes) citrinellus* (t. c. p. 109), *Phacellodomus sincipitalis* (t. c. p. 109), *P. maculipectus* (t. c. p. 109), *Chloronerpes (Campias) frontalis* (t. c. p. 110), *Synallaxis superciliosa* (t. c. p. 110), *Contopus brachyrhynchus* (t. c. p. 214), *Myiarchus ferocior* (t. c. p. 214), *M. atriceps* (t. c. p. 215), *Elainea strepera* (t. c. p. 215), *E. grata* (t. c. p. 216), *Cyanocorax tucumanus* (t. c. p. 216).

It is, however, much to be regretted that no complete list of Schulz's collections has been published.]

CASSIN, JOHN.

Capt. T. J. Page, U.S.N., made an exploration of the River La Plata and its tributaries in 1859 and 1860, under the orders of the U.S. Government. In the Appendix to his published narrative of this expedition ('La Plata, the Argentine Confederation, and Paraguay,' New York, 1873, 1 vol., 8vo) will be found (p. 599) a short report on the birds collected during the expedition by the late John Cassin. A certain number of species are named, but no exact localities are given.

DALGLEISH, JOHN J.

Notes on a Collection of Birds and Eggs from Central Uruguay. Proc. Roy. Phys. Soc. Edinburgh, vi. p. 232, and viii. p. 77.

[The collections described by Mr. Dalgleish were formed by a correspondent in the district of San Jorge, in the province of Durazno, Uruguay. The specimens sent along with the eggs were determined by Messrs. Sclater and Salvin.]

DARWIN, CHARLES.

Zoology of the Voyage of the 'Beagle' during the years 1832-6. Part III. Birds. By John Gould, Esq., F.L.S. London, 1841.

Darwin, when Naturalist to the 'Beagle,' during her voyage round the world in 1832-6, made good collections of birds on the Rio de la Plata and along the shores of Patagonia. Most of his specimens, originally deposited in the Zoological Society's Museum, are now in the British Museum, but some of them unfortunately are in a very imperfect condition. His valuable notes were published in the work of which the title is above given. They relate to about 80 species of Argentine Birds. The specimens were determined and the new species described by Gould; but Gould's MS. was afterwards revised for publication by G. R. Gray, on account of Gould's absence in Australia.

Darwin's 'Naturalist's Voyage,' originally published as a volume of the Narrative of the 'Voyage of the Beagle,' also contains many excellent notes on the life and habits of Argentine Birds.

DOERING, ADOLF.

Informe Oficial de la Comision Científica agregada al estado mayor general de la Expedicion al Rio Negro (Patagonia). Realizada en los meses de Abril, Mayo y Junio de 1879, bajo las órdenes del General D. Julio A. Roca. Entrega I. Zoología. Buenos Aires, 1881.

Dr. Adolf Doering, of the Argentine University of Cordoba, has been a zealous collector and observer of the birds of the Republic (see under [Cabanis](#) and [Sclater](#)). The zoological portion of his report upon the Rio Negro expedition of 1879 gives a list of the birds, which contains 110 species, most of them well-known Patagonian forms.

DURNFORD, HENRY.

Henry Durnford, a member of the British Ornithologists' Union, whose early decease was a severe loss to ornithological science, was a constant worker on birds from the time of his arrival in Buenos Ayres in 1875 until his death in 1878. The birds collected by Durnford are now mostly in the British Museum. His published papers on this subject are the following (see also biographical notice in 'Ibis,' 1879, p. 121):—

- (1) Ornithological Notes from the Neighbourhood of Buenos Ayres. *Ibis*, 1876, p. 157.

[Notes made during his first five months' residence at Belgrano, five miles north-west of Buenos Ayres. About 70 species are mentioned.]

- (2) Notes on the Birds of the Province of Buenos Ayres. *Ibis*, 1877, p. 166, and 1878, p. 58.

[Notes made principally at Baradero, 90 miles W.N.W. of Buenos Ayres. In the first paper 144 species are mentioned and *Porzana spiloptera* is described and figured as new. In the second 47 species, mostly additional, are noticed.]

- (3) Notes on some Birds observed in the Chupat Valley, Patagonia, and in the Neighbouring District. *Ibis*, 1877, p. 27.

[Durnford first visited Chupat, on the river of the same name, in Eastern Patagonia (43° 20' S. lat.), in October 1876; 62 species of birds are noted and commented upon.]

- (4) Notes on the Birds of Central Patagonia. *Ibis*, 1878, p. 389.

[Durnford's second visit to Chupat extended from September 1877 to April 1878. The list of birds is now extended to 89, and it is not believed that many more will be found to occur in the district.]

(5) Last Expedition to Tucuman and Salta. *Ibis*, 1880, p. 411, pl. xii.

[This is an almost verbatim copy of Durnford's journal in 1878, during his expedition to Tucuman and Salta. Many notes on birds are inserted. Durnford died at Campo Santo, in the province of Salta, on July 13th, 1878. The collection made on this occasion was worked out by Mr. Salvin (*Ibis*, 1880, p. 351, see [below](#)).]

GIBSON, ERNEST.

Mr. Ernest Gibson, who has been resident in the Argentine Republic since about 1873, is an excellent observer in the field, and has written two very interesting papers on our subject, from which we have quoted largely in this work.

(1) Ornithological Notes from the Neighbourhood of Cape San Antonio, Buenos Ayres. *Ibis*, 1879, p. 405; 1880, pp. 1, 153.

Mr. Gibson's notes, which relate to 61 species, are in most cases very full and contain particulars of the breeding-habits, eggs, and nests. Cape San Antonio is on the Atlantic coast, south of Buenos Ayres (36° 20' S. lat.).

(2) Notes on the Birds of Paisandú, Republic of Uruguay. (Communicated by J. J. Dalgleish.) *Ibis*, 1885, p. 275.

- 226 -

Field-notes on 52 species from this locality, which Mr. Gibson visited in 1883. The specimens were sent to Mr. J. J. Dalgleish and named by P. L. S.

GIEBEL, Prof. C. (of Halle, Germany).

Einige neue und wenig bekannte argentinische Vögel. *Zeitschr. f. d. ges. Naturwiss.* xxxi. p. 11 (1868).

In this paper the author described two new Bolivian species and two Argentine species (*Troglodytes fasciolatus* and *Geobamon rufipennis*), from specimens in the Halle Museum received from Dr. Burmeister.

GOULD, JOHN.

Gould determined the species in the collection made by Darwin during the voyage of the 'Beagle,' and drew up the scientific portion of the report on the birds, which forms vol. iii. of the "Zoology" of the voyage. Owing to his departure for Australia the MS. was subsequently completed and edited by G. R. Gray (see [DARWIN, C.](#)).

HOLMBERG, Dr. E. L.

Resultados científicos, especialmente zoológicos y botánicos, de los tres viajes llevados á cabo por el Dr. Holmberg, en 1881, 1882, y 1883 á la Sierra del Tandil. *Aves. Act. Ac. Nac. de Ciencias en Córdoba*, v. pp. 73-92.

[Seventy-nine species of birds are given as occurring in the Sierra of Tandil, south of Buenos Ayres, and slight field-notes are added.]

HUDSON, WILLIAM HENRY, C.M.Z.S.

My fellow-author of the present work, though English in name and origin and now resident in London, is an Argentine citizen by birth. From his early childhood he was an observer of bird-life in the province of Buenos Ayres, and continued his investigations until he left the country for England a few years ago. Besides the pampas he explored the woods and marshes along the Plata, and the range of the Sierras from Cape Corrientes on the Atlantic to the Azul and Tapalquen, and made an expedition to the Rio Negro in 1871.

The following is a list of his scientific papers on this subject, which are mostly incorporated in the present work:—

(1) Letters on the Ornithology of Buenos Ayres. *P. Z. S.* 1869, p. 432; 1870, pp. 87, 112, 158, 332, 545, 671, 748, 798; 1871, pp. 4, 258, 326.

(2) On the Birds of the Rio Negro of Patagonia. With Notes by P. L. Sclater, M.A., Ph.D., F.R.S., &c. *P. Z. S.* 1872, p. 534.

(3) On the Habits of the Swallows of the Genus *Progne* met with in the Argentine Republic. With Notes by P. L. Sclater, M.A., Ph.D., F.R.S., &c. *P. Z. S.* 1872, p. 605.

(4) Further Observations on the Swallows of Buenos Ayres. *P. Z. S.* 1872, p. 844.

- 227 -

- (5) Notes on the Habits of the Churinche (*Pyrocephalus rubineus*). P. Z. S. 1872, p. 808.
- (6) Notes on the Habits of the Pipit of the Argentine Republic. P. Z. S. 1873, p. 771.
- (7) Notes on the Procreant Instincts of the three Species of *Molothrus* found in Buenos Ayres. P. Z. S. 1874, p. 153.
- (8) On the Habits of the Burrowing-Owl (*Pholeoptynx cunicularia*). P. Z. S. 1874, p. 308.
- (9) On the Herons of the Argentine Republic, with a Notice of a curious Instinct of *Ardetta involucris*. P. Z. S. 1875, p. 623.
- (10) Note on the Spoonbill of the Argentine Republic. P. Z. S. 1876, p. 15.
- (11) Notes on the Rails of the Argentine Republic. P. Z. S. 1876, p. 102.
- (12) Notes on the Birds of the Genus *Homorus* observed in the Argentine Republic. Ibis, 1885, p. 283.

LEE, WILLIAM BLACKSTONE.

Ornithological Notes from the Argentine Republic. Ibis, 1873, p. 129.

This article gives field-notes on seven species, of which examples were obtained near Frayle Muerto, in the province of Cordova, and 33 species from near Gualaguaychú in Entrerios. The specimens were determined by myself and Salvin.

LEYBOLD, DR. FRIEDRICH.

Dr. Leybold was resident in Santiago, Chili, for some years, and sent bird-skins and other objects of natural history to Munich for sale in Europe. He published two papers on supposed new birds obtained by his collectors during their excursions from Chili to Mendoza.

- (1) Beschreibung von vier neuen Vogelarten aus der Argentinischen Provinz Mendoza. Journ. f. Orn. 1865, pp. 401-406.

[Describes as new *Synallaxis crassirostris*, *Myiarchus fasciatus*, *Sporophila rufirostris*, and *Phrygilus ornatus*, from Mendoza. These species are all referred to in our work.]

- (2) Beschreibungen einiger Thiere und Pflanzen aus den Anden Chile's und der Argentinischen Provinzen. Leopoldina, viii. p. 52 (1873).

- 228 -

[This paper contains descriptions of *Conurus glaucifrons*, from San Luis (= *Conurus acuticaudatus*), *Colaptes leucofrenatus* (= *Chrysoptilus cristatus*), and *Columbina aurisquamata* (= *Metriopelia aymara*), all from Mendoza.]

ORBIGNY, ALCIDE D'.

Voyage dans l'Amérique Méridionale (le Brésil, la République Orientale, de l'Uruguay, la République Argentine, la Patagonie, la République du Chili, la République de Bolivia, la République du Pérou), exécuté pendant les Années 1826-33. Vol. IV. Oiseaux. Paris, 1835-44. 4to, 396 pp., 66 pl.

After Azara's 'Apuntamientos' this is the most important of the older publications relating to Argentine ornithology. The celebrated French traveller and naturalist d'Orbigny made extensive collections of birds in several parts of the Argentine Republic, especially in Corrientes, on the Paraná, near Buenos Ayres, and on the Rio Negro. The birds were worked out by himself after his return home, with the assistance of the well-known French ornithologist the Baron F. de la Fresnaye. The list of them, with the descriptions of the new species, was first published in two consecutive volumes of the 'Magasin de Zoologie' (for 1837 and 1838), with a separate title¹³ and separately paged. It was unfortunately never completed, and contains only the Accipitres, Passeres, and Picariæ. The valuable notes and remarks of d'Orbigny were subsequently published in the fourth volume of his 'Voyage,' of which the title is given above. This work also, as is much to be regretted, was brought to a sudden termination when only half finished.

D'Orbigny's types are now mostly in the French National Collection at Paris, though a few of them, which cannot be found there, are supposed to have been retained in the De la Fresnaye Collection, and if so are now in the museum of the Boston Society of Natural History.

PAGE, Capt. T. J.

See CASSIN, *suprà*, p. 223.

SALVIN, OSBERT.

The collection consisted of 84 specimens belonging to 54 species, obtained in June 1878 at Tucuman or near Salta. Nine were new to Dr. Burmeister's list. See also [DURNFORD](#), *suprà*, p. 224.

SCHULZ, FRITZ.

Herr Fritz Schulz, an assistant in the museum of the University of Cordoba, brought a fine collection of birds to Europe in 1883, which he had made in Tucuman and other northern provinces of the Republic. The new species were described by Dr. Cabanis (see [above](#), p. 223), except a single species described by Schulz himself.

Ueber eine neue *Cnipolegus*-Art. Journ. f. Orn. 1882, p. 462.

[Describes *Cnipolegus cabanisi* from Tucuman.]

SCLATER, P. L.

(1) Exhibition of Specimens of *Helimaster angelæ*, and Notes thereupon by Prof. Burmeister. P. Z. S. 1865, p. 466.

[The specimens were obtained near Buenos Ayres, where it is "not uncommon." Dr. Burmeister also refers to *Chlorostilbon phaethon*.]

(2) On some new or little-known Birds from the Rio Paraná. P. Z. S. 1870, p. 57.

[Some of the specimens procured during Capt. Page's expedition (see [CASSIN](#), *suprà*, p. 223) are remarked on. Of these *Coryphistora alaudina* is figured and *Cnipolegus cinereus* is described as new.]

(3) Exhibition of a Skin of the Yellow-billed Cuckoo (*Coccyzus americanus*) from Buenos Ayres. P. Z. S. 1872, p. 496.

[The specimen was shot by Hudson in the district of Quilmes, in April 1870.]

(4) Notice of a small Collection of Birds forwarded by Dr. Adolf Döring, Professor of Chemistry in the University of Cordova. P. Z. S. 1879, pp. 460-461.

[The collection contained examples of nine species from the vicinity of Cordova.]

(5) On two new Species of Birds discovered by Mr. E. W. White in the Argentine Republic. Ibis, 1881, p. 599, pl. xvii.

[Describes and figures *Poospiza erythrophrys* from Catamarca, and *Synallaxis whitii* from Oran.]

SCLATER, P. L., and SALVIN, O.

(1) List of Birds collected at Conchitas, Argentine Republic, by Mr. William H. Hudson. P. Z. S. 1868, p. 137.

[This article gives a list of 98 species, determined from specimens sent to the Smithsonian Institution by Hudson.]

(2) Second List of Birds collected at Conchitas, Arg. Rep., by Mr. W. H. Hudson; together with some Notes upon another Collection from the same locality. P. Z. S. 1869, p. 158.

[This article contains the results of an examination of a second collection from the same locality, likewise belonging to the Smithsonian Institution, and adds 14 species to the former list. It also gives an account of a collection made by Mr. Haslehurst near Buenos Ayres, which contains examples of 10 species not up to that date transmitted by Hudson.]

(3) Third List of Birds collected at Conchitas, Arg. Rep., by Mr. W. H. Hudson. P. Z. S. 1869, p. 631.

[Hudson's third collection sent to the Smithsonian Institution contained examples of 92 species, of which 33 were additional to those contained in the two former lists. Thus the total number of species of the district of Quilmes is raised to 143.]

WEISSHAUPT, ALBERT.

Herr Weisshaupt was a German collector at Santiago, Chili, who came several times to London with fine collections of living animals (see P. Z. S. 1870, p. 664, and 1871, p. 700). He made one or more excursions to Mendoza from Santiago, and collected bird-skins in the vicinity of that city. Many of these skins were acquired by Messrs. Salvin and Godman and myself respectively and are in our collections.

WHITE, ERNEST WILLIAM.

Ernest William White was another active worker in Argentine ornithology, whose untimely death we have lately had occasion to deplore¹⁴. During five years' journeyings in the northern provinces of the Republic White made very extensive collections and accumulated a mass of excellent notes, which are published in the following papers:—

- (1) Notes on Birds collected in the Argentine Republic. With Notes by P. L. Sclater, M.A., Ph.D., F.R.S. P. Z. S. 1882, p. 591.

[This article contains field-notes on 201 species from various provinces of Argentina, including Misiones and Oran. The species were mostly determined by me, and I added some remarks.]

- (2) Supplementary Notes on the Birds of the Argentine Republic. With Remarks by P. L. Sclater. P. Z. S. 1883, p. 37.

[Contains remarks on 33 additional species, mostly from Cosquin, near Cordova. I added some notes, and described *Poospiza whitii* as new.]

- (3) Further Notes on the Birds of the Argentine Republic. P. Z. S. 1883, p. 432.

[Gives the names of and notes upon 19 additional species, determined by comparison of specimens with those in my collection and that of Messrs. Salvin and Godman.]

Mr. White's 'Cameos from the Silverland' (2 vols., London, 1881-82) should likewise be carefully studied by those who wish to become acquainted with the natural history of the Argentine Republic.

WITHINGTON, FRANK.

- On the Birds of the Lomas de Zamora, Buenos Aires, Argentine Republic. By Frank Withington. With Notes by P. L. Sclater. Ibis, 1888, p. 461.

[Mr. Withington, for some years resident in Buenos Ayres, and an ardent collector and observer of its birds, has lately sent me a collection which contained examples of 92 species. His interesting field-notes are given in this paper.]

11 Systematischer Index zu Don Felix de Azara's Apuntamientos para la historia natural de los páxaros del Paraguay y Rio de la Plata. Bremen, 1847.

12 Journ. f. Orn. 1887, p. 1.

13 Synopsis avium ab Alcide d'Orbigny in ejus per Americam meridionalem itinere collectarum et ab ipso viatore necnon A. de la Fresnaye.

14 For biographical notice of this naturalist see Ibis, 1885, p. 335.

II. *List of some of the principal Localities where Collections have been made, mentioned in this Work.*

ANDALGALA (FUERTE DE). A town in the Province of Catamarca, near its eastern boundary.

AZUL. A town and district; Pampas of Buenos Ayres: lat. 30°.

BAHIA BLANCA. Bay and town on the Atlantic; Province of Buenos Ayres.

BARADERO. Town on the Rio de la Plata, north of Buenos Ayres city.

CAMPO COLORADO. Near Oran, Province of Salta.

CAMPO SANTO. Province of Salta.

CAPELLÁN. Province of Catamarca.

CARHUÉ. Pampas of Buenos Ayres: lat. 33°.

CERRO VAYO. Province of Tucuman.

CHUPAT (OR CHUBUT). River in Patagonia, in the Territory of the same name.

CONCEPCION (OR CONCEPCION DEL URUGUAY). A town on the Lower Uruguay, in the Province of Entierios.

CONCHITAS. A small stream in the district of Quilmes, near Buenos Ayres city. This locality

was attached by some error to the specimens sent by Hudson to the Smithsonian Institution.

- COSQUIN.** A village in the Sierras, west of Cordova City.
- CURUMALAN.** In the Pampas of Buenos Ayres, 75 miles north of Bahia Blanca.
- GUALEGUAYCHÚ.** A town on the Lower Uruguay, Province of Entrerios.
- ITAPUA.** Territory of Misiones.
- MERCEDES.** A town and district west of Buenos Ayres city.
- ORAN.** A town in the Province of Salta, 50 miles south of the Bolivian border.
- PARANÁ.** A city on the Paraná River, Province of Entrerios.
- PIGUÉ.** In the Pampas of Buenos Ayres, 75 miles north of Bahia Blanca.
- PUNTA LARA.** A point on the Rio de la Plata, near La Plata city.
- QUILMES.** A town and district near Buenos Ayres city.
- RINCON DE LUNA.** A village in the Province of Corrientes.
- RIO COLORADO.** Pampas of Buenos Ayres.
- RIO QUINTO.** Province of Cordova.
- RIO SAUCE.** A stream west of Bahia Blanca.
- RIO VERMEJO.** Province of Salta.
- SAN ANTONIO (CAPE OF).** South of Buenos Ayres city: S. lat. 36° 20'.
- SAN XAVIER.** Territory of Misiones.
- SENGEL.** A tributary of the Chupat River.
- SENGUELEN.** A tributary of the Chupat River.
- SIERRA DE LA VENTANA.** In the Pampas of Buenos Ayres, near Bahia Blanca.
- TAFI (VALLEY OF).** Near the city of Tucuman.
- TOMBO POINT.** On the coast near the mouth of Chupat River.
- TOTAL (SIERRAS DE).** Province of Catamarca.

INDEX.

- 233 -

- Acahé*, i. 110.
- Acanthylis collaris*, ii. 11.
- Actiturus bartramius*, ii. 189.
- Actodromas bairdi*, ii. 184.
- *fuscicollis*, ii. 185.
- *maculata*, ii. 183.
- Æchmophorus major*, ii. 202.
- Ægialitis cantiana*, ii. 174.
- *collaris*, ii. 173.
- *falklandica*, ii. 172.
- Afeytado*, ii. 114.
- Agachona*, ii. 181.
- Agelæus flavus*, i. 98.
- *ruficapillus*, i. 99.
- *thilius*, i. 97.
- Agriornis leucurus*, i. 112.
- *maritima*, i. 112.
- *striata*, i. 111.
- Aiaiai*, ii. 106.
- Ajaja rosea*, ii. 114, 115, 116.
- Alas-amarillas*, ii. 163.
- Alectrurus psalurus*, i. 123.
- *risorius*, i. 123.
- *tricolor*, i. 122.

Allied Saltator, i. 41.
 — *Woodpecker*, ii. 20.
Alma do gato, ii. 37.
Alonzito, i. 167.
Alonzo Garsia, i. 167.
Aluco flammeus, ii. 48.
Amazon, Blue-fronted, ii. 47.
 —, *Vinaceous*, ii. 46.
Amazonian Kingfisher, ii. 27.
Amblycercus solitarius, i. 72.
Amblypterus anomalus, ii. 16.
Amblyrhamphus holosericeus, i. 101.
 — *ruber*, i. 101.
American Dabchick, ii. 205.
 — *Golden Plover*, ii. 170.
 — *Oyster-catcher*, ii. 176.
 — *Waterhen*, ii. 156.
Anabates gutturalis, i. 197.
 — *unirufus*, i. 195.
Anabazenops, Oily-green, i. 198.
 — *oleagineus*, i. 198.
 — *rufo-superciliatus*, i. 198.
Anæretes flavirostris, i. 142.
 — *parulus*, i. 141.
Anas bahamensis, ii. 135.
 — *brasiliensis*, ii. 133.
 — *chiloënsis*, ii. 135.
 — *cyanoptera*, ii. 130.
 — *flavirostris*, ii. 131.
 — *maculirostris*, ii. 131.
 — *melanocephala*, ii. 130.
 — *oxyura*, ii. 134.
 — *peposaca*, ii. 137.
 — *platalea*, ii. 136.
 — *spinicauda*, ii. 134.
Andean Flamingo, ii. 119.
 — *Goose*, ii. 122.
Angela Humming-bird, ii. 5.
Angelito de las Animas, i. 118.
Ani, Black, ii. 31.
Antarctic Rail, ii. 148.
Antenor unicinctus, ii. 63.
Anthus correndera, i. 17, 19, 54, 80.
 — *furcatus*, i. 19.
 — *pratensis*, i. 17.
 — *rufus*, i. 17.
Antrostomus longirostris, ii. 14.
 — *parvulus*, ii. 14.
Anumbé roxo, i. 195.
Añumbi, i. 189, 190, 191.
Anumbius acuticaudatus, i. 31, 67, 88, 96, 133, 187, 189.
 — *striaticollis*, i. 194.
Aphobus chopi, i. 108.
Aptenodytes demersa, ii. 206.
Aramides gigas, ii. 150.
 — *nigricans*, ii. 150.
 — *rhytirhynchus*, ii. 149.
 — *ypecaha*, ii. 150.
Aramus scolopaceus, ii. 159.
Ardea cærulea, ii. 99.
 — *candidissima*, ii. 98, 99.
 — *cocoi*, ii. 93, 94.
 — *egretta*, ii. 98, 99, 105.
 — *gardeni*, ii. 105.
 — *leuce*, ii. 98.
 — *marmorata*, ii. 104.

— nivea, ii. 99.
— sibilatrix, ii. 100.
Ardetta involucris, ii. 93, 101, 227.
Argentine Blackbird, i. 4.
— *Cow-bird*, i. 72.
— *Flamingo*, ii. 117.
Arremon orbignii, i. 41.
Arundinicola flaviventris, i. 137.
— *leucocephala*, i. 122.
Ashy Tyrant, i. 121.
Ashy-black Tyrant, i. 126.
Ashy-headed Goose, ii. 124.
Asio accipitrinus, ii. 49.
— *brachyotus*, ii. 49.
Asturina pucherani, ii. 58.
— *rutilans*, ii. 63.
— *unicincta*, ii. 63.
Athene cunicularia, ii. 52.
Atticora cyanoleuca, i. 33, 166.
— *fucata*, i. 35.
Aulanax latirostris, i. 121.
Avestruz petizo, ii. 219.
Aymara Dove, ii. 142.
— *Parrakeet*, ii. 46.
Azara's Sand-Plover, ii. 173.
— *Tanager*, i. 40.
— *Trogon*, ii. 29.
Azure Jay, i. 110.

Bahama Duck, ii. 135.
— *Pintail*, ii. 135.
Bailarin, ii. 71.
Baird's Sandpiper, ii. 184, 185.
Banduria, ii. 112.
Bank Parrot, ii. 41.
— *Swallow*, i. 33.
Barn-Owl, Common, ii. 48.
Barred Upland Goose, ii. 123.
Bartramia longicauda, ii. 189.
Bartram's Sandpiper, ii. 189.
Basileuterus auricapillus, i. 21.
— *vermivorus*, i. 21.
Batitú, ii. 189.
Bay-winged Cow-bird, i. 95.
Bécard, White-winged, i. 162.
Bernicla antarctica, ii. 123.
— *dispar*, ii. 123.
— *magellanica*, ii. 123.
— *melanoptera*, ii. 122.
— *poliocephala*, ii. 124.
Bienteveo Tyrant, i. 147.
Bittern, Marbled Tiger-, ii. 104.
Black Ani, ii. 31.
— *Duck*, ii. 137.
— *Rail*, ii. 149.
— *Vulture*, ii. 89.
Black-and-chestnut Warbling Finch, i. 49.
Black-and-yellow Thickbill, i. 43.
Black-and-yellow-crested Tyrant, i. 157.
Black-billed Cuckoo, ii. 38.
Blackbird, Argentine, i. 4.
Black-crowned Tyrant, i. 115.
Black-faced Ibis, ii. 110.
Black-headed Duck, ii. 130.
— *Finch*, i. 45.
— *Reed-Wren*, i. 13.

— *Siskin*, i. 64.
 — *Thrush*, i. 4.
 — *Tyrant*, i. 157.
Black-necked Tanager, i. 37.
Black-tailed Skimmer, ii. 193.
Black-winged Dove, ii. 142.
Blackish Finch, i. 54.
 — *Tyrant*, i. 141.
Blue Heron, ii. 99.
 — —, *Little*, ii. 101.
 — *Tanager*, i. 39.
Blue-and-yellow Tanager, i. 39.
Blue-billed Tyrant, i. 127.
Blue-fronted Amazon, ii. 47.
Blue-winged Teal, ii. 130.
Boat-tail, Chopi, i. 108.
Boie's Woodpecker, ii. 17.
Bolborhynchus aymara, ii. 46.
 — *monachus*, ii. 43.
Bolborhynchus rubrirostris, ii. 46.
Bonaparte's Sandpiper, ii. 185.
Boyero, i. 101, 116.
Brazilian Cormorant, ii. 91.
 — *Lochmias*, i. 174.
 — *Stilt*, ii. 179.
 — *Teal*, ii. 133.
Bridges's Wood-hewer, i. 199.
Bright-cheeked Grebe, ii. 204.
Broad-billed Tyrant, i. 136.
Brown Buzzard, ii. 63.
 — *Cinclodes*, i. 172.
 — *Cuckoo*, ii. 35.
 — *Gallito*, i. 207.
 — *House-Wren*, i. 13.
 — *Martin*, i. 35.
 — *Pintail*, ii. 134.
 — *Tinamou*, ii. 207.
Brown-capped Wood-singer, i. 21.
Brown-crested Spine-tail, i. 177.
Brown-fronted Spine-tail, i. 178.
Brown-headed Wood-bird, i. 23.
Brush-loving Fly-snapper, i. 12.
Buarremon citrinellus, i. 41.
 — (*Atlapetes*) *citrinellus*, ii. 223.
Bubo crassirostris, ii. 50.
 — *magellanicus*, ii. 50, 51.
 — *virginianus*, ii. 50.
Bucco chacuru, ii. 30.
 — *maculatus*, ii. 30.
 — *striatipectus*, ii. 30.
Buff-breasted Sandpiper, ii. 190.
Burmeister's Cariama, ii. 162.
 — *Humming-bird*, ii. 2.
Burrito, ii. 150.
Burrowing Owl, ii. 52.
 — *Parrot*, ii. 41.
Bush-bird, Larger, i. 203.
 —, *Leach's*, i. 202.
 —, *Red-capped*, i. 204.
 —, *Slaty-blue*, i. 204.
Buteo albicaudatus, ii. 59, 61, 62.
 — *erythronotus*, ii. 62.
 — *fuliginosus*, ii. 60.
 — *macropterus*, ii. 58.
 — *melanoleucus*, ii. 64.
 — *obsoletus*, ii. 59.

— oxypterus, ii. 59.
 — pterocles, ii. 61.
 — swainsoni, ii. 59, 60.
 — tricolor, ii. 62.
 — unicolor, ii. 60.
 Butorides cyanurus, ii. 101.
 — striata, ii. 101.
Buzzard, Brown, ii. 63.
 —, *One-banded*, ii. 63.
 —, *Red-backed*, ii. 62.
 —, *Swainson's*, ii. 59.
 —, *White-tailed*, ii. 61.

Cabanis's Tyrant, i. 128.
Cabeza amarilla, i. 98.
Caburé, ii. 52.
Cachalote, i. 195.
 —, *White-throated*, i. 197.
Cuchila, i. 18.
 — *Pipit*, i. 17.
Cactus Woodpecker, ii. 19.
Cairina moschata, ii. 129.
Calandria, i. 5.
 — *blanca*, i. 9.
 — *de las tres colas*, i. 9.
 — *Mocking-bird*, i. 5.
Calidris arenaria, ii. 186.
Calliperidia angelæ, ii. 5.
 — *furcifera*, ii. 1, 5, 8.
Calodromas elegans, ii. 209, 214.
Caminante, i. 166.
Campephilus boiæi, ii. 17, 18.
 — *pileatus*, ii. 18.
 — *schulzi*, ii. 18.
Campestre, ii. 24.
Campias frontalis, ii. 20.
Campylopterus inornatus, ii. 5, 6.
Capito maculatus, ii. 30.
Caprimulgus europæus, ii. 14.
 — *parvulus*, ii. 14.
Caracara, ii. 82.
Carancho, ii. 74, 82.
 — *Carrion-Hawk*, ii. 81.
Carau, ii. 160, 161.
Cardinal Finch, i. 47.
 — —, *Lesser*, i. 48.
 —, *Yellow*, i. 55.
Carduelis atrata, i. 65.
Cariama burmeisteri, ii. 162.
 —, *Burmeister's*, ii. 162.
 —, *Crested*, ii. 161.
 — *cristata*, ii. 161.
Carpintero, ii. 24.
Carrion-Hawk, Carancho, ii. 81.
 —, *Chimango*, ii. 74.
Casera, i. 167.
Caserita, i. 166.
Casiornis rubra, i. 163.
Cassicus solitarius, i. 72.
Cassin's Tern, ii. 196.
Cassique, Solitary, i. 72.
Catamenia analis, i. 57.
 — *inornata*, i. 57.
Catharista atrata, ii. 89.
Cathartes atratus, ii. 89.
 — *aura*, ii. 89.

— foetans, ii. 89.
Catita, ii. 44.
 — *de las sierras*, ii. 46.
Cayenne Lapwing, ii. 165, 166.
Centrites niger, i. 134.
Cerchneis cinnamomina, ii. 70.
Ceryle amazona, ii. 26, 27, 28.
 — *americana*, ii. 27.
 — *stellata*, ii. 26.
 — *torquata*, ii. 26, 27.
Chacuru, ii. 30.
Chætocercus bombus, ii. 2.
 — *burmeisteri*, ii. 2.
Chajá, ii. 120.
Chamæpelis talpacoti, ii. 144.
Charadrius azaræ, ii. 173.
 — *collaris*, ii. 173.
 — *dominicus*, ii. 170.
 — *falklandicus*, ii. 172.
 — *fulvus americanus*, ii. 170.
 — *modestus*, ii. 171.
 — *totanirostris*, ii. 174.
 — *virginianus*, ii. 170.
 — *virginicus*, ii. 170.
Chat-like Tyrant, i. 120.
Chauna chavaria, ii. 119.
 — *derbiana*, ii. 119.
Cheese-bird, Rufous, i. 163.
Chestnut Cuckoo, ii. 36.
 — *Wood-hewer*, i. 201.
Chestnut-shouldered Hang-nest, i. 107.
Chicli, i. 179.
Chilian Eagle, ii. 64.
Chiloe Wigeon, ii. 135.
Chimango, ii. 74.
 — *Carrion-Hawk*, ii. 74.
Chingolo, i. 58.
 — *grande*, i. 164.
 — *Song-Sparrow*, i. 58.
Chin-spotted Tyrant, i. 133.
Chipiu pardo y canela, i. 45.
Chiriví, ii. 136.
Chiroxiphia caudata, i. 161.
Chisel-bill, i. 101.
Chivi Greenlet, i. 22.
Chloephaga dispar, ii. 123.
 — *magellanica*, ii. 123.
 — *melanoptera*, ii. 122.
 — *poliocephala*, ii. 124.
Chloroceryle amazona, ii. 27.
 — *americana*, ii. 27.
Chloronerpes affinis, ii. 20.
 — *aurulentus*, ii. 21.
 — *frontalis*, ii. 20.
 — *maculifrons*, ii. 20.
 — *rubiginosus*, ii. 21.
 — *tucumanus*, ii. 21, 223.
 — (Carpenter) *frontalis*, ii. 223.
Chlorostilbon aureiventris, ii. 9.
 — *phaethon*, ii. 9, 229.
 — *splendidus*, ii. 1, 6, 9.
Chochi, ii. 35.
Chocolate Dove, ii. 144.
 — *Tyrant*, i. 112.
Chocoyno, i. 4.
Choliba, ii. 51.

— *Owl*, ii. 51.
Chopi, i. 108.
— *Boat-tail*, i. 108.
Chordeiles virginianus, ii. 13.
Chorlito de invierno, ii. 172.
Chorlo, i. 113; ii. 170.
— *canela*, ii. 174.
— *solo*, ii. 189.
Chrysomitris atrata, i. 65.
— *barbata*, i. 64.
— *icterica*, i. 64.
— *magellanica*, i. 64.
Chrysomus frontalis, i. 99.
Chrysoptilus chlorozostus, ii. 21.
— *cristatus*, ii. 21, 228.
— *melanochlorus*, ii. 21.
Chrysotis æstiva, ii. 47.
— *amazonica*, ii. 47.
— *vinacea*, ii. 46.
Chrysuronia chrysur, ii. 8.
— *ruficollis*, ii. 8.
Chueké, ii. 216.
Chunga burmeisteri, ii. 162.
Chuñia, ii. 162.
Churinche, i. 152.
Ciconia maguari, ii. 99, 106.
Cinclodes bifasciatus, i. 173.
—, *Brown*, i. 172.
— *fuscus*, i. 172.
— *vulgaris*, i. 172.
—, *White-winged*, i. 173.
Cinclus schulzi, i. 11, ii. 223.
Cinereous Cuckoo, ii. 38.
— *Harrier*, ii. 57.
— *Plover*, ii. 173.
— *Tinamou*, ii. 210.
— *Tyrant*, i. 128.
Cinnamomeous Kestrel, ii. 69.
Circus cinereus, ii. 57.
— *macropterus*, ii. 58.
— *maculosus*, ii. 58.
— *megaspilus*, ii. 58.
Cistothorus fasciolatus, i. 16.
— *platensis*, i. 15.
Cnipolegus anthracinus, i. 126, 127.
— *aterrimus*, i. 126.
— *cabanisi*, i. 128; ii. 229.
— *cinereus*, i. 128; ii. 229.
— *cyanirostris*, i. 127.
— *hudsoni*, i. 126, 131.
Coccyborus glaucocæruleus, i. 44.
Coccyzus americanus, ii. 37.
— *cinereus*, ii. 38.
— *melanocoryphus*, i. 81; ii. 38.
— *pumilus*, ii. 39.
— *seniculus*, ii. 38.
Cock, Little, i. 206.
Cock-tailed Tyrant, i. 122.
Cocoi Heron, ii. 93.
Cola estraña, i. 123.
Colaptes agricola, ii. 22, 24.
— *australis*, ii. 24.
— *campestris*, i. 82; ii. 24.
— *leucofrenatus*, ii. 21, 228.
— *longirostris*, ii. 23, 223.
— *pitius*, ii. 24.

— pura, ii. 24.
— rupicola, ii. 23.
Colegial, i. 131.
Columba livia, i. 83.
— maculosa, ii. 140.
— picazuro, ii. 139, 140.
Columbina aurisquamata, ii. 142, 228.
Columbula picui, ii. 39, 143.
Come-palo, ii. 19.
Cometes sparganurus, ii. 3.
Common Barn-Owl, ii. 48.
— *Jacana*, ii. 163.
— *Miner*, i. 165.
— *Rhea*, ii. 216.
— *Seed-Snipe*, ii. 176.
Condor, Great, ii. 90.
Contopus brachyrhynohus, i. 155; ii. 223.
— brachytarsus, i. 156.
Contramaestre gaviero, i. 22.
— *pardo verdoso, corona amarilla*, i. 146.
Conurus acuticaudatus, ii. 42, 228.
— aymara, ii. 46.
— bruniceps, ii. 46.
— fugax, ii. 42.
— glaucifrons, ii. 42, 228.
— hilaris, ii. 43, 222.
— mitratus, ii. 43.
— molinæ, ii. 43.
— murinus, ii. 43.
— patachonicus, i. 25; ii. 41.
— patagonus, ii. 41.
— rubrirostris, ii. 46.
Coot, Red-fronted, ii. 157.
—, *Red-gartered*, ii. 157.
—, *Yellow-billed*, ii. 158.
Corethrura leucopyrrha, ii. 154.
Cormorant, Brazilian, ii. 91.
Correndera, La, i. 17.
Coryphistera alaudina, i. 188; ii. 229.
—, *Lark-like*, i. 188.
Coryphospingus cristatus, i. 48.
— pusillus, i. 48.
Coscoroba Candida, ii. 126.
— *Swan*, ii. 126.
Cotile ruficollis, i. 36.
Cotorra, ii. 44.
Coturniculus manimbe, i. 60.
— peruanus, i. 60.
Cotyle fucata, i. 35.
— leucorrhoea, i. 31.
— pyrrhonota, i. 30.
— tapera, i. 26.
Coucou, ii. 38.
Courlan, Southern, ii. 159.
Cow-bird, Argentine, i. 72.
—, *Bay-winged*, i. 95.
—, *Screaming*, i. 86.
Crake, Marked, ii. 155.
—, *Red-and-white*, ii. 154.
—, *Spot-winged*, ii. 155.
Crane-Hawk, Grey, ii. 67.
Crax alector, ii. 145, 146.
— sclateri, ii. 145.
Creepers, Patagonian Earth-, i. 170.
—, *Red-tailed Earth-*, i. 171.
—, *Warbling Earth-*, i. 171.

Creole Duck, ii. 129.
Crested Cariama, ii. 161.
 — *Duck*, ii. 128.
 — *Oven-bird*, i. 170.
 — *Screamer*, ii. 119.
Crispin, i. 4; ii. 35.
Crotophaga ani, ii. 31, 34.
Crowned Harpy, ii. 66.
Crypturus cinereus, ii. 207, 208.
Crypturus obsoletus, ii. 207, 208.
 — *tataupa*, ii. 208.
Cuckoo, Black-billed, ii. 38.
 —, *Brown*, ii. 35.
 —, *Chestnut*, ii. 36.
 —, *Cinereous*, ii. 38.
 —, *Dwarf*, ii. 39.
 —, *Guira*, ii. 32.
 —, *Yellow-billed*, ii. 37.
Cuervo, ii. 90.
Culicivora boliviana, i. 12.
 — *dumicola*, i. 12.
 — *stenura*, i. 139.
Curahí-remimbí, ii. 100.
Curassow, Sclater's, ii. 145.
Curved-bill Rush-bird, i. 191.
Cyanocorax azureus, i. 110.
 — *cæruleus*, i. 110.
 — *chrysops*, i. 110.
 — *pileatus*, i. 110.
 — *tucumanus*, i. 110; ii. 223.
Cyanotis azaræ, i. 142, 144, 175.
Cybernetes yetapa, i. 124.
Cyclorhis altirostris, i. 24.
 — *ochrocephala*, i. 23.
 — *viridis*, i. 23, 24.
Cygnus coscoroba, ii. 120.
 — *nigricollis*, ii. 124, 126.

Dabchick, American, ii. 205.
Dafila bahamensis, ii. 135.
 — *spinicauda*, ii. 134.
Dark-backed Tanager, i. 37.
Dark-crested Finch, i. 48.
Dark Guan, ii. 146.
 — *Night-Heron*, ii. 105.
Dark-tailed Henicornis, i. 173.
Darwin's Rhea, ii. 219.
 — *Tinamou*, ii. 213.
Deep-billed Greenlet-Shrike, i. 24.
De Filippi's Marsh-Starling, i. 105.
Degollado, i. 106.
Dendrobates cactorum, ii. 19.
Dendrocolaptes picumnus, i. 199.
Dendrocygna fulva, ii. 126, 128.
 — *major*, ii. 127.
 — *viduata*, ii. 128.
Dicholophus burmeisteri, ii. 162.
 — *cristatus*, ii. 161.
Diplopterus galeritus, ii. 35.
 — *nævius*, ii. 35.
Dipper, Schulz's, i. 11.
Diuca Finch, i. 55.
 — —, *Lesser*, i. 56.
 — *grisea*, i. 55.
 — *minor*, i. 56.
 — *vera*, i. 55.

Domestic Martin, i. 25.
Dominican Gull, ii. 197.
 — *Tyrant*, i. 117.
Donacobius atricapillus, i. 13.
 — *brasiliensis*, i. 13.
Donacospiza albifrons, i. 49.
D'Orbigny's Seed-Snipe, ii. 178.
 — *Spine-tail*, i. 183.
 — *Tanager*, i. 41.
Dormilon, ii. 12, 183.
Dove, Aymara, ii. 142.
 —, *Black-winged*, ii. 142.
 —, *Chocolate*, ii. 144.
 —, *Little Turtle-*, ii. 143.
 —, *Picui*, ii. 143.
 —, *Spotted*, ii. 141.
 —, *Talpacoti*, ii. 144.
Drymornis bridgesi, i. 199.
Dryocopus atriventris, ii. 18.
 — *erythropterus*, ii. 18.
 — *lineatus*, ii. 18.
Duck, Bahama, ii. 135.
 —, *Black*, ii. 137.
 —, *Black-headed*, ii. 130.
 —, *Creole*, ii. 129.
 —, *Crested*, ii. 128.
 —, *Fulvous Tree-*, ii. 126.
 —, *Muscovy*, ii. 129.
 —, *Red*, ii. 137.
 —, *Rosy-billed*, ii. 137.
 —, *Rusty Lake*, ii. 138.
 —, *White-faced Tree-*, ii. 128.
 —, *White-winged Lake-*, ii. 138.
 —, *Whistling*, ii. 127.
Duerme-duerme, ii. 12.
Dusky Thrush, i. 1.
Dwarf Cuckoo, ii. 39.

Eagle, Chilian, ii. 64.
 —, *Grey*, ii. 64.
Eared Wren, i. 15.
Earth-creeper, Patagonian, i. 170.
 —, *Red-tailed*, i. 171.
 —, *Warbling*, i. 171.
Egret, Snowy, ii. 99.
 —, *White*, ii. 98.
Elainea albiceps, i. 145.
 — *grata*, i. 146; ii. 223.
 — *modesta*, i. 145.
 — *strepera*, i. 145; ii. 223.
 — *viridicata*, i. 146.
Elanus leucurus, ii. 71, 72.
El Campestre, ii. 24.
 — *Chocolate*, i. 113.
 — *Mitu*, ii. 145.
 — *Yacúhú*, ii. 146.
Emberiza hypochondria, i. 60.
 — *luctuosa*, i. 54.
Emberizoides macrurus, i. 63.
 — *sphenurus*, i. 63.
Embernagra macrura, i. 63.
 — *olivascens*, i. 63.
 — *platensis*, i. 62, 63; ii. 50.
Empidagra suiriri, i. 146.
Empidochanes argentinus, i. 155.
Empidonax bimaculatus, i. 155.

— brunneus, i. 155.
Empidonomus aurantio-atrocristatus, i. 157.
Engyptila chalcauchenia, ii. 144.
Erismatura dominica, ii. 138.
— ferruginea, ii. 138.
Erythrocnema uncinata, ii. 63.
Espatula, ii. 137.
Espinero, i. 189.
Esquimo Whimbrel, ii. 192.
Eudromia elegans, ii. 214.
Eudromias modesta, ii. 171.
Euphonia aureata, i. 37.
— chlorotica, i. 37.
— nigricollis, i. 37.
Euscarthmus gularis, i. 136.
— margaritaceiventris, i. 136.
Euxenura maguari, ii. 106, 107.
Eyebrowed Spine-tail, i. 178.
— *Tern*, ii. 197.

Falcinellus guarauna, ii. 109.
— igneus, ii. 109.
Falco circumcinctus, ii. 73.
— communis, ii. 67,
— femoralis, ii. 69.
— fusco-cærulescens, ii. 69, 70.
— peregrinus, ii. 67.
— punctipennis, ii. 73.
— sparverius, ii. 99.
Falcon, Peregrine, ii. 67.
—, *Spot-winged*, ii. 73.
Fierce Tyrant, i. 156.
Finch, Black-and-Chestnut Warbling, i. 49.
—, *Black-headed*, i. 45.
—, *Blackish*, i. 54.
—, *Cardinal*, i. 47.
—, *Dark-crested*, i. 48,
—, *Diuca*, i. 55.
—, *Gay's*, i. 52.
—, *Glaucous*, i. 44.
—, *Grey-headed*, i. 53.
—, *Indigo*, i. 43.
—, *Lesser Cardinal*, i. 48.
—, — *Diuca*, i. 56.
—, *Long-tailed Reed-*, i. 49.
—, *Many-coloured Ground-*, i. 61.
—, *Marsh-*, i. 45.
—, *Meadow Seed-*, i. 71.
—, *Misto Seed-*, i. 69.
—, *Mourning*, i. 54.
—, *Olive Ground-*, i. 63.
—, *Plain-coloured*, i. 57.
—, *Pretty Warbling*, i. 51.
—, *Prince Max's*, i. 44.
—, *Red-backed*, i. 53.
—, *Red-billed Ground-*, i. 62.
—, *Red-browed Warbling*, i. 50.
—, *Red-crested*, i. 48.
—, *Red-flanked Warbling*, i. 51.
—, *Red-stained*, i. 57.
—, *Ringed Warbling*, i. 51.
—, *Screaming*, i. 46.
—, *Slaty*, i. 53.
—, *Wedge-tailed Ground-*, i. 63.
—, *White-and-grey Warbling*, i. 52.
—, *White's Ground-*, i. 64.

—, *White's Warbling*, i. 50.
 —, *Yellow Seed*, i. 69.
Firewood Gatherer, i. 189.
Flamingo, Andean, ii. 119.
 —, *Argentine*, ii. 117.
Flat-billed Wood-hewer, i. 199.
Flauta del Sol, ii. 100.
Florida cærulea, ii. 99.
Fluvicola albiventris, i. 121.
Fly-snapper, Brush-loving, i. 12.
Forked-tail Pipit, i. 19.
Fork-tailed Goatsucker, ii. 15.
Four-coloured Tanager, i. 40.
Fulica armillata, ii. 157.
 — leucoptera, ii. 158.
 — leucopyga, ii. 157.
Fulvous Tree-Duck, ii. 126.
Furnarius figulus, i. 170.
 — rufus, i. 27, 119, 167; ii. 80.
 — tricolor, i. 170; ii. 223.

Gallina ciega, ii. 12.
Gallinago paraguaiæ, ii. 178.
Gallinazo, ii. 90.
Gallineta, ii. 151.
Gallinula galeata, ii. 156.
Gallito, i. 206.
 —, *Brown*, i. 207.
Gambetta flavipes, ii. 187.
 — melanoleuca, ii. 186.
Ganso, ii. 126.
Garza jaspeada, ii. 104.
Garzetta candidissima, ii. 99.
Gaviota, ii. 199.
Gay's Finch, i. 52.
Geobamon rufipennis, ii. 166, 226.
Geositta cucularia, i. 33, 68, 165, 171.
 — tenuirostris, i. 165.
Geothlypis velata, i. 20.
Geranoaëtus melanoleucus, ii. 64.
Geranospiza cærulescens, ii. 67.
Geranospizias cærulescens, ii. 67.
Geronticus melanopis, ii. 110.
Giant Humming-bird, ii. 4.
Glaucidium nanum, ii. 56.
Glaucous Finch, i. 44.
Glittering Humming-bird, ii. 9.
Glyphorhynchus cuneatus, i. 199.
Goatsucker, Fork-tailed, ii. 15.
 —, *Little*, ii. 14.
 —, *Nacunda*, ii. 12.
 —, *Short-winged*, ii. 16.
 —, *White-banded*, ii. 14.
Godwit, Hudsonian, ii. 191.
Gold-backed Woodpecker, ii. 21.
Golden-crowned Wood-singer, i. 21.
Golden Plover, American, ii. 170.
Golden-tailed Humming-bird, ii. 8.
Golondrina domestica, i. 26.
Goose, Andean, ii. 122.
 —, *Ashy-headed*, ii. 124.
 —, *Barred Upland*, ii. 123.
Great Condor, ii. 90.
 — Grebe, ii. 202.
 — Tern, ii. 195.
 — Tinamou, ii. 209.

Great-billed Tern, ii. 194.
Greater Yellowshank, ii. 186.
Grebe, Bright-cheeked, ii. 204.
 —, *Great*, ii. 202.
 —, *Rolland's*, ii. 204.
 —, *Thick-billed*, ii. 206.
Green Parrakeet, ii. 43.
Greenish Tyrant, i. 146.
Greenlet, Chivi, i. 22.
Greenlet-Shrike, Deep-billed, i. 24.
Greenlet, Ochre-headed, i. 23.
Grey-capped Gull, ii. 201.
Grey Crane-Hawk, ii. 67.
 — *Eagle*, ii. 64.
 — *Teal*, ii. 131.
Grey-eyed Tyrant, i. 147.
Grey-headed Finch, i. 53.
Greyish Saltator, i. 42.
Ground-Finch, Many-coloured, i. 61.
 —, *Olive*, i. 63.
 —, *Red-billed*, i. 62.
 —, *Wedge-tailed*, i. 63.
 —, *White's*, i. 64.
Guan, Dark, ii. 146.
 —, *Hoary-necked*, ii. 147.
 —, *White-headed*, ii. 146.
Gubernatrix cristatella, i. 55.
Guira Cuckoo, ii. 32.
 — *piririgua*, ii. 32.
Guira-pitá, i. 153.
Guira-yetapá, i. 123.
Guiraca cyanea, i. 43.
 — — *argentina*, i. 43.
 — *glaucocærulea*, i. 44.
Gull, Dominican, ii. 197.
 —, *Grey-capped*, ii. 201.
 —, *Spot-winged*, ii. 198.

Habia de bañado, i. 62.
 — *verde*, i. 24.
Habrura minima, i. 138.
 — *pectoralis*, i. 138.
Hæmatopus ater, ii. 176.
 — *palliatus*, ii. 176.
Hæmophila whitii, i. 64.
Half-black Siskin, i. 65.
Haliaëtus melanoleucus, ii. 64.
Haliæus brasiliæus, ii. 91.
Hang-nest, Chestnut-shouldered, i. 107.
Hapalocercus flaviventris, i. 80, 137.
Harpiprion cærulescens, ii. 112.
Harpy, Crowned, ii. 66.
Harpyhaliaëtus coronatus, ii. 66.
Harrier, Cinereous, ii. 57.
 —, *Long-winged*, ii. 58.
Hawk, Carancho Carrion-, ii. 81.
 —, *Chimango Carrion-*, ii. 74.
 —, *Grey Crane-*, ii. 67.
 —, *Pucheran's*, ii. 58.
 —, *Sociable Marsh-*, ii. 72.
Heleothreptus anomalus, ii. 16.
Heliomaster angelæ, ii. 5, 229.
 — *furcifer*, ii. 5.
Hemiiërax circumcinctus, ii. 73.
Hemiprocne zonaris, ii. 11.
Henicornis, Dark-tailed, i. 173.

— phoenicurus, i. 173.
Herodias egretta, ii. 98.
Heron, Blue, ii. 99.
—, *Cocoi*, ii. 93.
—, *Dark Night-*, ii. 105.
—, *Little Blue*, ii. 101.
—, *Variegated*, ii. 101.
—, *Whistling*, ii. 100.
Heteronetta melanocephala, ii. 130.
Heterospizias meridionalis, ii. 63.
Himantopus brasiliensis, ii. 178, 179.
— nigricollis, ii. 179.
Hirundinea bellicosa, i. 151.
Hirundo leucorrhoea, i. 30.
Hoary-necked Guan, ii. 147.
Hobby, Orange-chested, ii. 69.
Homorus gutturalis, i. 197.
— lophotes, i. 195.
— unirufus, i. 195.
Hornero, i. 167.
House-Sparrow, Yellow, i. 66.
House-Wren, Brown, i. 13.
Hudsonian Godwit, ii. 191.
Hudson's Black Tyrant, i. 126.
— *Spine-tail*, i. 186.
Humming-bird, Angela, ii. 5.
—, *Burmeister's*, ii. 2.
—, *Giant*, ii. 4.
—, *Glittering*, ii. 9.
—, *Golden-tailed*, ii. 8.
—, *Red-throated*, ii. 8.
—, *Sappho*, ii. 3.
—, *Violet-eared*, ii. 3.
—, *White-breasted*, ii. 7.
—, *White-sided*, ii. 1.
—, *White-throated*, ii. 7.
Hydropsalis furcifera, ii. 15.
— psalurus, ii. 15.
— torquata, ii. 15.
Hylocharis bicolor, ii. 9.
— sapphirina, ii. 1, 6, 8.
Hylophilus pœcilotis, i. 23.
Hypotriorchis femoralis, ii. 69.

Ibis albicollis, ii. 110.
—, *Black-faced*, ii. 110.
— cærulescens, ii. 112.
— chalconoptera, ii. 109.
— falcinellus, ii. 109.
— infuscata, ii. 113.
— plumbea, ii. 112.
—, *Plumbeous*, ii. 112.
—, *Whispering*, ii. 113.
—, *White-faced*, ii. 109.
—, *Wood-*, ii. 108.
Ibycter chimango, ii. 74.
Icterus-pyrrhopterus, i. 73, 107.
Indigo Finch, i. 43.

Jabiru, ii. 106.
Jacana, Common, ii. 163.
Jackass Penguin, ii. 206.
Jassana, ii. 163.
Jay, Azure, i. 110.
—, *Urraca*, i. 110.

Keanché, ii. 82.
Kestrel, Cinnamomeous, ii. 69.
Kingfisher, Amazonian, ii. 27.
 —, *Little*, ii. 27.
 —, *Ringed*, ii. 26.
Kite, White-tailed, ii. 71.

Lake-Duck, Rusty, ii. 138.
 —, *White-winged*, ii. 138.
Lanius ludovicianus excubitoroides, ii. 60.
Lapwing, Cayenne, ii. 165, 166.
Larger Bush-bird, i. 203.
Lark-like Coryphistera, i. 188.
Larus cirrhocephalus, ii. 198, 201.
 — *dominicanus*, ii. 197.
 — *glaucodes*, ii. 198.
 — *maculipennis*, ii. 198, 201, 202.
 — *serranus*, ii. 198.
 — *vociferus*, ii. 197.
La Saria, ii. 161.
Leach's Bush-bird, i. 202.
Leaf-scraper, Spiny, i. 174.
Lechuzon, ii. 49.
Leistes anticus, i. 102.
 — *superciliaris*, i. 100.
Leñatero, i. 31, 189.
Lepidocolaptes atripes, i. 201.
Leptasthenura ægithaloides, i. 177; ii. 19.
 — *fuliginiceps*, i. 177.
Leptopogon tristis, i. 144.
Leptoptila chalcauchenia, ii. 144.
 — *megalura*, ii. 144.
Lesser Cardinal Finch, i. 48.
 — *Diuca Finch*, i. 56.
 — *Yellowshank*, ii. 187.
Leucippus chionogaster, ii. 7.
Leucochloris albicollis, ii. 7.
Leuconerpes candidus, ii. 23.
Lichenops erythropterus, i. 129.
 — *perspicillatus*, i. 124, 126, 127, 129.
Limnornis curvirostris, i. 185, 191.
Limosa hæmastica, ii. 191.
 — *hudsonica*, ii. 191.
 — *lapponica*, ii. 191.
Lindo, i. 38.
 — *azul y oro cabeza celeste*, i. 37.
Little Blue Heron, ii. 101.
 — *Brown Tyrant*, i. 151.
 — *Cock*, i. 206.
 — *Goatsucker*, ii. 14.
 — *Kingfisher*, ii. 27.
 — *Turtle-Dove*, ii. 143.
 — *Waterhen*, ii. 156.
Lochmias, Brazilian, i. 174.
 — *nematura*, i. 174.
Long-billed Woodpecker, ii. 23.
Long-tailed Manikin, i. 161.
 — *Reed-Finch*, i. 49.
 — *Tyrant*, i. 139.
Long-winged Harrier, ii. 58.
Lophospingus pusillus, i. 48.
Lophospiza pusilla, i. 48.

Macás cornudo, ii. 203.
Macasíto, ii. 205.
Machetornis rixosa, i. 84, 85, 131.

Magellanic Thrush, i. 3.
Maguari Stork, ii. 106.
Manduria, ii. 112.
Mandurria ó curucáu, ii. 111.
Manea-cola, i. 166.
Manikin, Long-tailed, i. 161.
Many-coloured Ground-Finch, i. 61.
— *Tyrant*, i. 142.
Marbled Tiger-Bittern, ii. 104.
Mareca chiloensis, ii. 135.
— *sibilatrix*, ii. 135.
Marked Crake, ii. 155.
Marsh-bird, Red-breasted, i. 100.
—, *Red-headed*, i. 99.
—, *Scarlet-headed*, i. 101.
—, *Yellow-breasted*, i. 102.
—, *Yellow-headed*, i. 98.
—, *Yellow-shouldered*, i. 97.
Marsh-Finch, i. 45.
Marsh-Hawk, Sociable, ii. 72.
Marsh-Starling, De Filippi's, i. 105.
—, *Patagonian*, i. 104.
Marsh-Wren, Platan, i. 15.
Martin, Brown, i. 35.
—, *Domestic*, i. 25.
—, *Purple*, i. 24.
—, *Red-backed Rock-*, i. 30.
—, *Tree-*, i. 26.
Martineta Tinamou, ii. 214.
Maximilian's Parrot, Prince, ii. 47.
Max's Finch, Prince, i. 44.
Meadow Seed-Finch, i. 71.
Megaceryle torquata, ii. 26.
Melancholy Tyrant, i. 158.
Merlo, i. 4.
Merula fuscata, i. 4.
Metopiana peposaca, ii. 137.
Metriopelia aymara, ii. 142, 228.
— *melanoptera*, ii. 142.
Milvago chimango, i. 81; ii. 57, 74, 82.
— *pezoporus*, ii. 74.
Milvulus tyrannus, i. 160; ii. 77.
— *violentus*, i. 75.
Mimus calandria, i. 5, 9.
— *modulator*, i. 5, 7.
— *patagonicus*, i. 7, 79.
— *thenca*, i. 1, 7.
— *triurus*, i. 2, 8.
Miner, Common, i. 165.
—, *Red-winged*, i. 166.
Minera, i. 33, 166.
Minto Seed-Finch, i. 69.
Mitu, El, ii. 145.
Mocking-bird, Calandria, i. 5.
—, *Patagonian*, i. 7.
—, *White-banded*, i. 8.
Modest Spine-tail, i. 183.
Molina's Parrot, ii. 43.
Molothrus badius, i. 84, 86, 87, 88, 91, 92, 93, 95, 104.
— *bonariensis*, i. 18, 72, 74, 75, 78, 79, 81, 82, 83, 84, 85, 86, 88, 91, 92, 93, 154.
— *pecoris*, i. 72, 74, 86.
— *rufoaxillaris*, i. 86, 91, 92, 93, 95, 104.
— *sericeus*, i. 72.
Molú Chueké, ii. 219.
Molybdophanes cærulescens, ii. 112.
Mourning Finch, i. 54.

Mouse-brown Tyrant, i. 119.
Muscicapara viridicata, i. 146.
Muscisaxicola macloviana, i. 133.
 — *maculirostris*, i. 134.
 — *mentalis*, i. 133, 134.
 — *rufivertex*, i. 134.
Muscovy Duck, ii. 129.
Mycteria americana, ii. 106.
Myiarchus atriceps, i. 157; ii. 223.
 — *erythrocerus*, i. 156.
 — *fasciatus*, i. 126; ii. 227.
 — *ferocior*, i. 156; ii. 223.
 — *ferox*, i. 156, 157.
 — *tyrannulus*, i. 156, 157.
Myiobius nœvius, i. 151.
Myiodynastes solitarius, i. 150.
Myiotheretes rufiventris, i. 82, 112, 114, 117; ii. 76.

Ñacundá, ii. 12.
 — *Goatsucker*, ii. 12.
Ñacurutú, ii. 51.
Nandú, ii. 216.
Narrow-billed Wood-hewer, i. 201.
Narrow-tailed Tyrant, i. 139.
Nasica gracilirostris, i. 199.
Night-Heron, Dark, ii. 105.
Noctua cunicularia, ii. 52.
Noisy Tyrant, i. 145.
Nomonyx dominicus, ii. 138.
Nothoprocta cinerascens, ii. 210.
 — *doeringi*, ii. 210, 223.
 — *pentlandi*, ii. 210, 211.
Nothura cinerascens, ii. 210.
 — *darwini*, ii. 213.
 — *maculosa*, ii. 211, 213, 214.
 — *major*, ii. 211.
 — *minor*, ii. 213.
 — *perdicaria*, ii. 213.
Numenius borealis, ii. 192.
Nycticorax gardeni, ii. 105.
 — *obscurus*, ii. 98, 99, 105.

Ochetorhynchus dumetorius, i. 170.
 — *lusciniæ*, i. 171.
 — *ruficauda*, i. 171.
Ochre-headed Greenlet-Shrike, i. 23.
Ochthœca leucophrys, i. 121.
Œnops aura, ii. 89.
Oily-green Anabazenops, i. 198.
Olive Ground-Finch, i. 63.
One-banded Buzzard, ii. 63.
Orange-chested Hobby, ii. 69.
Oreophilus ruficollis, ii. 174.
 — *totanirostris*, ii. 174.
Oreotrochilus leucopleurus, ii. 1.
Ornismya angelæ, ii. 5.
 — *aureoventris*, ii. 9.
Orospina pratensis, i. 71; ii. 223.
Ortalida canicollis, ii. 147.
 — *guttata*, ii. 147.
Ortalis canicollis, ii. 147.
Ortygometra melanops, ii. 156.
Oryzoborus maximiliani, i. 44.
Ostrich, ii. 216.
Otus brachyotus, ii. 49.
 — *palustris*, ii. 49.

Oven-bird, Crested, i. 170.
 —, *Red*, i. 167.
Owl, Burrowing, ii. 52.
 —, *Choliba*, ii. 51.
 —, *Common Barn-*, ii. 48.
 —, *Pygmy*, ii. 56.
 —, *Short-eared*, ii. 49.
 —, *Virginian*, ii. 50.
Oyster-catcher, American, ii. 176.

Pachyrhamphus albescens, i. 146.
 — *albinucha*, ii. 222.
 — *minimus*, i. 138.
 — *polychropterus*, i. 162.
Painted Snipe, ii. 182.
Pajaro ardilla, ii. 37.
 — *Negro*, i. 72.
 — *Niño*, ii. 207.
Palamedea chavaria, ii. 119.
Pampas Woodpecker, ii. 24.
Paraguay Snipe, ii. 181.
Paroaria capitata, i. 48.
 — *cucullata*, i. 47.
Parra jacana, ii. 163.
Parrakeet, Aymara, ii. 46.
 —, *Green*, ii. 43.
 —, *Red-billed*, ii. 46.
Parrot, Bank, ii. 41.
 —, *Burrowing*, ii. 41.
 —, *Molina's*, ii. 43.
 —, *Patagonian*, ii. 41.
 —, *Prince Maximilian's*, ii. 47.
 —, *Red-headed*, ii. 43.
 —, *Sharp-tailed*, ii. 42.
Parula pitiayumi, i. 20.
Patagicoenas maculosa, ii. 139.
Patagona gigas, ii. 1, 4, 5.
Patagonian Earth-Creeper, i. 170.
 — *Marsh-Starling*, i. 104.
 — *Mocking-bird*, i. 7.
 — *Parrot*, ii. 41.
 — *Sand-Plover*, ii. 172.
 — *Song-Sparrow*, i. 59.
 — *Spine-tail*, i. 186.
Pato ceja blanca, ii. 132.
 — *collar negro*, ii. 132.
 — *creollo*, ii. 129.
 — *overo*, ii. 136.
 — *picaso*, ii. 136.
 — *Portugues*, ii. 133.
 — *real*, ii. 129.
 — *silvon*, ii. 127.
Pavo del Monte, ii. 146.
Pearly-bellied Tyrant, i. 136.
Pecho-amarillo, i. 102.
 — *colorado*, i. 106.
Pectoral Sandpiper, ii. 183, 184.
Penelope boliviana, ii. 146.
 — *canicollis*, ii. 147.
 — *obscura*, ii. 146.
 — *pileata*, ii. 146.
 — *pipile*, ii. 146.
Penguin, Jackass, ii. 206.
Pentland's Tinamou, ii. 210.
Pepoazá, i. 114.
 — *Tyrant*, i. 114.

Perdiz chico, ii. 214.
— *comun*, ii. 211.
— *grande*, ii. 209.
Peregrine Falcon, ii. 67.
Peristera frontalis, ii. 144.
Petasophora crispa, ii. 3.
— *serrirostris*, ii. 3, 8.
Petrochelidon pyrrhonota, i. 26, 30.
Phacellodomus frontalis, i. 192.
— *maculipectus*, i. 194; ii. 223.
— *ruber*, i. 184, 194, 195.
— *sibilatrix*, i. 192, 195.
— *sincipitalis*, i. 192, 193; ii. 223.
— *striaticollis*, i. 194.
Phaëthusa magnirostris, ii. 194.
Phalacrocorax albiventris, ii. 92.
— *brasilianus*, ii. 91.
— *imperialis*, ii. 92.
Phalarope, Wilson's, ii. 180, 181.
Phalaropus wilsoni, ii. 180.
Pheucticus aureiventris, i. 43.
Philomachus cayanus, ii. 165.
Phimosus infuscatus, ii. 113.
Phlœocryptes melanops, i. 174.
Phloeotomus schulzi, ii. 18, 223.
Phœnicopterus andinus, ii. 117, 119, 222.
— *ignipalliatu*s, ii. 117, 119, 222.
— *jamesi*, ii. 117.
Pholeoptynx cunicularia, ii. 48, 52, 227.
Phrygilus caniceps, i. 53.
— *carbonarius*, i. 54.
— *dorsalis*, i. 53; ii. 223.
— *fruticeti*, i. 54, 55; ii. 142.
— *gayi*, i. 52.
— *ornatus*, i. 51; ii. 227.
— *rusticus*, i. 53.
— *unicolor*, i. 53.
Phylloscartes flavo-cinereus, i. 139.
— *ventralis*, i. 137.
Phytotoma rutila, i. 164.
Piaya cayana, ii. 36.
Pica de punza azul y canela, i. 37.
Picaflor cola de topacio, ii. 8.
Picazuro Pigeon, ii. 139.
Pico de Plata, i. 129.
Picolaptes angustirostris, i. 201.
Picui Dove, ii. 143.
Picus cactorum, ii. 19, 20.
— *mixtus*, ii. 19.
Pigeon, Picazuro, ii. 139.
—, *Solitary*, ii. 144.
—, *Spot-winged*, ii. 140.
Pintail, Bahama, ii. 135.
—, *Brown*, ii. 134.
Pionus maximiliani, ii. 47.
Pipile cumanensis, ii. 146.
Pipit, Cachila, i. 17.
—, *Forked-tail*, i. 19.
Pipridea melanonota, i. 37.
Piririgua, ii. 32.
Pitangus bellicosus, i. 82, 147, 154.
— *bolivianus*, i. 147.
Pitiayume, i. 20.
Pitiayumi Wood-singer, i. 20.
Piuquen, ii. 123.
Plain-coloured Finch, i. 57.

Plant-cutter, Red-breasted, i. 164.
Platalea ajaja, ii. 114, 115, 117.
Platan Marsh-Wren, i. 15.
Platyrhynchus mystaceus, i. 136.
Plegadis falcinellus, ii. 109.
 — *guarauna*, ii. 109.
Plover, American Golden, ii. 170.
 —, *Azara's Sand-*, ii. 173.
 —, *Cinereous*, ii. 173.
 —, *Patagonian Sand-*, ii. 172.
 —, *Slender-billed*, ii. 174, 175.
 —, *Winter*, ii. 171, 172.
Plumbeous Ibis, ii. 112.
 — *Rail*, ii. 150.
Podager nacunda; ii. 12.
Podiceps bicornis, ii. 202.
 — *caliparæus*, ii. 204.
 — *chilensis*, ii. 203.
 — *dominicus*, ii. 205.
 — *major*, ii. 203, 205.
 — *rollandi*, ii. 204, 205.
Podilymbus antarcticus, ii. 206.
 — *podiceps*, ii. 206.
Polioptila dumicola, i. 12.
Polyborus brasiliensis, ii. 81.
 — *tharus*, ii. 65, 74, 81.
 — *vulgaris*, ii. 81.
Poospiza albifrons, i. 49.
 — *assimilis*, i. 51.
 — *erythrophrys*, i. 50; ii. 229.
 — *lateralis*, i. 51.
 — *melanoleuca*, i. 52.
 — *nigrorufa*, i. 49.
 — *ornata*, i. 51.
 — *thoracica*, i. 51.
 — *torquata*, i. 51.
 — *whitii*, i. 50.
Porphyriops melanops, ii. 156.
Porzana leucopyrrha, ii. 154.
 — *notata*, ii. 155.
 — *salinasi*, ii. 155.
 — *spilonota*, ii. 155.
 — *spiloptera*, ii. 155, 225.
Pretty-throated Spine-tail, i. 181.
 — *Warbling Finch*, i. 51.
Prince Maximilian's Parrot, ii. 47.
 — *Max's Finch*, i. 44.
Progne chalybea, i. 25.
 — *domestica*, i. 25.
 — *furcata*, i. 24, 25.
 — *purpurea*, i. 24.
 — *tapera*, i. 26, 85.
Psarocolius unicolor, i. 108.
Pseudoleistes virescens, i. 76, 97, 102.
Psittacus amazonicus, ii. 47.
Pterocnemis darwini, ii. 219.
Pterocyanea cyanoptera, ii. 130.
Pteroptochus albicollis, i. 207.
Ptiloleptis guira, ii. 32.
Ptyonura maculirostris, i. 134.
Pucheran's Hawk, ii. 58.
Puff-bird, Spotted, ii. 30.
Purple Martin, i. 24.
Purple-and-Yellow Tanager, i. 37.
Purple-breasted Trogon, ii. 29.
Pygmy Owl, ii. 56.

Pyrrhuloxia azaræ, i. 40.
— coccinea, i. 40.
— saira, i. 40.
Pyrocephalus parvirostris, i. 152.
— rubescens, i. 138.
— rubineus, i. 111, 152; ii. 227.

Quarhi-rahi, i. 153.
Queltregue, ii. 166.
Querquedula brasiliensis, ii. 45, 133.
— cyanoptera, ii. 130.
— flavirostris, ii. 131.
— maculirostris, ii. 131.
— torquata, ii. 132.
— versicolor, ii. 131.

Rail, Antarctic, ii. 148.
—, Black, ii. 149.
—, Plumbeous, ii. 150.
—, Spotted, ii. 148.
—, Ypecaha, ii. 150.
Rallus antarcticus, ii. 148.
— maculatus, ii. 148.
— nigricans, ii. 149, 150.
— rhytirhynchus, ii. 149, 150.
— salinasi, ii. 155.

Red Duck, ii. 137.
— Oven-bird, i. 167.
— Shoveller, ii. 136.
— Thorn-bird, i. 194.

Red-and-White Crake, ii. 154.

Red-backed Buzzard, ii. 62.

— Finch, i. 53.
— Rock-Martin, i. 30.
— Tyrant, i. 134.

Red-bellied Thrush, i. 3.

Red-billed Ground-Finch, i. 62.

— Parrakeet, ii. 46.

Red-breasted Marsh-bird, i. 100.

— Plant-cutter, i. 164.

Red-browed Warbling Finch, i. 50.

Red-capped Bush-bird, i. 204.

— Tanager, i. 40.

Red-crested Finch, i. 48.

— Woodpecker, ii. 21.

Red-faced Woodpecker, ii. 18.

Red-flanked Song-Sparrow, i. 60.

— Warbling Finch, i. 51.

Red-fronted Coot, ii. 157.

— Thorn-bird, i. 192.

— Woodpecker, ii. 20.

Red-gartered Coot, ii. 157.

Red-headed Marsh-bird, i. 99.

— Parrot, ii. 43.

Red-necked Swallow, i. 36.

Red-stained Finch, i. 57.

Red-tailed Earth-Creeper, i. 171.

Red-throated Humming-bird, ii. 8.

— Tyrant, i. 136.

Red-topped Tyrant, i. 134.

Red-winged Miner, i. 166.

Red-winged Thorn-bird, i. 194.

Reed-Finch, Long-tailed, i. 49.

Reed-Tyrant, i. 137.

Reed-Wren, Black-headed, i. 13.

Rey de los Pajaros, ii. 73.

Rhamphastos toco, ii. 40.
Rhea americana, ii. 216, 220.
—, *Common*, ii. 216.
— darwini, ii. 219.
—, *Darwin's*, ii. 219.
Rhinocrypta fusca, i. 207.
— lanceolata, i. 206.
Rhinogryphus aura, ii. 89.
Rhyacophilus solitarius, ii. 188.
Rhynchæa hilarii, ii. 182.
— semicollaris, ii. 179, 182.
Rhynchocyclus sulphureus, i. 147.
Rhynchops melanura, ii. 193.
— nigra, ii. 193.
Rhynchotus pentlandii, ii. 210.
— punctulatus, ii. 210.
— rufescens, ii. 50, 209, 214.
Ringed Kingfisher, ii. 11.
— *Spine-tailed Swift*, ii. 11.
— *Warbling Finch*, i. 51.
Ring-necked Teal, ii. 132.
Robin-like Wood-hewer, i. 198.
Rock-Martin, Red-backed, i. 30.
Rolland's Grebe, ii. 204.
Roseate Spoonbill, ii. 114.
Rostrhamus hamatus, ii. 72.
— leucopygus, ii. 72.
— sociabilis, ii. 72.
Rosy-billed Duck, ii. 137.
Rufous Cheese-bird, i. 163.
Ruisiñor lusciniæ, i. 172.
Rush-bird, Curved-bill, i. 191.
Rush-loving Spine-tail, i. 174.
Rusty Lake-Duck, ii. 138.
Rusty-tailed Tyrant, i. 156.

Saltator, Allied, i. 41.
— aurantirostris, i. 42.
— cærulescens, i. 42.
—, *Greyish*, i. 42.
— similis, i. 41.
— superciliaris, i. 41.
—, *Yellow-billed*, i. 42.
Saltatricula multicolor, i. 61.
Sanderling, ii. 186.
Sandpiper, Baird's, ii. 184, 185.
—, *Bartram's*, ii. 189.
—, *Bonaparte's*, ii. 185.
—, *Buff-breasted*, ii. 190.
—, *Pectoral*, ii. 183, 184.
—, *Solitary*, ii. 188.
Sand-Plover, Azara's, ii. 173.
—, *Patagonian*, ii. 172.
Sangre de Toro, i. 152.
— *Pura*, i. 152.
Sappho Humming-bird, ii. 3.
— sparganura, ii. 3.
Sarcidiornis carunculata, ii. 128.
— regia, ii. 128.
Sarcorhamphus gryphus, ii. 90.
Saria, La, ii. 161.
Saurophagus sulphuratus, i. 147.
Sayornis cineracea, i. 121.
Scarlet Tyrant, i. 152.
Scarlet-headed Marsh-bird, i. 101.
Schulz's Dipper, i. 11.

— *Woodpecker*, ii. 18.
Scissor-bill, ii. 193.
Scissor-tail Tyrant, i. 160.
Sclater's Curassow, ii. 145.
Sclerurus caudacutus, i. 174.
 — *umbretta*, i. 174.
Scolopax frenata, ii. 181.
 — — *magellanica*, ii. 181.
Scops brasilianus, ii. 51.
Screamer, Crested, ii. 119.
Screaming Cow-bird, i. 86.
 — *Finch*, i. 46.
Scytalopus indigoticus, i. 205.
 — *superciliaris*, i. 205; ii. 223.
 —, *White-eyebrowed*, i. 205.
Seed-Finch, Meadow, i. 71.
 —, *Misto*, i. 69.
 —, *Yellow*, i. 69.
Seed-Snipe, Common, ii. 176.
 —, *D'Orbigny's*, ii. 178.
Seriema, ii. 161.
Serpophaga nigricans, i. 141.
 — *subcristata*, i. 140, 141, 142.
Setophaga brunneiceps, i. 21.
Sharp-tailed Parrot, ii. 42.
Short-billed Tyrant, i. 155.
Short-eared Owl, ii. 49.
Short-footed Tyrant, i. 156.
Short-winged Goatsucker, ii. 16.
 — *Tyrant*, i. 131.
Shoveller, Red, ii. 136.
Shrike, Deep-billed Greenlet, i. 24.
 —, *Ochre-headed Greenlet*, i. 23.
Silver-bill Tyrant, i. 129.
Siskin, Black-headed, i. 64.
 —, *Half-black*, i. 65.
Sisopygis icterophrys, i. 76, 125.
Sittosomus erithacus, i. 198.
 — *olivaceus*, i. 198.
Skimmer, Black-tailed, ii. 193.
Slaty Finch, i. 53.
Slaty-blue Bush-bird, i. 204.
Slender-billed Plover, ii. 174, 175.
Small-crested Tyrant, i. 140.
Snipe, Common Seed-, ii. 176.
 —, *D'Orbigny's Seed-*, ii. 178.
 —, *Painted*, ii. 182.
 —, *Paraguay*, ii. 181.
Snowy Egret, ii. 99.
Sociable Marsh-Hawk, ii. 72.
Solitary Cassique, i. 72.
 — *Pigeon*, ii. 144.
 — *Sandpiper*, ii. 188.
 — *Tyrant*, i. 150.
Song-Sparrow, Chingolo, i. 58.
 —, *Patagonian*, i. 59.
 —, *Red-flanked*, i. 60.
 —, *Stripe-headed*, i. 60.
 —, *Yellow-shouldered*, i. 60.
Sordid Spine-tail, i. 184.
Sorry Tyrant, i. 144.
Southern Courlan, ii. 159.
Sparganura sappho, ii. 3.
Sparrow, Common Song-, i. 58.
 —, *Patagonian Song-*, i. 59.
 —, *Red-flanked Song-*, i. 60.

—, *Stripe-headed Song-*, i. 60.
—, *Yellow House-*, i. 66.
—, *Yellow-shouldered Song-*, i. 60.
Spatula platalea, ii. 136.
Speotyto cunicularia, ii. 52.
Spermophila analis, i. 57.
— *cærulescens*, i. 46, 79.
— *inornata*, i. 57.
— *melanocephala*, i. 45.
— *palustris*, i. 45.
— *rufirostris*, i. 57.
Spheniscus magellanicus, ii. 206, 207.
Spine-tail, Brown-crested, i. 177.
—, *Brown-fronted*, i. 178.
—, *D'Orbigny's*, i. 183.
—, *Eyebrowed*, i. 178.
—, *Hudson's*, i. 186.
—, *Modest*, i. 183.
—, *Patagonian*, i. 186.
—, *Pretty-throated*, i. 181.
—, *Rush-loving*, i. 174.
—, *Sordid*, i. 184.
—, *Spix's*, i. 179.
—, *Striped*, i. 182.
—, *Tit-like*, i. 177.
—, *White's*, i. 181.
—, *White-throated*, i. 179.
—, *Wren-like*, i. 188.
—, *Yellow-marked*, i. 185.
Spine-tailed Swift, Ringed, ii. 11.
Spiny Leaf-scraper, i. 174.
Spix's Spine-tail, i. 179.
Spiziapteryx circumcinctus, ii. 73.
Spoonbill, Roseate, ii. 114.
Sporophila ornata, i. 46.
— *rufirostris*, ii. 227.
Spot-billed Tyrant, i. 134.
Spot-winged Crake, ii. 155.
— *Falcon*, ii. 73.
— *Gull*, ii. 198.
— *Pigeon*, ii. 140.
Spotted Dove, ii. 141.
— *Puff-bird*, ii. 30.
— *Rail*, ii. 148.
— *Tinamou*, ii. 211.
Starling, De Filippi's, i. 105.
—, *Patagonian Marsh-*, i. 104.
Steganopus wilsoni, ii. 180.
Stelgidopteryx ruficollis, i. 36.
Stenopsis bifasciata, ii. 14.
Stephanophorus cæruleus, i. 38.
— *leucocephalus*, i. 38.
Sterna argentea, ii. 197.
— *cassini*, ii. 196.
— *frobeenii*, ii. 195.
— *hirundinacea*, ii. 196.
— *magnirostris*, ii. 194.
— *maxima*, ii. 195.
— *minuta*, ii. 197.
— *superciliaris*, ii. 197.
— *trudeauui*, ii. 195.
Stigmatura budytoides, i. 139.
— *flavo-cinerea*, i. 10, 139.
Stilt, Brazilian, ii. 179.
Stork, Maguari, ii. 106.
Strange-tailed Tyrant, i. 123.

Stripe-headed Song-Sparrow, i. 60.

Striped Spine-tail, i. 182.

— *Tyrant*, i. 111.

Strix flammea, ii. 48.

— *perlata*, ii. 48.

Sturnella defilippii, i. 105.

— *militaris*, i. 104.

Sublegatus griseocularis, i. 147.

Suiriri chorreado, i. 129.

Suiriri pardo y roxo, i. 156.

— *roxo*, i. 163.

— *Tyrant*, i. 146.

Sulphury Tyrant, i. 147.

Surucuá, ii. 29.

Swainson's Buzzard, ii. 59.

Swallow, Bank, i. 33.

—, *Red-necked*, i. 36.

—, *White-rumped*, i. 30.

Swan, Coscoroba, ii. 126.

Swift, Ringed Spine-tailed, ii. 11.

Sycalis chloropis, i. 69.

— *lutea*, i. 69.

— *luteiventris*, i. 69.

— *luteola*, i. 69.

— *pelzelni*, i. 66, 85.

— *uropygialis*, i. 69.

Sylbeocyclus dominicus, ii. 205.

Sylvia chivi, i. 22.

— *viridicata*, i. 146.

Sylvicola venusta, i. 20.

Synallaxis ægitholoides, i. 84, 177.

— *albescens*, i. 179, 180, 182, 192.

— *crassirostris*, i. 183; ii. 227.

— *flavigularis*, i. 183.

— *frontalis*, i. 178.

— *fuliginiceps*, i. 177.

— *hudsoni*, i. 81, 186; ii. 79.

— *humicola*, i. 183, 187.

— *maluroides*, i. 188.

— *melanops*, i. 174.

— *modesta*, i. 183, 184.

— *orbignii*, i. 183.

— *patagonica*, i. 186.

— *phryganophila*, i. 181.

— *ruficapilla*, i. 178, 179, 186.

— *sclateri*, i. 186; ii. 223.

— *scutata*, i. 181.

— *sordida*, i. 177, 184.

— *spixi*, i. 79, 179, 180, 192.

— *striaticeps*, i. 182.

— *sulphurifera*, i. 185; ii. 222.

— *superciliosa*, i. 178; ii. 223.

— *whitii*, i. 181; ii. 229, 231.

Sysopygis icterophrys, i. 125.

Tachybaptus dominicus, ii. 205.

Tachycineta leucorrhoea, i. 30, 32.

Tachyeres cinereus, ii. 137.

Tachytiorchis albicaudatus, ii. 61.

Tænioptera coronata, i. 115, 118, 119.

— *dominicana*, i. 117, 119.

— *icterophrys*, i. 125.

— *irupero*, i. 115, 118.

— *mœsta*, i. 118.

— *murina*, i. 119.

— *nengeta*, i. 114.

— rubetra, i. 114, 120.
 — suiriri, i. 146.
 — variegata, i. 113.
Talpacoti Dove, ii. 144.
Tanager, Azara's, i. 40.
 —, *Black-necked*, i. 37.
 —, *Blue*, i. 39.
 —, *Blue-and-Yellow*, i. 39.
 —, *Dark-backed*, i. 37.
 —, *D'Orbigny's*, i. 41.
 —, *Four-coloured*, i. 40.
 —, *Purple-and-Yellow*, i. 37.
 —, *Red-capped*, i. 40.
 —, *White-capped*, i. 38.
 —, *Yellow-striped*, i. 41.
Tanagra bonariensis, i. 39.
 — cyanoptera, i. 39.
 — sayaca, i. 39.
 — striata, i. 39.
Tantalus loculator, ii. 108.
Tapacola, *White-necked*, i. 207.
Tataupa Tinamou, ii. 208.
Teal, *Blue-winged*, ii. 130.
 —, *Brazilian*, ii. 133.
 —, *Grey*, ii. 131.
 —, *Ring-necked*, ii. 132.
 —, *Yellow-billed*, ii. 131.
Tern, *Cassin's*, ii. 196.
 —, *Eyebrowed*, ii. 197.
 —, *Great*, ii. 195.
 —, *Great-billed*, ii. 194.
 —, *Trudeau's*, ii. 195.
Tero-tero, ii. 195.
Téru-real, ii. 179.
Téru-réru, ii. 80.
 — *del campo*, ii. 79.
Téru-téru, ii. 166.
Thamnophilus argentinus, i. 204.
 — *cærulescens*, i. 204.
 — *leachi*, i. 202.
 — *major*, i. 203.
 — *ruficapillus*, i. 204.
 — *stagurus*, i. 203.
Thaumatias albicollis, ii. 7.
Theristicus caudatus, ii. 110.
 — *melanops*, ii. 110.
Thickbill, *Black-and-Yellow*, i. 43.
Thick-billed Grebe, ii. 206.
Thinocorus orbignyianus, ii. 178.
Thinocorus rumicivorus, ii. 176.
Thin-tailed Tyrant, i. 138.
Thlypopsis ruficeps, i. 40.
Thorn-bird, *Red*, i. 194.
 —, *Red-fronted*, i. 192.
 —, *Red-winged*, i. 194.
 —, *Whistling*, i. 192.
Thrush, *Black-headed*, i. 4.
 —, *Dusky*, i. 1.
 —, *Magellanic*, i. 3.
 —, *Red-bellied*, i. 3.
Tiger-Bittern, *Marbled*, ii. 104.
Tigrisoma brasiliense, ii. 104, 105.
 — *fasciatum*, ii. 104, 105.
 — *marmoratum*, ii. 104.
Tijereta, i. 160.
Tinamou, *Brown*, ii. 207.

—, *Cinereous*, ii. 210.
—, *Darwin's*, ii. 213.
—, *Great*, ii. 209.
—, *Martineta*, ii. 214.
—, *Pentland's*, ii. 210.
—, *Spotted*, ii. 211.
—, *Tataupa*, ii. 208.
Tinnunculus cinnamominus, ii. 69, 70, 77.
— *sparverius*, ii. 69.
Tiru-riru, i. 189.
— *del campo*, i. 187.
Tit-like Spine-tail, i. 177.
— *Tyrant*, i. 141.
Tit-Tyrant, Yellow-billed, i. 142.
Toco Toucan, ii. 40.
Todirostrum margaritaceiventor, i. 136.
Torcasa, ii. 141.
Tordo, i. 72.
— *Comun*, i. 72.
— *negro cabeza roxa*, i. 101.
— *pardo roxiso*, i. 96.
Tortola, ii. 141.
Tortolita, ii. 143.
Totanus bartramia, ii. 189.
— *chilensis*, ii. 186.
— *flavipes*, ii. 187.
— *melanoleucus*, ii. 25, 186, 187.
— *solitarius*, ii. 188.
Toucan, Toco, ii. 40.
Trarú, ii. 82.
Tree-Duck, Fulvous, ii. 126.
—, *White-faced*, ii. 128.
Tree-Martin, i. 26.
Trepador comun, i. 202.
Triceus margaritiventro, i. 136.
Trichothraupis quadricolor, i. 40.
Tringa acuminata pectoralis, ii. 183.
— *arenaria*, ii. 186.
— *bairdi*, ii. 184.
— *bonapartii*, ii. 185.
— *dorsalis*, ii. 184.
— *fuscicollis*, ii. 185.
— *maculata*, ii. 183.
— *rufescens*, ii. 190.
— *rufus*, i. 82.
Trochilus colubris, ii. 6.
Troglodytes auricularis, i. 15.
— *fasciolatus*, ii. 226.
— *furvus*, i. 13, 16, 85.
— *musculus*, i. 13.
— *platensis*, i. 13.
— (*Uropsila*) *auricularis*, i. 15; ii. 223.
Trogon, Azara's, ii. 29.
—, *Purple-breasted*, ii. 29.
— *surucura*, ii. 29.
— *variegatus*, ii. 29.
Trudeau's Tern, ii. 195.
Trupialis defilippii, i. 105.
— *guianensis*, i. 100.
— *loyca*, i. 104.
— *militaris*, i. 104, 105.
Tryngites rufescens, ii. 190.
Tucuman Woodpecker, ii. 21.
Turdus crotopezus, i. 1.
— *falklandicus*, i. 3.
— *fuscater*, i. 4.

--- leucomelas, i. 1.
 --- magellanicus, i. 3.
 --- nigriceps, i. 4.
 --- rufiventer, i. 3.
 --- rufiventris, i. 2, 3, 4.
Turkey-Vulture, ii. 89.
Turtle-Dove, Little, ii. 143.
Tyrannus aurantio-atrocristatus, i. 157.
 --- melancholicus, i. 111, 158.
 --- verticalis, ii. 60.
 --- violentus, i. 160.
Tyrant, Ashy, i. 121.
 ---, *Ashy-black*, i. 126.
 ---, *Bienteveo*, i. 147.
 ---, *Black-and-yellow-crested*, i. 157.
 ---, *Black-crowned*, i. 115.
 ---, *Black-headed*, i. 157.
 ---, *Blackish*, i. 141.
 ---, *Blue-billed*, i. 127.
 ---, *Broad-billed*, i. 136.
 ---, *Cabanis's*, i. 128.
 ---, *Chat-like*, i. 120.
 ---, *Chin-spotted*, i. 133.
 ---, *Chocolate*, i. 112.
 ---, *Cinereous*, i. 128.
 ---, *Cock-tailed*, i. 122.
 ---, *Dominican*, i. 117.
 ---, *Fierce*, i. 156.
 ---, *Greenish*, i. 146.
 ---, *Grey-eyed*, i. 147.
 ---, *Hudson's Black*, i. 126.
 ---, *Little Brown*, i. 151.
 ---, *Long-tailed*, i. 139.
 ---, *Many-coloured*, i. 142.
 ---, *Melancholy*, i. 158.
 ---, *Mouse-brown*, i. 119.
 ---, *Narrow-tailed*, i. 139.
 ---, *Noisy*, i. 145.
 ---, *Pearly-bellied*, i. 136.
 ---, *Pepoaza*, i. 114.
 ---, *Red-backed*, i. 134.
 ---, *Red-throated*, i. 136.
 ---, *Red-topped*, i. 134.
 ---, *Reed*, i. 137.
 ---, *Rusty-tailed*, i. 156.
 ---, *Scarlet*, i. 152.
 ---, *Scissor-tail*, i. 160.
 ---, *Short-billed*, i. 155.
 ---, *Short-footed*, i. 156.
 ---, *Short-winged*, i. 131.
 ---, *Silver-bill*, i. 129.
 ---, *Small-crested*, i. 140.
 ---, *Solitary*, i. 150.
 ---, *Sorry*, i. 144.
 ---, *Spot-billed*, i. 134.
 ---, *Strange-tailed*, i. 123.
 ---, *Striped*, i. 111.
 ---, *Suiriri*, i. 146.
 ---, *Sulphury*, i. 147.
 ---, *Thin-tailed*, i. 138.
 ---, *Tit-like*, i. 141.
 ---, *Wagtail*, i. 139.
 ---, *Warlike*, i. 151.
 ---, *White-bellied*, i. 121.
 ---, *White-browed*, i. 121.
 ---, *White-crested*, i. 145.

—, *White-headed*, i. 122.
—, *White-tailed*, i. 112.
—, *Widow*, i. 118.
—, *Wing-banded*, i. 155.
—, *Yellow-bellied*, i. 137.
—, *Yellow-billed Tit*-, i. 142.
—, *Yellow-browed*, i. 125.
—, *Yetapa*, i. 124.

Upland Goose, Barred, ii. 123.
Upucerthia dumetoria, i. 170.
— *luscini*a, i. 171.
— *ruficauda*, i. 171.
Urraca, ii. 32.
— *Jay*, i. 110.
Urubitinga meridionalis, ii. 63.
— *unicincta*, ii. 63.

Vanduria aplomado, ii. 112.
— *barroso*, ii. 112.
— *de Invierno*, ii. 111.
— *de las lagunas*, ii. 112.
Vanellus cayennensis, ii. 165, 195, 200.
— *modestus*, ii. 171.
Varied Woodpecker, ii. 19.
Variiegated Heron, ii. 101.
Veiled Wood-singer, i. 20.
Viguá, ii. 92.
Vinaceous Amazon, ii. 46.
Violet-eared Humming-bird, ii. 3.
Vireo chivi, i. 22.
— *olivaceus*, i. 22, 204.
Vireosylvia chivi, i. 22.
Virginian Owl, ii. 50.
Viudita, i. 118.
Vulture, Black, ii. 89.
— *Turkey*, ii. 89.

Wagtail Tyrant, i. 139.
Warbling Earth-Creeper, i. 171.
Warbling Finch, Black-and-Chestnut, i. 49.
—, *Pretty*, i. 51.
—, *Red-browed*, i. 50.
—, *Red-flanked*, i. 51.
—, *Ringed*, i. 51.
—, *White-and-Grey*, i. 52.
—, *White's*, i. 50.
Warlike Tyrant, i. 151.
Waterhen, American, ii. 156.
—, *Little*, ii. 156.
Wedge-billed Wood-hewer, i. 199.
Wedge-tailed Ground Finch, i. 63.
Whimbrel, Esquimo, ii. 192.
Whip-poor-Will, ii. 13.
Whispering Ibis, ii. 113.
Whistling Duck, ii. 127.
— *Heron*, ii. 100.
— *Thorn-bird*, i. 192.
White Egret, ii. 98.
White-and-Grey Warbling Finch, i. 52.
White-banded Goatsucker, ii. 14.
— *Mocking-bird*, i. 8.
White-bellied Tyrant, i. 121.
— *Woodpecker*, ii. 23.
White-breasted Humming-bird, ii. 7.
White-browed Tyrant, i. 121.

White-capped Tanager, i. 38.
White-crested Tyrant, i. 145.
White-eyebrowed Scytalopus, i. 205.
White-faced Ibis, ii. 109.
— *Tree-Duck*, ii. 128.
White-headed Guan, ii. 146.
— *Tyrant*, i. 122.
White-necked Tapacola, i. 207.
White-rumped Swallow, i. 30.
White-sided Humming-bird, ii. 1.
White-tailed Buzzard, ii. 61.
— *Kite*, ii. 71.
— *Tyrant*, i. 112.
White-throated Cachalote, i. 197.
— *Humming-bird*, ii. 7.
— *Spine-tail*, i. 179.
— *Wood-hewer*, i. 200.
White-winged Bécard, i. 162.
— *Cinclodes*, i. 173.
— *Lake-Duck*, ii. 138.
White's Ground-Finch, i. 64.
— *Spine-tail*, i. 181.
— *Warbling Finch*, i. 50.
Widow Tyrant, i. 118.
Wigeon, Chiloe, ii. 135.
Wilson's Phalarope, ii. 180, 181.
Wing-banded Tyrant, i. 155.
Winter Plover, ii. 171, 172.
Wood-bird, Brown-headed, i. 23.
Wood-hewer, Bridge's, i. 199.
—, *Chestnut*, i. 201.
—, *Flat-billed*, i. 199.
—, *Narrow-billed*, i. 201.
—, *Robin-like*, i. 198.
—, *Wedge-billed*, i. 199.
—, *White-throated*, i. 200.
Wood-Ibis, ii. 108.
Woodpecker, Allied, ii. 20.
—, *Boie's*, ii. 17.
—, *Cactus*, ii. 19.
—, *Gold-backed*, ii. 21.
—, *Pampas*, ii. 24.
—, *Red-crested*, ii. 21.
—, *Red-faced*, ii. 18.
—, *Red-fronted*, ii. 20.
—, *Schulz's*, ii. 18.
—, *Tucuman*, ii. 21.
—, *Varied*, ii. 19.
—, *White-bellied*, ii. 23.
Wood-singer, Brown-capped, i. 21.
—, *Golden-crowned*, i. 21.
—, *Pitiayumi*, i. 20.
—, *Veiled*, i. 20.
Wren, Black-headed Reed-, i. 13.
—, *Brown House-*, i. 13.
—, *Eared*, i. 15.
—, *Platan Marsh-*, i. 15.
Wren-like Spine-tail, i. 188.

Xanthornus pyrrhopterus, i. 107.
Xanthosomus flavus, i. 98.
— *ruficapillus*, i. 99.
Xiphocolaptes albicollis, i. 200.
— *major*, i. 201.
Xolmis variegata, i. 116.

Yabirú, ii. 106.
Yacú caraguata, ii. 147.
Yacúhú, El, ii. 146.
Yellow Cardinal, i. 55.
 — *House-Sparrow*, i. 66.
 — *Seed-Finch*, i. 69.
Yellow-bellied Tyrant, i. 137.
Yellow-billed Coot, ii. 158.
 — *Cuckoo*, ii. 37.
 — *Saltator*, i. 42.
 — *Teal*, ii. 131.
 — *Tit-Tyrant*, i. 142.
Yellow-breasted Marsh-bird, i. 102.
Yellow-browed Tyrant, i. 125.
Yellow-headed Marsh-bird, i. 98.
Yellow-marked Spine-tail, i. 185.
Yellow-shouldered Marsh-bird, i. 97.
 — *Song-Sparrow*, i. 60.
Yellow-striped Tanager, i. 41.
Yellowshank, Greater, ii. 106.
 —, *Lesser*, ii. 187.
Yetapa Tyrant, i. 124.
Ynambū azulado, ii. 207.
 — *tatāupā*, ii. 208.
Ypecaha Rail, ii. 150.

Zancudo, ii. 179.
Zapornia notata, ii. 155.
Zenaida maculata, ii. 141.
Zonotrichia canicapilla, i. 55, 59.
 — *hypochondria*, i. 60.
 — *matutina*, i. 58.
 — *pileata*, i. 58, 59.
 — *strigiceps*, i. 60, 64.
Zorsal, i. 4.

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TOC #409	Curlew	Whimbrel
TOC #424	<i>demersus</i>	<i>magellanicus</i>
TOC Order XX	Order XXI	Order XX
27	surpise	surprise
28	This in	This is
50	quite	quits
51	<i>mugellanicus</i>	<i>magellanicus</i>
54	adundant	abundant
71	Martens	Martins
124	Paragonia	Patagonia
152	pay	day
216	Order XXI	Order XX
231	CAPELLAN	CAPELLÁN
232	duch	durch
Index entries:		
<i>American</i>	<i>Oystercatcher</i>	<i>Oyster-catcher</i>
<i>Chorlo</i>	170	ii. 170
<i>Cock-tailed Tyrant</i>	<i>Cck-tailed</i>	<i>Cock-tailed</i>
<i>Eyebrowed Spine-tail</i>	<i>Eye-browed</i>	<i>Eyebrowed</i>
<i>Heron, Whistling</i>	i. 100	ii. 100

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