

CATALOGUE
OF THE
BATRACHIA SALIENTIA
IN THE
COLLECTION
OF THE
BRITISH MUSEUM.

BY
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PREFACE.

THE object of this Catalogue is to give a description of all the species of Tail-less Saurians (*Sauracilia Sclerota*) in the Collection of the British Museum, with an indication of their history and origin, and an account of the species to be found in other Collections which are deposited in the National Museum.

Dr. Günther observes:—"The system according to which I have arranged the *Sauracilia Anura* in the Collection of the British Museum differs in many respects from those hitherto employed. I have explained, in a paper in the 'Proceedings of the Zoological Society,' 1858, p. 235, the reasons which have induced me to subordinate the character of the maxillary tooth to that of the distal or tapering toe, in dividing the section *Cyrtophanes*. By so doing we obtain two parallel series, in each of which corresponding members occur in regular succession. I am not afraid of separating these animals into too many families, and have established them even for one or two

genera, where the characters seemed sufficient. As yet we know little (except of the barbers) of Africa, Australia, and Tropical America, and there are but few collectors who have directed particular attention to this class of animals. Thus we may not only affirm with some certainty that many families at present poor in species will soon be enriched, but we may even venture to prognosticate that at least some of the missing forms, which I have pointed out, will be discovered. The progress made in our knowledge of the *Entomibia Jacea* during the last fifty years may be seen at once by the following comparison of the number of species given by different authors:—

Flem in 1692	51 species.
Trinell in 1830	119 species.
Fendler & Eilson (vol. ix.) in 1854 ..	164 species.
The present Catalogue in 1858	280 species.

* There are, besides, many species which I could not introduce into this Catalogue, on account of the imperfect descriptions given of their systematic characters.

* Dr. J. E. Gray has collected in his MSS. (the free use of which, with his usual kindness, he has permitted me) diagnoses of many species from papers scattered through various journals, and he directed my attention to species which I might otherwise have overlooked. He proposed to arrange these animals into two groups, according to the form of the diapophysis of the neural vertebra. I fully acknow-

ledge the systematic importance of this character, but I consider it to be of subordinate value.

"I have to return my best thanks to my friend and fellow-colleague Edward v. Muehlen, M.D., for supplying me with detailed accounts of species in the Berlin Museum which are wanting in this Collection.

"Finally, I cannot forbear noticing a very bad practice, now prevalent, by which new species run the risk of being overburdened with synonyms, and thrown from the first into a state of confusion. In several of the large Collections new species remain named for years, without being established in a regular way by published descriptions. These names are then brought before the public by occasional visitors, especially by dealers, who often apply them to specimens of quite another species, without any further notice where or by whom they were given. Little better is the practice of publishing lists of species, where the new ones are named without any diagnosis. If an author does not choose to give science the benefit of his knowledge of a new species, why not mention it as '*Lophis*, n. sp.,' '*Syngasteris*, n. sp.,' '*Stylis*, n. sp.,' instead of '*Lophis regalis*, X, '*Syngasteris picta*, Y, '*Stylis maculata*, Z?' It is by such mispractice that species come to have, from the origin, different names in different countries. Whenever I have met with specimens bearing such a name, I have accepted it when well chosen, or when I have been able to discover where or by whom it was

given; but having now found that such names are often joined to species for which they were not originally intended by the authors, I intend henceforth to reject them altogether, and not to introduce them into the synonymy unless published with a proper diagnosis.

"The number of specimens in the Collection of the British Museum, contained in this Catalogue, amounts to 1891.

"I am able to vouch for the correctness of the plates, which were executed by Mr. Ford under my inspection."

JOHN EDWARD GRAY.

British Museum,
July 1, 1858.

m-g. Larva. South America.

q. Larva. South America.

r-d. Larva. South America.

s, v. Larva and adult. South America.

w. Adult; stuffed. South America.

x. Adult; stuffed. South America. Presented by Mr. Leachester.

3. *Pseudis minuta*.

Snout rather broad, depressed, rounded in front. An oblique white streak from the back edge of eye to the angle of mouth; a white stripe from the shoulder to the hypochondrium.

a. (Half-grown?); male. South America. Presented by Charles Darwin, Esq.

This species agrees in nearly all its characters with *P. parvulus*, but is at once distinguished by its much smaller size, our specimen being only one-sixth of the size of a young *P. parvulus* which has not quite lost the tail. Above brown, with darker spots; belly white, with some small irregular brown spots; inner side of legs with wavy brown longitudinal bands; two white streaks on each side as mentioned. Vomerine teeth in a nearly uninterrupted straight line. On each side of the tongue a long cleft for two separated internal subgular vocal sacs (perhaps united in full-grown specimens). Length from the snout to anus 1"; hinder foot twice as long as body.

2. *ERYLORUS*.

Skin with warts or nearly smooth. Fingers quite free; toes webbed to their tips by a very extensible membrane; tongue rather elongate, not webbed behind, sometimes tooth none; maxillary tubes small; tympanum indistinct. East Indies.

Erylorus, Tschudi, Abt. p. 85; Ann. d. Mus. viii. p. 333.

1. *Erylorus lima*.

Bombinator lima, Mus. Exped. Nat. et Physic.

Erylorus lima, Tschudi, Abt. p. 85; Ann. d. Mus. p. 334 pl. 65. f. 4.

Skin covered with small conical tubercles; beneath with symmetrical rows of prominent pores; tongue elongate, produced in a pointed end behind; maxillary with two tubercles; above brown, sometimes with a paler dorsal streak.

a-v. Adult and half-grown. Java. From the Leyden Museum.

18. *Rana bicoloris*.

Naturalist Trans. An. Nat. Soc. Finland 1845, p. 266.

Head longer than broad; snout rather elongate and pointed; tympanum two-thirds the width of eye; skin of the back with narrow longitudinal folds. Legs and toes slender, half-webbed; fourth toe one-third longer than fifth; metatarsus with one tubercle. Vomerine teeth small, in two rather-oblique series, beginning from near the front edge of the lower maxilla.

A whitish longitudinal band from the snout to anus; above with dark spots; sides of head brown; a white band from just below the eye to the shoulder; beneath uniform whitish.

a. Half-grown. Gaboon. From Mr. Cuning's Collection.

19. *Rana greyi*.

Smith, Illustr. of the Faun. of S. Afr. pl. 78. f. 2.

Head nearly as long as broad, with moderate, rounded snout; tympanum circular, half the width of eye; skin of the back and sides with broad longitudinal folds, and flat tubercles between. Toes rather elongate, webbed only at the base; fourth toe one-third longer than fifth; metatarsus with one, rather prominent tubercle. Vomerine teeth in two, rather oblique series, situated near the front edge of the lower maxilla.

Brownish yellow, brown variegated with large brown spots above; temple brown; beneath straw-yellow.

a-a. Adult and half-grown: discoloured. South Africa.

20. *Rana macaronesiana*.

Desc. d'Abbe, p. 200; *Smith, Faun. of the Empire*, Sept. p. 28. pl. 75. f. 3.

Body with six or eight longitudinal folds; toes and fingers slender, with blunt tip and moderate subarticular tubercles; toes not webbed to the end, fourth one-third longer than fifth and third; metatarsus with one tubercle. Vomerine teeth in two-oblique series. Tympanum distinct, of moderate size. Greyish or brown above, sometimes black-spotted, with or without paler vertebral band. On each side of the tongue a slit for the vocal sac.

a. Adult: tad state. Isle de France. Presented by Charles Barwin, Esq.

21. *Rana fasciata*.

Desc. d'Abbe, p. 200; *Smith, Ill. of S. Afr.* App. p. 23.

Head as long as broad; snout rather short, rounded; tympanum distinct, moderate; skin of back with irregular longitudinal plates; toes of moderate length, webbed to the tip, but deeply notched; fourth

- a. Adult. Cape of Good Hope. From M. Pennak's Collection.
 b. Adult. South Africa. Presented by Dr. A. Smith.
 c. Half-grown. South Africa. Presented by Charles Darwin, Esq.
 d-f. Adult: two states. Africa. Presented by Dr. Stanger.
 g. Adult. Africa. From Mr. Frank's Collection as *Rana fuscipolis*.
 h. Half-grown. Africa. From Mr. Frank's Collection as *Rana gracilis*.*

25. *Rana sacata*.

Rana sacata, *Stat. Mus. Lond. Nat.*; *Zool. f. Zool.* p. 559; *Smith*,
 l. c. pl. 78. f. 1.

Phrynoglossus sacatus, *Tschudi, Stat.* p. 78.

Rana delalandi, *Nat. Zool. Lond.*, *Esq.* p. 31, pl. 35. f. 1.

Head longer than broad; nostrils pointed; tympanum distinct, rather small; skin nearly smooth; hinder legs very slender; fingers and toes much elongate, very slender; toes only webbed at the base; vomerine teeth in a straight line, interrupted in the middle, situated between the front edge of the lower nostrils.

- a. Adult. South Africa. Presented by A. Smith, M.D.
 b. Adult: not good state. South Africa. Presented by Charles Darwin, Esq. Original specimen of Prof. Bell's description and figure.

26. *SPHENOPTERA*.

Habit similar to *Pelodonta*; head thick, with short, rounded snout and swollen, spheroidal occiput†; extremities short, fingers five; toes five, half-webbed; feet conform to those with a flat, oval, sharp-edged spot. Skin smooth, with indistinct scattered tubercles. Vomerine teeth in two oblique series. Tongue coniform, free and deeply notched behind; maxillary tubes moderate; tympanum distinct. Sacral vertebra not dilated. Male with an external vocal sac. East India.

1. *Sphenoptera strigata*. (Peters II. fig. A.)

Yellowish brown, with dark brown spots and a yellow band from the nostrils to anus.

- a. Many specimens. Madras. Presented by J. C. Jordan, Esq.
 b. Skeleton: male. Madras. Presented by J. C. Jordan, Esq.

Description.—In habit similar to *Pelodonta*; head thick, rounded, with short rounded snout and much-swollen occiput; extremities short; fingers quite free, each with one or two very prominent tubercles at the palmar surface; metacarpus with a larger, oval, outer tubercle and with a smaller inner one; toes five, of moderate length,

* In the printed, but not published, *Phrynoglossus* *Reptilien* *Musei* *Neap.* *Ital.*, I had the name of *Rana gracilis*, *Belizipis*, from the Field Court. Whatever the character of this species may be, the above specimen belongs to *R. delalandi*.
 † equal to spine, and 1/4 of maxilla.

- a. Larva. Guasmas. Presented by J. B. Forland, Esq.
 b. Several specimens not in a good state. Guasmas. Presented by
 J. B. Forland, Esq.

8. PTEROPODES.

Habit moderate; head short, fat, rounded in front. Fingers five; toes webbed, the first coniform base forming a slight, rounded prominence. Skin smooth, with a large gland on each side. Vomerine teeth in two oblique series; tongue entire and free behind, oral; costalium tubes moderate, tympanum hidden. Male with an internal subgular vocal sac. Brazil.

Cyrtomyza, sp., *Tahiti*, *Nat.* p. 61; *Ann. & Mém.* viii. p. 433.
Pteropoda, *Nat. Mus. Par.*

1. *Pteropoda fuliginosa*.

Pteropoda fuliginosa, *Nat. Mus. Par.*
Cyrtomyza fuliginosa, *Tahiti*, l. c.; *Ann. & Mém.* p. 434.

Uniform brownish, beneath body whitish spotted.

9. LEIOPRUS.

Habit as in *Acridinaria*. Fingers completely free, toes webbed at the base; the first coniform base prominent, subovoid. Tongue oral, free and entire behind. Vomerine teeth none; costalium tubes very small; tympanum distinct. Skin granular. South America.

Leiprus, *Ann. & Mém.* viii. p. 426.

1. *Leiprus marmoratus*.

Ann. & Mém. p. 425; *Arch. Voy. Antar. Mém.* t. 13. f. 1-6; *Tahiti*,
Nat. Mus. Par. Sept. p. 165.

Dark olive, marked with brown, sometimes with a whitish ventral line. South America.

- a. Half-grown. San Domingo.

2. *Leiprus alarius*.

Leiprus alarius, *Nat. Syst. of the People*, Sept. p. 85. pl. 15. f. 1.

- a. *Indulcia*. Port Desiro (Patagonia). Presented by Charles Darwin, Esq. The specimen is undoubtedly a half-grown *Pteropoda fuliginosa*; the form, the toes, even the lumbar gland (overlooked by Prof. Bell) are the same as in that species. But the condition of the specimen, the palate having been entirely destroyed, is not such as to allow me to give a decided opinion.

10. LIMNOCHEARIS.

Tongue oval, entire, hinder edge free. Teeth —? None truncated. Tympanum conspicuous, circular. Skin all smooth. Fingers five. Tarsus webbed at the base (Soll).

Soll describes the dentition thus: "Palatine teeth in two small groups, one in a line contiguous with the front margin of the lower maxilla, and a second at some distance behind them, close within the rim of the maxillary arch." As far as I can see, there were no palatine teeth at all; but if they are supposed to be lost, they must have been implanted in a series in front of the lower maxilla, much interrupted in the middle. The second series is merely imaginary, and nothing more than the sharp, quite smooth ridge of the upper palatine. The most truncated, produced beyond the mouth; the maxillary arch is angularly bent, so as to form a straight front series of maxillary teeth. Otherwise the specimen is not in such a condition as to allow me to give my own diagnosis of this *Limnocharis*.

Limnocharis, Soll, *Zool. of the Beagle*, Sept. p. 32.

1. *Limnocharis fusca*.

Soll, l. c. p. 32. t. 18. f. 3.

Above dark brown; flight lighter, obscurely banded with dark brown; beneath pale bluish grey; the throat dotted with brown.

♂. Very bad state. Rio Janeiro. Presented by Charles Darwin, Esq.

11. HYLOKHEIA.

Habit stout; head short, thick, broad; extremities moderate; fingers very long, quite free; tarsi rather long, slightly webbed at the base, fringed; metasternum with one blunt tubercle. Skin with small fat warts; no lumber gland. Maxillary teeth in one straight, uninterrupted series. Tongue circular, free and entire behind; maxillary tubes moderate; tympanum not very distinct. Sacral vesicles not dilated. Chili.

Hylorkheia, Soll, *Zool. of the Beagle*, Sept. p. 34.

1. *Hylorkheia sylvatica*.

Hylorkheia sylvatica, Soll, l. c. pl. 18. f. 1.

Brown, beneath dirty whitish.

♀. Adult female. Chile. Presented by Charles Darwin, Esq.

12. PYRICOPLATYS.

Head large and thick, snout very short, extremities rather short. Tongue large, rounded, free and hardly notched behind. Vomerian teeth in one interrupted series. Postorbital tubes rather small; tympanum hidden. Neck with parotid-like glands. Fingers free; toes half-webbed; a flat, sharp-edged spur at the metatarsus. Sacral vertebrae not dilated. Tropical America.

Pyrioplatys, sp., *Reichb. Nat.* p. 65; *Ann. d. Mus.* viii. p. 468.

1. *Pyrioplatys americana*.

Ann. d. Mus. p. 468; *Bull. Zool. of the South. Afric.* p. 46 pl. 16. f. 2.

On each side of the neck three large parotid-like glands.

a. A. Adult. Brazil.

c. Young: bad state. Monte Video. Presented by Charles Darwin, Esq.

13. CERATOPHYX.

Body stout, head very large, extremities short; cleft of mouth very large; edge of upper eyelid more or less produced into a point, so as to form a long horn or only a triangle. Skin with tubercles or reticulous folds. Fingers free; toes more or less webbed; third caudal fin with a flat, oblong, rather sharp-edged tubercle. Tongue heart-shaped; palatine teeth in two groups; postorbital tubes moderate; tympanum more or less hidden. South America.

Ceratophrys, *Bull. de Wien's Mus.* p. 586; *Wagl. Syst.* p. 268; *Ann. Mus. Zool.*; *Reichb. Nat.* p. 62.

Phrynosoma, (Linn.) *Forsk.* l. 1.

Hemiphragma, *Wagl. L. n.* p. 264.

Crotalus, *Cuvier's Zool.* 1805, p. 668.

Bull. sp., *Koen. sp.*, *not priv.*

1. *Ceratophrys corata*.

Bull. l. 72. l. 2; *Chin. Quatr. Voyag.* p. 120.

Koen. corata, l. *Wien. Ad. Prod.* p. 45, and *Syst. Nat.* l. p. 268; *Cuvier's Zool. Bull.* ii. p. 47; *Reichb. Nat. Afric.* p. 128; *Mus. Nat. Hist.* pl. 70; *Flügel, Wagners de Geschichte, 1807, Frankfurt in Berlin*, 1808, p. 65. t. 3, and *Armenow's Zool.* t. 3.

Bull. corata, *Linn. Sp.* p. 30; *Zool. Quatr. Voy.* p. 60; *Lacép. Quatr. Voy.* p. 664; *Bonnat. Voyag.* p. 18; *Mus. Zool.* iii. p. 182. pls. 45, 46.

Ceratophrys corata, *Wagl. Abbildg. nat. und Kunstg.* l. p. 577; *Wagl. Zool.* l. 22. l. 1, 2, and *Syst. Afric.* p. 128; *Reichb. L. n.*; *Ann. d. Mus.* p. 481.

Stomatocorata, *Cuvier's Zool.* p. 45.

Ceratophrys varia or *dybowska*, *Chin. Mus. Zool.*

— *corata*, *Schlegel, Atlas.* t. 16. l. 1, 2.

Back with a long dorsal shield; toes very slightly webbed at the base; tympanum distinct.

- a. Large specimen. Brazil.—In the stomach I found a full-grown *Cyrtogaster fuscus*.
- b. Adult. Brazil. Presented by Lord Stuart.
- c. Very large specimen; skin. Brazil.

2. *Ceratophrys helid*.

Ceratophrys helid, *Wied. Zool. 1*, p. 587; *Desc. d. Zool.* p. 417.
Stenobus coronatus, *Gravenh. Zool.* 1855, p. 552.
 — *helid*, *Gravenh. Zool.* p. 551 t. 6. f. 1, 2.
Ceratophrys gravenh., *Cher. Alpes Alpes*; *Matris, Zoolog. Syst.*
 pl. 25. f. 2.

Back without long shield; a transverse crest between the eyes; toes slightly webbed at the base; tympanum indistinct.

- a. Adult male. Brazil.
- b. Adult female. South America.
- c, d. Adult. South America. Purchased of Mr. August.
- e. Half-grown. South America.
- f. Half-grown. South America.

3. *Ceratophrys magnatoma*.

Bala coronatus, *Fond. Zool.* p. 138, pl. 25, and *Syst. viti.* p. 214
 (system wrong); *Zool. Syst.* p. 111. f. 1.
Bala magnatoma, *Syst. Zool.* t. 24. f. 1.
Ceratophrys dentata, *Cher. Alpes Alpes*; *Desc. d. Zool.* p. 448.
Phryganon — 7, *Tobias, Zool.* p. 81.

Back without long shield; no crest between the eyes; toes broadly webbed; tympanum distinct. South America.

4. *Ceratophrys ornata*.

Urochloa ornata, *Bull. Acad. of the Scienc.* *Syst.* p. 63, pl. 26. f. 2.
Tetraneura ruficeps, *Wied. Zool.* p. 587, pl. 26. f. 1.
 p. 588, and *Ann. de Mus. de Paris* 1808, pl. 26.

Back with a long dorsal shield; upper eyelid slightly pointed, triangular; toes half-webbed; tympanum indistinct.

- a, b. Adult male and female. Buenos Ayres. Presented by Charles Darwin, Esq.—Original specimens of Bell's Description and Spec.
- c. Adult female. Furca. From Mr. Cuming's Collection.
- d. Large specimen; stuffed. South America. Presented by Lieut. Ross, R.N.

This species is so closely allied to *Ceratophrys ornata*, that one can hardly understand how one naturalist could have placed it in a genus of Hymenoptera, and how another could have not only established a new

genus for it (as if it were a new and remarkable form), but likewise have overlooked the characteristic figure of it in a work as well known as the "Zoology of the Beagle." As for the vocal sac—which is wanting altogether according to Hallowell's examination,—the internal subgular vocal sac is not only present, but the vocal openings on each side of the tongue are so large (even in a rather small, of course male, individual) that a thick pencil may be introduced into them. I have but little doubt that Spix has already given a description of this animal, with a bad figure, as *Felis acuta*. Wagner afterwards formed it into his genus *Mesolepatus*.

14. ENTROGLOSSA.

Head nearly as long as the body, and about as long as broad; nine teeth in the lower jaw (7); no palatine teeth; maxillary tubes small; tongue suboval, deeply notched behind, attached by a cylindrical pedicel at the centre, entirely free in its posterior half, bound down anteriorly along the middle line by cellular tissue, reaching from the tip to the pedicel, free laterally except at the apex; fingers free; toes webbed at the base; tympanum distinct (Hallowell). Nostral vertebra?

Entroglossa, Hallowell, *Proc. Ac. Philad.* 1857, p. 84.

1. *Entroglossa africana*.

Hallowell, l. c.

Chocolate-brown above; abdomen sub-coloured. Gabon.

Part 2. CYSTIGNATHIDÆ.

Ears with five toes, cylindrical processes of several vertebrae, and without paracosta.

Synopsis of the Genera.

1. *Cystignathus*. Tympanic teeth in two groups or in two oblique or curved series; never a large gland. Tropical America; Africa (Australia).
2. *Pseudolema*. A large gland on each loin. South America.
3. *Limnodonatus*. Tympanic teeth in a straight line; no large gland on the loin. Australia.

1. CYSTIGNATHUS.

Extremities molinate; fingers quite free; toes free, sometimes very slightly webbed or fringed. Skin smooth, or with cutaneous or

glandular folds; never a large parotid-like gland. Tympanic tooth in two more or less oblique series or groups, never placed in a straight line. Tongue subreticular or oval, entire or slightly notched behind. Tympanum distinct or hidden. Malus either with a single subgular, or with two lateral vocal sacs, always with two cilia at the sides of tongue. North America; Africa (Australia).

Crisis, *Tribad. Nat.* p. 78.

Cystignathus, *Wagl. Syst. Amph.* p. 208; *Zool. f. Zool.* viii. p. 392;

Tribad. Nat. p. 78.

Rana, sp., *not. price.*

1. *Cystignathus vociferus*.

Nat. i. 78. 1.

Rana vocifera, *L. Mus. Ad. Fried. B.* p. 89, and *Syst. Nat.* i. p. 395;

Recherch. Nat. Amph. p. 119; *Mus. Zool. B.* p. 108, pl. 24; *Diagn.*

Nat. p. 61, pl. 16, and *Syst.* viii. p. 125; *Mus. Zool.* p. 179;

Greenw. Zool. p. 47; *Can. Exped. Zool.*

— *perulocaryta*, *Lacép. Sp. Amph.* p. 78.

— *magnum*, var., *Lacép. Quatr. Crap.* i. p. 247; *Recherch. Amph.*
p. 7.

— *reticula*, *Desm. Rept.* p. 68, pl. 17. f. 1, and *Syst.* viii. p. 128;
Lacép. Amph. p. 180.

— *gigas*, *Spix, Zool.* i. 1.

— *perulocaryta*, *M. & S. Z. I.* 2. t. 2. f. 1; *Wagl. Reptage.* i. p. 140;
Greenw. Zool. p. 48.

— *melanota*, *variosa*, *pygmaea*, *Spix, Zool.* i. 2. f. 2, 3. t. 5. f. 2,
t. 6. f. 2.

— *albivaria*, *Wagl. Rept.* i. p. 145, and *Rept. B.* Col. pl. 1. 2.

Cystignathus parvipes, *Wagl. Syst.* p. 208, and *Zool. Amph.* i. 21.

— *collaris*, *Tribad. Nat.* p. 78; *Zool. f. Zool.* p. 386, pl. 37,
f. 4 (mouth).

Two flaps on each side; melanotous with one tubercle; tympanum distinct; vomerine tooth in two series; skin smooth, in younger individuals with longitudinal folds.

a. Many specimens. Rio Janeiro. Presented by Charles Darwin, Esq.

b-d. Half-grown. Para. Presented by R. Graham, Esq.

e-g. Adult and half-grown. Brazil.

h, i. Adult. Brazil.

l. Adult. Brazil. From M. Frazzetti's Collection.

j. Adult: skin. Brazil. Presented by Mrs. Parker.

m. Half-grown. Brazil.

n. Adult male. Dominica. Mus. Oudling at *Rana delinquentia*.

o. Large specimen. Dominica. Presented by Col. R. Sabine.

p. Adult. North America. From Mr. Buxton's Collection.

q, r. Adult. North America. From Mr. Buxton's Collection.

s. Large specimen: stuffed. North America.

t. Large specimen: stuffed. North America. From the Buxton Collection.

u. Large specimen: skin. North America.

- v. Large specimen; skin. South America. From Mr. Stevens's Collection.
 w. Young; not good state. South America.
 x. Adult; skeleton. Brazil.
 y. Adult; female. South America. From a specimen of the Old Collection.
 z. Large specimen; skeleton. Brazil. From M. Bransler's Collection.

2. *Cyrtogaster vilgineus*.

Leptotyphlops vilgineus, Girard, Proc. Ac. Nat. Sc. Philad. 1852, p. 423.

Two fringed on each side; metasternum with two tubercles; tympanum distinct; vomerine teeth in two slightly arched series behind the inner nostrils; skin smooth, with a few scattered flat small warts. Above brown with some obsolete darker spots; on the occiput a large angular dark blotch.

- a-c. Adult male and female. South America. From the Mus. Gleditsing as *Bomb. pygmaea*.
 d-g. Adult and young. South America. Mus. Gleditsing.

3. *Cyrtogaster flavus*.

Ranae flavus, Schmidt, Hist. Amph. p. 180.

— typhlops, Syst. Rept. p. 55, pl. 20 t. 2, 4.

— virgatus, Mus. (not Lam.) p. 177.

Cyrtogaster typhlops, Des. & Sch. p. 422.

Two not fringed; tympanum distinct; vomerine teeth in two arches, each very convex.

- a. Adult. Pernambuco. Presented by J. F. G. Smith, Esq.
 b. Adult; stuffed. Antigua.
 c. Adult; stuffed. South America. From the Escher Collection.
 d. Large specimen; stuffed. South America. From Mr. Agassiz's Collection.
 e. Adult; skin. South America.
 f. Half grown. South America. From Mr. MacGillivray's Collection.

4. *Cyrtogaster gracilis*.

Cyrtogaster gracilis, Des. & Sch. p. 426; *D'Orbigny, Voy. Austr. Mérid. t. 12. t. 5-7.*

Tympanum distinct; vomerine teeth in a long, narrow row series, scarcely interrupted in the middle, and placed behind the internal nostrils; each part slightly convex. Nostril conical, pointed; upper jaw produced far beyond the lower. A white dorsal band.

- a-c. Adult males. Para. Presented by H. Graham, Esq.
 d. Adult female. St. Martin.

5. *Cystignathus schomburgkii*.

Cystignathus schomburgkii, Tranché, in *Gaz. Histor. Mus. de Châl.*, 1845, and *Wagn. Archiv*, 1846, p. 20.

Tympanum distinct; vomerine teeth in two rather convex series, scarcely separated in the middle, situated behind the inner nostrils. Snout rather pointed; third finger not much longer than first; second much shorter, nearly as long as fourth; toes not fringed. Above brown, beneath lighter; no white dorsal band.

- a. Adult. Brazil. From the Leyden Museum.—It is not without doubt that I refer this specimen to the above species, as it differs from Prof. Tranché's description in having a black streak from the snout through the eye to the loin, and black spots on the sides. The upper lip is white, black-edged.

6. *Cystignathus tenuis*.

Grand. Voy. An. Nat. Sc. Philad 1854, p. 295, and *U.S. Acad. Astron. Exped* 1855, ii. p. 207, pl. 26, f. 6-11.

Two black dorsal stripes, a black stripe from the snout through the nostril and eye to the shoulder; belly uniform yellowish; snout moderately pointed; tympanum small, nearly the size of half the eye. Vomerine teeth situated a little behind the inner nares, upon two very small eminences, well separated upon the middle of the palate. Gargles (Dill).

7. *Cystignathus ornatus*.

Hilgcock, K. Amer. Exped iv. p. 103, pl. 26.

Body and head short, as in *Hyla viridis*; skin smooth; tympanum distinct; tongue nearly circular; vomerine teeth in two rounded groups behind the inner nostrils. Dors-colour above with oblong spots of dark brown, margined with yellow.

- a. Adult. Georgia. From Mr. Dunning's Collection.—Differs in having the back of a uniform olive-colour; sides with three black spots, viz. a streak from the eye to the shoulder, an oval spot in the middle of the sides, and one or two smaller ones on the loin.

8. *Cystignathus solonae*.

Son. & Mör, p. 423.

Tympanum indistinct. Vomerine teeth in two small, rather obliquely arranged groups between the inner nares; fingers and toes with large subarticular enlargements.

- a. Adult. Chili. Presented by Charles Darwin, Esq.—With yellowish dorsal streak.
 b. Half-grown; tad state. South America. Presented by Charles Darwin, Esq.

9. *Cystignathus senegalensis*.

Cystignathus senegalensis, Desm. & Sbr., p. 418; Smith, *Illustr. of A. Africa*, t. 82.

Head and body short and swollen, quite smooth; tympanum indistinct; vomerine teeth in two small, obliquely arranged groups on a level with the hinder edges of the inner nostrils; tongue heart-shaped. Greyish or yellowish, with three broad brown longitudinal bands. South and West Africa.

♂. Adult male. South Africa. Presented by A. Smith, M.D.

10. *Cystignathus aggregatilis*.

Notes, Voyages Zool. 1865, p. 58.

Brownish black, with four white dorsal bands; joints of the extremities white banded or spotted. Senegal (Roumezière).

11. *Cystignathus georgianus*.

Cystignathus georgianus, Sbr. MS.; Desm. & Sbr., p. 420; Bell, *Roll of the Snake*, Sept. p. 25, t. 15, f. 4.
Cybaea georgiana, DeMeade, *Illustr.* p. 25.

Tympanum indistinct; vomerine teeth in two very small groups behind the very small inner nostrils; tongue oblong, entire behind; head moderately elongated; legs quite free. Brown, with rufous-coloured spots, or with two broad rufous-coloured lateral bands.

♂-♂. Half-grown and adult; not good state. Australia. Presented by Ch. Darwin, Esq.

♀. Adult female. Australia. Presented by A. Günther, M.D.

♀. ♀. Adult. Port Essington. Presented by Dr. Fleming.

♂. Adult. Port Essington. Presented by Dr. Fleming.

Of the two following species we have only the original specimens, upon which Professor Bell has founded his genus *Archermates*, with the species *grapti* and *fulvum*; these have sufficed so much, as not to allow me to give my own description of them. On the other hand, neither the descriptions nor the figures given by Prof. Bell offer sufficient characters for their separation as a different genus. I therefore place them among the *Cystignathi*, and refer to the descriptions of the "Zoology of the Snake."

12. *Cystignathus grapti*.

Archermates grapti, Bell, l. c. Sept. p. 25, t. 15, f. 5.

Vomerine teeth in two oblique series behind the inner nostrils; wrist without tubercle.

♂. Very bad state. Tasmania. Presented by Charles Darwin, Esq.

13. *Cystignathus bilineatus*.

Periboreus bilineatus, *Bull. U. S. G. P.* 33, pl. 17, f. 1.

Cystignathus bilineatus, *Ann. Mus. (nat. Hist. N. Am.)* 2.

Tomarine teeth in distinct oblique groups behind the lower maxilla. Waist with two tubercles.

a. Very bad state. Chocoma. Presented by Charles Darwin, Esq.

2. *PLEURODEMA*.

Head rather short, with obtuse occiput; antennules moderate; legs free, with a rudimentary thumb, tarsi more or less distinctly veined or striped; metasternum with two small blunt tubercles. Skin smooth, or with flat scattered warts; on each lobe a large paracymbial-like gland. Tomarine teeth in two groups. Tongue subtriangular, slightly notched behind. Eustachian tubes moderate. Sacral vertebrae not dilated. South America.

Pleurodema, *Trichob. Jour.* p. 34; *Bull. Acad. of the People, Argent.* p. 55.

Cystignathus, sp., *Ann. Mus. N. Am.* viii, pp. 437, 443.

1. *Pleurodema labyrinthicum*.

Ema labyrinthica, *Spix. Nat.* p. 21, t. 7, f. 1, 2.

Cystignathus labyrinthicus, *Ann. Mus. N. Am.* p. 437.

Lumbar gland enormous, covering nearly the whole side, depressed, flat, irregular. Tympanum distinct.

a. ♀. Large specimen. Brazil. From the Leyden Museum.

c. Large specimen: male. Pernambuco. Presented by J. F. G. Smith, Esq.

d. Large specimen: skeleton. India.

e. Large specimen: male: stuffed. South America. From Mr. Agassiz's Collection.

f. Large specimen: female: stuffed. South America.

g. Large specimen: stuffed. South America.

h. Large specimen: stuffed. Peru. Purchased of Mr. Sully.

2. *Pleurodema fulvum*.

Bull. Acad. of the People, Argent. p. 55, pl. 17, f. 2.

Pleurodema fulvum, *Bull.* (see page 55).

Lumbar gland large, longer than the head in breadth, depressed, flat, elliptical. Tarsi nearly half-withed. Tympanum indistinct.

a. Adult. Port Desein (Patagonia). Presented by Ch. Darwin, Esq.

b. Adult. Port Desein (Patagonia). Presented by Ch. Darwin, Esq.

3. *Pleurodema bilineatus*.

Pleurodema bilineatus, *Trichob. Jour.* p. 35.

Cystignathus bilineatus, *Ann. Mus. N. Am.* p. 443, pl. 17, f. 2.

Pleurodema darwini, *Magnum, Bull. Acad. of the People, Argent.* pp. 55, 57, pl. 17, f. 3, 4.

Lumbar gland prominent, rounded, oval, not longer than broad. Tars slightly fringed in all varieties. Tympanum indistinct.

Var. A. Without dorsal streak; lumbar gland whitish, a black spot in the centre.

a. Adult. Maldivas. Presented by Charles Darwin, Esq.—Original specimen for Prof. Bell's *Pleurostoma dorsalis* not being in a good state, and having lost the rostrine teeth.

b. a. Adult. Chili.

d. Adult. Chili. From H. Fernald's Collection.

e. Adult. Chili. From Mr. Conning's Collection.

f. Adult. Shores of Pacific Ocean.

g. A. Adult. South America. Presented by Charles Darwin, Esq.

i. Adult. South America. Presented by Charles Darwin, Esq.

k. Adult female. South America. Presented by Charles Darwin, Esq.

Var. B. With an indistinct dorsal streak, conspicuous only in front on the rostrum and on the coxopod. Lumbar gland black, with some small white spots in the centre.

l. Adult male. Yucatan. From Mr. Dymon's Collection.

m. Half-grown. Yucatan. From Mr. Dymon's Collection.

Var. C. Back with a broad whitish longitudinal streak; *Pleurostoma* elongate, Bell.

n. Adult. Chili. Presented by Charles Darwin, Esq. Original specimen of Prof. Bell's figure.

o. Adult. Chili. From Mr. Bridg's Collection.

p. Adult. South America. Presented by Charles Darwin, Esq.

p-a. Adult. South America. Presented by Charles Darwin, Esq. Intermediate between Var. A. and Var. C.

3. LIMULONASTES.

Habit rather stout, sometimes with large head; antennules rather short; fingers quite free; tarsi quite free or sometimes slightly webbed or fringed. Skin smooth or with scattered flat warts, in one species a large gland on the tail. Palatine teeth in one long, straight, in the middle hardly interrupted series, behind the inner maxilla. Tongue more or less circular, nearly entire behind. Inner maxilla and cuticular tube moderate; tympanum hidden. Male with an external subgular wood sec. Australia.

Wagler, *Grund. Forw. d. Nat. G. Philad.* vi. p. 411.

Fernald, *Comp. in Agassiz's Journ. Exped. Austr. Austr.* i. p. 405.

Limulonastres, *Philolog. Zool. Syst.* p. 21; Gray, 1855.

Compositioes, sp. *Ann. & Mag. Nat. Hist.* viii. p. 408; Gray, in *Capt. Gray's Zool. Austr.* p. 424.

3. *ALCIDEA*.

Head convex, crown smooth. Tongue acutely produced in front, rounded and five lobbed. Palatine teeth in two small close patches between the interior nostrils. Fingers four, short, webbed at the base (inner two broad, fringed). Toe webbed to the third pharynx. (Bell.)—Tympanum, carina tympanicum, tuba cuticularis, wanting. Diapophysis of neural vertebra appears to be a little dilated towards the end.

Alcedo, Bell, Nat. of the Snake, p. 41.

1. *Alcedo monticola*.

Bell, l. c. pl. 18. f. 8.

Green, sides yellowish brown. In spirits smoky brown.

a. *Nad state.* Island of Iucky, Chinese Archipelago. Presented by Charles Darwin, Esq.

The following genus is known to me only by Wiegmann's description and by letters from my friend, Dr. K. v. Martens; according to the latter, the vomerine teeth are certainly absent in the specimen in the Berlin Museum; and, as in *Alcedo monticola*, the inner toe is fringed, which I consider to be a sexual character.

4. *TELMATORHUS*.

Head short, with flat crown. Tongue oval, not pointed in front, rounded and five lobbed. No palatine teeth. Fingers four, short, with a rudimentary membrane between; toe webbed.

Telmatorhus, Wiegmann, Nov. Act. 1833, p. 308.

1. *Telmatorhus parvulus*.

Wiegmann, l. c. t. III. f. 2.

Above with many very small hump warts. Above brown, with a darker longitudinal band, anteriorly crossed by two transverse streaks. Feet.

Series III. *Brachycephalus*.

G. *sericeus* without maxillary teeth and with imperfectly developed ear.

Fam. 1. *PERYNECIDÆ*.

BRACHYCEPHALUS with webbed toe, with the process of neural vertebra dilated, and without parietals.

One genus. Tropical America.

I. FERTURCUL.

Head moderate, with distinct carinae, angular; body uniform; cleft of mouth moderate; extremities moderate; teeth, none in jaws nor in palata; tongue elongate, free and entire behind. No tympanum nor aurum tympani; metastibiae taken closed or unapertured; skin entirely or partially warty and spiny or smooth; metasternum with two small blunt and flat tubercles. Fingers four, toes five, half-webbed. Males with an internal subgenital vocal sac. Tropical America.

Phryganera, *Wiggen. Proc. Accl. Soc.* 1851, p. 261; *Zool. & Bot.* viii. p. 179; *Bull. Acad. of the Sciences*, p. 45.

Chloroceryx, sp., *Faustsch. Zool.* p. 37.

Phryganella, *Mulsant & Reichelet. Rept. Mus. Hist. Nat.* 1859, p. 43. *Hylamocryptus*, *Stålger, Mus. Fribur.*

1. *Phryganera nigricornis*.

Phryganera nigricornis, *Wiggen. L. c.*; *Zool. & Bot.* p. 229; *Bull. Acad. of the Sciences*, p. 45, t. 1, f. 1-3.

Chloroceryx fulvicornis, (*Muls. Lepid.*) *Faustsch. L. c.*; *IPöbeling, Pop. Zool.* *Abth. t. 15, f. 1-4.*

All upper and lateral parts covered with warts and small spines; head short, snout very blunt, the elongated carinae forming a rather obtuse angle; crown not concave; planar and palmar surfaces and tarsi very rough and tuberculous; all fingers quite free. Above and beneath black; ann-pit, some spots on the body and ann white.

n. s. *Mexico*. Presented by Charles Burvia, Esq.

d. *Adult*. *Mexico*. From M. Fernald's Collection.

2. *Phryganera larva*. (*Figs. III. fig. A.*)

Upper parts without spines, with flat warts or quite smooth; head moderate; snout rather protruding, the elongated carinae forming a rather acute angle; carinae reticulate swollen, so as to render the crown concave; planar and palmar surfaces with flat smooth tubercles, not rough; tarsi with a cutaneous fold at the inner edge; first and second fingers half-webbed. Above brownish black, beneath whitish; ann brownish.

n. s. *Adult* male and female. *Panama*. From M. Fernald's Collection.

n. s. *Adult*. *Guila*.

d. s. *Young*: *head state*. *Chili*. From Mr. Cuning's Collection.

Description.—Habit like *Acridothera ignea*; head angular, with swollen carinae reticulate, so as to render the crown and the broad region concave; snout rather protruding, perpendicularly truncated, but rounded in front; mouth moderately cleft; tarsi small, lateral. All upper parts without spines, except upper side of thigh and humerus; crown quite smooth; back with some flat smooth warts; sides, upper parts of thigh and humerus with spiny warts. Extremities short; humerus as long as the coccytus is broad; fore-arm rather shorter; thigh and calf as long as humerus; first and second fingers

Above brown; forehead and crown, a streak along the caudal vertebra and some spots on the extremities yellow; beneath brown, with some large elliptical yellow spots. Metatarsus with one tubercle.

- ♂. Adult. Swan River. Presented by J. Wright, Esq. (Original specimen of Dr. Gray's *Scorpi. australis*, and different from Dixon's *Phryx. australis*; cf. *Expt. Geol.* viii. p. 725.)
 ♀. Adult. Australia. From M. Parrish's Collection.

2. *Pseudophryx* *Mirouli*.

Phryxus australis, *Dun. & Mir.* viii. p. 725. pl. 105. f. 3, 4.

Above olive, no white on the head; beneath white, variegated with brown. Metatarsus with two small tubercles.

- ♂. Adult. Australia. Presented by the Earl of Derby.
 ♀. Adult. Australia.
 ♂, ♀. Adult; not good state. Van Diemen's Land. Presented by Sir W. J. Hooker.

3. BRACHYCEPHALUS.

Head moderate; snout distinct, rather tapering; cleft of mouth moderate; extremities moderate; fingers four, toes, last rudimentary, scarcely visible; toes five, five, the two outer ones rudimentary. Teeth, none in jaws nor in palate; tongue elongate, elliptic, entire. Postorbital tubercle rudimentary; no tympanum nor osseous tympanum. Skin smooth; on the back a long shield, formed by the dilated processes of six dorsal vertebrae. Sacral vertebrae only feebly dilated. Tropical America.

- Brachycephalus*, *Mis. Nov. Class. Expt.* p. 26; *Wagl. Syst. Amph.* p. 20; *Reichb. Ichth.* p. 57; *Dun. & Mir.* p. 725.
 - *Epiphyxus*, *Cuvier, Voy. Ind. Océan.* vi. 105, non Ag.
Dalb. sp., *Spic. Spex. Nov. Test.* p. 45.

1. *Brachycephalus* *epiphyxus*.

- Dalb. epiphyxus*, *Spic. Spex. Nov. Test.* l. 50. f. 2.
Brachycephalus epiphyxus, *Mis. l. c.*; *Wagl. l. c.*; *Reichb. l. c.*;
Dun. & Mir. p. 725.
Epiphyxus epixi, *Cuvier, l. c.*

Tail yellowish, sometimes with a large black dorsal spot.

- ♂. Many specimens. Brazil. Purchased by Dr. Gordiner.
 ♀-♂. Adult. Tropical America. Presented by Charles Darwin, Esq.

1. RHINODERMA.

Head narrow, rather elongate; snout ending in a horizontal dorsal lobe; mouth moderate; nostrils moderate; fingers four, a rudimentary membrane between; toes five, half-webbed; an indistinct tubercle on the talon. Teeth, none in jaws nor in palate; tongue rather broader and slightly nicked behind; maxillaries taken small. Skin smooth; tympanum hidden; male with an internal subgular vocal sac. CHIL.

Rhinoderma, *Ann. & Mém. v. 13*, p. 387; *Bull. Zool. of the Muséum*, Sept. p. 42.

1. *Rhinoderma darwini*.

Rhinoderma darwini, *Ann. & Mém.* p. 389; *Bull. Zool.* p. 43, pl. 25, f. 1, 2.

Blackish, throat and breast black, belly white.

♂-f. Adult. CHIL. Presented by Charles Darwin, Esq.

♀. Adult. CHIL. From M. Parrish's Collection.

♂. Adult: bad state. CHIL.

2. ATELOPE.

Tongue elongate, subelliptical, entire, rounded and equal at each end. Teeth, none in jaws nor in palate. Tympanum hidden; maxillaries taken moderate; fingers four, depressed, quite free^{*}; toes five, outer one indistinct, the other four flattened and webbed at the base. Metatarsus without any tubercles. Male with an internal subgular vocal sac (*Ann. & Mém.*).

Atelope, *Ann. & Mém.* p. 390.

1. *Atelope flavescens*.

Atelope flavescens, *Ann. & Mém.* p. 391.

Tawnyish, spotted with brown. Cayenne.

3. UPERONIA.

Head rather short, not very distinct from body; snout distinct, broad, rounded; mouth small; thigh and arms rather short; only palatine teeth. Tongue large, circular, entire. Tympanum hidden; paracelsa none; maxillaries taken moderate. Fingers four, quite free; toes five, half-webbed. Sacral vertebra dilated. Male with an internal subgular sac. East Indies.

Uperonia, *Ann. & Mém.* p. 348.

Systèmes, (not Wagner) *Tchink*, *Nat.* p. 68.

Engystone, sp. *Chin. Mémoires* *Asiat.*

* I have never seen the animal; in the diagnosis of the genus, *Silvescu* describes the fingers "completely free;" but in the description of the only species, he says, "no rudiment of membrane exists in slight & free base."

l. Adult. Hilly. (*S. palmarum*.)

m. Young; discoloured. *Sine patria*.

n, o. Larvæ. Borneo. Presented by J. J. Macneil.

B. Asiatic variabilis, Hübner very distinctly variegated with black; belly black-spotted. Glands with horny surface.

o. *Buffs gurgistanus*, Guenée, *Ann. of Nat. Hist.* 1842, p. 483.
Tubercles not numerous, of unequal size.

p, q. Adult and young. Chusan. Presented by the Hon. East India Company.

r, s. Adult. Chusan. Presented by the Hon. East India Company.

t-u. Half-grown and young. Chusan.

β. *Buffs vulgaris japonica*, Schlegel, *Faun. Jap.* 1851, t. 2, p. 15, f. 6.—Tubercles numerous, of nearly equal size.

w, x. Adult and half-grown. Ningpo (China). From Mr. Canning's Collection.

y, z. Half-grown. Ningpo. From Mr. Canning's Collection.

a-d. Adult and half-grown. Japan. From the Leyden Museum.

2. *Buffs chilensis*.

! *Buffs chalcid*, Mulsant, *Nat. Hist. Chalk*, p. 104; *Schweid. Nat. Insect.* p. 227; *Mém. Mus.* p. 161.

— *chalcid*, *Curr. of Ent. Mag. Soc. L. et. T. L. S.*

— *chilensis*, (*Mém. Mus.*) *Tribut. Mus.* p. 68; *Systeme of Nat. Fy. Swed.* Sept. t. 3, f. 1, 2; *Nat. Syst. Insect.* p. 48; *Ann. d. Mus.* p. 476.

— *spiniolus*, *Wagn. Abh. Nat. Hist.* t. 12, f. 1; *Tribut. Mus.* p. 68.

Grown without bony enlargement. Foveolæ short, subtriangular. Tarsus with a cutaneous fold at the inner edge*. Terae half-webbed. Tympanum very distinct. Olive or brownish, with darker, sometimes confluent spots; beneath whitish, uniform or black-spotted.

a. Adult. Valparaiso. Presented by Charles Darwin, Esq.

b-f. Adult. Chalk.

g. Adult. Chalk.

h. Half-grown. Chalk.

i. Half-grown. Chalk. From Mr. Bridger's Collection.

k, l. Young. Chalk. Presented by Charles Darwin, Esq.

m. Adult. Chalk. Presented by J. E. Forthard, Esq.

n. Adult. California. From Mr. Stevens's Collection.—This agrees with the specimens from Chalk, except in having a darker coloration, and a very narrow whitish variegated line.

* Others are wrong in denying the existence of this cutaneous fold: all the specimens in the British Museum Collection exhibit it very well developed.

16. *Bely lachmanni*.

Bely lachmanni, *Abbr. in Mus. Par.*; *Tribut., Naturh.* p. 59;
Ann. d. Sci. p. 305.

Covers without bony enlargement; mouth truncated; paraclype subtriangular, large; legs nearly free; a basal cutaneous fold. *China*.

17. *Bely scillatus*.

Covers rather flat, with two long ridges, beginning from the snout, much divergent posteriorly, each held behind; snout rather pointed, protruding. Frontoclype indistinct, not swollen; tympanum very distinct, much higher than broad. Above covered with numerous nearly equal warts, beneath granulated. Tarsus half-wedged; tarsi with two tubercles, without cutaneous fold. Back brown, with a narrow yellow ventral line separating four or five pairs of black, yellow-edged spots; sides punctated with yellow; belly punctated with black.

a. Adult. Brazil. From M. Ferrugli's Collection.

18. *Bely ornatus*.

Bely ornatus, *Spic. Spec. Nov. Test.* t. 18. f. 1; *Cronsch. Dele.* p. 54;
Wied. Abh. tab. . . .
 — *ornatus*, *Spic. L. c.* t. 17. f. 2; *Wied. Res. Pl. Cal.*
 — *ornatus*, *Wied. Dele.* t. p. 554, and *Abh.* tab. . . .
 — *ornatus*, *Ann. d. Sci.* p. 710.

Covers ornate, with a bony enlargement round the upper and hinder edge of orbit; snout obtuse, rounded. Frontoclype moderate, elongate, oval; tympanum very distinct. Tarsus half-wedged; tarsi with a series of small tubercles along the inner edge. A large brown oblique streak across the tympanum; back with a yellowish dorsal line, and a few pairs of brown spots on each side of it.

- a. Adult. Rio de Janeiro. Presented by the Lords of the Admiralty.
 b. Half-grown; bad state. Rio de Janeiro.
 c. Half-grown. Fam. Presented by E. Graham, Esq.
 d. Half-grown. Fam. Presented by E. Graham, Esq.
 e. Half-grown. Brazil. Purchased of Dr. Gardiner.
 f. g. Half-grown. Brazil. Presented by Lord Stuart.
 h. i. Half-grown. Brazil. Presented by Lord Stuart.
 j. Half-grown. Brazil. Presented by Lord Stuart.
 k. Half-grown. Brazil. Presented by Lord Stuart.
 l. Half-grown. Brazil. Presented by Lord Stuart.
 m. Half-grown. Brazil. Presented by Lord Stuart.
 n. Adult. Brazil. Presented by Lord Stuart.
 o. Young; bad state. Brazil. Presented by Lord Stuart.
 p. Adult. Brazil.
 q. Adult; bad state. Puerto Caballo. From Mr. Knapp's Collection as *B. ornatus*.

- v. Adult; bad state. Puerto Caballo. From Mr. Beaudé's Collection.
4. i. Half-grown. Venezuela. From Mr. Dymon's Collection.
- w, n. Adult and half-grown. S. America. Presented by Charles Darwin, Esq. (Named in the Paris Museum, *Spis melanota*.)
- p-β. Adult. S. America. Presented by Charles Darwin, Esq.
- p. Adult; stuffed. America. From Mr. Arguer's Collection.

12. *Bala agna*.

Bala, l. 78, l.

- Bala marina*, *Edw. Spid. Nat. l.* p. 358; *Esq. Spis.* p. 21; *DeMeun.* *Nat. l.* p. 354; *Zool. Voy. Voy. l.* p. 587; *Stewart. Voy. l.* p. 5.
- Bala marina*, *Schrad. Hist. Nat. l.* p. 219; *Esq. Spis. l.* p. 255; *Morr. Trans. l.* p. 179; *Swainson. Cat. l.* p. 54.
- *agna*, *Lath. Spid. l.* p. 15; *DeMeun. Spis. l.* p. 58; *pl. 37*, and *Spis. l.* p. 255; *Esq. Spis. l.* p. 21; *Esq. Spis. l.* p. 54 & 15; *Wied. Spis. l.* p. 58; *Esq. Spis. l.* p. 24; and *Esq. Spis. l.* p. 54; and *Esq. Spis. l.* p. 54; *Tachid. Naturk. l.* p. 108; *Esq. Spis. l.* p. 255.
- *horrida*, *DeMeun. Spis. l.* p. 57; *pl. 37*, and *Spis. l.* p. 255.
- *lucida*, *DeMeun. Spis. l.* p. 255.
- Psylliodes horrida*, *Morr. Trans. l.* p. 179.
- Bala maculiventris*, *Esq. Spis. l.* p. 21.
- *lucida*, *Esq. Spis. l.* p. 21.

Covers obscure, with a heavy enlargement round the upper and hinder edge of orbit. Facets numerous, rhomboidal or oval, or elliptic. Tarsus half-webbed; tarsus with a cutaneous fold at the inner edge.

- a. Adult. America.
- b. Adult. America. Purchased.
- c. Adult. America.
- d. Adult. America. From Mr. Cuming's Collection.
- e. Adult. America.
- f. Adult. America.
- g. Adult. S. America. From Mr. Bates's Collection.
- h. i. Half-grown. Buenos Ayres. Presented by Charles Darwin, Esq. Facets very narrow, elongate.
- h. j. Half-grown; skin. Brazil. Presented by Mrs. Parker.
- w, n. Adult. Brazil.
- v. Adult. Brazil. From Mr. Claxson's Collection.
- p. Adult. Brazil. Presented by Lord Stuart.
- q, r. Adult and half-grown. Brazil. Presented by Charles Darwin, Esq.
- s. Adult. Bahia.
- t. Adult. Rio de Janeiro. Presented by the Lords of the Admiralty.
- u. Adult. Para. Presented by R. Graham, Esq.
- v. Adult. Para. Presented by R. Graham, Esq.
- w, n. Adult and half-grown. Para. Presented by R. Graham, Esq.
- p. Half-grown. Para. From Mr. Stevens's Collection.

21. *Bufo peltocéphalus*.

Bufo peltocéphalus, *Nbr. Mus. Paris, Faun. Entom. Extrac.* p. 59; *Nbr. de la Faune de la Guyane Fran. de la Guay.* *Sept. pl.* 59; *Ann. d. Zool.* p. 712.

Crown concave, an irregularly serrated ridge above the orbit and along the entire vertex; snout obtuse, rounded. Paratoids moderate, oval or elliptical, obliquely situated. Toes half-webbed; tarsus with a mucous fold at the inner edge.

n.v. Adult and half-grown. Cuba. Presented by the Zoological Society.

d. Adult. Cuba.

22. *Bufo d'Orbigny*.

D'Orbigny, Voy. Ann. Mus. t. 15, p. 5-7.
Bufo d'Orbigny, *Ann. d. Zool.* p. 697.

Crown on each side with a sharp bony ridge, Y-shaped posteriorly; edge of upper jaw dilated beaded; first finger rather shorter than second; paratoids short, very small; toes half-webbed. Brownish olive, with indistinct darker spots, a yellowish vertical line beginning from the snout; belly uniform whitish; crown without black cross-streak.

n.v. Adult and half-grown. Montevideo. Presented by Charles Darwin, Esq.

d. Adult. Montevideo.

s. Young. Chile. Presented by Charles Darwin, Esq.

f. Young. Rio Chuyal. Presented by Charles Darwin, Esq.

23. *Bufo grandisona*. (Plura V. fig. A.)

Bufo grandisona, *Spix, Spec. Mus. Nat. t. 22, p. 2.*
— *grandisona*, *pl.*, *Ann. d. Zool.* p. 715. (*Strophobates de Belli*,
de la Guyane de la Cayenne, avec une note de petite batracien le long de bord interne du tarse.)

Crown rather flat, not very concave, with a slight bony enlargement round the upper edge of eye; snout narrow, pointed, obliquely truncated, upper part prominent; groove below the eye not very deep. Paratoids moderate, subtriangular, not very prominent; tympanum distinct. Toes half-webbed; tarsus without mucous fold at the inner edge. Belly and breast uniform white.

n, s. Adult. Pernambuco. Presented by J. F. G. Smith, Esq.

s. Adult. Pernambuco. Presented by J. F. G. Smith, Esq.

d. Adult. South America. From Mr. Bates's Collection.

s-g. Half-grown. America.

24. *Bufo gutturosa*. (Plura V. fig. B.)

Bufo gutturosa, *Zett. Rept. II.* p. 185.
— *gutturosa et strimosa*, *Donat. Rept. pl. 24, t. 2, and Rept. viii.*
p. 185.

4. Adult female; not good state. *Andes of Ecuador*. From Mr. Fraser's Collection.

Length of the body $1\frac{1}{2}$ " ; length of anterior extremity $1\frac{1}{2}$ " ; length of posterior extremity 2 " ; length of fourth toe $\frac{1}{2}$ ". The eggs are very large, half the size of a pea, and there are only sixteen in one-half of the ovarium.

7. *Hylasus intecius*.

Litorea intecia, *Guss.*, *d. Naturall's History in Jamaica*, p. 395, pl. 7.

Digits of all the feet very small; fourth toe extremely long; hand somewhat pointed; vomerine teeth arranged in two curved lines, whose convexity is forward, scarcely interrupted at their meeting angle; posterior half of tongue round and free. Colour pale buff, streaked with minute dark spots, irregularly scattered, accumulated in the form of bands across the legs and thighs. A band of deep brown passes from the nostril through the eye, and is lost about the middle of the side.

a. Adult: not good state. *Jamaica*. Presented by Mr. Guss.

b. Adult: very bad state. *Jamaica*.

c. Adult. *Jamaica*. Presented by Captain Farry.

d. Adult: not good state. *Jamaica*.

8. *Hylasus leptopus*.

Heterodyla leptopus, *Bell*, *Zool. of the Beagle*, *Rept.* p. 45, pl. 16, f. 5.

Tongue free behind; vomerine teeth in two oblique groups between the inferior nostrils; tympanum distinct, small, round; toes depressed, rather dilated, truncated and nicked at the tip; fingers slightly webbed at the base; toes very slightly webbed(?); hinder edge of the thigh with scattered glands.—*Bell*.

a. Very bad state. *Yakobia*. Presented by Charles Darwin, Esq. Neither the description of Professor Bell, nor what I myself could see in the badly preserved specimen, can justify the separation of this species as a different genus.

4. **PLATYMANIA***.

Vomerine teeth. Skin smooth, or with narrow folds; no large gland. Digits rather small; fingers and toes free. Tympanum distinct; masticatory tubes moderate; tongue large, free and deeply notched behind. Male without vocal sac. *Peru and Philippine Islands*.

Hylasus, sp., *d. Dussel*.

1. *Platymanis villosa*.

Hylasus villosus, (*Bleek*.) *d. Ann. des Sc. Nat. 3 serie, Zool. six.* p. 277; *Jour. d'Orléans*, *Rept. in Voy. au Pérou* par M. de Quoy, p. 86, pl. 1, f. 4, 4A.

Vomerine teeth in two oblique series behind the inner nostrils.

* *starts fat, and gives True frog.*

first and third longest, nearly equal in length; the second rather longer than the fourth. Tons quite free, with a very slight fold at the edges; fourth longest by far; third rather longer than fifth; metasternum with two small blunt tubercles. Skin granulated, with symmetrical longitudinal folds on the back; a prominent glandular fold from the back edge of eye above the tympanum to the arm-pit; tongue elongate, heart-shaped, free and deeply notched behind; buccal muscles and metasternal tubes rather small; vomerine teeth in two rather elongate and oblique groups, somewhat behind the level of the hinder edge of the metastra. Above brownish or olive; back irregularly variegated with darker; between the eyes a blackish spot, in front of which a lighter one; sides of head beneath the median metastra and the glandular fold blackish; extremities with darker cross-bands; hinder side of the thighs dark brown; under parts dull yellowish; throat speckled with brown. Length of body 14"; length of first extremity 14"; length of hinder extremity 2".

Fam. 3. HYLIDÆ.

Hexana with webbed toes, dilated processes of nasal vesicles, and without paracels.

Synopsis of the Genera.

1. *Litoria*. First finger opposite to the three others. Australia.
2. *Pseudacris*. Tons slightly webbed at the base, web wanting between the two inner toes.
3. *Eyla*. Head covered with soft skin; no finger opposite to the three others; toes all webbed; no pouch on the back of the female. Cosmopolitan.
4. *Hyalinobatrachium*. Head covered with soft skin; female with a pouch on the back. Central America.
5. *Hyalobatrachium*. Head above bony; female with a pouch on the back. Peru; Mexico.
6. *Trachycephalus*. Head above bony; no pouch on the back of the female. West Indies; South America.

1. LITORIA.

Vomerine teeth; skin of back smooth, or with plaits; disks very small; fingers very slightly webbed, the first opposite to the three others; toes half-webbed; tympanum distinct; metasternal tubes small; tongue broad, elliptic, entire or slightly notched behind; males with a subgular vocal sac. Australia.

*Litoria**, *Forsk.*, *Syst.* p. 77; *Fam. 3. Hyl.* viii. p. 608.
Pseudis, *sp.*, *Gray, Zool. Misc.* p. 58.

* *Litoria glauca*, *Fal.*, *Ess. of the Faun.* p. 49, pl. 18 f. 4, was founded upon a specimen, now in the Collection of the British Museum, from Cosmopolitan

1. *Liberia freylinetti*.

Liberia freylinetti, (Nalb. MSB.) *Zeitsch. Ent.* p. 77; *Ann. d. Mus.* p. 334, pl. 66, f. 2.

Polodytes affinis, *Crag. Ent. Mus.* p. 68.

Snout moderate; back nearly smooth; nostril in the middle between the eye and the top of snout.

a. Fort Esmington. From Mr. Gilbert's Collection.

2. *Liberia nana*.

Polodytes nana, *Crag. Ent. Mus.* p. 68.

Snout pointed; back with short longitudinal plates; nostril nearer the top of snout than the eye.

a. Adult female. Fort Esmington. From Mr. Gilbert's Collection.

b. Adult male. Fort Esmington. Presented by the Earl of Derby.

c. Half-grown. Australia. Presented by Sir J. Richardson.

2. PSEUDACHIL.

Vomerine teeth. Skin of back smooth. Dials very small; flagella quite free, none opposite to the others; base webbed at the base, no web between the two inner ones. Tympanum distinct; moustachial tubes moderate; tongue oval, slightly notched behind. Male with internal vocal sac. North America.

Chlorophila, *Said, Proc. An. Nat. St. Philad.* 1864, p. 68.

Pseudochila, *Mé. Soc. Ent.* p. 21.

Cyrtognathus, sp. *Nalb. J. Amer. Egypt.* iv. p. 107.

Acha, sp. *Ann. d. Mus.* viii. p. 338.

Saig, sp. *not given*.

1. *Pseudochila nigrita*.

Nana nigrita, *Cuvier, Ann. Ent. Nat. Hist. New York* i. p. 109; *Warren, Med. Phys. Res.* p. 105, and *Ann. An. Nat. St. Philad.* v. p. 66.

Acha nigrita, *Ann. d. Mus.* p. 338.

Cyrtognathus nigrita, *Nalb. J. Amer. Egypt.* iv. p. 107, pl. 28.

Said, Proc. An. Nat. St. Philad. 1864, p. 68.

Skin of back smooth; vomerine teeth in two rather oblique series on the level of the hinder edge of the lower moustache. Snout rather prominent beyond the lower jaw. Blackish ash, with three or five darker, sometimes interrupted longitudinal bands; a black streak passing through the eye above the tympanum; upper lip with a whitish streak.

a. Adult. Georgia. From Mr. Cuming's Collection.

b. Adult. Great Bear Lake. Presented by Sir J. Richardson.

(Child), presented by Charles Darwin, Esq. The specimen apparently was in a state of decay before it was put in spirits; it belongs to a species of *Cyrtognathus*, in the head a condition to be determined, and the glands on the hinder side of the flagella are merely the spines of a parasitic animal.

3. ETLA.

Tomatine teeth. Skin smooth, or with scattered small tubercles; no large gland. Digits always very conspicuous; fingers more or less webbed, in some species quite free; toes broadly webbed, in one species only with a narrow membrane at the base. Tympanum distinct; metastachian tubes always very conspicuous; tongue large, more or less circular, entire or slightly notched behind. Males with one or two vocal sacs (except in one species). Cosmopolitan.

Hyla, *Lophoceros*, *Centrolenia*, *Hylomantis*, *Bufo*, *Scaphiopus*, *Scaphiopus* or *Fossa* *Scaphiopus*, p. 83.

Hyla, *Bull. Acad. Sci. de Napoli*, Sept. p. 48.

Hyla, *Ann. d. Mus. Nat. Hist. Nap.*, l. c.; *Ann. Museo Storia. Nat. Nap.*, Sept. p. 55; *Ann. Mus. Nat. Hist. Nap.*, and *Ann. Mus. Nat. Nap.*, vii.

Dendrobates, *Hypobates*, *Lophoceros*, *Colombia*, *Bufo*, *Scaphiopus*, *Scaphiopus*, *Fossa*, *Ann.* p. 71-74.

Colombia, *Hypobates*, *Asiatia*, *Hyla*, *Scias*, *Phyllodytes*, *Wagl. Nat. Anst.* p. 200-205.

Colombia, *sp.*, *Fossa*, *sp.*, *not. prior.*

- * Group with scrofinæ teeth in two curved, more or less separated rows, forming together an arch with the convexity towards the front. (Γ)

1. *Hyla albomarginata*.

Hyla albomarginata, *Spix*, *Fat. t. 8. l. 1*; *Ann. d. Mus.* p. 558.

Hypobates albomarginata, *Wagl. Nat. Anst.* p. 201; *Fossil. Nat.* p. 72; *Guillemot, Rept. de Guillemot's Voyage, Ann. Mus. Nat. Hist. Nap.* p. 55.

Hyla *infinita*, *Wagl. Nat. l. p. 202*, and *Abth. l. 1*; *Bufo*, *l. c. p. 87. t. 28. l. 1-5*.

The three outer fingers nearly entirely webbed. Skin smooth; head short. Minutely punctulated with brown; a white glandular hill passing above the eye.

a. Adult. Rio Janeiro. Presented by A. Fry, Esq.

b. Adult. Para.

c. *sp.* Adult and half-grown. Brazil. Presented by Lord Stuart.

d. Half-grown. Brazil.

e. Half-grown. Brazil. From Dr. Guillemot's Collection.

f. *l.* Young. Brazil. From Dr. Guillemot's Collection.

g. Young; discoloured. Brazil. Presented by Lord Stuart.

h. Adult. South America. Presented by Charles Darwin, Esq.

i. Half-grown; discoloured. South America.

2. *Hyla langsdorffi*.

Hyla langsdorffi, *Ann. d. Mus. Nat. Hist. Nap.*, *Ann. Mus. Nat. Hist. Nap.*, l. c. p. 557; *Guillemot, l. c. p. 17. l. 1*.

Centrolenia langsdorffi, *Bufo*, *l. c. p. 200*.

The three outer fingers nearly entirely webbed. Skin minutely granular; head large, with angular snout. Brownish, with whitish and brown variegations; in old age more uniform.

19. *Hyla corticalis*.

Leptopus corticalis, *Bernmeister*, l. c. p. 85. t. 50. f. 7-22.

Vomerine teeth behind the hinder edge of the nostrils. The three outer fingers nearly entirely webbed; outer edge of arm and foot with a broad cutaneous fold; skin with small scattered warts. Digits very large. Newfrelburg (Brazil).

20. *Hyla meridionalis*.

Cathey, *Nat. Hist. Carol. II*, pl. 71.

Hyla viridis, var. *h.* *Cour. Spis. Rept.* p. 55.

Colombia meridionalis, *Fern. Biol. Trav. II*, p. 221.

— *viridis*, *Schombk. Nat. Anst.* p. 178.

Rana bilineata, *Shaw, Zool. II*, p. 158.

Hyla lateralis, *Cour. Rept. II*, p. 100; *Trans. Phila.* p. 18, pl. 2, f. 1.

Lacerte, *Ann. Exp. Nat. Hist. New York*, I, p. 176; *Biol. Journ.*

Trans. Nat. Hist. Philad. v. p. 241; *Ann. f. Phila.* p. 107.

Hyla viridis, *Haberm. N. Amer. Rept. IV*, pl. 59.

The series of vomerine teeth well separated from one another, on a level with the hinder edge of the nostrils; fingers slightly webbed; upper parts quite smooth. A white streak along the edge of the upper lip and the sides.

a-c. Adult and half-grown: blackish. North America.

d-f. Adult: not good state. New Orleans.

21. *Hyla agrivola*.

Bull. Acad. of the People, Rept. p. 45. t. 18. f. 2.

The series of vomerine teeth well separated from one another, on a level with the hinder edge of the nostrils; fingers slightly webbed. A white streak only along the edge of the upper lip; another parallel line above the tympanum.

a, b. Adult and young. Malabar. Presented by Charles Darwin, Esq.

c. Half-grown; not good state. America. Presented by Charles Darwin, Esq.

22. *Hyla prasina*.

Bernmeister, l. c. p. 106. t. 51. f. 2.

The series of vomerine teeth on a level with the hinder edge of the nostrils; fingers slightly webbed; outer edge of the nostrils and of the sides of the body with a cutaneous, scurfed white fold. Skin of back smooth, green (olive in spots). Newfrelburg (Brazil).

23. *Hyla bawitini*.

Ann. f. Phila. Rept. Acad. Phila. p. 104.

Vomerine teeth on a level with the front edge of the nostrils; fingers are fourth webbed; skin of back smooth, of throat tuberculous;

a continuous fold across the chest. Male with a vocal sac on each side beneath the angle of mouth; both sacs communicating one with the other.

a, b. Adult. Mexico.

c. Adult. Mexico. From M. Parralish's Collection.

d. Adult; not good state. Mexico. From M. Sells's Collection.

e-g. Adult. Mexico. From Hugo Stuck's Collection.

h. Adult; very immature. Mexico. From Hugo Stuck's Collection.

i, k. Adult males. Honduras.

l. Half-grown. Vera Cruz. From Mr. Cuming's Collection.

m. Adult female. Brazil. Presented by Lord Stuart.

n. Adult; not good state. Brazil.

24. *Hyla capistrata*.

Hyla capistrata, Bonn, *Mon. Académ.* l. p. 55. pl. 2. f. 4.

— *pauca*, Bonn & Bér. p. 558.

Tympanic teeth on a level with the front edge of the nostrils; fingers one-third webbed; skin of back and throat smooth; a continuous fold across the chest; lips white-spotted; male with a sub-gular external vocal sac. Brazil.

**** Group with tympanic teeth arranged in two groups.

25. *Hyla ventrali*.

Hyla ventrali, (Sill.) Sill, *Zool. of the Acapú*, Sept. p. 45. pl. 20. f. 2.

Tympanic teeth in two groups, situated on a level with the hinder edge of the nostrils, and rather obliquely arranged, divergent towards behind; fingers slightly webbed; toes half-webbed; tympanum one-third of the width of eye. Reddish grey above with brown spots.

a. Adult. Malinade. Presented by Charles Darwin, Esq.

26. *Hyla arenarum*.

Hyla arenarum, *Dool. State* p. 26. pl. 2. f. 2, and *Sept. viii.* p. 57;

Trans. & Bér. p. 519; *Bermúdez*, l. c. p. 108.

Hyla lutea, *Dool. State* p. 25. pl. 2. f. 2, and *Sept. viii.* p. 59;

Contr. Sept. ii. p. 175.

Colombia arenarum et lutea, *Merr. Trans.* p. 172.

Bombayana rubra, *Fitchii*, *State* p. 74.

Sphenocorymbus luteus, *Fitchii*, *State* p. 71.

Tympanic teeth on a level with the hinder edge of the nostrils. Fingers half-webbed; toes entirely webbed; tympanum rather indistinct; upper parts smooth; tongue entire behind, very large, covering the whole of the lower face of the buccal cavity. Above uniform brownish.

a. Adult; discoloured. Demerara. Presented by Sir W. Holmes.

17. *Hyla fusca*.

Hyla fusca, *Donat. Nat.* p. 40, and *Rept. viii.* p. 2; *Don. & Mir.* p. 574.

Colombia fusca, *Merr. Nat.* p. 176.

Yuccaline teeth between the nostrils. Fingers slightly webbed; upper parts smooth; a fold across the chest; tympanum small, half the width of eye; tongue with an angular nick behind. Above uniform brown.

n. Adult: head state. Brazil.

18. *Hyla luteola*.

Hyla luteola, *Wied. Zool. t.* , and *Nat. l.* p. 525; *Peruviana*, *L. n.* p. 327. t. 21. f. 2.

† *Hyla subulosa*, *Spix, Spex. Nov. Nat. t.* 10. f. 4.

Yuccaline teeth between the nostrils. Fingers very slightly webbed; upper parts smooth; tympanum much smaller than eye; tongue nearly circular. Above yellow, minutely brown-spotted; belly whitish, variegated with darker; sides of the thighs and of belly with black cross-streaks (*Merr.*). Neudorfburg (Brazil).

19. *Hyla arborea*.

Genes, Quatr. li. p. 86; *Schumacherfeld, Therop. Silv.* p. 153; *Alben. Quatr. i.* p. 222.

Hyla arborea, *L. Faun. Suec.* p. 190, and *Mus. Ad. Fried. l.* p. 41, and *Spex. Nat. l.* p. 267; *Silv.* p. 38. t. 8-12; *Wied. Zool. t.* *Arven.* p. 6; *Müller, Zool. Don. Fried.* p. 55; *Merr., Zool. Faun. St. Hill. l.*; *Donat. Nat. Hist. iii.* p. 37; *Linn. Selen.* p. 59; *Merr. Nat.* iii. p. 180.

Hyla viridis, *Linn. Spex. Rept.* p. 39; *Donat. Optid. p.* 6; *Linn. Rept. l.* p. 100; *Donat. Nat.* p. 14. f. 1, and *Rept. viii.* p. 10; *Gravenh. Zool.* p. 26; *Müller, Zool. Spex. iii.* p. 100, and *Primo Cap. - Genes.* p. 124; *Merr. Faun. Nat.*; *Nat. St. Hill. St. Pruvon, Rept. Mir. Rept.* p. 74; *Don. & Mir.* p. 581.

Hyla viridis, *Donat. Quatr. Cap. iii.* p. 307; *Linn. Quatr. Cap. l.* p. 100.

Colombia arborea, *Silv. Zool. Rept.* p. 153; *Merr. Nat.* p. 179; *Silv. St. Hill. Nat. Hist. iii.* p. 86.

Hyla arborea, *Don. Rept. Arven.*; *Geoff. Arven. Rept. li.* p. 205; *Silv. Faun. St. Hill.* p. 144.

Hyla arborea, *Wied. Zool.* p. 205.

Trachelytes arborea, *Zool. Nat.* p. 74.

Yuccaline teeth between the nostrils. Fingers slightly webbed; two-thirds webbed; upper parts smooth; a fold across the chest; tympanum one-third the size of the eye; tongue circular, hardly nicked behind. Above greenish, sometimes spotted with olive, with a more or less conspicuous grayish streak through the eye, least on the sides; sometimes a grayish elliptical spot on the loins.

Group with various teeth, arranged in two oblique series, concealed posteriorly.

62. *Hyla arena*.

Hyla arena, Lam. Voy. Cap. Zool. II. p. 69, pl. 7, f. 8.

Hyla jacksoniana, Sid. Mitt. Zool. f. Jour. p. 402.

Nautilus jacksoniana, Tatham, Nat. p. 73.

Group, in Group's Journ. Zool. Jour. 1. S. I. 3 (without name).

Flap-like; toes broadly webbed; head longer than broad; tongue elliptical, slightly notched behind; upper parts smooth; a glandular fold behind the angle of mouth. Olive, with a whitish band on each side of back; a blackish streak along the median ventral. Male with a subgular vocal sac.

a-d. Adult. West Australia.

e-h. Adult. West Australia.

i, k. Adult. West Australia.

l-m. Adult and half-grown. West Australia.

n-o. Half-grown. West Australia.

p. Young. West Australia.

q. Adult. King George's Sound. From the Leyden Museum as *H. asiatica*.

r. Five specimens. New South Wales. Presented by Sir A. Smith.

s. Adult: not good state. Swan River.

t, u. Young and half-grown. Swan River. Presented by Sir A. Smith.

v, w. Adult males. Port Essington. Presented by Dr. Fleming.

x, y. Adult males. Port Essington. Presented by Dr. Fleming.

z. Half-grown: bad state. Port Essington. Presented by Dr. Fleming.

aa. Half-grown. Port Essington. Presented by Dr. Fleming.

ab. Adult female. Tasmania. Presented by R. Gunn, Esq.

ac. Half-grown. Tasmania. Presented by R. Gunn, Esq.

ad, ae. Half-grown: bad state. Tasmania. Presented by R. Gunn, Esq.

af. Five young specimens. Tasmania. Capt. Ross's Expedition.

ag. Adult: very bad state. New Holland.

ah. Adult: not good state. New Holland. Presented by Charles Darwin, Esq.

ai, aj. Adult females. New Holland. Presented by J. B. Johns, Esq.

ak. Adult. New Holland. From M. Farrukh's Collection.

al, am. Adult: not good state. New Holland. Presented by Mrs. Newton.

an. Adult. New Holland. Presented by the Earl of Derby.

ao. Adult: very bad state. —? Presented by C. Bowring, Esq.

ap. Adult female. Melbourne. Presented by Mr. Kraft.

aq. Adult: skeleton. New Holland.

ar. Adult female: skeleton. Australia.

Skelton.—Besides the symplectic and pterygoid arches, there is a

third from the tympanic bone to the maxillary formed by the processes mastilloides, which reaches to that point of the maxillary where this bone is united with the pterygoid. As in *Cyrtopneustes*, there is a large or interspace between the frontal and parietal bones, with distinct sutures in one of the skeletons, which in another are unfractured with these bones. The sides of the skull are more or less united, according to the age of the individual. The maxillary style is not quite so long as the vertebral column, and provided with a high, sharp ridge. The clavicles are curved, with the convexity behind; in front of their symphysis in the manubrium sterni, half-cartilaginous, not bony; the costal bones are rather brittle, dilated at the sternal end, and joined behind with a very large and broad unifying cartilage. Humerus with a moderate ridge, still lower in the lower. The line bones have a slight longitudinal groove, are just as long as the ones, and a little longer than the humerus.

63. *Hyla verrucosa*.

Ann. Am. N. Nat. 1854, p. 171.

Fingers five, toes broadly webbed; head short; snout angular, obtuse; nasal region concave; tympanum much smaller than the eye; tongue slightly notched behind; upper parts smooth, a glandular fold above the tympanum. Above brown, with a broad darker band from between the eyes to the vent. New Holland.

64. *Hyla strepera*.

Hyla strepera, *Proc. Acad. Nat. Sci. Philad.* 1853, p. 800.

Diadophis strepera, *Recherch. Zool.* p. 78.

Fingers quite five; toes only webbed at the base; tongue circular, entire and free behind. Fort Jackson.

4. *HYCOTRIMA*.

Youngish toad. Skin of back glandular, of crown smooth; no large gland. Digits rather large; fingers and toes elongate, very slightly webbed. Tympanum distinct; masticular tubes moderate; tongue large, nearly circular, very slightly notched behind. Transverse process of nasal vertebrae equally dilated from the base. Skin with an external subcuticular vessel on; female with a pouch on the hinder part of the back. Peru; Mexico.

Hyla, sp., *Ann. N. Y. Acad. Sci.* vol. p. 204.

*Chirotrima**, *Phil. Acad. Nat. Sci.* p. 55.

* *Chirotrima* appears to have referred to the existence of a pouch on the belly; the denomination is derived from *chiro*, hand, and *trima*, held by the old male mate for the female; therefore I think myself justified in not accepting his name.