

**The Project Gutenberg eBook of A New Tortoise, Genus Gopherus, From North-central Mexico, by John M. Legler**

This ebook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this ebook or online at [www.gutenberg.org](http://www.gutenberg.org). If you are not located in the United States, you'll have to check the laws of the country where you are located before using this eBook.

**Title:** A New Tortoise, Genus Gopherus, From North-central Mexico

**Author:** John M. Legler

**Release Date:** June 14, 2010 [EBook #32817]

**Language:** English

**Credits:** Produced by Chris Curnow, Joseph Cooper and the Online Distributed Proofreading Team at <https://www.pgdp.net>

\*\*\* START OF THE PROJECT GUTENBERG EBOOK A NEW TORTOISE, GENUS GOPHERUS,  
FROM NORTH-CENTRAL MEXICO \*\*\*

UNIVERSITY OF KANSAS PUBLICATIONS  
MUSEUM OF NATURAL HISTORY

---

Volume 11, No. 5, pp. 335-343, pls. 7 and 8  
April 24, 1959

**A New Tortoise, Genus Gopherus,  
From North-central Mexico**

BY

**JOHN M. LEGLER**

UNIVERSITY OF KANSAS  
LAWRENCE  
1959

---

UNIVERSITY OF KANSAS PUBLICATIONS, MUSEUM OF NATURAL HISTORY

**Editors: E. Raymond Hall, Chairman, Henry S. Fitch,  
Robert W. Wilson**

**Volume 11, No. 5, pp. 335-343  
Published April 24, 1959**

UNIVERSITY OF KANSAS  
Lawrence, Kansas

## A New Tortoise, Genus *Gopherus*, From North-central Mexico

BY

JOHN M. LEGLER

In the course of taxonomic studies of the genus *Gopherus* it was found that specimens from north-central Mexico belong to an hitherto unrecognized species, which is named and described below.

### *Gopherus flavomarginatus* new species

*Holotype*.—U.S. National Museum 61253, adult; stuffed specimen with disassociated skull; 30 to 40 miles from Lerdo, Durango, Mexico; obtained by Dr. Elswood Chaffee, 1918.

*Paratypes*.—USNM 61254, adult, stuffed specimen with skull in place, other data the same as those for holotype; USNM 60976, adult, stuffed specimen with disassociated skull, Lerdo, Durango, Dr. Elswood Chaffee, May 1918; University of Illinois 42953-4, adults, two carapaces, Carrillo, Chihuahua, Pete S. Chrapliwy and Kenneth L. Williams, 1 August 1958; University of Kansas 39415, adult, carapace only, 8 mi. E and 2 mi. S Americanos, Coahuila, Robert W. Dickerman, 19 May 1954.

*Diagnosis*.—A large tortoise of the genus *Gopherus*, having a flat-topped, posteriorly-flared shell, carapacial laminae that are pale with contrasting dark centers (at least on the lateral margins of the carapace), intergular seam longer than interhumeral, obtuse gular projections, and a relatively wider skull than other Mexican representatives of the genus.

*Description of species*.—Ground color of carapace pale yellow to straw in smaller specimens, pale brown in larger specimens; in some specimens a slight indication of darker radial markings on carapace; epidermal areolae of carapace (if present) and first two or three zones of growth (around areolae) dark brown to black, their contrast with the ground color greater in smaller specimens; ground color of lateral marginals yellowish, much paler than remainder of carapace; black areolae of marginals contrasting sharply with ground color even in old individuals; plastron pale, approximately the same shade of yellow as lateral marginals, marked with sharply contrasting blotches of black or dark brown in younger specimens, becoming immaculate with age.

Carapace low, evenly arched or slightly flat-topped in cross section, its height slightly more than 50 per cent of its length; top of carapace, between highest parts of first and fourth central laminae, more or less flat in profile; carapace flared, wider posteriorly than anteriorly; central laminae all broader than long, the first not (or but slightly) narrower posteriorly than anteriorly; plastron deeply notched behind, the inner margins of the notch straight, neither convex nor concave; gular projections truncate (not pronglike) having no notch or but a shallow notch between them; greatest combined width of gular laminae much greater than greatest length; interlaminal length of gular greater than that of humeral; one large axillary scute on each side, approximately rectangular but slightly wider below than above; one or two inguinal scutes on each side, the anterior roughly triangular and much larger than posterior.

Anterior surface of antebrachium having enlarged, juxtaposed (or slightly imbricated), osteodermal scales arranged in seven to eight longitudinal rows, each scale yellowish with a black or dark brown center; scales on lateral edge of antebrachium, from fifth claw to elbow, ten in number and darker than other antebrachial scales; two enlarged black-tipped, yellow spurs on posterior surface of thigh, inner spur approximately half the size of outer. Head relatively wide, greatest width of skull slightly more than 80 per cent of condylobasilar length; width of head 1.3 to 1.7 times diameter of hind foot; scales on top of head large but irregularly arranged (see table 1 for measurements of type and paratypes).

TABLE 1. MEASUREMENTS, IN MILLIMETERS, OF THE HOLOTYPE  
AND PARATYPES OF GOPHERUS FLAVOMARGINATUS  
NEW SPECIES

CATALOGUE NUMBER AND COLLECTION	Length of carapace	Width of carapace	Length of plastron	Height	Diameter of hind foot	Width of head
USNM 60976	246	212	252	108	31	41
USNM 61253	222	166	212	96	21	36
USNM 61254	371	292	358	157	43	55
IU 42953	281	220				
IU 42954	278	214				
KU 39415	303	232				

Duges (1888:146-147, and 1896:479) twice reported specimens of *Gopherus polyphemus* from Chihuahua (see discussion of distribution); his description of two living examples (1888) agrees generally with the above description of *G. flavomarginatus*. He stated that the iris of his smaller specimen was yellow and the iris of a larger specimen brown.

It will be most interesting to learn the color of juveniles of *G. flavomarginatus*. Considering the dark color of the epidermal areolae of adults, I would expect the color of hatchlings to be dark brown to nearly black, with each lamina acquiring paler borders as it grew, rather than acquiring darker borders as is usually the case in *G. berlandieri* (personal observation), *agassizii* (Miller, 1932:194, pl. 2; Woodbury and Hardy, 1948:165, figs. 9 and 10), and *polyphemus* (personal observation).

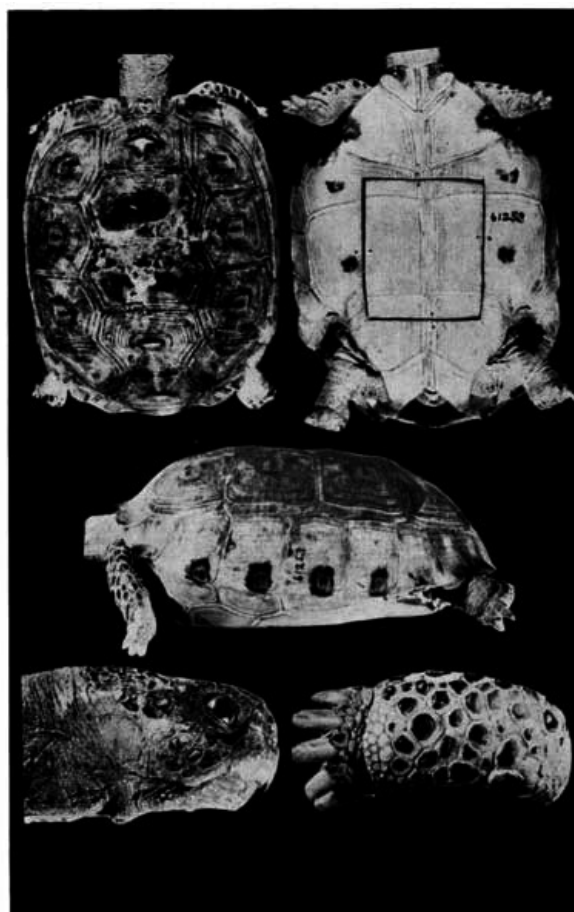


PLATE 7

PLATE 7. *Gopherus flavomarginatus* new species: *Top*—Dorsal and ventral views of holotype ( $\times \frac{1}{3}$ ); *Middle*—Lateral view of holotype ( $\times \frac{1}{3}$ ); *Bottom*—Head of paratype (USNM 61254) ( $\times \frac{1}{2}$ ) and antibrachium of holotype ( $\times \frac{5}{6}$ ). Dark outline on plastron of holotype indicates where portion of shell was removed (and then replaced) in course of preparation.

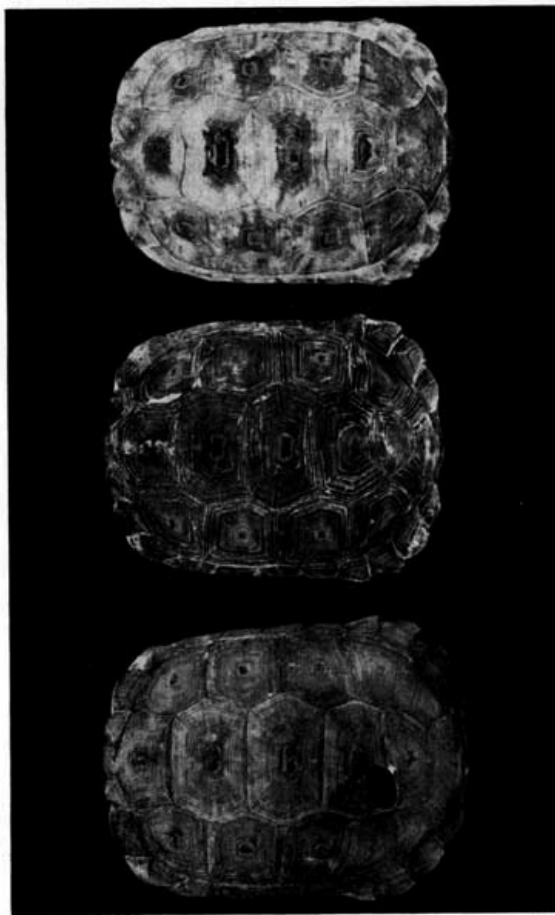


PLATE 8

PLATE 8. *Gopherus flavomarginatus* new species: Dorsal views of paratypes (from top to bottom, IU 42953, IU 42954, and KU 39415), approximately  $\frac{1}{5}$  natural size.

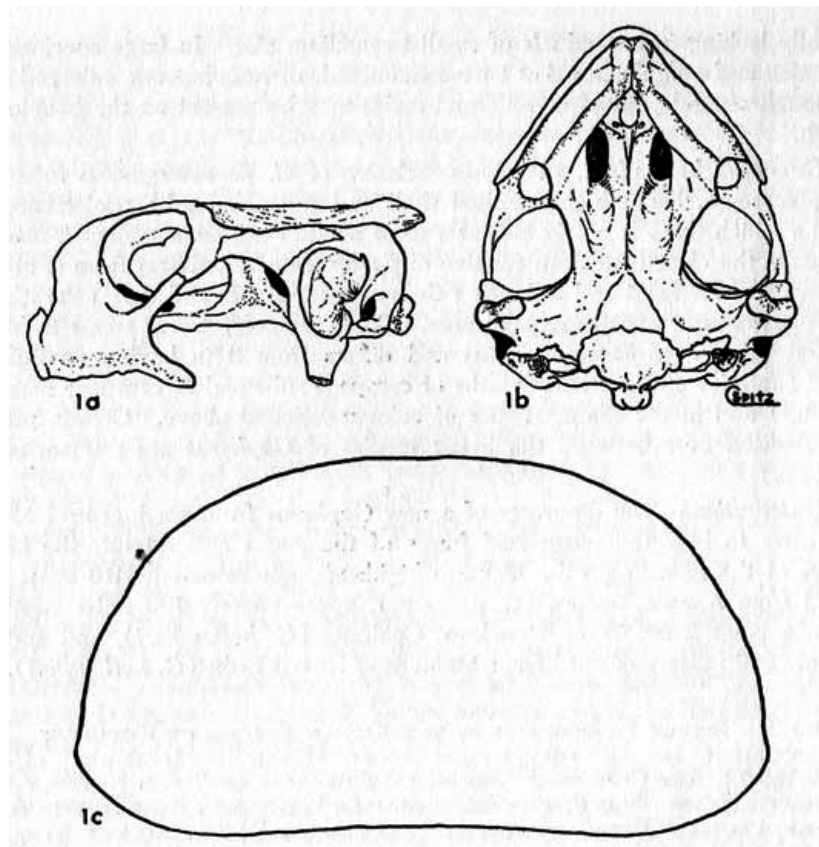


FIG. 1. *Gopherus flavomarginatus* new species: 1a and 1b—Lateral and ventral views of skull of holotype ( $\times 1$ ); 1c—Cross section of paratype (USNM 60976) taken through middle of third central lamina ( $\times \frac{2}{5}$ ).

*Anomalies.*—There is a high incidence of anomaly in the type series. Three of the specimens (USNM 60976, IU 42954, and KU 39415) have a supernumerary central

lamina. All of the specimens from Durango are anomalous in regard to the marginal laminae. In the holotype the first marginals are small, approximately as wide as the small precentral. In the largest paratype (USNM 61254) the first and second marginals are fused to form a single large scute on each side. In the remaining Durangan paratype (USNM 60976) there are eleven normal marginals on each side but a supernumerary lamina occurs between the first and second marginal on the left and between the precentral and first marginal on the right side. The remaining three paratypes have the number of marginals that is normal for the genus.

*Relationships.*—*Gopherus flavomarginatus* differs from all other species of the genus by its larger size and by having an intergular seam that is longer than the interhumeral seam. The possession of a single, rectangular axillary scale, wider below than above, also tends to distinguish *flavomarginatus* from other living *Gopherus*; in the other species this scute (frequently paired in *berlandieri*) is generally triangular or at least pointed below. Femoral spurs are developed to varying degrees in the other species of *Gopherus*; they are usually lacking in individuals of small to medium size. In large specimens of *agassizii* and *polyphemus* that I have examined, there is but one enlarged spur, although several pointed osteodermal scales may be present on the back of the thigh.

*Gopherus berlandieri*, the closest relative of *G. flavomarginatus* in a geographic sense, has a highly arched shell and pronglike gular projections, between which there is nearly always a deep notch. *Gopherus agassizii*, morphologically the closest Mexican relative of *flavomarginatus*, differs from it in having a narrower head and in lacking the contrasting pale and dark coloration of the plastron and lateral marginal area. *Gopherus polyphemus* seems to be the closest relative of *flavomarginatus* and differs from it in having an unflared shell (anterior and posterior widths of carapace subequal or carapace narrower behind) and in the characteristics of color mentioned above. Certain proportional differences between the living species of *Gopherus* are summarized in table 2.

*Distribution.*—The discovery of a new *Gopherus* from north-central Mexico increases to four the recognized forms of the genus and extends the known range of the genus onto the Mexican highlands, approximately 410 miles eastward from Alamos, Sonora (*G. agassizii*), approximately 100 miles westward from a point 2 mi. W of Monclova, Coahuila (*G. berlandieri*), and approximately 200 miles westward from Monterrey, Nuevo León (*G. berlandieri*).

TABLE 2. BODILY PROPORTIONS IN THE KNOWN SPECIES OF GOPHERUS. TWO SPECIMENS OF *G. POLYPHEMUS* FROM HARMON, MISSISSIPPI (USNM 53166-7), ARE CONSIDERED SEPARATELY BECAUSE OF THEIR NOTABLY NARROWER HEADS. THE SIZE OF EACH SAMPLE IS GIVEN IN PARENTHESES ABOVE THE AVERAGE; EXTREMES ARE IN PARENTHESES FOLLOWING THE AVERAGES.

SPECIES AND GENERAL LOCALITY	Greatest width of skull as a percentage of condylobasilar length	Height of shell as a percentage of width of carapace	Height of shell as a percentage of length of carapace	Diameter of hind foot as a percentage of width of head
<i>G. polyphemus</i> (Florida)	(6) .94 (.92-.97)	(13) .53 (.48-.58)	(13) .39 (.36-.42)	
<i>G. polyphemus</i> (Mississippi)	(2) .87 (.84-.89)	(2) .53 (.52-.54)	(2) .43 (.40-.45)	
<i>G. berlandieri</i> (Texas and NE Mexico)	(21) 78 (.70-.83)	(22) .56 (.48-.62)	(21) .46 (.43-.51)	
<i>G. agassizii</i> (U.S. and N. Sonora)	(6) .77 (.70-.83)	(8) .53 (.49-.58)	(8) .41 (.38-.44)	
<i>G. agassizii</i> (Alamos, Sonora)		(4) .56 (.52-.59)	(4) .39 (.37-.41)	(4) .92 (.87-1.00)
<i>G. flavomarginatus</i> (North-central Mexico)	(2) .83 (.82-.83)	(3) .54 (.51-.58)	(3) .43 (.42-.44)	(3) .71 (.58-.78)

Thus far, *G. flavomarginatus* is known only from the three localities represented in the type series and from the indefinite locality, "Bolson de Mapimí", Chihuahua, given by Duges (1888:146-7, and 1896:479). These long-doubted references of Duges to *Gopherus polyphemus* seem clearly to represent *G. flavomarginatus*, which probably occurs in several or all of the internally drained basins in northeastern Chihuahua, western Coahuila, and northern Durango. This region is within the Basin and Range physiographic province of Fenneman (1931:326-8) and the Mapimí biotic province of Smith (1949:231). Duges (*supra cit.*) seems to have used "Bolson de Mapimí" in a restricted sense, as it is shown on some recent maps (Nat. Geog. Soc., Map of Mexico

and Central America, 1953) (American Geog. Soc., Culican Map, NG 13, 1935). Other maps show this bolson to include internally drained portions of the Mexican highlands from northeastern Chihuahua to the region near Lerdo and Torreon. Thayer (1916:73) pointed out that the Bolson de Mapimí, in its larger sense, consists of a series of basins separated by mountains of considerable elevation.

The range of *G. flavomarginatus* appears to be limited ultimately by the higher elevations of the Sierra Madre Occidental and the Sierra Madre Oriental to the west and east, respectively, and to the south by the Mexican plateau. The northern limits of the range are less clear; possibly the range extends as far as the portions of the United States adjacent to northeastern Chihuahua, but this is doubtful. The range seems not to overlap that of any other species of *Gopherus*, although the ranges of *G. flavomarginatus* and *G. berlandieri* closely approximate each other in central Coahuila.

In September, 1958, when I was collecting turtles near Cuatro Ciénegas, Coahuila, I took the opportunity to query natives, as well as an American rancher, about the possible occurrence of tortoises in the area. Most persons had seen no tortoises in the area or said they had seen them only rarely. Several older men who had herded goats in the area all their lives said that tortoises (referred to as "Tortuga del Monte") were common on the other side of the Sierra de La Madera and Sierra de La Fragua ranges west of Cuatro Ciénegas. These men referred probably to *G. flavomarginatus*. Americanos lies approximately 75 miles west-northwest of Cuatro Ciénegas.

It is indeed remarkable that a population of large tortoises in northern Mexico has so long escaped the notice of naturalists. Also remarkable is the fact that the late Dr. Leonhard Stejneger, in view of his intense interest in North American chelonians and his familiarity with the genus *Gopherus*, did not remark on the specimens from Durango when he saw them; a thorough search of Stejneger's notes revealed no clue that he had ever studied the specimens. Perhaps his first reaction to the specimens, like mine when I first examined the two disassociated skulls, was to consider "Lerdo" a misspelling of "Laredo." However, a check of old correspondence and accession records at the National Museum confirmed, beyond doubt, the validity of the locality data for these specimens. Dr. Chaffee, the collector, frequently sent specimens of plants and animals to the Museum from Durango and Zacatecas; his home was in Lerdo.

*Size.*—The largest specimen of *Gopherus flavomarginatus* (USNM 61254) exceeds by more than 50 millimeters the length of the largest known specimens of *G. agassizii*, and slightly exceeds the length of the largest specimen of *G. polyphemus* that I have examined (USNM 51357, length of carapace 360 millimeters, a specimen formerly kept at the National Zoological Park). *G. polyphemus* is the largest tortoise inhabiting the United States; the maximum length of 343 millimeters given for the species by Carr (1952:334) probably more closely approaches the true maximum in free-living populations. *G. agassizii* rarely attains a length greater than 300 millimeters (Woodbury and Hardy, 1948:152-5). The fact that representatives of the genus do not attain a larger size in the United States may be due to the decimation of natural populations by man for food and souvenirs.

There have been several indications that a large species of tortoise existed in north-central Mexico. The Chihuahuan specimens reported by Duges (248 and 202 millimeters long, respectively) rank in size with the smaller paratypes of *G. flavomarginatus*; Duges stated, however, that the species was said to attain a length of one meter but that he thought such large size surely to apply to another species.

Mr. Charles M. Bogert recently related to me two stories that are here worthy of note. One of them, which Bogert learned from the late Dr. Karl P. Schmidt, concerns a collector who was sent by the Chicago Natural History Museum (then Field Museum) to Coahuila in the early part of the century to obtain materials for a desert exhibit. When the exhibit had been completed several decades later, the collector, visiting the museum, inquired as to where the large tortoises were that he had collected in Coahuila. Dr. Schmidt could find no record of such tortoises and suggested that possibly they had been confused with Galapagos tortoises (*Geochelone*). Dr. Robert F. Inger is unable to locate the specimens or add anything to the story. The collector stated that the large tortoises had been found in only one bolson in Coahuila.

Mr. Bogert further related that, in 1946 when he was camped at Las Delicias, Coahuila, a Mexican mule herder told him of seeing a large tortoise "three bolsos north" of the bolson in which Las Delicias is located (the general area referred to would be near Americanos). The man awoke one morning to find his saddle missing; following tracks from the place where the saddle had been left, the man eventually found it on the back of a large tortoise. The tortoise had apparently sought shelter beneath the saddle and, finding it unsatisfactory, had walked away with the saddle on his back.

Either of the incidents related above, or the reference of Duges (*loc. cit.*) to large size, since they are based on second or third-hand accounts, would seem to be unrealistic and of little scientific value when considered alone and at face value. However, in the light of the discovery of *Gopherus flavomarginatus*, these accounts have new meaning and tend to support my proposal that the species is the largest tortoise in North

America.

*Remarks.*—The paratypes at the University of Illinois were found in a trash-dump in Carrillo. According to what the collectors learned from local inhabitants, the species is used for food and the shells are sometimes used for poultry dishes or even for eating utensils. Although the species is found on the flat, sandy desert near Carrillo, it is more common on the nearby mountain slopes and is seen there most frequently after rains. Dickerman (field notes, 1954) likewise noted that the species was eaten near Americanos; the K.U. paratype represents the best (and only specimen saved) of several broken shells found in that area. Judging by the habits of other members of the genus and by the notes of Duges (1888:147), *G. flavomarginatus* is probably herbivorous.

*Acknowledgments.*—A portion of this study was completed in the summer of 1958, while I was an internee at the United States National Museum. I am grateful to Dr. Doris M. Cochran of that institution for helpful information regarding the origin of the type and for permission to study other specimens in her care. Thanks are due also to Messrs. Pete S. Chrapliwy and Kenneth L. Williams who collected two of the paratypes and who generously provided their notes on the specimens when learning of my study, to Dr. Hobart M. Smith and Mr. Charles M. Bogert for offering helpful suggestions and for the loan of specimens, and to Mr. Jebb Taylor for assistance with taking data. The drawings are the work of Mrs. Connie Spitz; the photographs are by the author.

## LITERATURE CITED

- CARR, A.  
1952. Handbook of turtles; the turtles of the United States, Canada, and Baja California. Cornell Univ. Press, xv + 542 pp., 37 figs., 82 pls., 15 tables, 23 maps.
- DUGES, A.  
1888. La Tortuga Polifemo. *La Naturaleza*, 1(ser. 2):146-147.  
1896. Reptiles y Batracios de los E. U. Mexicanos. *La Naturaleza*, 2(ser. 2):479-485.
- FENNEMAN, N. M.  
1931. Physiography of western United States. McGraw-Hill, New York, 1st. ed., v-xii + 534 pp., 173 figs.
- MILLER, L.  
1932. Notes on the desert tortoise (*Testudo agassizii*). *Trans. San Diego Soc. Nat. Hist.*, 7:187-208.
- SMITH, H. M.  
1949. Herpetogeny in Mexico and Guatemala. *Ann. Assn. American Geographers*, 34(3):219-238, 1 fig.
- THAYER, W. N.  
1916. The physiography of Mexico. *Journ. Geol.*, 24:61-94, 2 figs.
- WOODBURY, A. M., and HARDY, R.  
1948. Studies of the desert tortoise, *Gopherus agassizii*. *Ecol. Monogr.*, 18:145-200, 25 figs., 4 tables.

*Transmitted November 18, 1958.*

\*\*\* END OF THE PROJECT GUTENBERG EBOOK A NEW TORTOISE, GENUS GOPHERUS,  
FROM NORTH-CENTRAL MEXICO \*\*\*

Updated editions will replace the previous one—the old editions will be renamed.

Creating the works from print editions not protected by U.S. copyright law means that no one owns a United States copyright in these works, so the Foundation (and you!) can copy and distribute it in the United States without permission and without paying copyright royalties. Special rules, set forth in the General Terms of Use part of this license, apply to copying and distributing Project Gutenberg™ electronic works to protect the PROJECT GUTENBERG™ concept and trademark. Project Gutenberg is a registered trademark, and may not be used if you charge for an eBook, except by following the terms of the trademark license, including paying royalties for use of the Project Gutenberg trademark. If you do not charge anything for copies of this eBook, complying with the trademark license is very easy. You may use this eBook for nearly any purpose such as creation of derivative works, reports, performances and research. Project Gutenberg eBooks may be modified and printed and given away—you may do practically ANYTHING in the United States with eBooks not protected by U.S. copyright law. Redistribution is subject to the trademark license, especially commercial redistribution.

START: FULL LICENSE

THE FULL PROJECT GUTENBERG LICENSE

PLEASE READ THIS BEFORE YOU DISTRIBUTE OR USE THIS WORK

To protect the Project Gutenberg™ mission of promoting the free distribution of electronic works, by using or distributing this work (or any other work associated in any way with the phrase “Project Gutenberg”), you agree to comply with all the terms of the Full Project Gutenberg™ License available with this file or online at [www.gutenberg.org/license](http://www.gutenberg.org/license).

## **Section 1. General Terms of Use and Redistributing Project Gutenberg™ electronic works**

1.A. By reading or using any part of this Project Gutenberg™ electronic work, you indicate that you have read, understand, agree to and accept all the terms of this license and intellectual property (trademark/copyright) agreement. If you do not agree to abide by all the terms of this agreement, you must cease using and return or destroy all copies of Project Gutenberg™ electronic works in your possession. If you paid a fee for obtaining a copy of or access to a Project Gutenberg™ electronic work and you do not agree to be bound by the terms of this agreement, you may obtain a refund from the person or entity to whom you paid the fee as set forth in paragraph 1.E.8.

1.B. “Project Gutenberg” is a registered trademark. It may only be used on or associated in any way with an electronic work by people who agree to be bound by the terms of this agreement. There are a few things that you can do with most Project Gutenberg™ electronic works even without complying with the full terms of this agreement. See paragraph 1.C below. There are a lot of things you can do with Project Gutenberg™ electronic works if you follow the terms of this agreement and help preserve free future access to Project Gutenberg™ electronic works. See paragraph 1.E below.

1.C. The Project Gutenberg Literary Archive Foundation (“the Foundation” or PGLAF), owns a compilation copyright in the collection of Project Gutenberg™ electronic works. Nearly all the individual works in the collection are in the public domain in the United States. If an individual work is unprotected by copyright law in the United States and you are located in the United States, we do not claim a right to prevent you from copying, distributing, performing, displaying or creating derivative works based on the work as long as all references to Project Gutenberg are removed. Of course, we hope that you will support the Project Gutenberg™ mission of promoting free access to electronic works by freely sharing Project Gutenberg™ works in compliance with the terms of this agreement for keeping the Project Gutenberg™ name associated with the work. You can easily comply with the terms of this agreement by keeping this work in the same format with its attached full Project Gutenberg™ License when you share it without charge with others.

1.D. The copyright laws of the place where you are located also govern what you can do with this work. Copyright laws in most countries are in a constant state of change. If you are outside the United States, check the laws of your country in addition to the terms of this agreement before downloading, copying, displaying, performing, distributing or creating derivative works based on this work or any other Project Gutenberg™ work. The Foundation makes no representations concerning the copyright status of any work in any country other than the United States.

1.E. Unless you have removed all references to Project Gutenberg:

1.E.1. The following sentence, with active links to, or other immediate access to, the full Project Gutenberg™ License must appear prominently whenever any copy of a Project Gutenberg™ work (any work on which the phrase “Project Gutenberg” appears, or with which the phrase “Project Gutenberg” is associated) is accessed, displayed, performed, viewed, copied or distributed:

This eBook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at [www.gutenberg.org](http://www.gutenberg.org). If you are not located in the United States, you will have to check the laws of the country where you are located before using this eBook.

1.E.2. If an individual Project Gutenberg™ electronic work is derived from texts not protected by U.S. copyright law (does not contain a notice indicating that it is posted with permission of the copyright holder), the work can be copied and distributed to anyone in the United States without paying any fees or charges. If you are redistributing or providing access to a work with the phrase “Project Gutenberg” associated with or appearing on the work, you must comply either with the requirements of paragraphs 1.E.1 through 1.E.7 or obtain permission for the use of the work and the Project Gutenberg™ trademark as set forth in paragraphs 1.E.8 or 1.E.9.

1.E.3. If an individual Project Gutenberg™ electronic work is posted with the permission of the copyright holder, your use and distribution must comply with both paragraphs 1.E.1 through 1.E.7 and any additional terms imposed by the copyright holder. Additional terms will be linked to the Project Gutenberg™ License for all works posted with the permission of the copyright holder found at the beginning of this work.

1.E.4. Do not unlink or detach or remove the full Project Gutenberg™ License terms from this work, or any files containing a part of this work or any other work associated with Project Gutenberg™.



1.E.5. Do not copy, display, perform, distribute or redistribute this electronic work, or any part of this electronic work, without prominently displaying the sentence set forth in paragraph 1.E.1 with active links or immediate access to the full terms of the Project Gutenberg™ License.

1.E.6. You may convert to and distribute this work in any binary, compressed, marked up, nonproprietary or proprietary form, including any word processing or hypertext form. However, if you provide access to or distribute copies of a Project Gutenberg™ work in a format other than “Plain Vanilla ASCII” or other format used in the official version posted on the official Project Gutenberg™ website (www.gutenberg.org), you must, at no additional cost, fee or expense to the user, provide a copy, a means of exporting a copy, or a means of obtaining a copy upon request, of the work in its original “Plain Vanilla ASCII” or other form. Any alternate format must include the full Project Gutenberg™ License as specified in paragraph 1.E.1.

1.E.7. Do not charge a fee for access to, viewing, displaying, performing, copying or distributing any Project Gutenberg™ works unless you comply with paragraph 1.E.8 or 1.E.9.

1.E.8. You may charge a reasonable fee for copies of or providing access to or distributing Project Gutenberg™ electronic works provided that:

- You pay a royalty fee of 20% of the gross profits you derive from the use of Project Gutenberg™ works calculated using the method you already use to calculate your applicable taxes. The fee is owed to the owner of the Project Gutenberg™ trademark, but he has agreed to donate royalties under this paragraph to the Project Gutenberg Literary Archive Foundation. Royalty payments must be paid within 60 days following each date on which you prepare (or are legally required to prepare) your periodic tax returns. Royalty payments should be clearly marked as such and sent to the Project Gutenberg Literary Archive Foundation at the address specified in Section 4, “Information about donations to the Project Gutenberg Literary Archive Foundation.”
- You provide a full refund of any money paid by a user who notifies you in writing (or by e-mail) within 30 days of receipt that s/he does not agree to the terms of the full Project Gutenberg™ License. You must require such a user to return or destroy all copies of the works possessed in a physical medium and discontinue all use of and all access to other copies of Project Gutenberg™ works.
- You provide, in accordance with paragraph 1.F.3, a full refund of any money paid for a work or a replacement copy, if a defect in the electronic work is discovered and reported to you within 90 days of receipt of the work.
- You comply with all other terms of this agreement for free distribution of Project Gutenberg™ works.

1.E.9. If you wish to charge a fee or distribute a Project Gutenberg™ electronic work or group of works on different terms than are set forth in this agreement, you must obtain permission in writing from the Project Gutenberg Literary Archive Foundation, the manager of the Project Gutenberg™ trademark. Contact the Foundation as set forth in Section 3 below.

1.F.

1.F.1. Project Gutenberg volunteers and employees expend considerable effort to identify, do copyright research on, transcribe and proofread works not protected by U.S. copyright law in creating the Project Gutenberg™ collection. Despite these efforts, Project Gutenberg™ electronic works, and the medium on which they may be stored, may contain “Defects,” such as, but not limited to, incomplete, inaccurate or corrupt data, transcription errors, a copyright or other intellectual property infringement, a defective or damaged disk or other medium, a computer virus, or computer codes that damage or cannot be read by your equipment.

1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES - Except for the “Right of Replacement or Refund” described in paragraph 1.F.3, the Project Gutenberg Literary Archive Foundation, the owner of the Project Gutenberg™ trademark, and any other party distributing a Project Gutenberg™ electronic work under this agreement, disclaim all liability to you for damages, costs and expenses, including legal fees. YOU AGREE THAT YOU HAVE NO REMEDIES FOR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE PROVIDED IN PARAGRAPH 1.F.3. YOU AGREE THAT THE FOUNDATION, THE TRADEMARK OWNER, AND ANY DISTRIBUTOR UNDER THIS AGREEMENT WILL NOT BE LIABLE TO YOU FOR ACTUAL, DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES EVEN IF YOU GIVE NOTICE OF THE POSSIBILITY OF SUCH DAMAGE.

1.F.3. LIMITED RIGHT OF REPLACEMENT OR REFUND - If you discover a defect in this electronic work within 90 days of receiving it, you can receive a refund of the money (if any) you paid for it by sending a written explanation to the person you received the work from. If you received the work on a physical medium, you must return the medium with your written explanation. The person or entity that provided you with the defective work may elect to provide a replacement copy in lieu of a refund. If you received the work electronically, the person or entity providing it to you may choose to give you a second opportunity to receive the work electronically in lieu of a refund. If the second copy is also defective, you may demand a refund in writing without further opportunities to fix the problem.

1.F.4. Except for the limited right of replacement or refund set forth in paragraph 1.F.3, this

work is provided to you 'AS-IS', WITH NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.

1.F.5. Some states do not allow disclaimers of certain implied warranties or the exclusion or limitation of certain types of damages. If any disclaimer or limitation set forth in this agreement violates the law of the state applicable to this agreement, the agreement shall be interpreted to make the maximum disclaimer or limitation permitted by the applicable state law. The invalidity or unenforceability of any provision of this agreement shall not void the remaining provisions.

1.F.6. INDEMNITY - You agree to indemnify and hold the Foundation, the trademark owner, any agent or employee of the Foundation, anyone providing copies of Project Gutenberg™ electronic works in accordance with this agreement, and any volunteers associated with the production, promotion and distribution of Project Gutenberg™ electronic works, harmless from all liability, costs and expenses, including legal fees, that arise directly or indirectly from any of the following which you do or cause to occur: (a) distribution of this or any Project Gutenberg™ work, (b) alteration, modification, or additions or deletions to any Project Gutenberg™ work, and (c) any Defect you cause.

## **Section 2. Information about the Mission of Project Gutenberg™**

Project Gutenberg™ is synonymous with the free distribution of electronic works in formats readable by the widest variety of computers including obsolete, old, middle-aged and new computers. It exists because of the efforts of hundreds of volunteers and donations from people in all walks of life.

Volunteers and financial support to provide volunteers with the assistance they need are critical to reaching Project Gutenberg™'s goals and ensuring that the Project Gutenberg™ collection will remain freely available for generations to come. In 2001, the Project Gutenberg Literary Archive Foundation was created to provide a secure and permanent future for Project Gutenberg™ and future generations. To learn more about the Project Gutenberg Literary Archive Foundation and how your efforts and donations can help, see Sections 3 and 4 and the Foundation information page at [www.gutenberg.org](http://www.gutenberg.org).

## **Section 3. Information about the Project Gutenberg Literary Archive Foundation**

The Project Gutenberg Literary Archive Foundation is a non-profit 501(c)(3) educational corporation organized under the laws of the state of Mississippi and granted tax exempt status by the Internal Revenue Service. The Foundation's EIN or federal tax identification number is 64-6221541. Contributions to the Project Gutenberg Literary Archive Foundation are tax deductible to the full extent permitted by U.S. federal laws and your state's laws.

The Foundation's business office is located at 809 North 1500 West, Salt Lake City, UT 84116, (801) 596-1887. Email contact links and up to date contact information can be found at the Foundation's website and official page at [www.gutenberg.org/contact](http://www.gutenberg.org/contact)

## **Section 4. Information about Donations to the Project Gutenberg Literary Archive Foundation**

Project Gutenberg™ depends upon and cannot survive without widespread public support and donations to carry out its mission of increasing the number of public domain and licensed works that can be freely distributed in machine-readable form accessible by the widest array of equipment including outdated equipment. Many small donations (\$1 to \$5,000) are particularly important to maintaining tax exempt status with the IRS.

The Foundation is committed to complying with the laws regulating charities and charitable donations in all 50 states of the United States. Compliance requirements are not uniform and it takes a considerable effort, much paperwork and many fees to meet and keep up with these requirements. We do not solicit donations in locations where we have not received written confirmation of compliance. To SEND DONATIONS or determine the status of compliance for any particular state visit [www.gutenberg.org/donate](http://www.gutenberg.org/donate).

While we cannot and do not solicit contributions from states where we have not met the solicitation requirements, we know of no prohibition against accepting unsolicited donations from donors in such states who approach us with offers to donate.

International donations are gratefully accepted, but we cannot make any statements concerning tax treatment of donations received from outside the United States. U.S. laws alone swamp our small staff.

Please check the Project Gutenberg web pages for current donation methods and addresses. Donations are accepted in a number of other ways including checks, online payments and credit card donations. To donate, please visit: [www.gutenberg.org/donate](http://www.gutenberg.org/donate)

## **Section 5. General Information About Project Gutenberg™ electronic works**

Professor Michael S. Hart was the originator of the Project Gutenberg™ concept of a library of electronic works that could be freely shared with anyone. For forty years, he produced and distributed Project Gutenberg™ eBooks with only a loose network of volunteer support.

Project Gutenberg™ eBooks are often created from several printed editions, all of which are confirmed as not protected by copyright in the U.S. unless a copyright notice is included. Thus, we do not necessarily keep eBooks in compliance with any particular paper edition.

Most people start at our website which has the main PG search facility: [www.gutenberg.org](http://www.gutenberg.org).

This website includes information about Project Gutenberg™, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.