

sunt, aliquando omnino absunt; corpore subtus nigro; antennis fusco-nigris; pedibus fusco-nigris, tarsorum articulis anteriorum latis.

Magnitudine variat; long. corp. lin. $1\frac{3}{5}$ – $1\frac{4}{5}$, lat. $\frac{4}{5}$.

A variable species, both in pattern and size; nevertheless the four examples before me (none absolutely identical with the three others) evidently represent a single species, which is abundantly distinct from all others with which I am acquainted: its elongated form, coupled with the greater breadth of the *post-medial* elytra (especially as contrasted with the thorax), and the distinct angle formed by the line of the margins of the elytra and thorax separate it at once from all species found in Great Britain. In our list the name will stand next to *H. palustris*, Linn.

Four examples of *H. tinctus* were detected among a mass of Turner's captures, by my friend Dr. Power: they were captured certainly in the district of the New Forest.

XXXV.—*A Synopsis of the Species of Alligators.*

By Dr. J. E. GRAY, F.R.S. &c.

HAVING had occasion to re-examine the large collection of Alligators in the British Museum for the purpose of naming the more recently received specimens, I am induced to lay before the readers of the 'Annals' an abstract of the result of this examination.

I may observe that Spix, in his work on Brazilian Lizards, gives very good figures of these animals, with the colours well marked; and Natterer, in his 'Beiträge' on South-American Alligators, gives very accurate and detailed figures of the head and the neck-shield of the different species; and he has figured some varieties or species very nearly allied to those here noticed, which I have not seen.

The Alligators (*Alligatoridæ*) may be divided thus:—

I. *The ventral scutella like the dorsal ones, bony, and articulated together, forming a shield. The eyelids with an internal bony plate. The cervical scutella in pairs, forming an elongated shield. Nasal bone short. Tropical America.*

1. JACARE. The orbits united by a bony cross ridge. Eyelids partly fleshy, striated or rugose.

2. CAIMAN. The orbits not united by a cross ridge. Eyelids entirely bony, smooth.

II. *The ventral scutella thin, the dorsal scutella bony, not articulated together. The eyelids fleshy, smooth. The cervical scutella in pairs, separate. Nasal bone elongate, separating the nostrils. North America.*

3. ALLIGATOR. The face broad, depressed.

1. JACARE.

Head moderately high, shelving on the sides. Orbits united by a distinct bony cross ridge. Eyelids striated or rugose, strengthened by a small internal bone. The cervical scutella four or five pairs, forming a shield; the dorsal and ventral scutella bony, articulated together, forming a dorsal and ventral shield; the gular and ventral scutella smooth.

A. Head elongate; interorbital ridges strong. Dorsal scutella elongate, keeled, keels of vertebral series highest; lumbar scutella in six longitudinal series. Nuchal scutella small, compressed. Eyelids striated, with a rather large internal bone. Back black, yellow-varied. *Melanosuchus*.

1. *Jacare nigra* (Black Jacare).

Crocodylus sclerops, Schn. Amph. 162; Cuvier, Arch. Zool. ii. t. 2. f. 3.

Crocodylus Yakare, Daud. Rept. ii. 414.

Alligator Sclerops, Cuvier, Oss. Foss. v. 35, t. 1. f. 7 & 16, t. 2. f. 3.

Caiman niger, Spix, Bras. t. 4 (good).

Champse niger, Natterer, Beitr. t. 21 (good).

Hab. Para; 13 feet long (Graham).

I think it better to adopt Spix's name, as *sclerops* has been used for all the species.

B. Head short; orbits with diverging ribs in front to edge of jaws. Dorsal scutella broad, slightly keeled, equal; the lumbar scutella in four longitudinal series. Nuchal scutella distinct, in two cross series. Eyelids rugose, with a small internal bone. Back olive, brown-banded. *Cynosuchus*.

a. Head short, broad, depressed, with very distinct preorbital ridges to the edge of the jaw. Cervical disk short, broad, formed of four bands of scutella. Sides of jaws pale, with a series of dark spots.

2. *Jacare latirostris*.

Crocodylus latirostris, Daud. Rept. ii. 417.

Caiman fissipes, Spix, Bras. t. 3 (good).

Champse fissipes, Wagner, Icon. t. 17; Natterer, Beitr. t. 22 (good).

Alligator sclerops, Pr. Max. Abbild. t. .

A. cynocephalus, Dum. & Bibr. Erp. Gén. 86.

Hab. Brazils. Pernambuco (J. P. G. Smith).

The nose of the young specimen is as long as the width at the eighth tooth.

b. Head elongate, longer than the width at the eighth tooth, with none or only indistinct evanescent ridges from the front of the orbit. Cervical disk oblong, elongate, of five series of scutella.

* Face depressed, broad; sides of the jaws with a series of large coloured spots, as in the former section.

3. *Jacare longiscutata*.

Dorsal scutella elongate, longer than broad, uniformly keeled, in ten longitudinal series in the middle of the body; ventral

scutella elongate, in fourteen or sixteen longitudinal series. Sides of the jaws pale, with five or six band-like spots; the inner pair of the first and second series of cervical scutella large and equal-sized.

Hab. Tropical America.

This is very like the following; but the head is rather broader, and the dorsal and ventral shields are much larger and more numerous.

It is known from the young of *Jacare nigra* by its olive-colour, the spots on the sides of the jaws, and the presence of the distinct nuchal scutella.

4. *Jacare ocellata*.

Dorsal scutella broad, uniformly keeled, in eight longitudinal series in the middle of the body; ventral scutella in twelve longitudinal series, those of the hinder series smaller, longer, and more numerous; the central pair of cervical scutella in the first series smaller than those that follow.

Hab. Lake of Santa Cruz de la Sierra.

**** Face attenuated, rather high on the sides; sides of the jaws one-coloured, not spotted or banded.**

5. *Jacare punctulata*.

Caiman (Jacaretinga) punctulatus, Spix, Bras. t. 2 (good).

Champsia sclerops, Natterer, Beitr. t. 22 (head, good).

Alligator punctulatus, Dum. & Bibr. Erp. Gén. ii. 91.

Back pale yellow, brown-banded; the sides of the head yellow; upper and lower jaws yellow, one-coloured, or minutely speckled; sides of the neck smooth, with flat scales. Nose rather high and square.

Hab. Brazils (*Spix*); Surinam; Argentine Republic.

Var. Sides of the neck rugose, with prominent keeled scales. Demerara.

Dr. Natterer figures two other species, under the names of *Champsia vallifrons* (t. 23) and *Ch. punctulatus* (t. 24), the latter of which seems to differ from the former in the head being narrower and more tapering. I have seen no specimens agreeing with these figures; but they look very like varieties of the above. At the same time, some of our specimens appear to have more attenuated snouts than others; but when the callipers are applied to the nose and to other parts of the head, the absolute proportions of the parts are very nearly the same.

I may observe that, characteristic as are the figures of Dr. Natterer's paper, none of them exactly agree with our specimens when measured. Perhaps this arises from their having been drawn in perspective.

In some specimens of this *Jacare*, the first and sometimes

even the second cervical scutella have two keels, in others only one; but this is no specific distinction, as it is not rare to find species with two keels on one side of the neck, and only one on the other.

2. CAIMAN.

Head high, flattened on the sides. Orbits without any ridges. The eyelids smooth, strengthened with a large, single, internal bony plate. The dorsal and ventral scutella bony, articulated together, forming a dorsal and ventral shield; the gular and lateral ventral shields keeled, the abdominal ones smooth; the cervical scutella four or five pairs, with sometimes one or a pair interposed between the second and third pairs.

A. *Head shelving on the sides. Nuchal scutella five, in a single cross series; cervical scutella five pairs; dorsal scutella highly keeled, irregular, in six series; the lumbar scutella in two longitudinal series; the gular and two outer lateral series of ventral scutella keeled. The flat upper disk at base of tail broad and strongly crested. Paleosuchus.*

1. *Caiman trigonatus*, Gray, Cat. B. M. 66.

Crocodylus trigonatus, Schn. Amph. 161, ii. t. 1, 2 (skull); Cuvier, Oss. Foss. v. 65.

C. palpebrosus, var. 2, Cuvier, Oss. Foss. v. 40, t. 2. f. 1.

Champsia trigonata, Natterer, Beitr. t. 26 (good).

Hab. Tropical America. St. Domingo (Cuvier).

Cuvier and Duméril and Bibron have confounded this species with the Black Crocodile from West Africa; and we have even received a skeleton of the latter animal from the Paris Museum, under the name of *Alligator palpebrosus*, var.

B. *Head flat and erect on the sides. Nuchal scutella many, in two cross series; cervical scutella three pairs; dorsal scutella slightly keeled; the lumbar scutella in four longitudinal series; the gular, the ventral, and lateral abdominal scutella keeled. The flat upper disk at the base of the tail elongate. Aromosuchus.*

2. *Caiman palpebrosus*, Gray, Cat. B. M. 67.

Crocodylus sclerops (male), Cuvier, Arch. Zool. ii. 168.

C. palpebrosus, var., Cuvier, Oss. Foss. v. 38, t. 1. f. 6 & 17, t. 2. f. 2.

Champsia palpebrosa, Natterer, Beitr. t. 27 (good).

Caiman (Jacaretinga) moscifer, Spix, Bras. t. 1.

Brown; tail black, banded.

Hab. Tropical America.

Natterer figures the head of a species, under the name of *C. gibbiceps*; but I do not see in what respect it differs from the above, except that the head is a little higher, which is, perhaps, a sexual distinction.

3. ALLIGATOR.

Head depressed, broad, without any preorbital ridges. The

eyelids smooth, fleshy. The dorsal scutella not articulated together, in six longitudinal series; the ventral scutella thin; the gular and abdominal shields smooth; nuchal scutella one pair, small; cervical scutella three pairs, hinder smallest.

Alligator Mississippiensis, Gray, Cat. B. M. 61.

Crocodylus Mississippiensis, Daud. Rept. ii. 418.

C. Lucius, Cuvier, Oss. Foss. v. 32, t. 1. f. 8, & 15 t. 2. f. 4.

C. Cuvieri, Leach, Zool. Misc. ii. 102, t. .

Alligator Lucius, Dum. & Bibr. Erp. Gén. iii. 75, t. 25, 26.

Hab. North America. Carolina (*Catesby*).

There are two varieties (?); or, it may be, one sex has the face longer in proportion to the width than the other.

XXXVI.—On *Additions to the Madeiran Coleoptera*.

By T. VERNON WOLLASTON, M.A., F.L.S.

[Continued from p. 293.]

Fam. Curculionidæ.

Genus LIXUS.

Fabricius, Syst. Eleuth. ii. 498 (1775).

6. *Lixus anguinus*?, Linn.

L. angusto-elongatus, subcylindricus, subnitidus, pube cinereo-albida demissa minuta parce tectus et linea marginali nivea ornatus; rostro longiusculo, minute inæqualiter punctulato, postice subcarinato; prothorace minutissime punctulato necnon profunde et remote varioloso, in disco linea albidior utrinque ornato; elytris apice singulatim acuminatis sed vix dehiscentibus, sat profunde striato-punctatis, obsolete albido lineatis.

Long. corp. lin. 6.

Habitat prope urbem Funchalensem, a Dom. Wolff nuper lectus.

Curculio anguinus?, Linn., Syst. Nat. i. ii. 610 (1767).

L. rather smaller and narrower than the *L. Cheiranthi*, less densely clothed with a minute ashy pubescence, but (like that species) ornamented with a broad paler line along its sides; also less opake. *Rostrum* rather longer and slenderer than that of *L. Cheiranthi*; also a little more curved, subcarinated posteriorly, very minutely punctulated, and with rather larger punctures intermixed. *Prothorax* much more deeply and remotely punctured, the punctures (or varioles) being, *on the disk*, enormous and subconfluent; the spaces between them very minutely punctulated; ornamented on either side of its disk with a broad but indistinct paler line. *Elytra* gradually a little narrowed behind, and with the extreme apex of each more produced or



Gray, John Edward. 1862. "XXXV.—A synopsis of the species of Alligators." *The Annals and magazine of natural history; zoology, botany, and geology* 10, 327–331.

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