

20. *Leptosoma integrum*.

*Nyctemera integra*, Walk. Cat. Lep. Het. B. M. xxxv. p. 1879 (1866).

"Rossel Island, Oct. 18, 1888."

In the British Museum from the Philippines and Ternate.

GEOMETRÆ.

Euschemidæ.

Genus CELERENA.

*Celerena*, Walk. Trans. Ent. Soc. Lond. (3) i. p. 71 (1862).

21. *Celerena vulgaris*.

*Celerena vulgaris*, Butl. Proc. Zool. Soc. Lond. 1876, p. 768.

"Normunby Island, Oct. 30, 1888." Two specimens.

In the collection of the British Museum from Port Moresby. I much doubt whether this insect is distinct from *C. perithea*, Cram., which is found in Amboina, as the width of the markings appears to be a variable character.

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XVIII.—*Description of a new Stenodermatous Bat from Trinidad.* By OLDFIELD THOMAS.

MR. H. CARACCIOLA, of Trinidad, has recently sent to the British Museum some few bats which appeared to him to be of unusual occurrence there. Among these there is a specimen belonging to the genus *Vampyrops*, but representing a very striking new species, for which I propose the name

*Vampyrops Caracciolaë*.

Size rather less than in *V. vittatus*, Peters. Markings unusually conspicuous, the white lines, both facial and dorsal, brighter and more prominent than in any other species of the genus. General colour a uniform soft greyish brown both above and below, rather paler over the shoulders. Supra-orbital white stripes broad, nearly touching one another anteriorly, and running from just behind the nose-leaf to the posterior corner of the ear; dorsal stripe commencing on the occiput, expanding between the shoulders, and continued



quite to the base of the interfemoral. Structure of nose-leaf, ear, and tragus apparently, so far as can be judged from a skin, quite as in *V. lineatus* and *vittatus*. Ear-conch margined with white anteriorly.

Fur on the upper surface extending along the arms to the middle of the forearm, and on the wings as far as a line from the elbow to the middle of the femur. Interfemoral membrane and hind limbs thinly hairy.

Skull, except in its smaller size, very like that of *V. vittatus*, broader and heavier in proportion than that of *V. lineatus*.

Dental formula :— $I. \frac{2}{2}, C. \frac{1}{1}, P. \frac{2}{2}, M. \frac{2}{3} \times 2 = 30$ .

*Teeth* (figs. 1–3).—Outer upper incisors well developed, filling up the space between the canines and inner incisors.

Canines proportionally short and stout. Upper premolars and anterior molars as in *V. vittatus*. Second molars convex instead of being flattened or concave behind, owing to the total absence of  $\overline{m.3}$ . Lower incisors four in number, about equal in size. Anterior cusp of the last lower premolar almost as high as the canine.

$\overline{m.2}$  in horizontal section slightly longer than  $\overline{m.1}$ ;  $\overline{m.3}$  small, not so minute as in *V. bidens*, but still only about one quarter the size in section of the anterior premolar.

Fig. 1.

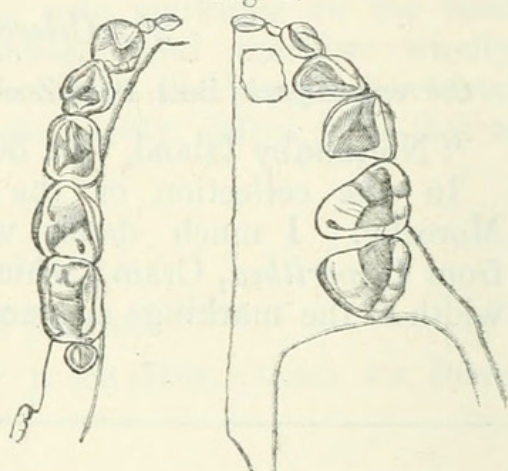
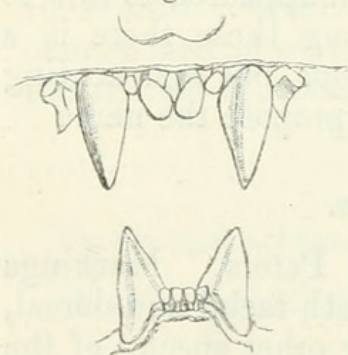
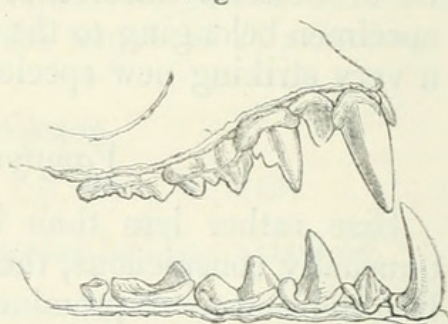
Teeth of *Vampyrops Caracciola*.

Fig. 2.



Front view.

Fig. 3.



Side view.

Dimensions of the type, a slightly immature\* specimen preserved as a skin (sex not determinable) :—

\* The epiphyses of the hind limbs are not united, but the teeth are all fully exerted.



Head and body (c.) 73 millim.; ear, above crown, 9; forearm 50 (=1.96 inch); tibia 19.

Skull: basal length (c.) 20 millim.; greatest breadth 16.8; interorbital, breadth 6.2; palate, length 12.6, breadth outside  $\frac{m.1}{m.1}$  11.4, inside  $\frac{m.1}{m.1}$  6.2.

Teeth: upper canines, vertical length 3.6, greatest horizontal diameter 2.0, distance from tip of one to tip of the other 4.1; front of canine to back of  $\frac{m.2}{m.2}$  9.8; front of  $\frac{m.1}{m.1}$  to back of  $\frac{m.2}{m.2}$  4.7; transverse breadth of  $\frac{m.1}{m.1}$  2.6; height of lower canine 3.3; front of canine to back of  $\frac{m.3}{m.3}$  10.3; front of  $\frac{m.1}{m.1}$  to back of  $\frac{m.3}{m.3}$  5.9; length of  $\frac{m.1}{m.1}$  2.2,  $\frac{m.2}{m.2}$  2.9,  $\frac{m.3}{m.3}$  0.8.

No detailed comparison of this new species with its allies is necessary, as its dental formula ( $I. \frac{2}{2}, M. \frac{2}{3}$ ) at once separates it from every other member of the group except the otherwise very different *Artibeus perspicillatus* and *Stenoderma achradophilum*.

In working out the relationships of this form, however, several points in connexion with the genera of the group have arisen which seem to be worthy of mention. The number of the molar teeth, a character elsewhere usually of generic importance, here only seems to be of specific value, a fact only recognized after the foundation of almost as many "genera" or "subgenera" as there really exist species. Mr. Dobson, in his invaluable 'Catalogue,' has practically adopted the later views of Prof. Peters on the subject, and has wisely only admitted such genera as are based on other characters than those of the molars; but some of the species appear to me to be referred to the wrong genera owing to the principle of ignoring the molars not being sufficiently rigidly carried out.

In comparing the two genera *Vampyrops* and *Chiroderma* Mr. Dobson says of the latter:—"This genus is undoubtedly closely allied to *Vampyrops*. . . . The form of the upper and lower first premolars is, however, very different and peculiar; the second molar in both jaws is larger than any of the other teeth; and in immature specimens a well-defined cleft extends backward from the nasal opening in the middle between the orbits."

Now, in my opinion, this last character, that of the nasal cleft, is the only valid distinction between the two genera, and the statement by Prof. Peters that it closes up in old age is simply due to his having wrongly attributed to *Chiroderma* an old individual of a species (*Phyllostoma pusillum* of Wagner) really referable to *Vampyrops*, he at that time thinking that the form and number of the molars was of more importance than the presence or absence of the nasal cleft.



But not only has *Vampyrops pusillus* (as it should be called) no cleft, but Mr. Dobson's "*Chiroderma bidens*" is also without it; and since there appears to be no generic importance in the other characters of *Chiroderma* as mentioned by him, I propose that the two species just referred to should be shifted to *Vampyrops*, which would then contain all the members of this group of bats with oblique incisors and perfect nasal regions.

The genera to which the new Trinidad bat is most nearly allied may therefore be arranged as in the following synopsis:—

A. Palate continued some way behind molars.

- a. Middle upper incisors vertical ..... 1. *Artibeus*.
- b. Middle upper incisors oblique.
  - a'. Nasal region not cleft ..... 2. *Vampyrops*.
  - b'. Nasal region cleft ..... 3. *Chiroderma*.

B. Palate not continued backwards behind molars.

- c. Palate emarginate to level of  $\frac{m. 1}{m. 1}$ . Crown not unusually elevated ..... 4. *Stenoderma*.
- d. Palate emarginate to level of  $\frac{m. 3}{m. 3}$ . Crown much elevated above muzzle ..... 5. *Ametrida*\*.

The enlarged genus *Vampyrops* may then be arranged as follows:—

A. Molars  $\frac{3}{3}$ .

- a. Forearm about 60 millim. Front of canine to back of  $\frac{m. 2}{m. 2}$  12-13 millim. .... 1. *V. vittatus*, Ptrs.†
- b. Forearm 52 millim. .... 2. *V. infuscus*, Ptrs.
- c. Forearm 35-43 millim. Front of canine to back of  $\frac{m. 2}{m. 2}$  about 8 millim. .... 3. *V. lineatus*, Geoff.

B. Molars  $\frac{2}{3}$ .

- d. Incisors  $\frac{2}{2}$ . Front of canine to back of  $\frac{m. 2}{m. 2}$  9.8 millim. .... 4. *V. Caracciola*, Thos.
- e. Incisors  $\frac{2}{1}$ . Front of canine to back of  $\frac{m. 2}{m. 2}$  6.4 millim. .... 5. *V. bidens*, Dobs.

C. Molars  $\frac{2}{2}$ .

- f. Forearm 35 millim. .... 6. *V. pusillus*, Wagn.

\* From which *Sphæronycteris*, Peters (MB. Ak. Berl. 1882, p. 987), is very doubtfully separable.

† With which *V. Helleri*, Ptrs., is synonymous; see Alston, Biol. Centr.-Am., Mamm. p. 48 (1879).



Thomas, Oldfield. 1889. "Description of a New Stenodermatous Bat from Trinidad." *The Annals and magazine of natural history; zoology, botany, and geology* 4, 167–171.

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