HISTORICAL PERSECTIVE

Albert C. L. G. Günther *Biologia Centrali-Americana* Reptilia and Batrachia[1]

On *Iguana* and *Ctenosaura*

IGUANA

Iguana, Laurenti.

1. **Iguana rhinolophus.**

Iguana rhinolophus, Wiegm. Herp. Mex. p. 44; Dum. & Bibr. Erp. Gén. iv. p. 207; Tyler, Proc. Zool. Soc. 1850, t. 3 (*Metopoceros cornutus*); Cope, Proc. Ac. N. Sc. Phil. 1862, p. 356; Sumichrast, Ann. & Mag. N. H. 1864, xiii. p. 500; Bocourt, Miss. Sc. Mex., Rept. p. 134; Cope, Journ. Ac. N. Sc. Phil. viii. 1876, p. 124.

Hab. MEXICO, Mazatlan and Presidio (*Forrer*), Cordova (*Sallé*), Tehuantepec and Rio Coazacoalcos (*Sumichrast*), Cozumel Island on the coast of Yucatan (*G. F. Gaumer*); GUATEMALA, Chiapam (*Salvin*); COSTA RICA (*Cope*); PANAMA (*Brit. Mus.*), Darien, R. Truando (*Schott*).

"Iguana verde" of the Creoles; "Guchachi-guëla" of the Zapotec Indians.

This is the northern or Central-American race of the South-American *I. tuberculata*; it does not seem to extend southwards beyond the Isthmus of Darien, but occurs also in the island of Santa Lucia and probably other parts of the West Indies.

2. **Iguana tuberculata.**

Iguana tuberculata, Laur. Syn. Rept. p. 49.

Hab. GUATEMALA (*Salvin*); HONDURAS (*Brit. Mus.*); NICARAGUA (*Brit. Mus.*); PANAMA (*Dow*), Darien (*Schott*).—Generally distributed over the northern parts of SOUTH AMERICA and BRAZIL; occurring also in many West-Indian Islands.

CTENOSAURA

Ctenosaura, Wiegmann, Isis, 1828, p. 371.

1. **Ctenosaura acanthura.**

Lacerta acanthura, Shaw, Zool. ii. 1802, p. 216.
Cyclura teres, Harlan, Journ. Ac. Sc. Phil. 1825, p. 246, t. 16.
Ctenosaura cycluroides, Wiegm. Isis, 1828, p. 371; Bocourt, Miss. Sc. Mex., Rept. p. 143 (part.); Sumichrast, Bull. Soc. Zool. Fr. v. 1880, p. 175.
Ctenosaura shawii, Gray, Wiegm.
Cyclura pectinata, Wiegm. Herpet. Mex. p. 42, t. 2; Dum. & Bibr. Erp. Gén. iv, p. 221.
Cyclura denticulata, Wiegm. l. c. p. 43, t. 3.
Cyclura articulata, Wiegm. l. c.
Cyclura acanthura, Sumichrast, Arch. Sc. Phys. et Nat. xix. 1864, p. 49; Ann. & Mag. N. H. 1864, xiii. p. 500.
Ctenosaura acanthura, Gray, Cat. Liz. p. 191; Cope, Proc. Ac. Nat. Sc. Phil. xviii. p. 124; Bocourt, Le Naturaliste, 1882, p. 47; Boul. Cat. Liz. ii. p. 195, varr. A, B, D.
Ctenosaura pectinata, Gray, Cat. Liz. p. 191; ?Cope, Proc. Ac. Nat. Sc. Phil. xviii. p. 124; and Proc. Am. Phil. Soc. xxii. 1885, p. 388; Bocourt, Miss. Sc. Mex., Rept. p. 140, and Le Naturaliste, 1882, p. 47; Sumichrast, Bull. Soc. Zool. v. 1880, p. 174.
Ctenosaura teres, Bocourt, Miss. Sc. Mex., Rept. p. 142, and Le Naturaliste, 1882, p. 47.
Ctenosaura multispinis, *brevirostris*, and *teres*, Cope, Proc. Am. Phil. Soc. 1886, p. 266.

Hab. NORTH AMERICA, California.—MEXICO, Tres Marias Is., Presidio, Mazatlan, Cuidad, and Ventanas (*Forrer*), Tierra Colorado in Guerrero (*H. H. Smith*), Colima (*Dugès*, *in mus. Paris*; *U.S. Nat. Mus.*), Putla (*Boucard*), Tehuantepec (*Sumichrast*), Tampico (*W. B. Richardson*), Vera Cruz (*Sallé*; *Méhédin, in mus. Paris*), Yucatan, Cozumel I. (*Cope*).

Editors' Note.—Usually, we have chosen as featured historical works narrative pieces that lend insight into language as well as the state of knowledge applicable when the chosen article was written. The piece featured in this issue is quite different. Instead of a narrative, this piece by Albert Günther is indicative of the sometimes massive works that documented results of extensive expeditions and simultaneously summarized the knowledge available at the time. Although much less interesting to peruse, these types of publications allow us to recreate the historical events that lead to the present day and often include references to the works of authors that might otherwise be overlooked and forgotten.

[1] Reprinted in 1987 by the Society for the Study of Amphibians and Reptiles (Facsimile Reprints in Herpetology) in cooperation with Comité Herpetológico Nacional (México).

A BRIEF HISTORY OF THE BIOLOGIA CENTRALI-AMERICANA...

One of the most monumental biological publications of all time is the 67-volume *Biologia Centrali-Americana*, subtitled "Contributions to the Knowledge of the Fauna and Flora of Mexico and Central America." Edited by the eminent British naturalists Osbert Salvin and Frederick DuCane Godman, the series appeared in parts, with 1677 plates (more than 900 colored), at irregular intervals, often monthly, over a period of 37 years, 1879 to 1915. It was actually more nearly a synopsis of the entire biota, as then known, of Middle America — México (excluding Baja California) through Panamá — written by numerous specialists, although "certain groups, such as the Crustacea and most of the lower invertebrates, were never treated owing to a lack of material, while a number of groups of insect were omitted because no workers could be found to undertake them …"

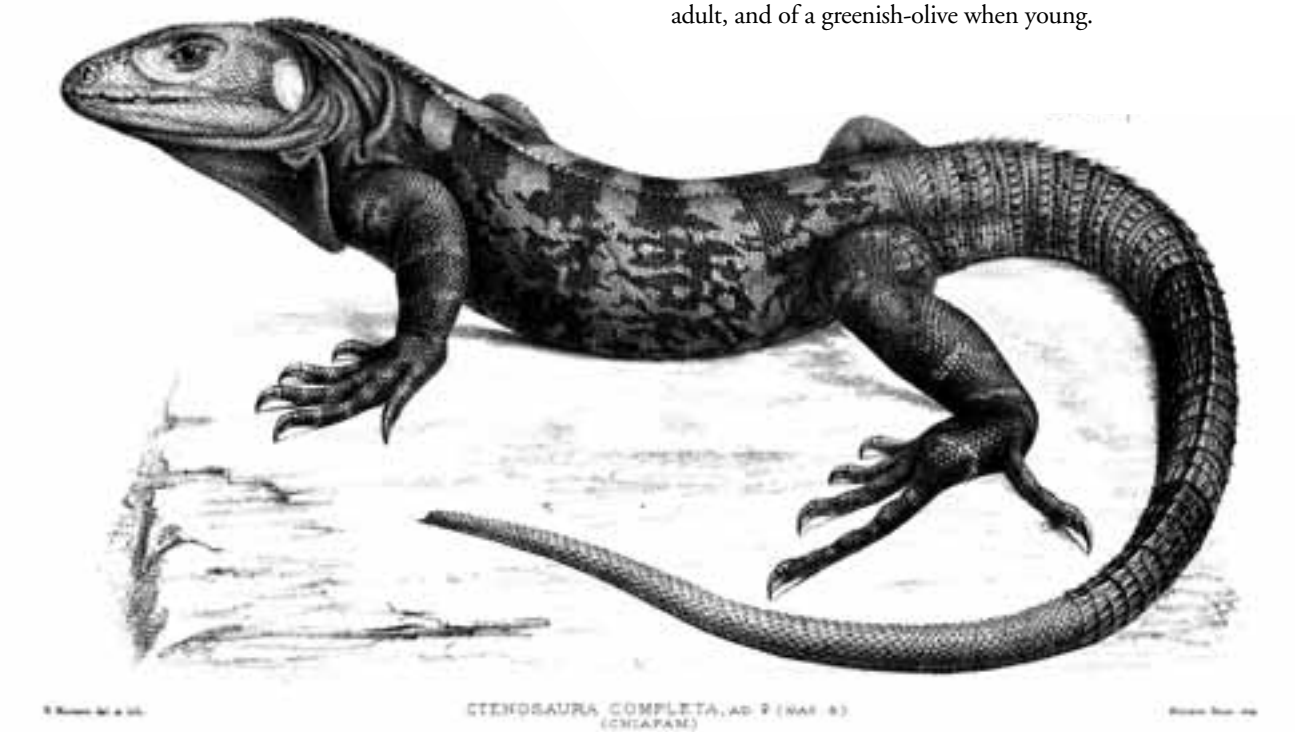
Selander and Vaurie. 1962.
Amer. Mus. Novit. 2099:1–70.

That the whole work was finished was due to the tenacity of purpose and administrative skill of Godman and the editorial assistance of George Charles Champion, a beetle specialist, for Salvin, the other editor, died June 1, 1898, at the age of 63, having been born February 25, 1835, in Elmhurst, Finchley, England. From 1898 on, all responsibility for *Biologia Centrali-Americana* and for the joint Salvin-Godman collection fell to Godman. He was then 64, having been born January 15, 1834, in Park Hatch, Surrey, England. Despite advancing years and ill health, he managed to complete the monumental work in all its parts, although the last, introductory volume of 1915 did not do justice to the overall theoretical analysis that had at one time been the editors' hope. The coverage of the work was admittedly not complete, but what was started was brought to a most admirable conclusion. A few years later, on February 19, 1919, Godman died, at the age of 85.

Hobart M. Smith

"Iguana negra" of the Creoles; "Guchachi-chévé" of the Zapotec Indians.

Tail subcylindrical; the spines of the broad rings moderately developed, the broad rings of the anterior verticelli separated by three or two narrow rings, rarely by one. Dorsal crest generally interrupted in the sacral region; if continuous, the continuity is effected merely by the low and somewhat enlarged scales of the median series. Scales of the calf of the leg very small. The coloration varies and changes with age. The ground-colour of the young is generally green, marbled with darker on the back, the dark markings forming more or less distinct, irregular cross bands, which are sometimes confluent, sometimes spotted with black, and about seven or eight in number on the back. With age the dark colour becomes more diffused and irregularly distributed over the body, at places entirely suppressing the ground-colour, which itself assumes a more olive tinge or changes into yellowish. Specimens from Tampico are uniform black when adult, and of a greenish-olive when young.



I have examined a great number of specimens, which I am unable to divide into species, although they by no means agree with one another in every point. The development of the crest, which by some authors has been used as a specific character, depends partly on age, partly on sex. The largest specimens I have seen, males as well as females, are thirty inches long, of which the tail takes two thirds. Shaw's type is still preserved in the British Museum, and said to be from California; also Bocourt has examined specimens from that country.

2. **Ctenosaura completa.** (Tabb. XXIX., XXX.)
Ctenosaura cycluroides, part., Bocourt, Miss. Sc. Mex., Rept. p. 143.
Ctenosaura completa, Bocourt, l. c. p. 145, and Le Naturaliste, 1882, p. 47; Cope, Proc. Am. Phil. Soc. 1886, p. 268.
Ctenosaura acanthura, var. C, Boul. Cat. Liz. ii. p. 197.

Hab. MEXICO, Yucatan and Cozumel I. (*Cope*), Mugeres I. (*G. F. Gaumer*); BRITISH HONDURAS, Belize (*Dyson*); GUATEMALA, Peten (*Morelet*), Chiapam (*Salvin*); HONDURAS (*Mus. Brit.*, *Bocourt*), Bonacca I. (*G. F. Gaumer*); SALVADOR, La Union (*Bocourt*).

Tail subcylindrical; the spines of the tail very prominent and acute in the adult male, the scutes of the narrow rings being also strongly armed. Dorsal crest not interrupted in the sacral region, the continuity being effected by short lobes in the adult male, and by depressed scales in females and young. Scales of the calf of the leg larger than in *C. acanthura*. Greenish or greenish-olive, with six black cross-bands on the back, of which the anterior is the least developed, and, like the following, more or less distinctly paired; in old specimens these bands are narrower and more or less broken up, and the anterior may disappear altogether.

Of this species I have seen nine specimens — two adult males and several young from Honduras, an adult female and young from Belize, and an adult female from Guatemala. It grows to the same size as *C. acanthura*, from which it is not easily distinguished.

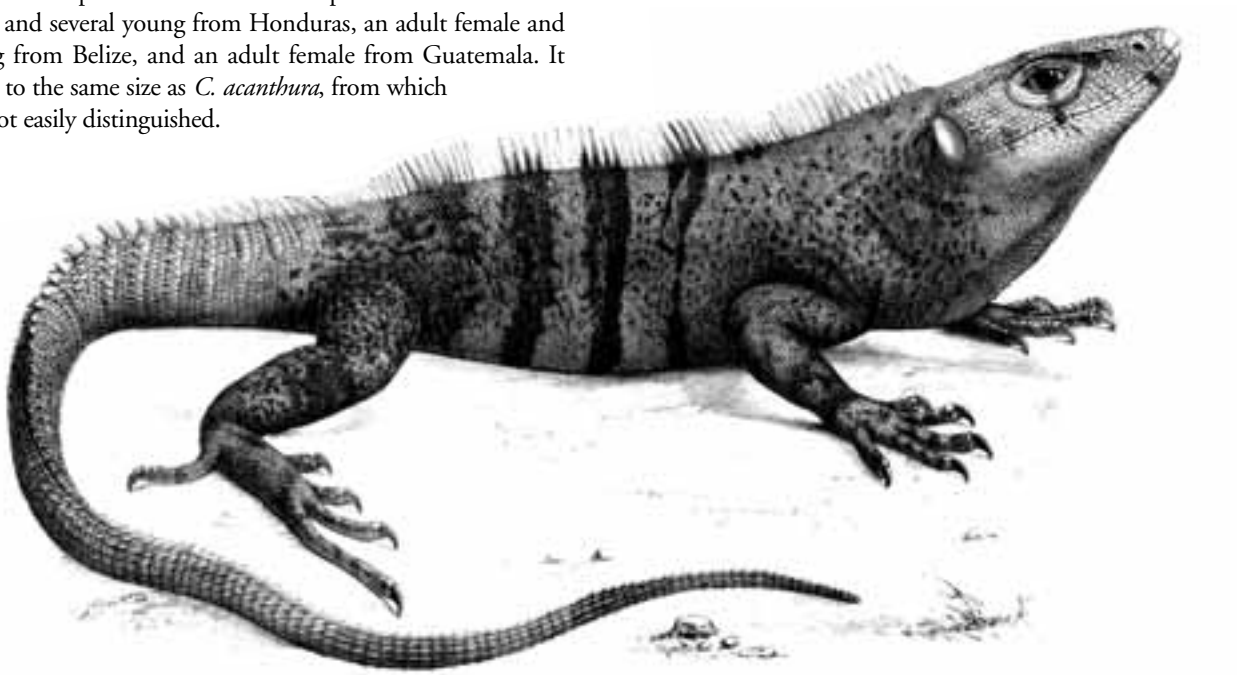
BIBLIOGRAPHIC INFORMATION

Günther's volume on amphibians and reptiles is one of the most important publications on the herpetology of Middle America and it is still in active use, yet it is not widely available. The original edition consisted of probably no more than 300 copies, according to the best estimates of several natural history booksellers, and is regarded by them as one of the scarcest volumes in the entire *Biologia Centrali-Americana* series. As Hobart Smith notes in his introduction [to the SSAR Facsimile Reprint], the herpetology volume cost the equivalent of about US$37 in 1902 when the volume had just been completed, a very considerable sum of money at the time. In recent years copies have sold for as much as $1000 on the second-hand market, when they can be found at all.

Dates of Publication. Günther's book was issued over the period 1885 to 1902 and at the foot of the first page of each signature the date of publication is given. Since the plates did not always accompany the corresponding text, these cannot be dated so easily. Fortunately, however, such details are recorded on the wrappers in which the original parts were published, and a copy of the *Biologia* with all of the wrappers intact exists in the Zoology Library of the British Museum (Nat. Hist.), London, …

Kraig Adler, Editor
5 February 1987

Tab. XXIX. represents a male from Bonacca Island, of half the natural size, with separate view of a part of the tail; Tab.



XXX. a female from Chiapam, of the natural size, also the inner side of the calf of the leg, to show the size of the scales.

3. **Ctenosaura quinquecarinata.**

Cyclura quinquecarinata, Gray, Zool. Misc. p. 59; Cope, Proc. Am. Phil. Soc. xi. 1871, p. 161.

Enyaliosaurus quinquecarinatus, Gray, Cat. Liz. p. 192.

Ctenosaura quinquecarinata, Sumichrast, Bibl. Univ. et Rev. Suisse, 1873, p. 259; and Bull. Soc. Zool. v. 1880, p. 175.

Hab. MEXICO, Oaxaca (*Boucard*), Tehuantepec (*Sumichrast*); HONDURAS (*Mus. Brit.*).

Tail much thickened and depressed near its base, verticillated, each verticellus formed by a ring of large strongly armed scutes, and by a ring of much narrower and unarmed scutes. The armature is confined to the upper and lateral surfaces of the tail, the lower side being comparatively smooth. The strongest spines are arranged in one median, and two or three lateral series. Dorsal crest very low, obsolete in the sacral region. Upper parts and throat yellowish, marbled with black or brown.

4. **Ctenosaura defensor.**

Cachryx defensor, Cope, Proc. Ac. N. Sc. Phil. xviii. p. 124; Proc. Am. Phil. Soc. 1869, p. 169, t. 10; Bocourt, Miss. Sc. Mex., Rept. p. 143, t. 17 bis. figg. 12, 12a.

Hab. MEXICO, Yucatan (*A. Schott, U.S. Nat. Mus.*).

Extralimital are the following species: —

1. *Iguana acanthura*, Blainville, = *Cyclura acanthura*, Dum. & Bibr., = *Cyclura hemilopha*, Cope, Boulenger, = *Ctenosaura acanthura*, Bocourt (Miss. Sc. Mex., Rept. p. 138), = *Ctenosaura interrupta*, Bocourt (Le Naturaliste, 1882, p. 47). — Lower California.

2. *Ctenosaura erythromelas*, Boul. Proc. Zool. Soc. 1886, p. 241, t. 23; *Cachryx erythromelas*, Cope, Proc. U.S. Nat. Mus. 1886, p. 437. — Probably Lower California.

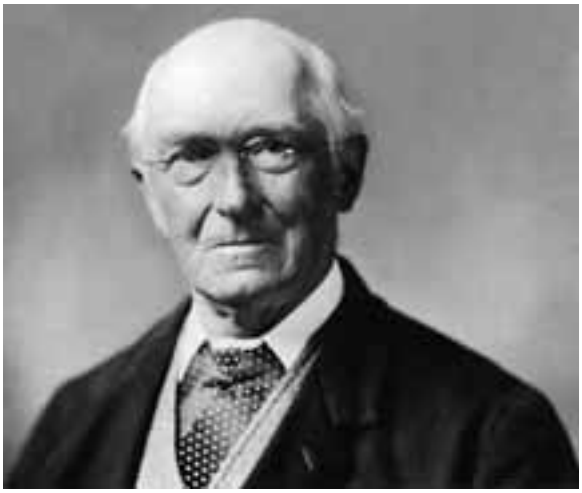
BIOGRAPHICAL SKETCH

Albert C. L. G. Günther (1830–1914)[1]

Albert Günther was born in 1830 in Esslingen, Württemberg (Germany). He entered the theological school at the University of Tübingen in 1847 and took holy orders in the Lutheran Church in 1851, although he subsequently turned to medical studies because of a longstanding interest in natural history and the influence of several professors. He received a doctorate in philosophy and arts in 1853 and went on to medical school, initially in Berlin, before teaching in Bonn, and finally completing his medical degree in Tübingen in 1857.

That same year, Günther offered his services to John E. Gray, Keeper of the Zoology Department at the British Museum, and was hired to catalogue the museum's snake collection, then the frogs, and finally the fishes, which occupied him for the rest of his life. Günther took over the Keeper's position from Gray in 1875 and, like Gray before him, aggressively built the collection, taking advantage of opportunities presented as the British Empire expanded. In 1879, he hired Georges Boulenger and placed him in charger of lower vertebrates, assuring that the long tradition of herpetological research at the British Museum would continue.

Günther founded *Zoological Record* in 1865, and it is still today the most complete index of the world's zoological literature. Günther's greatest zoological discovery occurred in 1867, when he announced the recognition that *Sphenodon* of New Zealand was not a lizard but the sole living representative of the order Rhynchocephalia. In addition, he published *Reptiles of British India* (1864), *The Gigantic Land-Tortoises (Living and Extinct)* (1877 [1878]), and the herpetological volume in the series *Biologia Centrali-Americana* (1885–1902). Günther's work on lower vertebrates was regularly cited by Charles Darwin in *Descent of Man* (1871), in which he depended heavily on Günther for his information about sexual characters. In addition to the books, Günther published some 200 papers on herpetology, with a geographic emphasis on Australia, Africa, and Asia. Günther retired in 1895 and died at Kew, London in 1914.



Albert C. L. G. Günther in about 1900. Photograph courtesy of Kraig Adler and the British Museum (Natural History) Library.

[1] **Source:** Adler, K. 1989. Herpetologists of the past, pp. 5–141. In K. Adler (ed.), *Contributions to the History of Herpetology*. Society for the Study of Amphibians and Reptiles, Contributions to Herpetology, vol. 5. Ithaca, New York.