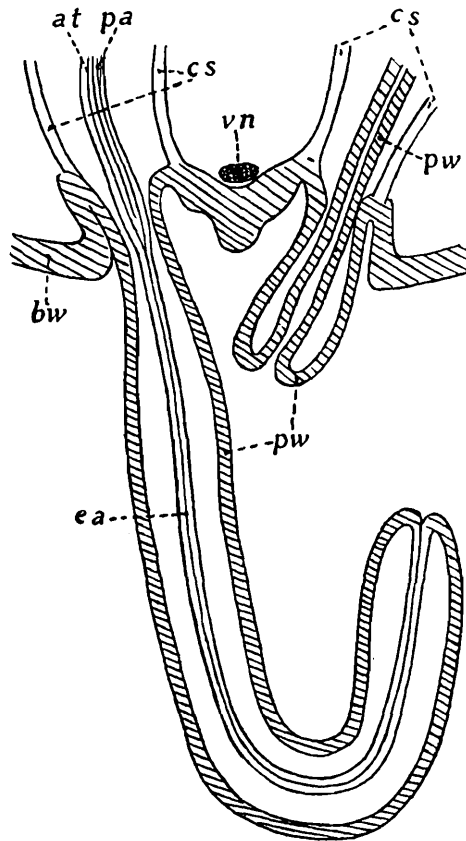


## BRANCHIURA SOWERBYI BEDDARD, AND ITS SYNONYMY.

By W. MICHAELSEN (*Hamburg*).

Mr. G. E. Gates sent me for examination some worms collected at Mongyai in the North Shan States by Messrs. B. N. Chopra and H. S. Rao of the Zoological Survey of India. Without hesitation I identified the first examined specimens, which included an almost complete individual, with *Kawamura japonica* Stephenson (1917, *Mem. As. Soc. Bengal*, VI, p. 89, pl. iv, figs. 1-5). Later on examination of a really complete specimen, however, I recognised at its hind end thread-shaped median-ventral and dorsal gills like those characteristic of *Branchiura sowerbyi* Beddard (1892, *Quart. Journ. Microsc. Sci.* (N. S.), XXXIII, p. 325, pl. xix). A closer examination convinced me that the worms indeed are specimens of *B. sowerbyi* already known from the Shan States, and that the *Kawamura japonica* is identical with this branchiate species.



*Branchiura sowerbyi* Beddard. Transverse section through the ventral part of the 11th segment cutting the penes longitudinally; one of which is almost completely stretched forth whilst the other is only partially everted. *at.* atrium; *bw.* body-wall; *cs.* coelomic sac; *ea.* ectal part of the atrium; *pa.* paratrium; *pw.* wall of the penis; *vn.* ventral nerve-cord.

*Branchiura sowerbyi* is very fragile as I can state from experience, and as Stephenson noted that the specimens of his supposed new species from Lake Biwa were "nearly all immature and many fragmentary", and further "mostly fragments and immature", I am convinced that

Stephenson did not see any complete specimen. He, therefore, did not recognise the identity of his worms with *Branchiura*.

Some observations about the penis which are rarely seen everted, may be added here. The secondary male pores, distinctly seen only on specimens with drawn-in penes (not to confound with the primary male pores at the tip of the everted penes), are situated not just in the lines of ventral setal bundles, as Beddard and Stephenson noted them, but very slightly dislocated mediad; this area is so narrow that they do not extend beyond the innermost setae of the ventral bundles. This more exact statement corresponds to Beddard's drawing (1892, pl. xix, fig. 8) better than to his description, for in this drawing the male pores are nearer to each other than are the spermathecal pores just behind the ventral setae of that segment. In specimens with everted penes the body-wall of the 11th segment shows ventrally a pair of depressions united with one another in the outer part, separated from one another at the bottom by a more or less high longitudinal wall. The secondary male pores, out of which the penes arise, lie at the lateral slopes of the depressions, *i.e.*, somewhat obliquely, so that the basal parts of the penes converge a little. A penis is pear-shaped, as Stephenson figured it (1917, pl. iv, fig. 2), only when beginning to evert; the nearly completely everted penis, as seen in most of my Shan States specimens, is longish cylindrical, somewhat narrowed at its base and rounded at its tip, which bears the primary male pore—this is a simple, small hole. Such a widely everted penis is about 1 mm. long and in general 0.01 mm. thick, quite straight or more or less bent.