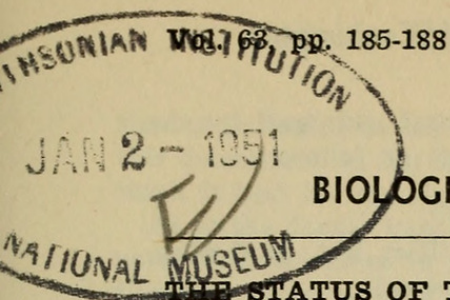


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PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

THE STATUS OF THE MILLIPED *CHELODESMUS MARXI* COOK,  
AND OF THE FAMILY NAME CHELODESMIDAE

BY RICHARD L. HOFFMAN

O. F. Cook's pioneer classification of the Diplopoda (1895, Ann. N. Y. Acad. Sci., 9: 1-7) included a great many new generic and family names proposed without descriptions. In many cases their characters were deduceable on the basis of included species, but as often as not his original type species have remained totally unknown to this day. An example may be found in the case of *Chelodesmus marxi*, and the genus and family based upon it.

The original presentation of the family included only the following information (*op. cit.*, p. 4):

"Family CHELODESMIDAE,—genera *Chelodesmus*, *Leptodesmus*, *Odontopeltis*, *Odontotropis*, *Priodesmus*, *Rhacodesmus* (*Rhacis*, is pre-occupied), *Strongylodesmus*.

"*Distribution*: Tropical America."

That this grouping was a mixed one is indicated by the fact that *Rhacodesmus* and *Strongylodesmus* have since been removed to a separate family, *Rhacodesmidae*, and *Eurydesmus*, which should have been included, was listed in the *Xystodesmidae*. It should be remembered, however, that Cook worked with the disadvantage of having only inadequate descriptions of most Neotropical forms, and that is why he based the family name on *Chelodesmus* (of which he had specimens) instead of on the earlier, but poorly known, *Leptodesmus*.

*Chelodesmus* was described in a brief footnote diagnosis as follows (*op. cit.*, p. 4):

"Pores 13, on segments 5, 7, 9, 10-19, latero-inferior; sternum of fifth segment of male with four processes, that of the sixth with two; male legs with a large process from the apex of the penultimate joint. Type *Chelodesmus marxi*, U. S. National Museum."

This sort of description is rather inadequate in diplopod taxonomy, and is further complicated by the absence of any reference to a type locality. In succeeding years no additional information on *Chelodesmus* has been forthcoming, and the majority of European workers have completely ignored the name and generally employed *Leptodesmidae* for the dominant family of large South American polydesmoids. Curiously enough, however, American systematists have rather consistently clung to *Chelodesmidae*.

The primary reason for our long-standing ignorance of the characters of *Chelodesmus* is that Cook retained the original type of *marxi*, and not until his death in 1949 was it returned to the U. S. National Museum, where I recently had the opportunity to study it and make drawings of the gonopods. It is now obvious that *Chelodesmus* is a synonym of the

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earlier *Eurydesmus*, a Brazilian genus recently much enlarged by the work of Otto Schubart. The pertinent citations are as follows:

Genus EURYDESMUS Saussure

*Eurydesmus* Saussure, 1860, Mem. Soc. Phys. et d'Hist. nat. de Genève, vol. 15, p. 335 (generotype, *E. angulatus* Saussure).

*Chelodesmus* Cook, 1895, Ann. N. Y. Acad. Sci., vol. 9, p. 4 (generotype, *C. marxi* Cook).

*Eurydesmus marxi* (Cook)

Plate XIII

*Type specimen*.—U. S. National Museum no. 1,881, labeled only "Therezopolis, Brazil, Dr. Goeldi, Marx Comm." This locality is undoubtedly in or near the State of Rio de Janeiro.

*Diagnosis*.—Very close to *E. agrestis* Schubart, to which it runs in that author's key (1945, Arquivos do Museu Nacional, vol. 38, p. 78) but differing in a number of minor details of the male gonopod.

*Description*.—Similar to the species of *Eurydesmus* as described by Schubart. The following notes were made from the type:

Length, about 40 mm. (much broken), width, 9 mm.

Dorsum arched, almost smooth, finely coriaceous on keels. Latter medium in size, continuing slope of dorsum. Repugnatorial pores lateral, in a definite notch on side of keels.

Pleurites with an oblique, longitudinal ridge (directed cephaloventrad) just above spiracular openings.

Sternites wide, smooth, glabrous; produced into spines at bases of legs. Sternite of 5th segment with four upright conical knobs, that of 6th segment with two subtriangular laminae.

Legs rather short, stout; prefemora not spined; a small projection at the distal end of femora. Second tarsal joint with the usual long process ventrad of third. Terminal claw small, straight. Legs and body completely glabrous.

Color dark reddish-brown with underparts and edges of tergites lighter red. Legs red with a purplish cast.

Male gonopods as illustrated, projecting from a large, suboval, sternal aperture. Femoral process considerably larger than telopodite, forming a flat, shield-like development, bearing near the base a long slender spiniform projection. Femur of gonopod rather massive, tibiotarsus slender, distally flattened and twisted, its inner edges fimbriated. A little distad of midlength the tibiotarsus is widely slit, forming a long narrow sheath from which the solenomerite is exerted.

*Remarks*.—Comparison of the figure of *marxi* with that of *agrestis* given by Schubart (*op. cit.*, fig. 60) reveals that the two species are extremely close, and that the latter may very well fall as a synonym of *marxi*. However, there are several minor differences which may be constant, or only individual variations, or may possibly reflect different interpretation of the structure. For instance, Schubart shows the solenomerite simply arising from the side of the tibiotarsus, and an adjacent secondary process originating independently above it. In the type of *marxi*, I satisfied myself that the solenomerite unquestionably projects from the inside of the tibiotarsus, and continues to the base of that por-



tion as indicated in the drawing. In view of my particular attention to this detail, and of the fact that Dr. Schubart is a very careful worker, I think it best for the time being to retain the two species as distinct.

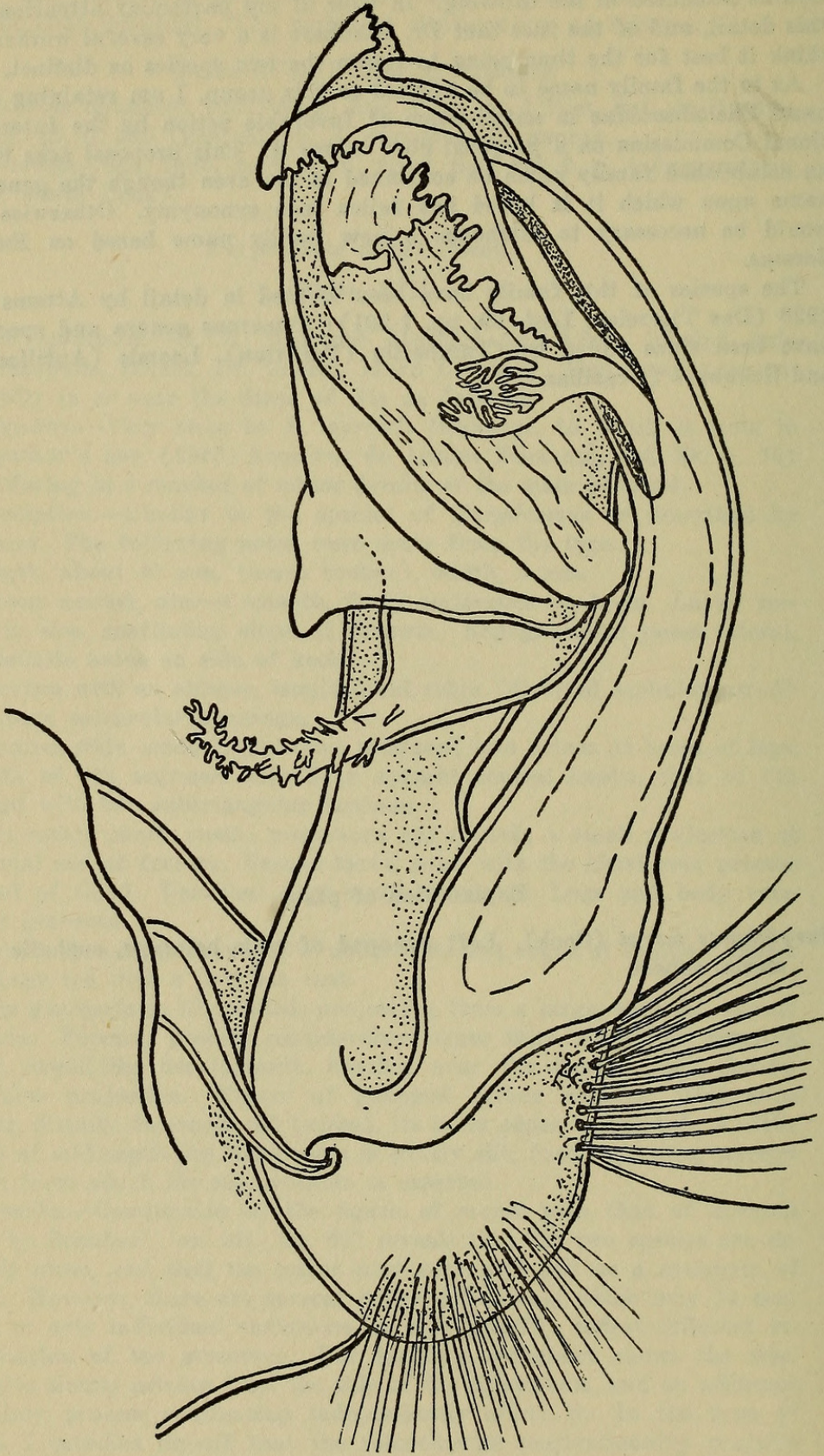
As to the family name to be applied to this group, I am retaining the name Chelodesmidae in anticipation of favorable action by the International Commission on a proposal now before it. This proposal asks that an established family name be continued in use even though the generic name upon which it is based has fallen into synonymy. Otherwise it would be necessary to introduce a new family name based on *Eurydesmus*.

The species of this family have been treated in detail by Attems in 1938 (Das Tierreich, Lief. 69, pp. 1-201); numerous genera and species have been since added by Chamberlin (Peruvian), Loomis (Antillean) and Schubart (Brazilian).

#### Explanation of plate

*Eurydesmus marxi* (Cook). Left gonopod of male holotype, cephalic or mesial aspect.







Hoffman, Richard L. 1950. "The status of the milliped *Chelodesmus marxi* Cook, and of the family name Chelodesmidae." *Proceedings of the Biological Society of Washington* 63, 185–188.

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