

1872. CLAUS, C.

Zur Naturgeschichte der *Phronima sedentaria* Forsk. Mit Tafel xxvi. xxvii.
Zeitschrift für wissenschaftliche Zoologie. Bd. XXII. pp. 331-338.

Claus here states his conviction that the cell inhabited by *Phronima* is derived exclusively from smaller or larger specimens of *Pyrosoma* eaten out for the purpose. He describes the differences presented by the male form of *Phronima sedentaria*. Guérin's *Phronima atlantica* he regards as nothing but "das noch jugendliche, kleine, aber doch schon fortpflanzungsfähige Weibchen" of the same species, and thinks that Spence Bate did wrong in giving a separate specific name, "*Phronima Borneensis*," to White's variety of *Phronima atlantica* from Borneo. Compare Note on Streets, 1877.

Referring to his own earlier observation of rudiments of a second pair of antennæ on the head of the young *Phronimella elongata*, he says that he wrongly concluded that the Phronimidæ in general might have both pairs of antennæ in rudiment to start with, the females eventually developing only the front pair. He found, however, that in the little, sexually indifferent, young ones of *Phronima sedentaria* there was no trace of the hinder pair; in individuals 4 mm. long sexual difference was shown in the front antennæ, and in larger forms the position of the coming second pair of antennæ was indicated. The sexual organs of the male are described and figured.

1872. COPE, E. D.

Descriptions of species from the Mammoth Cave. The American Naturalist. Vol. VI. July, 1872.—No. 7. Vol. VI. Salem, Mass. Peabody Academy of Science, 1872. pp. 421-422.

The new genus which Cope established for the Gammarid, which he found in the Mammoth Cave, is thus described:—

"*Stygobromus*, Cope, Gen. nov. *Gammaridarum*. Near *Gammarus*. The first antennæ with flagellum, and much shorter than the second. Two pairs of limbs chelate by the inflexion of the last claw-like segment; other limbs clawed. Terminal abdominal segment very short, spiniferous; the penultimate segment with a stout limb with two equal styles, the antepenultimate short, two-jointed and undivided. Eyes none.

"This genus is nearer to the true *Gammarus* than the allied genus described from the Austrian Caves, the *Niphargus* of Schiödte (Proc. Entom. Soc. London, 1851, p. 150). In the latter the first antennæ are the larger, and the body terminates in a very long style; the last abdominal limb is undivided like that which precedes it. In *Stygobromus* the penultimate limb is like that represented by Schiödte for *Niphargus*, though I am not certain whether it is homologically identical. The last limb is about equally divided, but the simple basis is long and stout.

"It is just possible that the antepenultimate limb represents the basis and one style only, for in that of one side a slight process appears at the extremity of the basal segment, though it is not visible on that of the other. The terminal limbs are recurved and appressed to the last abdominal segment, forming a fulcrum or prop. The animals of this genus are aquatic, and swim much as the common *Gammari*. The absence of eyes is another example of the adaptation to darkness."

The type species he describes thus:—" *Stygobromus vitreus*, Cope. 'Gammaroid Crustacean' Cope, Ann. Mag. Nat. Hist., Nov., 1871. Two last pairs of limbs appressed to last