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The Cæciliæ

Prof. W. Peters

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Description of Sigerpes occidentalis, the Type of a new Genus of Mantodea from West Africa. By J. WOOD-MASON.

In this short paper a new species of *Mantodea* closely related to the East-African *Sibylla tridens*, Saussure, is described and made the type of a new genus, *Sigerpes*, which must be placed in the sub-family Harpagidæ next to the genera *Oxyphilus* and *Hestias*.

The cephalic horn, as was suspected by the author (P. A. S. B. 1876), turns out to be rudimentary in the males.

The new species, described from a fine dried female specimen in the British Museum from the neighbourhood of Sierra Leone, differs from *Sigerpes* (olim *Sibylla*) *tridens* ♀ in having the cephalic horn somewhat longer and without lateral lobes and teeth, the base of the wings greenish yellow, the fore tibiæ more numerously toothed, the fore femora on the inside red tipped with black, and the extremities of the organs of flight not so obviously truncate.—*Proc. As. Soc. Beng.* November 1879.

The Cæcilie. By Prof. W. PETERS.

Professor Peters has published an important paper on this curious group of Amphibians, in which, after discussing certain critical points, he gives a new division of the known forms into genera, and describes several new species. He finds that his *Gymnopsis multiplicata* (Monatsber. Berl. Akad. 1874) is generically identical with Duméril's *Rhinatrema unicolor*, and that the characters given by the latter author for his genus *Rhinatrema* are erroneous as applied to this species; while the *Cæcilia bivittata* of Cuvier, which was referred by Duméril to the genus *Rhinatrema*, is founded upon immature examples of the Linnean *Cæcilia glutinosa*. Accordingly he sinks the genus *Rhinatrema* altogether, and retains his own name *Gymnopsis* for the genus including his and Duméril's species.

For the division of the Cæcilie into genera he considers that the position of the tentacular pore alone leads to very unsatisfactory and unnatural results, as, independent of the structure of the skull and viscera, the structure or absence of the dermal scales, the dentition, especially of the lower jaw, and the differences in the form of the tentacle, seem to him to be of much greater importance. The tentacle occurs under three different forms, namely:—dagger-shaped (*cultratum*), which occurs in *Ichthyophis* (*Epicrion*), lies freely in the sheath and can be pushed out like the point of a trocar; valve-like (*valvatum*), placed at the orifice of the sheath and united to its hinder margin, so that it moves round upon this fixed basal part like a flap upon its hinge, although when protruded it appears somewhat spindle-shaped, as in *Cæcilia tentaculata*; and globular (*globosum*), which occurs in *Gymnopsis*, and in which the thin basal part is situated in the bottom of the sheath. An intermediate form occurs in *Cæcilia* (*Herpele*) *squalostoma*; it appears globular externally, but is attached by its extremity to the wall of

the sheath, like the second form, but at a greater distance from the orifice.

With regard to the habits of the species, it appears that *Chthonerpeton indistinctum* and *Hypoglyphis rostratus* have been found living in society at considerable depths in the earth; whilst other species were observed in the East Indies by Colonel Beddome under stones, and *Typhlonectes compressicaudus* and *natans* have been found swimming in fresh water. The branchiferous young of *Ichthyophis glutinosus* has also been taken in the water.

Prof. Peters gives the following Table of the genera:—

- I. LEPIDOCÆCILLÆ.—Skin with tile-like scales, at least on the margins of the folds; mandibular teeth in two rows.
 - A. Extremity of the body pointed; tentacle cultrate.
 - a. Body depressed; body-rings forming an angle in the middle of the belly; tentacular pit near the buccal margin, between eye and nostril 1. *Ichthyophis*.
 - b. Body cylindrical; tentacular pit under the nostril 2. *Uræotyphlus*, g. n.
 - B. Extremity of the body rounded off.
 - a. Tentacular pit horseshoe-shaped; tentacle valvate.
 - * Tentacle under the nostril 3. *Cæcilia*.
 - † Tentacle behind and under the nostril . 4. *Hypogeophis*, g. n.
 - b. Tentacular pit circular; tentacle globose.
 - * Eyes visible, in an orbit 5. *Dermophis*, g. n.
 - † Eyes invisible, under the cranial bones.
 - a. Tentacular pit nearer the angle of the mouth than the nostril 6. *Gymnophis*.
 - β. Tentacular pit nearer the nostril than the angle of the mouth 7. *Herpele*, g. n.
 - II. GYMNOCÆCILLÆ.—Skin naked, without tile-like scales; tentacle valvate; tentacular pit horseshoe-shaped.
 - A. Extremity of the body rounded off.
 - a. Mandibular teeth biserial; tentacular pit midway between nostril and eye 8. *Chthonerpeton*, g. n.
 - b. Mandibular teeth uniserial; tentacular pit much nearer the eye than the nostril 9. *Siphonops*.
 - B. Extremity of the body compressed; mandibular teeth biserial; tentacular pit close behind the nostril 10. *Typhlonectes*, g. n.

The genus *Ichthyophis*, Fitzinger (= *Epicrium*, Wagler), includes three eastern species—namely, *I. glutinosus*, Linn., *I. monochrous*, Bleek., and *I. Beddomei*, sp. n. Beddome's *Epicrium carnosum*, *Gegenes carnosus*, Günth., is regarded by Prof. Peters as founded upon very young, immature animals, which, from their cylindrical form and the position of the nostrils, seem to approach *Cæcilia* rather than *Ichthyophis*. As the generic name *Gegenes* has long been pre-

occupied, the author suggests *Gegeneophis* for the genus in the event of its proving to be well founded. *Uracotyphlus* has the tentacular pit circular and the base of the cultrate tentacle at the bottom of the tentacular tube. It includes two East-Indian species—*Cæcilia oxyura*, Dum. & Bibr., and *C. malabarica*, Beddome. The genus *Cæcilia*, as restricted, includes seven American species—namely, *C. tentaculata*, Linn., *isthmica*, Cope, *gracilis*, Shaw, *pachynema*, Günth., *ochrocephala*, Cope, *polyzona*, Fisch. (sp. n.), and *Güntheri*, sp. n. (= *C. rostrata*, Günth. non Cuv.). *Hypogeophis* has the eye visible; the species referred to it are *Cæcilia rostrata*, Cuv., from the Seychelles, and *C. Seraphini*, Dum., from Gaboon and the Camarons. *Dermophis* includes scaled species, which have been referred by previous authors to Wagler's genus *Siphonops*, founded upon the scaleless *Cæcilia annulata*, Mikan. Prof. Peters refers to *Dermophis* the American species *Siphonops mexicanus*, Dum. & Bibr., *S. brasiliensis*, Lütken, *S. proximus*, Cope, and *S. simus*, Cope, and the West-African *S. brevirostris*, Pet., and *S. thomensis*, Bocage. *Gymnopsis* closely approaches *Siphonops* in the structure of the skull. To this genus three American species are referred—namely, *G. multiplicata*, Pet., *Rhinatrema unicolor*, Dum., and *Siphonops oligozona*, Cope. *Herpele*, which approaches *Cæcilia* in cranial structure, includes only one species, the West-African *Cæcilia squalostoma*, Stutchbury. In *Chthonerpeton* the tentacular pit is placed midway between eye and nostril, but considerably below the line joining those organs; the only known species is *Siphonops indistinctus*, Reinh. & Lütk., from South America. The sole representative of the restricted genus *Siphonops* is Wagler's type species *C. annulata*, Mikan, from Brazil, Guiana, and Peru. Lastly, in *Typhlonectes* the eyes are distinct, and the anal aperture surrounded by a sort of sucking-disk. The species are all from South America—namely, *Cæcilia compressicauda*, Dum. & Bibr., *C. dorsalis*, Pet., *C. natans*, Fisch., and ? *Siphonops syntremus*, Cope. The foetal form has vesicular branchiæ. Prof. Peters's paper is illustrated with a plate elucidating the characters of the genera.—*Monatsb. Akad. Wiss. Berl.*, November 1879, p. 924.

Histology, Development, and Origin of the Testis and Ovary in Campanularia angulata (Hincks). By M. J. FRAIPONT.

The histological study of the three layers, ectoderm, intermediate lamella, and entoderm, of the body in Hydroids, leads to some new and important facts, of which a summary is here given.

The small nematocysts of the ectoderm of the tentacles are surrounded by a slight protoplasmic layer, often nucleolated and individualized, to which a palpocil corresponds. This relation is important from the physiological point of view, and that of the mode of action of the urticant organs.

The endoderm of the stolons in the vicinity of the pedicles of female gonangia (*Campanularia angulata*), and especially in the branches (*C. flexuosa*), contains larger cells, having, on the one hand,