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Illustration: Simplified map of Fiji showing four regional divisions of population made by the author.

A RACIAL STUDY OF THE FIJIAN

BY

NORMAN E. GABEL

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MAP

Simplified map of Fiji showing four regional divisions of population made by the author ...
frontispiece

A RACIAL STUDY OF THE FIJIANS

[Pg 1]

BY

NORMAN E. GABEL

INTRODUCTION

This paper concerns itself with a physical survey of the native male population of Fiji. The main objective is a description of these people by means of anthropometric procedure.^[1] The treatment includes, first, a description of the Fijians as a whole, second, a comparison with neighboring people, and third, regional differences among the Fijians themselves.

THE PROBLEM AND PROCEDURE

The data used in this survey were secured in 1954 during a stay of seven months in Fiji. My plan was to obtain anthropometric samples from several parts of the archipelago; this plan was only slightly altered as time and transportation facilities directed. Each of the three main administrative districts into which the islands are divided were visited and within each district samples were secured from most of the constituent provinces. The original sample consisted of 880 subjects. Later, 65 subjects were excluded for various reasons: some were part Samoan or Tongan, a few were Rotumans, and others were immature. The number finally used stands at 815.

A limited amount of comparative material has been included in order to help locate the Fijians in the overall Pacific picture. These data were drawn from W. W. Howells, "Anthropometry and Blood Types in Fiji and the Solomon Islands" in *The American Museum of Natural History, Anthropological Papers*, volume 33, part 4, 1933, and from L. R. Sullivan, "A Contribution to Tongan Somatology" based on the field studies of E. W. Gifford and W. C. McKern, in *Memoires of the Bernice P. Bishop Museum*, volume 8, number 4, 1922. The latter report provides comparison with what may be termed western Polynesians who are also the nearest Polynesians

to the Fijians. The Fijian data in Howell's paper make it possible for me to check some of my own Fijian material, and the Solomon Island data in the same report provide a Melanesian measuring stick.

Since an over-all description of the Fijians is the initial concern of this paper, each physical trait measured or derived from measurement is tabulated according to range, average, and deviation. Traits observed but not measured are presented according to degree of development, e.g., absent, medium, and pronounced, and according to percentage of occurrence. Further statistical manipulation is not deemed necessary for the writer's purposes.

It is well established that the Fijians are a mixed people. They are regarded, and with good reason, as a hybrid of, mainly, Melanesian and Polynesian components. Their geographical location, their history, and their physical appearance bear this out.

The proportions of Polynesian and Melanesian elements are, of course, not evenly distributed throughout Fiji. Even superficial observation indicates that the natives range from strongly Melanesian to markedly Polynesian. To demonstrate how this variability follows certain regional trends, the data have been broken down into four geographical areas. This subdivision rests on several considerations and merits further comment.

One of the subgroups represents the people of the mountainous interior of Viti Levu, the main island of Fiji (see accompanying map). This region may be regarded as something of a refuge area. Fijians from this relatively isolated locality might reasonably be expected to exhibit more of the earlier racial elements of the total composition. It should be pointed out, however, that the degree of isolation associated with this; interior; group is not extreme. Fiji tradition and history indicate extensive interregional movement. Particularly in early historic times, when the advent of firearms and other Western culture greatly stimulated intergroup warfare and cannibalism, there was much moving about from one region to another. With all this, the interior people still remained, as indeed they are today, more apart from the rest of the population and less subject to outside influence.

The second segment chosen for interregional comparison is in the central Lau Islands and is designated in this paper as the "eastern" group. Lying as they do, at the eastern end of Fiji, they are closest to Tonga, the nearest Polynesian neighbors. Tongan contact with Fiji in prehistoric as well as more recent times is well established. [2] It is in the Lau Islands that Polynesian cultural affinities are most marked. Hence, it seems a logical choice for a second and separate glance in the racial history.

The third comparative sample might be termed an intermediate group. It is taken from the coastal villages of eastern Viti Levu, largely from the provinces of Rewa and Tailevu. This area is geographically between the "interior" and "eastern" groups and is referred to in this paper as the "coastal" group.

The final regional division represents the northwestern parts of Viti Levu. This is the place where, according to Fiji tradition, their ancestors first landed after migrating from the west. [3] [Pg 2] Fijian legend, which gives this hint of their ancestry, does not include a physical description of these immigrants. Nor does it define the physical appearance of the earlier people whom the newcomers encountered and with whom they mingled. On the rather slim hope that anthropometry might shed a little light on this questionable phase of Fijian history, this area, along with the first three, has received separate treatment.

THE HABITAT

The islands of Fiji are centrally located in the southwest Pacific. Over three hundred islands and islets make up the archipelago, which spreads between latitudes 15' and 22' south of the equator for 300 miles. The international date line runs through Fiji at the Koro Sea and the Moala Island group.

The total land area of the islands is about the equivalent of the state of Delaware, somewhat over 7,000 square miles. Two great islands account for nearly 95 per cent of the total area: Viti Levu, the largest, is over 4,000 square miles, and Vanua Levu, about half as large. Over 90 per cent of the native population lives on these two islands although nearly a hundred other islands are inhabited.

Most of the islands are made up of volcanic and sedimentary rocks. The largest islands rest on a submerged portion of an ancient land mass, sometimes called the Melanesian continent, which goes back in time to the Paleozoic and, in its prime, intermittently connected Fiji with southeastern Asia and Australia. Subsequent submergence, followed by cycles of volcanic upbuilding, erosion, and more submergence over eons of time, gave the big islands their upper foundations. The last extensive volcanic activity and land uplift occurred in the Pleistocene and accounts for many of the present mountain masses. The final touches to the Fiji profile have been wrought by more recent weathering and erosion. Sedimentation is still going on at river mouths and along the coasts, where deltas are being built and mangrove thickets flourish.

Many of the smaller islands are old limestone masses that were pushed up from the sea. Unlike the high craggy volcanic islands, these are lower and flat-topped. Typically, they contain a basin-shaped depressed area that is surrounded by a rim. These depressions are usually fertile and heavily forested.

Coral islands make up the third variety of landforms. These are always small and low. Their small size, thinner soil, and lack of fresh water make them much less suitable for human habitation. But even a thin layer of soil produces a luxurious vegetation.

Fringing and barrier reefs are abundant throughout the archipelago, surrounding nearly every island. The most striking of these formations is the Great Sea Reef, which forms an arc of nearly 300 miles along the western fringe of Fiji and encloses large areas of coral-infested sea.

Moderately high mountains give to the larger islands a generally rugged terrain. The more extensive ranges lie across the path of the prevailing south and easterly winds producing windward and leeward climatic areas. On the windward side rainfall is heavy and rather evenly distributed over the year. Here the valleys and mountain slopes support a typical dense tropical growth. The leeward side, however, receives much less moisture and has wet and dry seasons. Scattered patches of trees and grasses cover the ground, whereas heavy stands of forest are confined to valley bottoms and higher mountain slopes. The mountainous interior of Viti Levu contains a number of peaks over 3,000 feet, the highest of which is Mt. Victoria, 4,341 feet.

Surface water is abundant on the bigger islands. Several large and navigable rivers drain Viti Levu and Vanua Levu. The Rewa River, on the east side of Viti Levu is the largest and is navigable for small craft for 70 miles. Smaller rivers and hundreds of streams are important sources of food and drink for the people of the interior.

Great flood plains are formed at the mouths of the larger rivers. These and the fertile flats that run back along the valleys contain the greatest population densities.

The climate is generally pleasant and healthful. Tropical extremes of heat and humidity are moderated by the prevailing trades, which usually supply cool and pleasant breezes from the east. Still, days of uncomfortable heat and oppressive humidity are not unknown; however, such periods are protracted only in the interior. The climate is far from uniform throughout the islands. The windward sides, where rainfall often exceeds a hundred inches, have a more even temperature and sunshine is more moderate. On the leeward sides there is less general cloudiness and more sunshine, especially during the dry season. The smaller islands generally resemble the leeward areas in climate.

Native plant and animal life, like much of the southwest Pacific, is southeastern Asiatic in type and in origin. In the more profuse and varied windward sides there are several general vegetation zones. Along the coasts and in the larger river basins occur alluvial vegetation largely dominated by several kinds of mangrove, which is densest in mud flats washed by the tide. In this zone trees are scattered, and many of them bear useful nuts and fruits. On the slopes and ridges behind the coastal belts are the great tropical rain forests. They make up a dense cover of evergreen trees interwoven with wild creepers and vines. Thick stands of shrubs and smaller trees add to the tropical profusion. Above 2,000 feet the forests thin out and become more heavily coated with moss and lichens, and ferns and orchids attach themselves to the branches. Beyond 3,000 feet is the cloud belt, and above this trees become stunted and are finally replaced by hardy shrubs that cling to the rocks and crags.

On the leeward sides, patches of rain forest are found only in the moister areas. More typical of this zone are thin-leaved trees interspersed in large expanses of meadow and grassland.

A number of native plants are very vital to the Fijian livelihood and some have modern economic importance. Several timber trees are essential to house building, canoe construction, and wood carving. The ubiquitous palms, here as elsewhere in the Pacific, are vital sources of food, drink, building, and weaving materials and cordage. The mangrove provides firewood, house poles, fishing fences, and traps, laths for bows and black dye for their hair and tapa. Valuable starch is secured from the sago palm, which is cut just before flowering, and the leaves are a common thatching material. Various reeds, canes, and bamboos and lianas are useful to Fiji economy. In the drier areas reeds and grasses provide material for house walls, thatch, fish fences, and arrow shafts. Several kinds of trees yield edible nuts and fruits.

Like other central-Pacific island groups, Fiji is poorly provided with indigenous mammals. A small gray rat is a considerable pest in garden and homes, and a large nocturnal bat, which is called a flying fox, lives in tree colonies and is often seen at dusk in banana groves or other feeding places. All the economically important animals of Fiji have been introduced, such as pigs, fowl, dogs, cattle, horses, sheep, and goats.

Bird life is diverse and interesting, although in a number of places introduced forms, like mynahs and turtle doves, have forced the native varieties back into the jungle. Several game birds such as doves, pigeons, and ducks are occasionally hunted.

Snakes and lizards are fairly common on the islands; none is poisonous. Some are eaten, but the practice is not usual. Snakes had a more important place in the former religious and totemic practices.

Much more vital to the native economy is the abundant and varied marine life. This, with gardening, provides the foundation of Fijian subsistence. Turtles, crabs, prawns, eels, to say nothing of scores of fishes, are hunted, trapped, poisoned, speared, and netted. The cycle of the balolo worm has here the same importance as in other Pacific islands.

HISTORY

The first western contact with Fiji was made in 1643 when Captain Abel Tasman entered Fijian waters and sighted several islands and reefs without realizing the nature of his discovery. Over a hundred years later, Captain Cook made a second contact by stopping at one of the southern Lau Islands. Real knowledge of the area began in 1792 when Captain Bligh sailed through the archipelago from the southeast to the northwest, following the famous mutiny of the *Bounty*. Bligh made an attempt to land, was attacked by natives, and continued through the islands with no more landings. He did, however, make a record of most of the islands he passed.

In the nineteenth century, commercial contacts began in the form of sandalwood trade. This profitable commodity brought Europeans and Americans first to the Sandalwood Coast on the west side of Vanua Levu. During this period the first systematic survey of Fijian waters was made by the U.S. Exploring Expedition in 1840. After little more than a decade the sandalwood supply was depleted to the point where trade virtually ceased.

As a result of this initial commercial contact, which was mainly around western Vanua Levu and eastern Viti Levu, some marked changes were effected in Fijian culture. After the sandalwood traders abandoned Fiji for more profitable fields, a number of deserters and ship-wrecked men remained. These beachcombers, along with firearms that had been introduced by trade or salvaged from wrecks, brought about the first striking alterations. Rival chiefs competed for the acquisition of muskets, gunpowder, and beachcombers. The latter in some instances became attached to royal households as dubious advisors and instructors in the use of guns, powder, and shot. Some of these coaches enjoyed a status resembling that of household pets.

The introduction of firearms changed the native political scene and increased the scope and destructiveness of warfare. For a time the rulers of Mbau in eastern Viti nearly monopolized the supply of muskets and white men. This established their political supremacy over rival leaders. Larger and stronger political and military alliances, some resembling small kingdoms, developed for purposes of defense or aggression. As warfare grew more frequent, new diseases entered the islands and trade in liquor advanced.

[Pg 3]

After the third decade of the nineteenth century better elements began to enter Fiji and ensuing culture contact was not so consistently deplorable. *Bêche-de-mer* traders and whalers began to visit the islands for trade goods and supplies. Some began to settle at the east end of Viti Levu. Missionaries came in the 1830's and the Christianization of Fiji began.

Internal conflict between rival chiefs, attacks on French, British, and American ships, with subsequent reprisals, continued and intensified. By mid-century, rivalry between the local kingdoms of Mbau and Rewa reached a peak. At this time the powerful ruler of Mbau, Thakombau, who dominated a large segment of eastern Viti Levu, had become hard pressed by his Rewa enemies. Thakombau submitted to the missionaries who had been pressing his conversion. With his support of the missionaries, the native struggles became a religious war between Christianity and paganism as well as between nativism and westernism. Thakombau's cause was rescued in 1855 when King George of Tonga brought an army of 2,000 warriors to Fiji and combined his strength with that of the kingdom of Mbau. Thenceforth Thakombau remained the paramount chief in eastern Fiji and for some twenty ensuing years ruled under the dominance of Tongan princes. Another Tongan chief, Ma'afu, arrived in 1848 and set up a political domain that rivaled the kingdom of Thakombau.

Throughout these struggles and particularly with the conversion of Thakombau and the leadership of the already Christianized Tongan chiefs, native religion, including cannibalism, rapidly declined. Meanwhile, English, Australian, and New Zealand settlers were augmenting earlier trade contacts. Plantations and trade centers developed, and in 1857 a British consul was appointed and set up at Levuka on the east coast of Viti Levu. A few years later Thakombau sought relief from the payment of indemnities to foreign powers and from internal harassments by an offer to cede his dominions to Great Britain. The initial offer was declined and the British consul was recalled in 1860.

The next ten years saw a continuation of political and military turmoil stemming from rival interests of native rulers, Tongan interlopers, and European immigrants. A second appeal to the British government resulted in an unconditional deed of cession on October 10, 1874, which marks the beginning of Fiji's status as a British Crown Colony.

POPULATION

Over 300,000 people live in the Fiji Islands. Of these about 140,000 are native Fijians. The others are arranged in the following divisions: ^[4]

Indians	154,803
Europeans	6,500
Part European	7,496
Polynesians	} 4,133
Melanesians	
Micronesians	
Rotumans	3,990
Chinese	3,857
Others	649

When Fiji became a British Crown Colony in 1874 the population was entirely native except for a handful of outsiders. At that time the population has been variously estimated at approximately 200,000. Shortly thereafter a measles epidemic reduced their number severely. This, with other epidemics and maladies for which they had little or no immunity or resistance, continued the decimation until by 1905 there were only 87,000. During the next decade they held their own, until in 1919 the influenza scourge brought them to their lowest level of 83,000. This was the last serious setback to their number; since that time the population has been on the upgrade.

A present threat to Fijian population, in the opinion of many, stems not from disease but from the Indian presence. This began in the latter part of the nineteenth century when Indian immigration of indentured laborers began. The influx went on until 1916 by which time some 40,000 to 50,000 Indians had come to Fiji and very few had returned to India. Since then, the Indians have increased more rapidly than the Fijians until they now outnumber them. This situation has, of course, created numerous problems beyond the scope of this paper.

It is significant to point out that intermarriage or interbreeding between Fijians and Indians is relatively slight. The amount of mingling of Fijians with Europeans or Orientals cannot be demonstrated statistically, but it has not been extensive. The Fijians, on the whole, retain pretty much of their prehistoric racial make-up.

RACIAL BACKGROUND

It is well established that the Fijians are a mixed people, derived mainly from Melanesian and Polynesian sources. Both of these parental strains in turn are commonly believed to be racial blends. Hooton describes the Melanesians as Oceanic Negroes whose composition includes Negrito, Australoid, "plus convex-nosed Mediterranean plus minor fractions of Malay and Polynesian."^[5] Birdsell sees the same three strains in Melanesia which he believes contribute to the Australians, namely Negrito, Murrayan, and Carpentarian, plus a small amount of Mongoloid. He believes they differ from Australians in being "basically negritic in their genetic composition as a result of the rain forest environment."^[6] Polynesians, however, are usually thought to be derived from Caucasoid, Mongoloid, and Negroid strains in which the Caucasoid component is more often the strongest.

The composite character of the Fijians has been variously explained as far as order and time of the contributing elements are concerned. One theory regards a Negroid stock as aboriginal to which a Polynesian strain was later added. An early explanation of this sort is that of Fornander who held that the ancestors of the modern Polynesians coming from southeastern Asia via Indonesia in the early centuries A.D. made a prolonged stopover in Fiji as they moved eastward. This left a Polynesian imprint on the native Fijian physical appearance as well as on their language and culture.^[7] Later on, Churchill added a second movement of Polynesians from the west about a thousand years later. This was used to explain a certain amount of Mongoloid elements that needed accounting for in western Polynesia.^[8]

A differing interpretation brings the Polynesian influence into Fiji from the east in relatively recent times. Thomson, for example, regards it as mainly Tongan. There are many references in the eighteenth and nineteenth centuries to Tongan presence in Fiji; they came to trade, to fight, and merely to visit.

Hocart believes the Polynesians at one time occupied most of Fiji until they were driven eastward to Tonga and Samoa by native Melanesians.^[9] Howells tentatively suggests another possibility: originally all of Fiji was occupied by Polynesians except perhaps for some Melanesian tribes in the mountainous interior of Viti Levu. Around the eleventh century a wave of immigrants from the west reached Fiji. "The newcomers, taking possession of the archipelago, partly amalgamated with and partly pushed out the Polynesian tenants, just as did the hill tribes of Hocart's theory, the refugees fleeing to Somoa and Tonga."^[10] Howells associates this immigration with the Fijian tradition of an arrival of ancestral families from across the western sea.

This Fijian tradition of their own origin includes a landing on the west coast of Viti Levu at Nandi by an ancestral chief and his sons who came across the sea from the west. Several of his sons moved eastward and eventually founded families with native wives in various parts of the archipelago. These families ultimately became consolidated into present-day tribes or federations. Most Fijian social units derive their origin from this or similar legendary immigrations. These episodes occurred eight or ten and, in one case, fifteen generations ago.^[11] Where these ancestors came from or what their racial affiliations were is not described in the stories. On the basis of supposed similarities of place-names, claims have been made for Africa as the place of origin, but the validity of them is dubious. It is likely that these traditions refer only to the more recent immigrations from the west. As to the racial make-up of the ancestors, it is commonly believed that they were Polynesians who, after settling in various parts of Fiji, took native wives, presumably Melanesian, and originated many of the existing family lines. This assumption does not rest on any actual physical reference to their appearance but on such cultural data as their patrilineal succession and their tradition of strong hereditary chieftainship.

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The young Fijian who acted as my interpreter, guide, and recorder was Joji Qalelawe; my especial thanks to him for his intelligent and cheerful coöperation.

MEASUREMENTS AND INDICES

GENERAL

Weight^[12]

	No.	Range	Mean	S.D.	C.V.
Total sample	814	105-300	163.0	20.3	12.5
Interior	0	0	0	0	0
East	73	130-245	168.1	19.3	11.5
Coast	210	118-300	160.7	22.8	14.2
N.W.	79	120-212	161.9	16.9	10.4

The average weight of 163 pounds, coupled with their rather tall stature, describes the Fijian as a large person, on the whole. Their generous weight does not reflect excessive obesity; the body build, as will be pointed out later, is prevailingly muscular and athletic. Variation among the regional samples is not significant; all the groups average more than 160 pounds.

Stature

	No.	Range	Mean	S.D.	C.V.
Total sample	815	150.1-195.0	172.5	6.1	3.5
Interior	154	150.1-183.7	169.6	6.0	3.5
East	120	160.2-190.5	173.3	6.0	3.5
Coast	210	156.1-195.0	173.4	5.8	3.4
N.W.	79	159.8-186.0	172.7	5.8	3.3
Fiji (Howells)	133	158-190	170.8	6.1	3.6
Solomons (Howells)	85	146-181	160.2	6.8	4.2
Tonga (Sullivan)	92	160-188	173.0	5.2	3.0

The stature of the Fijians is moderately tall. Howells' series of Fijians, as well as mine, indicate this category. In this measurement, the Fijians are similar to the Tongans. They are 12 cm. taller than the Melanesians.

Among the Fijian themselves, the interior people of the highlands are definitely shorter than the rest of the population.

Rumors still persist of remnants of pygmoid people in the interior mountains of Viti Levu. I found no evidence of them either in my travels in the interior or by extensive inquiries among natives and Europeans who had thorough knowledge of the whole island.

Span

	No.	Range	Mean	S.D.	C.V.
Total sample	815	155.0-208.0	180.0	15.1	8.8
Interior	154	155.0-201.0	179.5	7.5	4.2
East	120	166.4-200.5	178.1	24.3	13.6
Coast	210	160.1-208.0	181.2	14.6	8.1
N.W.	79	165.1-202.0	180.0	21.6	11.9

Span of the arms also reflects the generous proportions of the Fijians. Regional difference is not marked. Relative to stature, the hill people have the longer arms and the eastern natives the shortest. The greater relative arm length of the hill tribes seems to be owing more to deficiency of stature than to excessive arm length or shoulder breadth.

Span-Stature Index

	No.	Range	Mean	S.D.	C.V.
Total sample	815	96.1-116.3	104.3	8.5	8.15
Interior	154	99.4-115.1	105.2	2.3	2.2
East	120	99.1-108.5	102.7	13.5	13.14
Coast	210	97.9-116.3	104.4	7.7	7.4
N.W.	79	100.2-109.7	104.1	12.0	11.5

THE TRUNK

Sitting Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	75.1-100	87.0	3.5	3.9
Interior	154	75.1-94	84.4	9.4	11.0
East	120	81-100	88.5	3.5	3.9
Coast	210	80-99	87.7	3.2	3.6
N.W.	79	80-94	86.0	2.9	3.3
Fiji (Howells)	132	78-101	88.3	3.06	3.46
Solomons (Howells)	85	69-95	83.6	3.8	4.5

A total sitting height average of 87 cm. attests the generous general body length. A regional trend follows the same curve as that for stature. The eastern body length is greatest; it exceeds the over-all average by 1-1/2 cm. and is more than 4 cm. larger than the interior people who fall at the bottom of the scale of sitting height. Howells' Fijian series is close to my eastern average. Compared with the Solomon Islands natives, the Fijians are much more elongated.

Relative Sitting Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	45-58	50.4	1.5	3.0
Interior	154	46-56	49.8	1.4	2.8
East	120	48-54	51.0	1.3	2.5
Coast	210	46-56	50.5	1.4	2.8
N.W.	79	47-54	50.2	1.4	2.8
Fiji (Howells)	132	46-57	51.7	1.36	2.63
Solomons (Howells)	85	46-57	52.1	1.64	2.92

The relative sitting height ratio for all Fijians is 50.4 per cent. The eastern average of 51 per cent indicates a little more legginess, whereas the interior groups tend somewhat to longer trunks.

Biacromial

[Pg 6]

	No.	Range	Mean	S.D.	C.V.
Total sample	815	28-47	39.7	8.2	6.2
Interior	154	29-43	39.0	6.2	4.7
East	120	35-45	39.9	6.1	4.0
Coast	210	28-45	39.7	7.6	4.9
N.W.	79	35-47	40.5	6.6	3.9

The Fijians are generally a broad-shouldered people. The inhabitants of Ra and Ba have the highest average and the interior people are least broad-shouldered.

Relative Shoulder Breadth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	18-27	22.3	1.3	5.8
Interior	154	19-25	22.9	1.0	3.9
East	120	20-26	23.0	1.0	3.9
Coast	210	18-26	22.9	1.0	4.4
N.W.	79	20-27	23.4	3.1	13.2

Relative to total stature, shoulder breadth averages 22.3 per cent. No significant regional differences are indicated.

Bi-Iliac

	No.	Range	Mean	S.D.	C.V.
Total sample	815	23-40	29.2	5.6	5.3
Interior	154	25-38	29.0	5.1	5.2

East	120	27-34	29.5	4.1	4.8
Coast	210	23-37	29.2	5.9	5.5
N.W.	79	26-32	29.3	4.6	5.0

The Fijians, as a whole, are fairly broad-hipped; this condition holds with little variation in all the provinces.

Shoulder-Hip

	No.	Range	Mean	S.D.	C.V.
Total sample	815	58-101	73.7	4.3	5.8
Interior	154	65-100	74.6	4.2	5.6
East	120	67-82	73.8	3.2	4.3
Coast	210	58-99	73.5	4.3	5.9
N.W.	79	62-86	72.8	5.9	8.1

The total shoulder-hip ratio describes the shoulders as 73.7 per cent as wide as the hips. These ratios do not vary greatly in different parts of Fiji. The somewhat higher index of the hill groups is owing largely to their narrower shoulders, whereas the superior shoulder breadth of the northwest provinces contributes mostly to the lower hip-shoulder index.

Chest Breadth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	24-39	28.6	6.4	5.7
Interior	154	25-33	28.6	3.3	4.7
East	120	26-39	29.4	7.2	5.8
Coast	210	25-37	28.7	7.8	6.2
N.W.	79	25-32	28.9	4.3	4.9

Broad chests are also characteristic in Fiji. The eastern men surpass the Viti Levu males, and the interior groups have the narrowest chests, but the regional variations are small.

Chest Depth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	184-308	22.9	5.5	7.0
Interior	154	195-263	22.4	3.2	5.8
East	120	189-295	22.5	4.9	6.6
Coast	210	184-300	21.7	5.7	7.2
N.W.	79	192-250	21.8	3.3	6.0

The chests of the Fijians are also fairly deep. The close similarity in chest depth of the interior group and the eastern sample is rather striking inasmuch as the former are nearly 4 cm. shorter in stature. This would indicate that the interior group, for their size, are relatively deep-chested.

Thoracic

	No.	Range	Mean	S.D.	C.V.
Total sample	815	59-96	76.4	4.6	6.0
Interior	154	69-88	78.5	3.9	5.0
East	120	65-85	76.3	4.3	5.6
Coast	210	56-89	75.5	4.7	6.2
N.W.	79	65-85	75.7	4.4	5.8

The thoracic index shows that the Fijians are deep-chested relative to thoracic breadth as well as in absolute values. Again the interior people stand out for their deeper chests.

ARMS AND LEGS

Arm Length

	No.	Range	Mean	S.D.	C.V.
Total sample	815	45-87	75.2	5.0	6.6
Interior	154	45-83	73.6	4.8	6.1
East	120	52-84	75.1	3.9	5.2
Coast	210	57-87	76.0	4.9	6.4
N.W.	79	55-86	75.3	6.6	8.8

The over-all arm length is 75.2 cm. Shorter arms seem to be characteristic of the interior

population where the average is nearly 2 cm. less than the over-all average. The eastern group has the longest arms; the other samples are intermediate.

Humeral Length

	No.	Range	Mean	S.D.	C.V.
Total sample	815	26-39	32.8	8.6	5.7
Interior	154	28-38	32.8	7.1	5.2
East	120	28-39	32.9	8.3	5.6
Coast	210	26-38	32.9	9.1	5.8
N.W.	79	28-38	33.0	7.9	5.4

Length of the upper arm averages 33 cm. for all Fijians; the several provinces are closely similar in this trait.

Radial Length

	No.	Range	Mean	S.D.	C.V.
Total sample	815	23-35	27.6	4.1	5.1
Interior	154	24-33	27.3	2.4	4.5
East	120	23-34	27.5	6.9	6.1
Coast	210	24-35	27.9	3.5	4.8
N.W.	79	25-32	27.9	3.4	4.8

Lower arm length is 27.6 cm. and also varies but little among the regional samples.

Radial-Humeral

	No.	Range	Mean	S.D.	C.V.
Total sample	815	65-113	84.0	4.2	5.0
Interior	154	77-104	83.0	3.8	4.6
East	120	65-95	83.5	4.7	5.6
Coast	210	75-113	84.7	4.2	4.9
N.W.	79	77-94	82.2	3.6	4.3

The radial-humeral ratio indicates that the lower arm of Fijians is 84 per cent as long as the upper arm. None of the subgroups deviates markedly from this average.

Leg Length^[13]

	No.	Range	Mean	S.D.	C.V.
Total sample	815	61-98	84.3	10.5	12.5
Interior	154	74-96	81.1	8.6	12.9
East	120	73-96	84.1	8.6	10.3
Coast	210	68-97	85.3	7.2	8.5
N.W.	79	75-95	85.7	4.4	5.2

Average leg length is 84.3 cm., and some regional differences are manifest. The legs of the hill people are shorter by 3 cm. than are the other groups. Their neighbors to the northwest and east have the longest legs, and the eastern are intermediate.

Tibial Length

	No.	Range	Mean	S.D.	C.V.
Total sample	815	34-49	40.9	8.3	6.9
Interior	154	35-45	40.3	13.4	10.8
East	120	35-47	40.7	6.2	5.2
Coast	210	35-47	41.2	6.8	5.1
N.W.	79	36-47	40.9	6.1	5.9

Lower leg length is around 40 cm. for all Fijians. The regional pattern is similar to that of total leg length: shortest in the highlands, intermediate in the east, and longest in the coastal and northwestern districts.

Calf Circumference

	No.	Range	Mean	S.D.	C.V.
Total sample	815	29-57	37.6	6.7	7.1
Interior	154	31-51	37.0	6.4	7.1

East	120	33-50	38.1	4.7	6.5
Coast	210	29-48	37.2	9.4	7.9
N.W.	79	30-43	37.7	7.6	6.3

The generous girth of the calf of the Fijians reflects their sturdily muscled legs. The eastern groups excel the other Fijians in this respect, whereas the interior groups have the lowest average for calf circumference. [Pg 7]

THE HEAD

Head Circumference

	No.	Range	Mean	S.D.	C.V.
Total sample	815	410-630	562.4	7.8	6.7
Interior	154	537-613	565.3	4.1	2.5
East	120	528-630	566.3	4.9	2.9
Coast	210	410-630	563.5	4.6	3.5
N.W.	79	537-597	557.7	14.3	11.5

The head circumference average of 562.4 mm. Probably is a little on the large size because of the thick wiry hair of most Fijians; the eastern groups appear to have the largest heads and the northwestern groups show a rather abrupt drop.

Head Length^[14]

	No.	Range	Mean	S.D.	C.V.
Total sample	815	162-215	187.9	9.4	5.0
Interior	154	170-210	190.1	7.6	4.0
East	120	172-209	188.6	6.6	3.5
Coast	210	162-215	187.4	13.5	7.2
N.W.	79	165-214	187.2	7.9	4.2
Fiji (Howells)	133	164-208	188.8	7.29	3.86
Solomons (Howells)	85	170-208	188.5	6.5	3.5
Tonga (Sullivan)	117	173-213	191.0	6.6	3.5

Total head length for all Fijians is 187.9 mm; longest heads occur in the interior. Both Howells' Fijian average and the Solomon Islands series are close to the above value. Gifford's Tongan head length of 191 mm. Somewhat exceeds the Fijian.

Head Breadth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	122-186	155.9	6.8	7.7
Interior	154	135-170	152.1	6.6	4.3
East	120	144-172	157.2	5.2	3.3
Coast	210	141-186	158.3	9.3	8.5
N.W.	79	122-185	152.9	8.6	8.2
Fiji (Howells)	133	135-170	153.7	6.1	3.9
Solomons (Howells)	85	126-158	144.7	5.2	3.6
Tonga (Sullivan)	117	145-167	154.8	4.3	2.8

General head breadth is 155.9 mm., and considerable regional variation is shown. Fijians of the interior have the narrowest heads, whereas the coastal and eastern people have appreciably wider heads. Howells' series of Fijians are closest to my highland groups.

The Solomon Islanders are markedly narrower headed than the Fijians, whereas Sullivan's Tongan series is nearer the Fijian average.

Cephalic Index

	No.	Range	Mean	S.D.	C.V.
Total sample	815	68-99	83.0	6.4	7.7
Interior	154	68-96	80.0	6.0	7.3
East	120	72-92	83.9	3.8	4.5
Coast	210	72-99	84.2	7.2	8.6
N.W.	79	71-95	81.6	10.3	12.6
Fiji (Howells)	133	68-94	81.54	4.7	5.7
Solomons (Howells)	85	65-88	76.8	3.9	5.1
Tonga (Sullivan)	117	73-89	81.1	3.1	3.9

Most Fijians tend to brachycephaly. The eastern natives and those of the coastal series have the broadest heads. The interior people show definitely lesser values in this ratio than do the other groups. Howells' Fijian series is close to the northwestern Fijians in their mesocephaly, and so is the Tongan mean. The Solomon series borders on dolicocephaly.

Head Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	110-154	129.5	6.8	7.9
Interior	154	114-140	127.7	4.8	3.8
East	120	114-148	129.6	5.0	3.9
Coast	210	112-154	120.0	7.0	5.4
N.W.	79	117-142	127.6	9.2	8.9

Head height averages do not differ greatly among the provinces. The interior and northwestern people have somewhat lower heads; the coastal and eastern people show slight superiority.

Length-Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	55-84	69.0	3.4	3.6
Interior	154	59-77	67.2	3.9	5.8
East	120	61-78	68.7	3.2	4.7
Coast	210	55-84	69.4	3.7	4.3
N.W.	79	58-84	68.1	4.5	3.5

Relative to head length, the cranial vault of Fijians is high. The mountain people show the lowest relative head height, whereas the other provinces are nearer to the over-all average.

Breadth-Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	66-102	83.0	3.0	3.3
Interior	154	75-96	84.0	3.9	4.6
East	120	75-91	82.4	3.4	4.1
Coast	210	66-97	82.8	5.3	8.4
N.W.	79	73-92	81.2	8.6	9.7

Head height relative to total breadth is 83 per cent. In this ratio the interior groups have the highest index, a condition owing more to deficiency in cranial breadth than to superior head height.

Cranial Module

	No.	Range	Mean	S.D.	C.V.
Total sample	815	141-176	157.7	10.5	6.7
Interior	154	147-166	156.6	11.5	7.3
East	120	148-172	158.4	4.4	2.7
Coast	210	143-176	158.5	15.5	9.7
N.W.	79	141-171	155.9	10.7	6.7

Head size as expressed by the cranial module averages 157.7 mm. for all Fijians. Regional fluctuation is unimportant.

Minimum Frontal

	No.	Range	Mean	S.D.	C.V.
Total sample	815	99-125	109.9	4.0	2.7
Interior	154	100-121	109.8	3.6	3.3
East	120	99-122	110.8	3.8	3.4
Coast	210	100-125	109.7	4.7	4.3
N.W.	79	101-120	109.4	3.7	3.4

A minimum frontal diameter of 109.9 mm. indicates a fairly ample forehead breadth for the total sample. None of the subgroups depart much from this value.

Fronto-Parietal

	No.	Range	Mean	S.D.	C.V.
Total sample	815	58-89	70.6	4.3	6.1

Interior	154	63-82	72.2	3.3	4.6
East	120	64-79	70.5	3.0	4.3
Coast	210	58-77	69.9	4.1	5.9
N.W.	79	61-89	69.7	8.7	12.5

Forehead breadth relative to total cranial width is 70.6 per cent. The greatest deviation from this average occurs in the interior where the fronto-parietal ratio is 72.2 per cent and lesser head breadth more than greater forehead width causes the higher index.

THE FACE

Bizygomatic

	No.	Range	Mean	S.D.	C.V.
Total sample	815	110-164	145.7	5.0	3.4
Interior	154	110-163	145.8	6.3	4.3
East	120	137-161	146.7	4.3	2.9
Coast	210	128-164	145.2	4.9	3.4
N.W.	79	136-156	145.1	4.3	3.0
Fiji (Howells)	132	130-159	144.05	5.05	3.5
Solomons (Howells)	84	115-149	138.0	5.5	4.0
Tonga (Sullivan)	116	131-159	143.5	5.9	4.1

Broad faces are the rule among most of these people, as the total average of 145.7 mm. shows. Regional values for this criterion are closely alike in all parts of Fiji, the eastern showing a slight superiority in bizygomatic breadth.

Howells' Fiji series is slightly lower in this diameter as is the Tongan average. The Solomon Islands natives have definitely narrower faces.

Cephalo-Facial

	No.	Range	Mean	S.D.	C.V.
Total sample	815	82-108	93.5	5.7	6.1
Interior	154	84-108	96.0	4.8	5.0
East	120	82-102	93.3	3.2	3.4
Coast	210	85-103	92.5	5.7	6.2
N.W.	79	80-104	92.6	6.4	7.3
Fiji (Howells)	132	85-111	93.7	3.5	3.7
Solomons (Howells)	84	85-111	95.4	3.8	4.0
Tonga (Sullivan)	116	85-103	92.8	3.5	3.7

Face breadth relative to head width averages 93.5 per cent for all Fijians; Howell's series is much the same. The narrower heads of the interior people largely account for their higher index; otherwise there is general similarity in the several provinces.

Zygo-Frontal

	No.	Range	Mean	S.D.	C.V.
Total sample	815	64-100	75.5	3.0	3.9
Interior	154	64-98	75.4	3.2	4.2
East	120	68-99	75.5	2.5	3.3
Coast	210	66-100	75.5	3.1	4.1
N.W.	79	66-93	75.4	2.9	3.8
Tonga (Sullivan)	116	63-84	73.1	4.2	5.8

The ratio of forehead width to face breadth is 75.5. All of the regional averages for the zygo-frontal index are strikingly alike among the Fijians in every instance; the forehead is about three-quarters the breadth of the face. The Tongan ratio is a little lower.

Total Face Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	100-147	122.5	6.0	4.9
Interior	154	103-137	121.3	5.6	4.6
East	120	110-147	124.7	5.8	4.7
Coast	210	107-142	122.6	6.1	5.0
N.W.	79	100-143	121.7	6.8	5.6
Fiji (Howells)	133	105-159	121.8	6.9	5.7
Solomons (Howells)	85	100-129	116.4	6.6	5.7

Fijian faces have the moderate average height of 122.5 mm. Slightly shorter faces occur in the interior people, whereas the greatest total face height average occurs in the east. The Fijian of Howells' series is close to mine. The Tongan value for face height describes them as definitely longer faced. The Solomon Islanders depart in the other direction with decidedly shorter faces.

Total Facial Index

	No.	Range	Mean	S.D.	C.V.
Total sample	815	68-104	84.1	4.6	5.5
Interior	154	73-96	83.2	4.4	5.3
East	120	75-101	85.0	4.4	5.2
Coast	210	73-97	84.5	4.6	5.4
N.W.	79	68-104	83.9	5.6	6.7
Fiji (Howells)	132	74-105	84.7	5.0	6.0
Solomons (Howells)	84	74-97	84.5	4.4	5.2
Tonga (Sullivan)	116	78-102	89.3	4.4	5.0

Relative to maximum breadth, the Fijian face tends to shortness, although this is due largely to their generous facial breadth rather than absolute deficiency of height. The interior groups have the lowest values and the eastern groups show relatively broad faces. [Pg 9]

The Tongan average is much higher than any of the Fijian values, whereas the Solomon Islanders show similarity to the Fijians in this feature.

Upper Face Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	56-84	70.2	5.1	7.3
Interior	154	59-79	69.1	3.9	5.6
East	120	64-83	71.7	4.0	5.6
Coast	210	59-84	70.4	6.6	9.4
N.W.	79	58-80	69.4	4.8	6.9

The ratio of the upper face height to maximum facial breadth shows the Fijians of the interior to be relatively shorter faced and the eastern people longest. The coastal and northwestern series are intermediate.

Upper Facial Index

	No.	Range	Mean	S.D.	C.V.
Total sample	815	37-65	48.2	3.7	7.7
Interior	154	41-65	47.4	3.3	7.0
East	120	42-59	48.9	2.9	5.9
Coast	210	40-59	48.5	4.8	9.9
N.W.	79	39-56	47.8	3.5	7.3

The ratio of the upper face height to maximum facial breadth shows the Fijians of the interior to be relatively shorter faced and the eastern people longest. The coastal and northwestern series are intermediate.

Bigonial

	No.	Range	Mean	S.D.	C.V.
Total sample	815	95-146	109.7	5.1	4.6
Interior	154	95-146	109.8	6.0	3.6
East	120	97-125	110.6	5.1	4.6
Coast	210	95-129	109.9	5.3	4.8
N.W.	79	99-119	109.1	4.5	4.1
Tonga (Sullivan)	116	92-119	104.8	5.8	5.5

Lower jaw breadth as expressed by the bigonial diameter indicates a tendency to broadness shared with little variation among all the subgroups. The Tongan value is considerably smaller.

Fronto-Gonial

	No.	Range	Mean	S.D.	C.V.
Total sample	815	80-122	99.9	5.5	5.5
Interior	154	84-122	100.0	6.0	6.0

East	12086-115	99.9	5.3	5.3
Coast	21080-114	100.3	6.0	6.0
N.W.	7985-113	99.8	4.8	4.8

Similarly the bigonial diameter in relation to forehead breadth is much the same in all groups, the general average nearly 100 per cent.

Zygo-Gonial

[Pg 10]

	No.	Range	Mean	S.D.	C.V.
Total sample	815	65-86	75.3	4.1	5.4
Interior	154	67-86	75.4	6.0	8.0
East	120	65-82	75.4	3.5	4.6
Coast	210	66-83	75.7	3.4	4.5
N.W.	79	68-83	75.2	3.4	4.5
Tonga (Sullivan)	116	63-87	73.2	4.6	6.2

Relative to face breadth, jaw width is 75.3 per cent with very little geographic variation.

Nasal Height

	No.	Range	Mean	S.D.	C.V.
Total sample	815	42-65	53.9	3.4	6.3
Interior	154	45-65	53.2	3.5	6.6
East	120	48-62	54.7	3.1	5.7
Coast	210	46-63	54.1	3.4	6.3
N.W.	79	45-61	52.9	3.5	6.6
Fiji (Howells)	133	44-63	52.4	3.9	7.4
Solomons (Howells)	85	40-59	49.9	3.8	7.7
Tonga (Sullivan)	117	47-65	57.4	3.9	6.8

The Fijian nose may be called medium long. Greatest nasal heights occur in the eastern and in the coastal series. The interior and northwestern groups have shorter noses. The Fijians of Howells' series fall near the short end of my averages. Natives of the Solomons are definitely lower in nasal height, whereas the Tongan's average is so much higher that one suspects a difference in the location of the nasion.

Nasal Breadth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	31-62	46.7	3.4	7.3
Interior	154	40-61	47.6	3.4	7.1
East	120	38-53	45.5	3.0	6.6
Coast	210	38-62	46.4	3.3	7.1
N.W.	79	31-57	47.4	3.6	7.6
Fiji (Howells)	133	37-54	46.19	3.0	6.0
Solomons (Howells)	85	34-51	44.6	2.8	6.3
Tonga (Sullivan)	117	38-55	44.4	3.0	6.8

Broad noses are common to most Fijians. The greatest contrast is between the narrower-nosed eastern people and the interior people, among whom the widest noses occur. The nose of the Solomon Islanders is somewhat narrower, according to Howells' data, and the Tongan average is also lower.

Nasal Index

	No.	Range	Mean	S.D.	C.V.
Total sample	815	61-112	87.1	8.2	9.4
Interior	154	69-109	89.7	8.1	9.0
East	120	61-100	83.2	7.6	9.1
Coast	210	63-111	86.0	7.1	8.7
N.W.	79	63-110	89.9	8.6	9.6
Fiji (Howells)	133	68-123	88.8	8.3	9.3
Solomons (Howells)	85	68-119	87.1	8.9	10.2
Tonga (Sullivan)	117	61-98	77.6	7.6	9.8

Platyrrhini is the rule in Fiji, but individual and regional variations are great. There are some leptorrhine subjects in every province, and there are some whose noses are broader than long. The interior people and the northwestern groups have the relatively broadest noses, whereas the eastern index is more moderate. The noses of Sullivan's Tongans are relatively longer than the

Lauans. The Solomon Island average is identical with the Fijian.

Nasal Depth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	16-32	22.0	2.9	3.2
Interior	154	17-32	22.5	2.1	9.3
East	120	17-28	21.9	1.8	8.2
Coast	210	17-32	21.8	3.6	6.5
N.W.	79	16-29	22.3	1.9	8.5

Nasal depth averages 22 mm.; the regional variation is very small.

Nasal-Depth Index

	No.	Range	Mean	S.D.	C.V.
Total sample	815	32-60	47.2	6.8	6.8
Interior	154	34-59	47.4	5.1	6.6
East	120	35-60	48.4	4.6	9.5
Coast	210	32-58	47.0	8.1	7.2
N.W.	79	34-58	47.2	5.5	6.7

Mouth Breadth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	29-72	57.6	4.7	8.2
Interior	154	34-72	59.6	4.4	7.4
East	120	33-66	56.5	3.9	6.9
Coast	210	29-67	57.3	4.0	7.0
N.W.	79	36-65	57.3	4.4	7.8

Mouth breadth averages show the interior groups to have widest mouths, the eastern people least wide, and the coastal and northwestern people intermediate.

Lip Thickness

	No.	Range	Mean	S.D.	C.V.
Total sample	815	9-45	22.4	3.8	6.9
Interior	154	12-31	23.4	3.6	5.4
East	120	12-29	21.7	3.4	5.7
Coast	210	16-45	20.8	3.6	5.3
N.W.	79	10-29	22.0	3.9	5.7

Thick lips are characteristic of most Fijians. The interior average is highest for this diameter, whereas the northwestern Fijians have least-thick lips.

Ear Length

	No.	Range	Mean	S.D.	C.V.
Total sample	815	55-83	66.6	4.5	6.8
Interior	154	53-83	66.0	4.8	7.3
East	120	55-80	67.2	5.0	7.4
Coast	210	55-77	66.7	4.9	7.3
N.W.	79	57-75	66.5	3.7	5.6
Tonga (Sullivan)	117	56-81	66.0	4.6	6.9

Fijian ears on the whole tend to be long, as the average 66.6 mm. indicates. Regional differences are slight. Tongans closely resemble Fijians. [Pg 11]

Ear Breadth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	24-55	34.3	3.2	9.3
Interior	154	27-41	33.7	2.5	7.4
East	120	29-40	34.1	4.0	11.7
Coast	210	29-55	34.7	3.9	11.2
N.W.	79	25-42	33.8	2.9	8.6
Tonga (Sullivan)	116	25-42	34.5	2.6	7.6

Ear breadth is also generous, and regional differences hardly exceed 1.5 mm., including the Tongans.

Ear Index

	No.	Range	Mean	S.D.	C.V.
Total sample	815	38-62	51.6	5.0	9.7
Interior	154	40-61	51.1	3.6	7.0
East	120	41-59	50.6	5.8	11.5
Coast	210	42-62	52.1	6.7	12.9
N.W.	79	38-59	50.9	4.0	7.9
Tonga (Sullivan)	116	41-62	52.4	3.9	7.5

Length-breadth ear ratios indicate that coastal groups have somewhat broader, and the northwestern people the relative longest, ears.

Bicanine Breadth

	No.	Range	Mean	S.D.	C.V.
Total sample	815	24-72	39.8	11.7	19.4
Interior	154	37-49	39.9	10.7	16.8
East	120	36-68	41.8	7.4	7.7
Coast	210	24-72	39.0	13.4	14.3
N.W.	79	38-49	38.6	14.0	16.3

Bicanine breadth is characteristically great among Fijians, reflecting the ample jaws and teeth. Widest diameters are seen in the east, followed by the hill people of the interior. The northwestern groups have the least bicanine diameter.

MORPHOLOGICAL OBSERVATIONS

PIGMENTATION

Skin Color: Exposed

	Brunet		Swarthy		Lt. Brn		Med. Brn		Dk. Brn		Black		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Total sample	1	.01	5	.6	30	4	400	48	377	46	0	0	813
Interior	0	0	0	0	1	1	55	36	97	63	0	0	153
East	0	0	3	2	12	10	99	83	6	6	0	0	120
Coast	0	0	1	0	7	3	85	41	116	56	0	0	209
N.W.	0	0	0	0	1	1	42	53	36	46	0	0	79
Fiji II	0	0	0	0	0	0	128	96	5	4	0	0	133
Solomons	0	0	0	0	0	0	4	5	79	93	2	3	85

(Range: Lt. Brown to Dk. Brown.)

Color of skin includes exposed and unexposed areas. The former was observed on the face, since the Fijians do not use any kind of face or head covering. This condition in the total series divides itself quite evenly between medium brown and dark brown. A few have light-brown skin; only six individuals are classified as swarthy and brunet. None was judged to be completely black. The Fijians of Howells' series are described as 96 per cent medium brown^[15] and 5 per cent dark brown, a discrepancy I would attribute to personal judgment difference. The Solomon Islanders are markedly darker than the Fijians, the majority have dark-brown skin and 3 per cent are black, whereas 5 per cent have medium-brown complexions.

Tongan data on skin color cannot be directly adjusted to my statistics. Sullivan's comment on their skin color states that it is "a medium yellowish-brown where it is unexposed to the sun. Exposed parts of the skin of a few of the persons were a very dark chocolate" (Sullivan, 1922, p. 248).

Among the Fijians themselves, the greatest contrasts occur between the eastern and the interior groups of Viti Levu. Where 63 per cent of the latter have dark-brown skin, only 5 per cent of eastern fall into this category. The bulk of eastern (83 per cent) have medium-brown skin as against 36 per cent of hill people. The coastal and northwestern provinces are, like the total series, more evenly divided between medium and dark brown.

Skin Color: Unexposed

	Brunet	Swarthy	Lt. Brn	Med. Brn	Dk. Brn	Black	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Total sample	6 1	9 1	24 2	30 5	45 6	11 1	0 0 813
Interior	0 0	0 0	20 13	133 87	0 0	0 0	153
East	3 3	4 3	77 64	36 30	0 0	0 0	120
Coast	1 1	2 1	56 27	148 71	2 1	0 0	209
N.W.	0 0	1 1	20 25	57 72	1 1	0 0	79
Fiji II	0 0	0 0	0 0	127 96	5 4	0 0	132
Solomons	0 0	0 0	0 0	9 11	74 87	2 2	85

Unexposed skin color was observed on the under surface of the upper arm near the armpit. The anticipated shift in color range results in a reduction of dark-skin incidence to a mere 1 per cent, and an increase in medium brown to 60 per cent and of light brown to 30 per cent.

Howells' describes 96 per cent of his Fijians as medium brown, 4 per cent dark brown, and none light brown. The Solomon Islanders seem definitely darker than the Fijians whether they are compared with Howells' or my series.

The eastern groups continues to contrast with the interior people. The former show a majority of 64 per cent in the light-brown category as compared with 13 per cent among the interior groups; the latter have a medium-brown incidence of 87 per cent against 30 per cent among Lauans.

Hair Color

[Pg 13]

	Black	Dk. Brn	Med. Brn	Lt. Brn	Red-Brn	Total
	No. %	No. %	No. %	No. %	No. %	No. %
Total sample	757 93	31 5	1 0	0 0	18 2	807
Interior	145 95	8 5	0 0	0 0	0 0	153
East	114 95	6 5	0 0	0 0	0 0	120
Coast	193 92	11 5	0 0	0 0	5 2	204
N.W.	70 89	5 6	0 0	0 0	4 5	75
Fiji II	118 91	9 7	0 0	0 0	3 2	130
Solomons	55 65	26 31	0 0	3 4	0 0	84
Tonga	0 94	0 4	0 0	0 0	0 0	0

Black hair is the usual color, although 5 per cent are described as dark brown and a few red-brown. This latter variation is a rufous color (reddish-brown) and it may be a little more frequent than the data indicate because the Fijians frequently dye their hair with a substance extracted from mangrove bark. This intensifies the usual blackness of the hair and adds a satisfying gloss. More sophisticated natives have access to modern hair dye and lacking this, some have been known to resort to black shoe polish.

Hair bleaching is no longer practiced in Fiji.

The hair of the Solomons Islands is not so uniformly black, nearly a third have dark-brown hair and a few are light brown.

Eye Color

	Black	Dk. Brn	Med. Brn	Lt. Brn	Total
	No. %	No. %	No. %	No. %	No. %
Fiji I	2 0	550 68	257 31	4 1	813
Interior	0 0	131 86	22 14	0 0	153
East	0 0	71 59	48 40	1 1	120
Coast	0 0	127 61	81 39	1 0	209
N.W.	1 1	53 67	25 32	0 0	79
Fiji II	0 0	130 98	0 0	2 2	132
Solomons	0 0	85 100	0 0	0 0	85
Tonga	0 3	0 94	0 0	0 3	0

A little more than two-thirds of Fijians' eyes are described as dark brown. The remaining third have medium-brown eyes. There were four individuals who were light brown. Howells, with his Fijian series, is more generous with the darker designation; he designated 98 per cent as dark brown and 2 per cent light brown. His Solomons sample is described as dark brown without exception. The Tongan data also is recorded as more uniformly dark brown than my Fijians.

The Fijians of the interior of Viti Levu have more deeply pigmented eyes than the others; 86 per cent are classed as dark brown and only 14 per cent medium brown.

HAIR

Hair Form

	Straight	Low Wave	Deep Wave	Curl	Frizz	Wool	Total
	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Total sample	0 0	7 0.1	13 0.291	11.0702	862	0 0	813
Interior	0 0	0 0	0 0	4 3	149 97	0 0	153
East	0 0	1 1	10 8	37 31	72 60	0 0	120
Coast	0 0	0 1	3 0	18 9	188 90	0 0	209
N.W.	0 0	2 3	0 0	7 9	70 89	0 0	79
Fiji II	0 0	0 0	0 0	19 16	38 33	59 51	116
Solomons	2 3.3	1 1.6	0 0	16 26	17 28	25 41	61

Frizzly hair is the condition of over 85 per cent of Fijians; 11 per cent are curly-haired, whereas over twenty individuals have wavy hair. Straight hair is absent. The Fiji II series of Howell distinguishes between frizzly and wooly hair, which I do not. Their combined incidence is 83 per cent, quite close to my frequency of frizzly. Whether one does or does not distinguish between frizzly and wooly hair, there is no doubt that most Fijians have Negroid hair form. The Solomon Islanders are surprising with somewhat less Negroid hair form than the Fijians. Their combined percentage of frizzly and wooly is 69, which is nearly 20 per cent less than that of the Fijians. Twenty per cent have curly hair against 11 per cent among Fijians. Also, the only instances of straight hair occur in the Solomons.

In the Fijian breakdown, the interior groups have the most Negroid hair; 97 per cent have frizzly hair and 3 per cent have curly hair. The eastern people are the least Negroid in this respect; frizzly hair drops to 60 per cent, whereas curly hair advances to 30 per cent and wavy hair to 9 per cent. The coastal and northwestern series are closer to the interior groups with about 90 per cent frizzly hair.

Hair Texture

[Pg 14]

	Course	Medium	Fine	Total
	No. %	No. %	No. %	No. %
Total sample	804 99	9 1	0 0	813
Interior	153 100	0 0	0 0	153
East	116 97	4 3	0 0	120
Coast	208 100	1 0	0 0	209
N.W.	78 99	1 1	0 0	79

Hair texture is prevailingly coarse; only 1 per cent of the total series shows medium coarseness and none have fine hair. This preponderance of coarse hair is much the same in all the provinces, although the eastern people do depart slightly with a 3 per cent incidence of medium-coarse hair.

It might be added that Fijian hair is quite stiff or wiry. For example, when the hair is unshorn, it stands out like a mop. A Fijian can insert a long stemmed flower in his hair and it will stay in place with no additional fastening.

Head Hair Quantity

	Absent	Subm.	[16]	++	+++	Total
	No. %	No. %	No. %	No. %	No. %	No. %
Total sample	0 0	61 7.219	27 5.33	65	0 0	813
Interior	0 0	26 17	27 18	100 65	0 0	153
East	0 0	5 4	24 20	91 76	0 0	120
Coast	0 0	11 5	63 30	135 65	0 0	209
N.W.	0 0	7 9	21 27	51 65	0 0	79
Fiji II	0 0	0 0	0 0	1 1	132 92	133
Solomons	0 0	0 0	0 0	5 6	80 94	85

Head hair quantity is pronounced in the majority of Fijians (65 per cent); it is moderate in 27 per cent and submedium in 7 per cent. Howells describes nearly all the Fijians as having very pronounced head hair—99 per cent, which would appear to be a personal difference in appraisal. In any case, the two series agree that Fijians have hair of more than moderate quantity. The Melanesians of the Solomons are also characterized by much head hair.

Regionally, the only significant variation in this trait is shown in the east, where more individuals have a submedium designation. In the absence of age data, this contrast cannot be fairly interpreted.

Hair Length

It might be observed here that although hair length was not included in this survey, on the basis of personal but unrecorded observation, the Fijians conform to the Melanesian pattern. Most Fijian men now cut their hair short in the Western style, but some still do not. Women generally trim their hair but not short. The natural length of head hair is intermediate between the short-

haired African Negroes and the long-haired Caucasians and Mongolians.

Baldness

	Absent		Subm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Total sample	731	90	40	3	30	4	12	1	0	0	813
Interior	122	80	12	8	12	8	7	5	0	0	153
East	112	93	3	3	4	3	1	1	0	0	120
Coast	194	93	10	5	4	2	1	0	0	0	209
N.W.	72	91	1	1	3	4	3	4	0	0	79

The lack of age correlations also limits the value of data on baldness, but some meaning can nevertheless be extracted. Regardless of age, with an incidence of pronounced baldness of 1 per cent among all adult males and of 4 per cent for a moderate condition, it is a clear indication that Fijians are not prone to loss of head hair.

Beard Quantity

[Pg 15]

	Absent		Subm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Total sample	0	0	23	4	29	3	70	4	20	8	813
Interior	0	0	22	14	67	44	64	42	0	0	153
East	0	0	45	38	59	49	16	13	0	0	120
Coast	0	0	60	29	94	45	54	26	1	0	209
N.W.	0	0	22	28	30	38	27	34	0	0	79
Fiji II											
cheeks	27	21	2	2	44	34	46	35	12	9	131
skin	9	7	0	0	52	40	56	43	14	10	131
Solomons											
cheeks	21	25	0	0	42	49	22	26	0	0	85
chin	7	8	0	0	53	62	25	29	0	0	85
Tonga											
chin	0	0	0	19	0	31	50	0	0	0	0
lower chk.	0	4	0	37	0	18	40	0	0	0	0

Moderate beard quantity is shown by 44 per cent of Fijians; the remainder are fairly evenly divided between the submedium and pronounced categories. Howells' series, which records beard quantity for the cheeks and chin separately, shows a higher frequency of pronounced and very pronounced designations. However, his data includes many individuals who have no beards at all. Both series are doubtless influenced by the fact that they contain a preponderance of young adult; a greater proportion of older men would have greatly raised the incidence of the pronounced categories.

Nearly all modern Fijians have adopted the Western practice of shaving. Examination of earlier pictures and written description of Fijians leaves no doubt that the majority of mature men possess luxurious beards when nature is unrestrained.

The natives of the Solomon Islands, according to Howells, are a little less bearded than the Fijians.

The Tongans are a little more heavily bearded than the Fijians.

Some geographical variation is indicated by my data. The interior people of Fiji have the highest incidence of face hair; 42 per cent are recorded as pronounced. Least endowed are the eastern Fijians, where 13 per cent have pronounced beards and 38 per cent are submedium. The coastal and northwestern series conform more closely to the overall distribution.

Body Hair^[17]

	Absent		Subm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.
Total sample	0	0	24	3	30	3	28	4	16	2	813
Interior	0	0	31	20	56	37	41	27	25	16	153
East	0	0	55	46	45	38	14	12	6	5	120
Coast	0	0	57	27	82	39	46	22	24	11	209
N.W.	0	0	16	20	36	46	19	24	8	8	79
Tonga	0	0	23	29	0	26	0	22	0	0	0

The body hair endowment is also not unimpressive. Forty per cent show a moderate condition, 20 per cent are pronounced, and 10 per cent very pronounced; none are totally devoid of body hair; 30 per cent are submedium. Chest hair among the Tongans is somewhat less in evidence;

although the majority range from submedium to pronounced, 23 per cent are described as hairless.

The provincial distribution in Fiji follows that of face hair: the interior groups are hairiest and the eastern people least so.

The anatomical distribution of body hair deserves some comment, even though specific observations were made on the chest. Not infrequently the hair is heavier on the upper legs than on the chest. Occasionally, too, the back of the shoulders is quite hairy as well as the belly.

Grayness: Head

	Absent		Subm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
Total sample	621	76	82	10	82	10	28	3	3	3	813
Interior	80	52	37	24	19	12	17	11	0	0	153
East	91	76	13	11	16	13	0	0	0	0	120
Coast	176	84	14	7	17	8	2	1	0	0	209
N.W.	60	76	8	10	9	11	2	3	0	0	79

Grayness: Beard

	Absent		Subm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	
Total sample	610	75	61	8	90	11	52	6	0	0	813
Interior	72	47	30	20	20	13	31	20	0	0	153
East	89	74	9	8	18	15	4	3	0	0	120
Coast	178	85	8	4	21	10	2	1	0	0	209
N.W.	60	76	6	8	11	14	2	3	0	0	79

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Grayness of the hair data without corresponding age incidence is not particularly significant. It is clear, nevertheless, that premature grayness is not common. I would hazard the judgment that on the whole the Fijians show less tendency to grayness than do Caucasians.

The higher incidence of grayness of the interior sample of Fijians is likely due to a larger number of older men in that series.

THE FACE

Prognathism: Total

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	206	25	306	38	288	35	13	2	813
Interior	40	26	59	39	52	34	2	1	153
East	54	45	55	46	11	9	0	0	120
Coast	47	22	84	40	73	35	5	2	209
N.W.	18	23	29	37	32	41	0	0	79
Tonga	63	53	26	22	29	25	0	0	118

Prognathism: Mid-Facial

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	517	64	184	23	109	13	3	1/2	813
Interior	133	87	15	10	5	3	0	0	153
East	100	83	17	14	3	3	0	0	120
Coast	122	58	49	23	37	18	1	1	209
N.W.	48	61	20	25	11	14	0	0	79

Prognathism: Alveolar

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	798	98	9	1	4	1/2	2	0	813
Interior	153	100	0	0	0	0	0	0	153
East	120	100	0	0	0	0	0	0	120
Coast	207	99	0	0	1	1/2	1	1/2	209
N.W.	76	{96}	2	3	0	0	1	1	79

Slight and moderate total prognathism characterizes most Fijians. but it is pronounced in only 13 of the 813 subjects. A quarter of the series show no prognathism. The eastern people are least prognathic with a zero incidence of 45 per cent. The other regional sample are close to the general condition.

Mid-facial prognathism has a submedium incidence of 23 per cent and a medium of 13 per cent; the remainder lack the condition, except three individuals who are pronounced.

The coastal and northwestern groups have more frequent medium designations. Alveolar prognathism is almost entirely lacking in all groups.

Malar Projection: Lateral

	Absent Subm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	1	0	2	0	26	43	67	3	813
Interior	0	0	0	0	62	41	91	59	153
East	0	0	0	0	25	21	95	79	120
Coast	0	0	0	0	68	33	141	67	209
N.W.	0	0	0	0	28	35	50	63	79

Malar Projection: Frontal

	Absent Subm.		+		++		Total
	No.	%	No.	%	No.	%	
Fiji I	4	1/2	0	0	70	87	100
Interior	0	0	0	0	13	91	14
East	0	0	0	0	10	86	17
Coast	1	0	0	0	18	87	27
N.W.	0	0	0	0	6	85	12

The facial contours generally include lateral malar projection; two-thirds show a pronounced condition and the balance are medium. The eastern people have high cheek bones oftener than do the others.

Frontal malar projection is also common but more often moderately so; 87 per cent show medium projection and 12 per cent are pronounced.

Gonial Angles

	Sbm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	24	34	59	56	32	40	5	1	813
Interior	0	0	97	63	55	36	1	1	153
East	1	1	65	54	54	45	0	0	120
Coast	7	3	110	53	90	43	2	1	209
N.W.	3	4	49	62	27	34	0	0	79

Palate Shape

	Parabolic		Sm. U		Lg. U		Square		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	49	61	2	0	30	37	15	2	813
Interior	94	61	0	0	59	39	0	0	153
East	81	68	0	0	38	32	1	1	120
Coast	131	63	0	0	71	34	7	3	209
N.W.	50	63	1	1	27	34	1	1	79

A fairly strong tendency to well-developed gonial angles is indicated; 40 per cent show pronounced angles and nearly all the rest are medium. These proportions hold pretty much for all groups.

Palate shape also attests to the well-developed jaws of Fijians; it is a large U in 37 per cent of the subjects; 2 per cent are square and the remainder parabolic.

Chin Prominence

	Absent Subm.		+		++		Total
	No.	%	No.	%	No.	%	
Fiji I	2	0	16	4	20	5	93
Interior	0	0	36	24	110	72	7

East	0 0	25 21	89 74	6 5	120
Coast	0 0	41 20	153 73	13 6	207
N.W.	1 1	11 14	55 70	9 11	76

Chin Type

	Median Bilateral Total	
	No. %	No. %
Fiji I	673 83	140 17 813
Interior	130 85	23 15 153
East	112 93	8 7 120
Coast	162 78	45 22 207
N.W.	62 82	14 18 76

A well-developed chin further typifies most Fijian faces; nearly three-quarters have a moderate chin prominence, 7 per cent are pronounced, and the remainder are submedium. This range is much the same in the subgroups.

The chin is commonly median although 17 per cent have the bilateral type. The bilateral chin is least frequent in Lau (7 per cent).

THE HEAD

Temporal Fullness

	Absent Subm.		+ Total
	No. %	No. %	No. %
Fiji I	1 05	63 69	249 31 813
Interior	0 0	113 74	40 26 153
East	0 0	70 58	50 42 120
Coast	1 0	148 71	60 29 208
N.W.	0 0	59 75	20 25 79

Occipital Protrusion

	Absent Subm.		+ Total
	No. %	No. %	No. %
Fiji I	13 27	75 95	25 3 813
Interior	4 3	149 97	0 0 153
East	0 0	116 97	4 3 120
Coast	3 1	193 92	13 6 209
N.W.	0 0	79 100	0 0 79

A narrowness in the temporal part of the head is indicated. Sixty-nine per cent of the subject show submedium temporal fullness, whereas the remainder are moderate. This condition is not marked and may best be described as a discernable tendency.

The back of the head is generally rather flat as the 95 per cent incidence of occipital protrusion [Pg 17] indicates. This is a natural condition; no intentional flattening is practiced by Fijians.

Lambdoidal Flattening

	Absent Subm.		+ Total
	No. %	No. %	No. %
Fiji I	754 93	32 4	27 3 813
Interior	153 100	0 0	0 0 153
East	113 94	5 4	2 2 120
Coast	188 90	13 6	8 4 209
N.W.	72 91	3 4	4 5 79

Occipital Flattening

	Absent Subm.		+ Total
	No. %	No. %	No. %
Fiji I	809 100	2 0	2 0 813
Interior	153 100	0 0	0 0 153
East	120 100	0 0	0 0 120
Coast	209 100	0 0	0 0 209
N.W.	79 99	0 0	1 1 79

Median Sagittal Crest

	Absent		Subm.		+ Total		
	No.	%	No.	%	No.	%	
Fiji I	600	74	177	22	36	4	813
Interior	96	63	46	30	11	7	153
East	109	91	10	8	1	1	120
Coast	160	77	43	21	6	3	209
N.W.	53	57	24	30	2	3	79

Parietal Bosses

	Absent		Subm.		+ ++ Total				
	No.	%	No.	%	No.	%			
Fiji I	17	2	413	51	38	47	2	0	813
Interior	1	1	130	85	22	14	0	0	153
East	4	3	66	55	50	42	0	0	120
Coast	6	3	82	39	120	57	1	0	209
N.W.	1	1	40	51	38	48	0	0	79

A median sagittal crest though not striking is recorded in a number of cases. It has a submedium incidence of 22 per cent and pronounced 4 per cent. Among the interior people, the crest is more common. Because of the heavy, bushy, and wiry hair of Fijians it is probable that some instances of this feature were not detected by simple palpation, and the incidence may be higher than the data indicate.

Submedium development of the parietal bosses is rather common occurring in 51 per cent of the series. It is very common in the interior (85 per cent).

Cranial Asymmetry

	Absent		Left		Right		Total	
	No.	%	No.	%	No.	%	No.	%
Fiji	813	100	0	0	0	0	813	
Interior	153	100	0	0	0	0	153	
East	119	100	0	0	0	0	119	
Coast	208	100	0	0	0	0	208	
N.W.	79	100	0	0	0	0	79	

Facial Asymmetry

	Absent		Left		Right		Total	
	No.	%	No.	%	No.	%	No.	%
Fiji	806	100	1	0	0	0	807	
Interior	153	100	0	0	0	0	153	
East	117	98	0	0	2	2	119	
Coast	206	99	0	0	2	1	208	
N.W.	78	99	1	0	0	0	79	

[Pg 18]

Cranial and facial asymmetry are generally lacking, at least in any marked degree. Normal asymmetries of the face and head were ignored in this description.

EYES

Eye Folds: External

	Absent		Subm.		+ ++ Total				
	No.	%	No.	%	No.	%			
Fiji	804	98	5	1	4	1	0	0	813
Interior	152	99	0	0	1	1	0	0	153
East	119	99	0	0	1	1	0	0	120
Coast	209	99	1	1	1	1	0	0	208
N.W.	78	99	0	0	1	1	0	0	79

Eye Fold: Median

	Absent		Subm.		+ ++ Total	
	No.	%	No.	%	No.	%

Fiji I	782 96	3 1/2	25 3	3 1/2	813
Interior	152 99	0 0	1 1	0 0	153
East	108 90	1 1	10 8	1 1	120
Coast	202 97	1 0	5 2	1 0	209
N.W.	78 99	0 0	0 0	1 1	79

Eye Folds: Internal

	Absent		Subm.		+	++	Total
	No.	%	No.	%			
Fiji I	778	96	4	0	30	4	1 0 813
Interior	151	99	0	0	2	1	0 0 153
East	102	85	1	1	17	14	1 0 120
Coast	203	97	0	0	6	3	0 0 209
N.W.	78	99	0	0	1	1	0 0 79
Fiji II	116	89	7 5-1/2	7 5-1/2			0 0 130
Solomons	80	94	2 2-1/2	3 3-1/2			0 0 85
Tonga	63	57	33	30	9	8	6 5 111

Eye folds are not a feature of the Fijian facial make-up. The external fold is present in only 2 per cent of the total series. The median fold shows a 96 per cent absence. The eastern groups exceed the other provinces with a 10 per cent occurrence. The internal eye fold has a total presence of 4 per cent and is also commoner in the east (14 per cent).

Eye Obliquity

	Absent		Subm.		+	++	Total
	No.	%	No.	%			
Fiji I	251	31	358	43	201	25	3 1 813
Interior	92	60	46	30	14	9	1 1 153
East	33	28	52	35	45	38	0 0 120
Coast	47	22	102	49	58	28	2 1 209
N.W.	27	34	32	41	20	25	0 0 79

Eye Opening

	Absent		Subm.		+	++	Total
	No.	%	No.	%			
Fiji I	0	0	75	9-1/2	73	91	1 1/2 813
Interior	0	0	24	16	128	84	1 1 153
East	0	0	13	11	107	89	0 0 120
Coast	0	0	9	4	200	96	0 0 209
N.W.	0	0	7	9	72	91	0 0 79

Some degree of eye obliquity is present in the majority of cases; 43 per cent show a submedium condition; 25 per cent are medium and three individuals have pronouncedly oblique eyes. The remainder, or 31 per cent, have no obliquity. In the east, the natives depart from this total distribution in opposite directions. The interior groups have much less eye obliquity; the eastern people, a great deal more. The other provinces are quite close to the total frequencies.

Eye opening height is preponderately moderate (91 per cent). The remaining 10 per cent with one exception show submedium eye opening. Regional variation is not great. The eastern and interior groups have a little higher frequency in the submedium class.

FOREHEAD

Brow Ridges

	Absent		Subm.		+	++	+++	Total
	No.	%	No.	%				
Fiji I	0	0	148	19	364	44	295	36 6 1 813
Interior	0	0	16	10	69	45	64	42 4 3 153
East	0	0	28	23	42	35	50	42 0 0 120
Coast	0	0	42	20	99	47	67	32 1 0 209
N.W.	0	0	19	24	40	51	19	24 1 1 79

Brow ridges are a marked feature of Fijians in general. None of them lack some supraorbital development. Forty-four per cent have medium brow ridges, 36 per cent are pronounced, and 1 per cent are very pronounced. The other 19 per cent are small. The interior and eastern groups

share a little higher incidence of pronounced brow ridges; the other regions are nearer the total distribution of variations.

Forehead Height

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	0	0	44	55	36	45	0	0	813
Interior	0	0	90	59	63	41	0	0	153
East	0	0	68	57	52	43	0	0	120
Coast	0	0	110	53	99	47	0	0	209
N.W.	0	0	46	58	33	42	0	0	79

Forehead Slope

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	8	1	280	34	460	56	65	8	813
Interior	0	0	53	35	87	57	13	8	153
East	0	0	38	32	72	60	10	8	120
Coast	4	2	78	37	113	54	14	7	209
N.W.	2	3	27	34	47	59	4	4	79
Tonga	1	1	70	60	45	39	0	0	116

Forehead height is submedium in more than half the cases (55 per cent); the others are all medium. There is no significant variation among the subgroups.

A sloping forehead is quite characteristic of the Fijian head; 56 per cent are moderately sloping, 8 per cent are pronounced, and 34 per cent are submedium. Only 1 per cent have foreheads with no recession. Regional differences are very slight.

NOSE

Nasion Depression

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	1	0	170	21	579	71	63	8	813
Interior	0	0	41	27	103	67	9	6	153
East	1	1	32	27	85	71	2	2	120
Coast	0	0	45	22	144	69	10	10	209
N.W.	0	0	18	23	56	71	6	6	79

Root Height

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	1	0	63	8	555	67	194	24	813
Interior	0	0	16	10	96	63	41	27	153
East	1	1	3	3	77	64	39	33	120
Coast	0	0	10	5	157	75	42	20	209
N.W.	0	0	4	5	57	72	18	23	79

Root Breadth

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	0	0	1	0	258	32	554	68	813
Interior	0	0	0	0	38	25	115	75	153
East	0	0	1	1	53	44	66	55	120
Coast	0	0	0	0	67	32	142	68	209
N.W.	0	0	0	0	24	30	55	70	79

Nasal Septum

	Straight		Concave		Convex		Total
	No.	%	No.	%	No.	%	
Fiji I	777	99	0	0	36	4	813

Interior	153 100	0 0	0 0	153
East	118 98	0 0	2 2	120
Coast	196 94	0 0	13 6	199
N.W.	78 99	0 0	1 1	79

Bridge Height

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	No.
Fiji I	0 0	54 76	44 79	115 14	813				
Interior	0 0	13 8	124 81	16 10	153				
East	0 0	1 1	98 82	21 18	120				
Coast	0 0	10 5	173 83	26 12	209				
N.W.	0 0	7 9	60 76	12 15	79				
Tonga	0 0	21 22	81 70	9 8	111				

Bridge Breadth

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	No.
Fiji I	0 0	0 0	265 33	546 67	813				
Interior	0 0	0 0	29 19	124 81	153				
East	0 0	0 0	72 60	48 40	120				
Coast	0 0	0 0	62 30	147 70	209				
N.W.	0 0	0 0	23 29	56 71	79				

Nasal Profile

	Concave		Straight		Convex		Total
	No.	%	No.	%	No.	%	No.
Fiji I	14 2	625 77	173 21	812			
Interior	0 0	123 80	30 20	153			
East	1 1	88 73	31 26	120			
Coast	4 2	171 82	34 16	209			
N.W.	1 1	59 75	19 24	79			

Moderate nasion depression characterizes the majority of noses (71 per cent). Pronounced depression is recorded for 8 per cent, and submedium occurrence in 21 per cent. Only one individual lacks any depression. This distribution does not vary much among the provinces.

A well-elevated nasal root is also characteristic; 67 per cent show moderate elevation and 24 per cent pronounced, whereas 8 per cent are submedium; one individual is without any elevation. The interior Fijians have a little higher frequency of low nasal root (10 per cent), whereas the eastern people, with a 30 per cent incidence, excel in the pronounced category.

More striking is the breadth of the Fijian nasal root. It is pronounced in 68 per cent and moderate in the remainder of the series. Pronounced breadth is commoner among the interior people (75 per cent) and least preponderant in the east (55 per cent).

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The nasal septum is nearly always straight; the only departure from this condition is a 4 per cent incidence of convexity. Regional differences are not significant.

Nasal bridge height is commonly medium (79 per cent) in the totality of noses. Fourteen percent are pronouncedly high and 7 per cent are submedium. The several provinces do not depart very far from this distribution.

The Fijian nose shows a strong tendency to broadness of the bridge. Two-thirds show pronounced breadth of bridge and the remainder are medium. Pronounced broadness increases in the interior groups (81 per cent) and shows a marked decline in the east (40 per cent).

Nasal profiles are most often straight (77 per cent), but convex noses are not uncommon (21 per cent). Convexity is slightly more frequent in the east (26 percent), whereas in the coastal people its incidence drops to 16 per cent.

Nasal-Tip Thickness

	Subm.		+		++		+++		Total
	No.	%	No.	%	No.	%	No.	%	No.
Fiji I	1 0	344 42	461 58	1 0	812				
Interior	0 0	55 36	98 64	0 0	153				
East	1 1	80 67	39 33	0 0	120				

Coast	0 0	94 45	114 55	1 1	209
N.W.	0 0	27 34	52 66	0 0	79

Nasal-Tip Inclination

	Absent	Subm.	+	++	Total
	No. %	No. %	No. %	No. %	No. %
Fiji I	731 90	57 7	24 3	0 0	812
Interior	147 96	6 4	0 0	0 0	153
East	109 91	6 5	5 4	0 0	120
Coast	186 89	16 8	7 3	0 0	209
N.W.	71 90	6 8	2 3	0 0	79

Nasal Wings

	Compressed	Medium	Flaring	Total
	No. %	No. %	No. %	No. %
Fiji I	0 0	198 24	615 76	813
Interior	0 0	25 16	128 84	153
East	0 0	70 58	50 42	120
Coast	0 0	42 20	167 80	209
N.W.	0 0	16 20	63 80	79

The nasal tip is pronounced more often than not, 58 per cent showing this condition. The remaining 42 per cent have tips of medium thickness. Thicker tips occur more often in the interior (64 per cent) and in the northwest (66 per cent), least often in the east (33 per cent).

Usually the nasal tip is not inclined downward. Slight and moderate inclination has a combined incidence of only 10 per cent.

Flaring nasal wings are a common condition (76 per cent). This incidence rises to 84 per cent in the interior and drops to 42 per cent in the east.

MOUTH

Lip Thickness: Membranous

	Subm.	+	++	+++	Total
	No. %	No. %	No. %	No. %	No. %
Fiji I	19 24	28 53	36 45	2 0	813
Interior	10 7	43 28	100 65	0 0	153
East	1 1	83 69	36 30	0 0	120
Coast	1 1/2	88 42	119 57	1 1/2	209
N.W.	4 5	39 49	36 46	0 0	79
Tonga	12 10	97 84	7 6	0 0	116

Lip Thickness: Integumental

	Subm.	+	++	+++	Total
	No. %	No. %	No. %	No. %	No. %
Fiji I	4 1/2	608 75	201 25	0 0	813
Interior	1 1/2	114 75	38 25	0 0	153
East	1 1	100 83	19 16	0 0	120
Coast	2 1	164 78	43 21	0 0	209
N.W.	0 0	55 70	24 30	0 0	79
Fiji II	0 0	1 1/2	26 20	106 80	133
Solomons	0 0	0 0	12 14	73 86	85

Lip Eversion

	Absent	Subm.	+	++	Total
	No. %	No. %	No. %	No. %	No. %
Fiji I	12 1	333 41	444 55	24 3	813
Interior	0 0	63 41	88 58	2 1	153
East	8 7	77 64	35 29	0 0	120
Coast	0 0	63 30	138 66	8 4	209
N.W.	1 1	26 33	51 65	1 1	79

Lip Seam

	Absent		Subm.		+	++		Total	
	No.	%	No.	%		No.	%		
Fiji I	33	44	29	53	34	42	8	1	813
Interior	1	1	79	52	73	48	0	0	153
East	14	12	77	64	29	24	0	0	120
Coast	6	3	105	50	94	45	4	2	209
N.W.	3	4	44	56	32	41	0	0	79

Fijian lips are Negroid in thickness in many instances. Membranous lips are thick in 45 per cent of the series, medium in 53 per cent, and submedium in 25 per cent. Thickest lips occur in the interior and coastal areas where the pronounced type registers 65 per cent and 57 per cent, respectively. In the east, lips are more moderate in thickness, and the pronounced category drops to 30 per cent.

Integumental lips also tend to be heavy but not so much as the mucous parts. Twenty-five per cent of the total Fijians have thick integumental lips and the remainder are moderate. Howells' Fiji II series classes 80 per cent as very pronounced and the remainder as pronounced. The Solomon Islanders, with an 86 per cent incidence of very pronounced, have the heaviest lips of all.

Lip eversion varies largely between moderate and submedium, 55 percent and 41 per cent, respectively. The interior and coastal Fijians show this trait a little more often than the others, whereas the eastern people have least lip eversion. The lip seam is present in nearly all cases, but not to a pronounced degree. Fifty-three per cent are submedium and 42 per cent are moderate. The eastern groups are definitely less endowed with this trait. The other provinces vary but little from the total distribution.

TEETH

[Pg 21]

Bite

	Under		E-E Subm.		over+		over		Total		
	No.	%	No.	%	No.	%	No.	%			
Fiji I	2	0	51	8	64	27	4	34	13	2	807
Interior	0	0	94	61		59	39		0	0	153
East	0	0	73	61		45	38		2	2	120
Coast	1	0	130	62		76	36		0	0	207
N.W.	1	1	49	62		23	29		3	4	76
Fiji II	4	3	50	38		77	59		0	0	131
Solomons	1	1	37	45		45	54		0	0	83

Caries

	Absent		Subm.(1-4)		+(5-8)		++(9-16)		+++ (17-x)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%		
Fiji I	64	5	78	80	10	58	7	22	3	8	1	813
Interior	130	84	16	10	3	2	1	1	3	2	153	
East	100	83	10	12	4	3	2	1	4	3	120	
Coast	153	73	29	14	16	8	8	4	3	1	209	
N.W.	62	80	9	11	6	8	1	1	0	0	78	

Crowding

	Absent		Subm.		+	++		Total			
	No.	%	No.	%		No.	%				
Fiji I	68	5	84	11	5	14	13	2	0	0	813
Interior	134	88	19	12	0	0	0	0	153		
East	100	83	17	14	3	3	0	0	120		
Coast	180	86	25	12	4	2	0	0	209		
N.W.	64	81	14	18	0	0	0	0	78		

Tooth Eruption

	Complete		Incomplete		Total	
	No.	%	No.	%		
Fiji I	79	6	98	15	2	811
Interior	153	100	0	0	153	

East	119 99	1 1	120
Coast	199 95	8 4	207
N.W.	74 94	2 3	76

Wear

	Absent	Subm.	+	++	Total
	No. %	No. %	No. %	No. %	
Fiji I	184 23	443 54	144 18	42 5	813
Interior	27 {18}	58 {38}	37 {24}	31 {20}	153
East	26 {22}	69 {57}	24 {20}	1 {1}	120
Coast	60 {29}	120 {57}	28 {13}	1 {1/2}	209
N.W.	12 {15}	47 {60}	17 {22}	2 {3}	78

The jaws of Fijians have a rather distinctive frequency of edge-to-edge bite. I recorded this as 64 per cent, but Howells' series indicates a 38 per cent incidence.

The quality of Fijian teeth as reflected by frequency of caries is excellent. Nearly 80 per cent of the total show no tooth decay. The soundest teeth from this standpoint occur in the interior, the east, and the northwest. The coastal people show the highest incidence of caries, an interesting point since many of this sample come from around Suva and have more access to the Western processed foods.

Tooth crowding is quite uncommon to Fijians, a condition consistent with their generous jaw conformation. Crowding is noted in only 16 per cent of the series, and most of it is slight.

Tooth eruption is complete in nearly all the subjects. A 2 per cent incidence of incomplete eruption is entirely due to the immaturity of some of the young adults. No pathological suppression was noted.

Some wear of the teeth is recorded for more than three-quarters of the series, but lacking age incidence, the data has limited meaning. The Fijian diet is not abrasive the way, for instance, it is for the Indians of our Southwest, where the staple food is ground in stone mills.

EARS

Ear Helix

	Subm.	+	++	+++	Total
	No. %	No. %	No. %	No. %	
Fiji I	230 28	511 63	72 9	0 0	813
Interior	45 29	99 65	9 6	0 0	153
East	29 24	74 62	17 14	0 0	120
Coast	58 28	128 61	23 11	0 0	209
N.W.	24 30	51 65	4 5	0 0	79

Darwin's Point

	Absent	Subm.	+	++	Total
	No. %	No. %	No. %	No. %	
Fiji I	761 94	36 4	15 2	1 0	813
Interior	150 98	3 2	0 0	0 0	153
East	112 93	6 5	2 2	0 0	120
Coast	187 89	13 6	4 4	1 0	209
N.W.	77 97	2 3	0 0	0 0	79

Ear-Lobe Type

	Soldered	Attached	Free	Total
	No. %	No. %	No. %	
Fiji I	80 10	531 65	202 25	813
Interior	47 31	74 48	32 21	153
East	3 3	85 71	32 27	120
Coast	9 4	141 67	59 28	209
N.W.	5 6	52 66	22 28	79

Ear-Lobe Size

	Subm.	+	++	+++	Total
	No. %	No. %	No. %	No. %	

Fiji I	176	22	457	56	178	22	2	0	813
Interior	49	32	66	43	38	25	0	0	153
East	16	13	76	63	27	23	1	1	120
Coast	31	15	123	59	55	26	0	0	209
N.W.	20	25	47	59	12	15	0	0	79

Ear Protrusion

	Absent		Subm.		+		++		Total
	No.	%	No.	%	No.	%	No.	%	
Fiji I	2	0	262	32	463	57	86	11	813
Interior	1	1	47	31	90	59	15	10	153
East	0	0	31	26	77	64	12	10	120
Coast	1	0	75	36	114	55	19	9	209
N.W.	0	0	26	33	49	62	4	5	79

Ear Slant

	Absent		Subm.		+		Total		
	No.	%	No.	%	No.	%			
Fiji I	4	16	51	33	2	41	65	8	813
Interior	7	8	51	67	4	44	8	5	153
East	5	5	46	52	4	43	13	11	120
Coast	1	1	18	56	7	35	1	7	209
N.W.	3	8	38	48	3	49	2	3	79

The Fijian ear is a moderately distinctive appendage from a racial standpoint. The helix shows moderate development on the whole and is submedium otherwise except for a 9 per cent incidence of pronounced appearance. Regional variation is small.

The Darwin's point is noted in a number of cases: 4 per cent to a submedium degree and 2 per cent medium.

The ear lobe is somewhat distinctive with a 65 per cent incidence of the attached condition and 10 per cent soldered. The remaining 25 per cent is free. This distinctiveness is more marked among the interior groups where the soldered type of lobe increases to 31 percent.

Ear-lobe size is moderate in more than half the series, pronounced in 22 per cent, and submedium in 22 per cent. Small lobes are commoner in the interior province.

Moderate ear protrusion is the commonest form followed by submedium. Marked projection is recorded as 11 per cent.

Ear slant either is lacking or slight in most instances; the series is rather evenly divided between these two categories, the zero category having a small majority. Moderate slant is noted for 8 per cent.

BODY BUILD

Body Build: Endomorph

	1		2		3		4		5		6		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Fiji I	260	32	334	42	126	15	46	6	33	4	12	1	811
Interior	49	32	66	43	26	17	5	3	6	4	1	1	153
East	30	25	54	45	21	18	5	4	8	7	1	1	119
Coast	77	37	82	39	28	13	10	5	8	4	3	1	209
N.W.	26	33	34	43	9	11	6	8	2	3	2	3	79

Body Build: Mesomorph

	1		2		3		4		5		6		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Fiji I	1	{0.1}	2	{0.2}	33	4	131	16	227	28	4	19	52	813
Interior	0	0	1	1	11	7	27	18	41	27	7	3	48	153
East	1	1	0	0	2	2	14	12	38	32	6	5	54	120
Coast	0	0	0	0	9	4	29	14	67	32	10	4	50	209
N.W.	0	0	1	1	2	3	15	19	14	18	4	7	59	79

Body Build: Ectomorph

	1		2		3		4		5		6		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Fiji I	351	43.19	524	11.04	110	14.88	11	68	81	{0.1}			813
Interior	54	35	56	37	13	8.15	10	15	10		0	0	153
East	49	41	33	28	15	13	12	10	11	9	0	0	120
Coast	84	40	51	24	36	17	18	9	19	9	1	1	209
N.W.	39	49	19	24	11	14	6	8	4	5	0	0	79

Variations in body build have been expressed with the Sheldon method of somatotyping.^[18] Accordingly, the Fijians are primarily and definitely mesomorphic, with endomorphy the second strongest component, and ectomorphy, third. About 80 per cent of the total series had a mesomorphic rating of 5 and 6 which leaves no doubt as to the prevailing athletic physique. Endomorphy is seldom pronounced so that obesity may be described as no more than occasional. A pronounced linear build is likewise relatively infrequent.

The Fijian subgroups do not vary markedly from the over-all pattern.

SUMMARY

The preceding data may be summarized from three points of view. The first will emphasize the physical features that are common to most Fijians. At the outset it should be pointed out that a "typical" Fijian does not exist, except as a statistical abstraction. The racial composition of the Fijian is complex and far from being homogeneous. There is no doubt, from the physical and cultural evidence, as well as the geographical location, that Fijians are related to both Melanesians and Polynesians. The second point is to give a precise indication of these affinities with Melanesia and Polynesia. A third concern of this analysis is the geographical variability within Fiji. This consists of a regional breakdown of the Fijian data into interior, eastern, coastal, and northwestern divisions, in order to demonstrate some of the local variation of the Melanesian-Polynesian ingredients and their possible meaning.

Body (pl. 1).

—In general size and appearance, the Fijian is tall and well proportioned. His body is fairly tall and well muscled, that is, predominately athletic in build. Obesity is relatively uncommon except in moderate degrees. This rather tall stature allies the Fijians more closely with the Polynesians. Shoulder, chest, and hip diameters also indicate that Fijians are generously endowed.

The Fijians who occupy the mountainous interior of the main island are less tall than the coastal and eastern people; they also have narrower shoulders, relatively deeper and narrower chests, whereas their arms and legs are somewhat shorter. The eastern Fijians are tallest of all subgroups.

Skin Color.

—Most Fijians have either medium- or dark-brown skin on the exposed facial surfaces. The more protected body areas show higher frequencies of medium brown and light brown. The Fijians are definitely less dark than the Melanesians but are darker, on the whole, than the Polynesians.

The interior hill tribes are darker than the eastern and coastal groups. The lightest average skin shade occurs in the east.

Hair (pls. 6 and 7).

—In several respects the hair is the most consistent endowment of the Fijians. In nearly all instances it is black, frizzly, and coarse. The only departure from this condition is an occasional instance of dark brown and a few instances of rufous shade. Curly hair is a more common exception in the east. The coastal and northwestern people are nearer to the interior condition of frizzly hair. All in all, the hair form is definitely Melanesian. Hair length conforms to the general Melanesian condition, that is, intermediate between short Negroid and long Caucasoid or Mongoloid.

[Pg 23]

Considerable beard and body hair is common to Fijians (pls. 8 and 9). Moderate to pronounced beard is shown by nearly three-quarters of the total series, and body hair is even more prevalent. General hairiness is also exhibited by the Solomon Islanders and the Tongans in the comparative data. The interior tribes of Fiji are more hairy than the other groups. This prevalence of body and face hair seems to conform to parts of Melanesia where it may be regarded as an Australoid element. Its presence in the Tongan data does not seem to be representative of other Polynesians, who are generally described as more glabrous.

Head (pl. 2).

—Moderate brachycephaly is the commonest head form of Fijians, although the total range is great. In this respect the Fijians resemble the broad-headed Tongans, and are quite distinct from the longer-headed Melanesians. The Fijian head, despite its general brachycephaly, is rather

compressed in the temporal area and submedium in parietal elevation. The back of the cranium is characteristically flattened, a natural conformation as no deformation is practiced.

The interior mountain tribes of Fiji have narrower heads and lower cranial indices than do the coastal and eastern groups. The interior people also have lesser head heights and a higher breadth-height index.

Forehead (pl. 10).

—Moderate to strongly developed supraorbital ridges are a common Fijian endowment. Similarly are low and sloping foreheads. These features have been observed in western Melanesia, where, like hairiness, they suggest Australoid or archaic Caucasoid elements.

Face.

—Broadness characterizes the Fijian face. Bizygomatic breadth locates them nearer to the Polynesians than to the narrower-faced Melanesians. Strongly developed malars are common, and they tend to project laterally more than frontally. Widest faces appear among the eastern people.

Bigonial and bicanine widths show that generous breadth includes the lower parts of the face, a condition born out by strong gonial angles.

Face length falls between the long-faced Tongans and the definitely shorter-faced Melanesians (pls. 3 and 4).

Some prognathism is common among Fijians, both total and mid-facial, but the condition is not universal nor pronounced. The eastern Fijians are the least prognathic (pl. 10).

Eyes.

—Dark brown is the prevailing eye color, although many subjects have medium-brown eyes. Eye folds are only occasional and eye-opening height is usually moderate. Slight eye obliquity is common, more so in the eastern sample.

Nose (pl. 4).

—Great variability marks the nasal area. The commonest condition is a broad and moderately long nose. Medium nasion depression is frequent; the root is wide and moderately elevated. Bridge breadth is often pronounced and the nasal profile is straight to convex. The nasal tip is characteristically thickened and nasal wings are usually flaring. On the whole, there is a great deal of Melanesian in the Fijian nose; it is Negroid, but not pronouncedly. Those aspects of the nose which may be termed Negroid are commoner in the interior hill people and the northwest and least evident in the east.

Lips (pl. 5).

—Thick and moderately everted lips occur in nearly half the series. This Negroid combination is more manifest in the interior and least in the east. Integumental lips tend to be heavy.

Teeth.

—The condition of the teeth is generally excellent. Most Fijians have broad, roomy jaws that permit complete and uncrowded tooth development. Dental caries are very infrequent. A rather high incidence of edge-to-edge bite is interesting.

Ears (pl. 5).

—The ears are usually moderate in length and tend to protrude. Ear lobes are commonly large and are more often attached or soldered than free.

[Pg 24]

[Pg 25]

CONCLUSIONS

On the whole the Fijians are predominately Melanesian but with numerous Polynesian affinities that vary with locality. The Melanesian qualities are in part Negroid or Negritoid and in part Australoid. The Negroid resemblances are best illustrated by frizzly black hair, broad noses with depressed nasion and flaring nostrils, thick lips, and dark pigmentation (pls. 11 and 12). Australoid elements are general hairiness, strong brow ridges, low, sloping foreheads, compressed parietal and temporal areas, and some prognathism (pl. 13). The presence of Australoid suggestions need not mean that they come from Australia, but that they form a part of the Melanesian make-up. This interpretation of the Melanesians as a hybrid people conforms with similar designations by such students as Birdsell^[19] and Hooton.^[20] Polynesian influence in Fiji is

most clearly demonstrated by lighter pigmentation, tall and muscular body build, moderate brachycephaly, broad faces and jaws, high and fairly long noses and strong chins. I found much the same resemblances between Fijians and Polynesians as did Howells;^[21] however, in my comparisons the Polynesian similarities are outweighed and outnumbered by a greater array of Melanesian characters. The essential Melanesian character of the Fijian population is further demonstrated by recent blood-analysis comparisons; the conclusions of Simmons *et al.*, identify the Fijians as Melanesian.^[22]

The Fijians who live in the interior of Viti Levu show the most frequent Melanesian traits (pls. 11 and 14). These people are shorter, have narrower shoulders and chests; their heads are narrower and lower vaulted; they have broader noses, thicker lips, are hairier, and have darker skins. This condition, occurring as it does in the mountainous interior, which may be regarded as a refuge area, supports the theory that the Melanesian is the earlier component in Fiji.

The eastern Fijians stand in considerable contrast to the interior tribes and are the most Polynesian in appearance (pl. 15). They have lighter skins, greater stature, and heavier musculature. Their heads are broader, as are their faces and jaws; their noses are larger, narrower, and higher bridged, and their chins are more pronounced.

The coastal sample might be called intermediate or a more even blend of Melanesian and Polynesian.

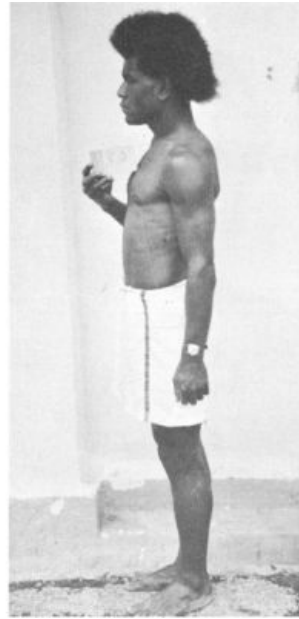
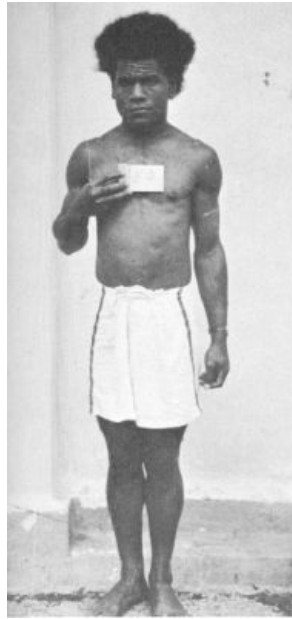
The northwestern people resemble the coastal tribes. This means they show fewer departures in either a Melanesian or Polynesian direction. This also means they do not tell us whether the legendary ancestors, who are supposed to have first landed in Fiji on the northwest coast of Viti Levu,^[23] were Melanesian or Polynesian. These data may mean one of three things: (1) the Fijian tradition of a landing at this place eight or ten generations ago is groundless, (2) the immigration did take place but whatever racial traits predominated, whether Melanesian or Polynesian, have been homogenized and obscured by subsequent intermixture and by movements back and forth on Viti Levu, (3) the landing did occur but the ancestors were already a Melanesian-Polynesian blend when they arrived.

[Pg 26]

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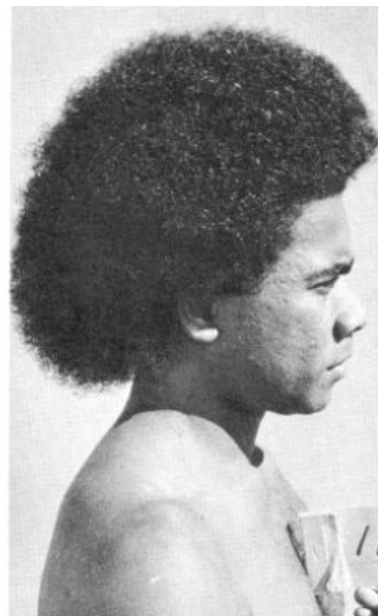
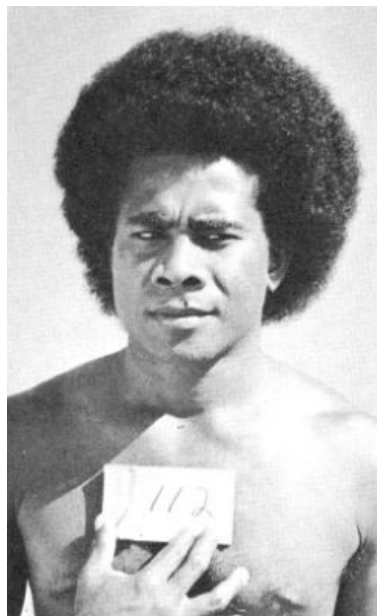
PLATES



[Pg 29]

PLATE 1. NEAR-AVERAGE BODY FEATURES

Stature: 173.3 cm.
Weight: 172.1 lbs.
Arm length: 75.1 cm.
Leg length: 82.2 cm.
Shoulder breadth: 41 cm.
Hip breadth: 29.1 cm.
Shoulder-hip index: 71.0
Chest breadth: 28.8 cm.
Chest depth: 22.8 cm.
Thoracic index: 75.7
Sitting height: 86.3 cm.
Sitting height-stature index: 50.0
Body build: Strongly mesomorphic



[Pg 30]

PLATE 2. NEAR-AVERAGE CRANIAL FEATURES

Head length: 187.2 mm.
Head breadth: 156.9 mm.
Cephalic index: 83.9
Head height: 128.6 mm.
Length-height index: 68.7
Length-breadth index: 81.1
Minimum frontal diameter: 109.8 mm.
Fronto-parietal index: 70.0

[Pg 31]

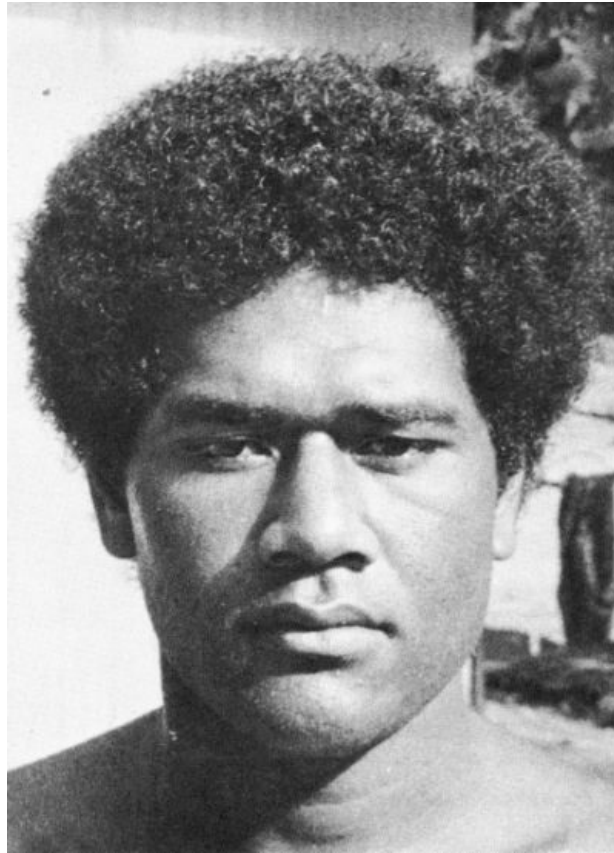


PLATE 3. NEAR-AVERAGE FACIAL FEATURES

Bizygomatic breadth: 146.7 mm.
Cephalo-facial index: 93.2
Zygo-frontal index: 75.3
Bigonial breadth: 109.6 mm.
Fronto-gonial index: 100.1
Zygo-gonial index: 74.7
Bicanine breadth: 39.8
Total facial height: 122.3 mm.
Total facial index: 84.1
Upper facial height: 71.3
Upper facial index: 48.9
Nasal height: 53.1
Nasal breadth: 45.5
Nasal index: 85.6

[Pg 32]

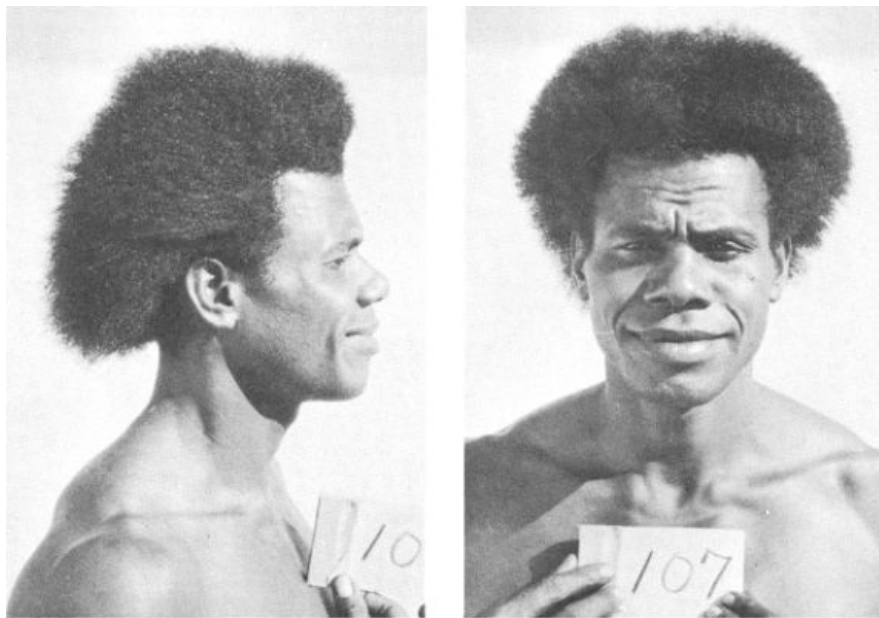


PLATE 4. NEAR-AVERAGE FACE AND NOSE FEATURES

FACE

- Pronounced malars
- Moderately long face
- Wide gonia
- Moderate chin
- Moderate prognathism

NOSE

- Broad bridge
- Wide root
- Moderate length
- Thick tip
- Flaring nostrils
- Straight profile

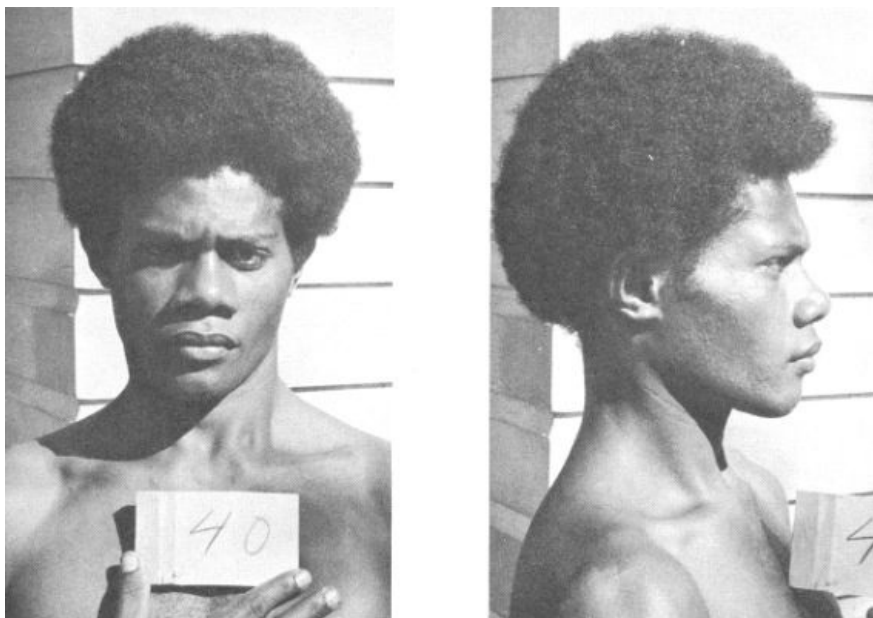


PLATE 5. NEAR-AVERAGE LIP AND EAR FEATURES

LIPS

- Moderately thick
- Pronounced lip seam
- Moderate eversion

EARS

- Moderate size
- Small lobe
- Attached lobe
- Moderate protrusion

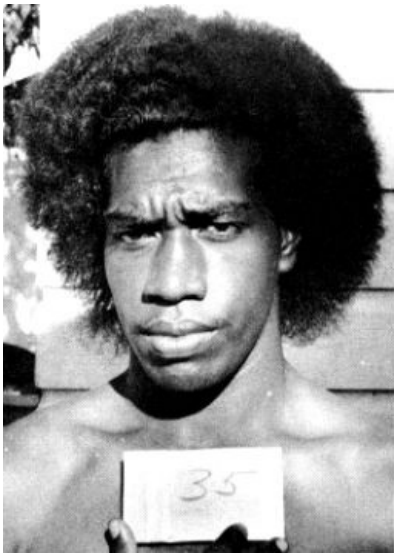


PLATE 6. NEAR-AVERAGE HAIR FEATURES

- Black color
- Frizzly form
- Pronounced quantity
- Coarse texture
- Intermediate length



PLATE 7. HAIR FORM VARIANTS

CURLY HAIR WAVY HAIR

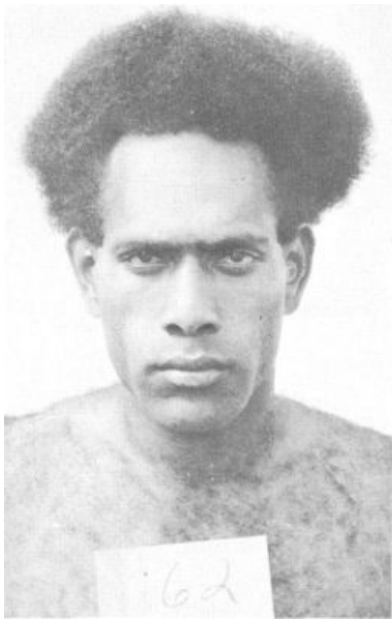


PLATE 8. PRONOUNCED BODY HAIR

20 per cent occurrence

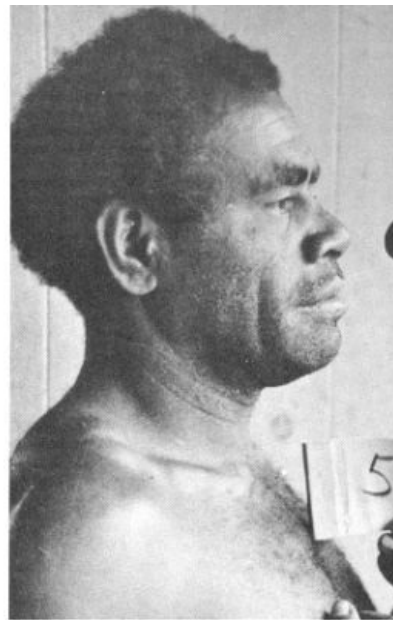
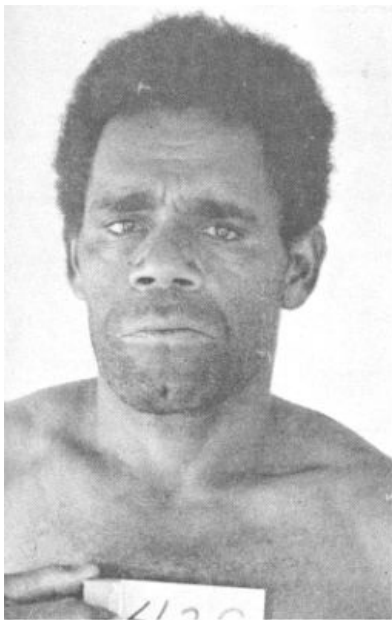


PLATE 9. PRONOUNCED BEARD

26 per cent occurrence

[Pg 37]

[Pg 38]

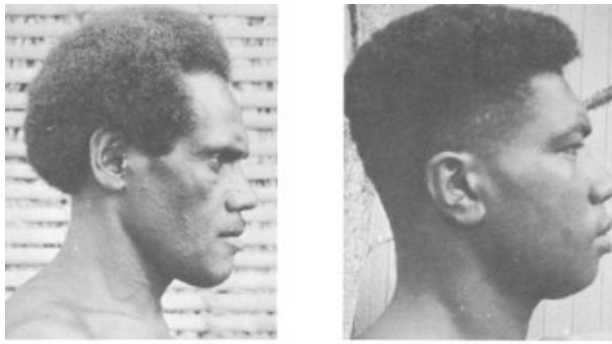


PLATE 10. FACIAL VARIATIONS

No prognathism
High forehead
Moderate browridges
Moderate prognathism
Low, receding forehead
Pronounced browridges
Pronounced prognathism
Low, receding forehead
Very pronounced browridges



PLATE 11. INTERIOR SUBJECT (MORE NEGROID)

Shorter stature
Narrower shoulders
Deeper chest
Darker skin

Narrower head
Broader nose
Thicker lips

[Pg 40]

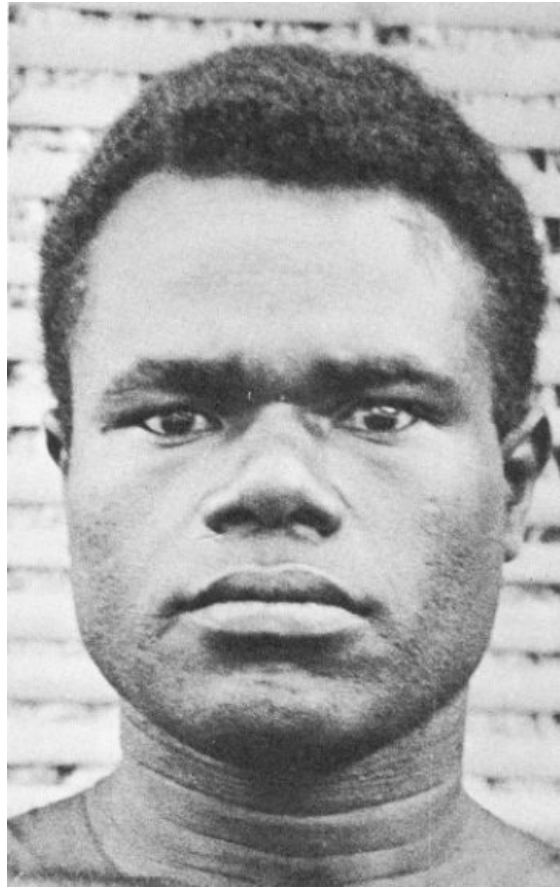
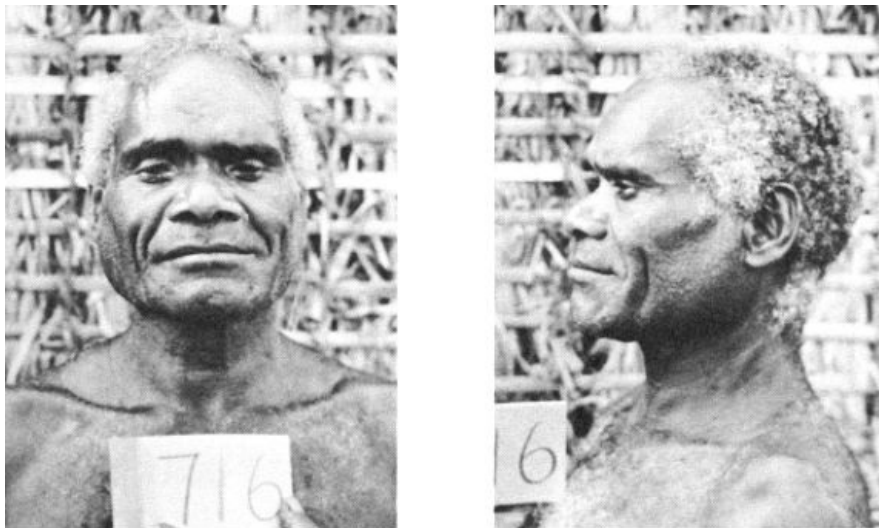


PLATE 12. "NEGROID" FIJIAN



[Pg 41]

PLATE 13. INTERIOR SUBJECT (MORE AUSTRALOID)

Heavier beard and body hair
Lower, more sloping forehead
More compressed parietals
More pronounced brow ridges
More prognathic

[Pg 42]



PLATE 14. "AUSTRALOID" FIJIANS

[Pg 43]

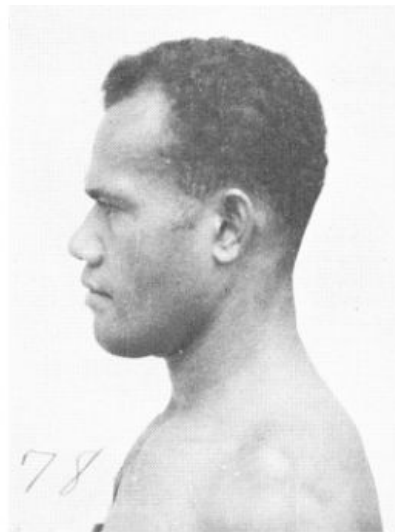
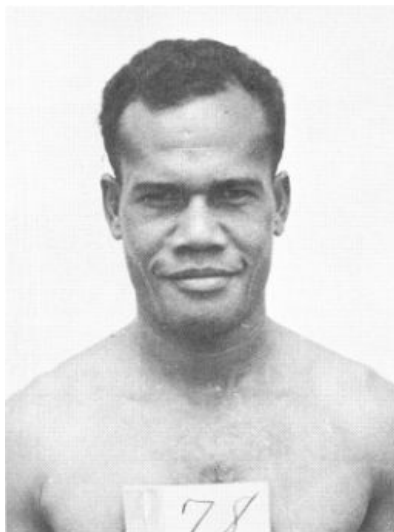


PLATE 15. EASTERN SUBJECT (MORE POLYNESIAN)

- Lighter skin
- Less beard and body hair
- Wavy hair
- Wider head
- Higher, steeper forehead
- Less prognathic
- Higher, narrower nose
- Moderately thick lips

[Pg 44]

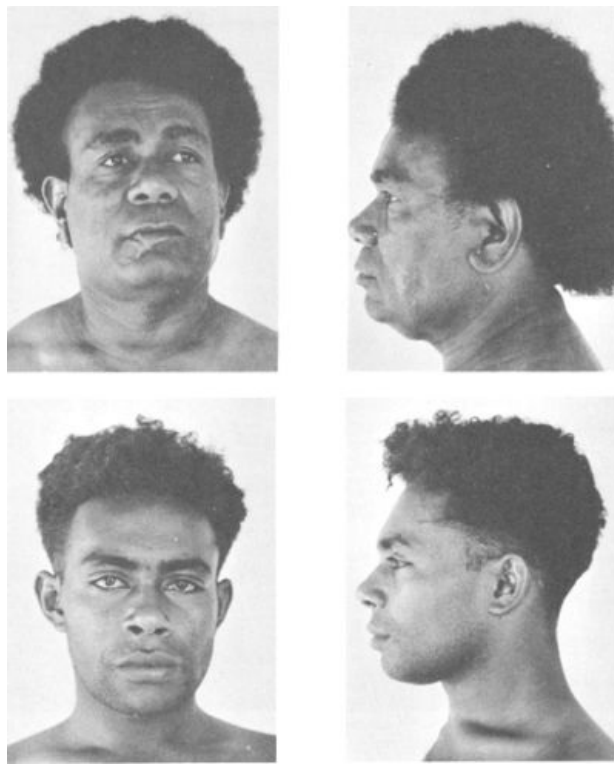


Illustration: PLATE 16. "POLYNESIAN" FIJIANS

[1] Hooton, 1946, pp. 735-763.

[2] Derrick, 1946, pp. 5-6.

[3] *Ibid.*, pp. 7-8.

[4] Population statistics from "Fiji Information," of 1954, issued by Public Relations Office, Suva, Fiji.

[5] Hooton, 1946, p. 621.

[6] Birdsell, 1949, p. 120.

[7] Fornander, 1878.

[8] Churchill, 1911.

[9] Hocart, 1929, p. 236.

[10] Howells, 1933, p. 335.

[11] Roth, 1953, pp. 54, 55.

[12] One pound deducted for dress (usually shorts only).

[13] By subtracting sitting height from total stature.

[14] Cranial measurements are not distorted by cradling practice or other causes of deformation.

[15] Howells records skin color with the von Luschan scale. I have adjusted this scale to my own.

[16] + means medium or moderate; ++ means pronounced; +++ means very pronounced.

[17] Observation taken on the chest.

[18] W. H. Sheldon, *The Variation of Human Physique*, Harper and Bros., 1940.

[19] Birdsell, 1949, p. 120.

[20] Hooton, 1946, p. 621.

[21] Howells, 1933, p. 332.

[22] Simmons *et al.*, 1945, pp. 3-4

[23] See pp. 1 and 4 of Introduction.

[Transcriber's Note: Figures incorrectly entered as zero have been calculated and inserted in {}.]

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