

syn. Aegisthidae nach Seifried & Schminke, 2003

Concluding remarks

Up to the present, many good characters have been overlooked or underestimated for the taxonomy within the genus *Pontostratiotes*, and special attention has been paid upon the armature and shape of cephalic shield, thoracic pleurotergites, and antennule (see Por, 1969, p. 2; Dinet, 1977, p. 1197). As already shown in the present paper, antenna and oral appendages, especially maxilla and maxillipede, provide good taxonomic characters: In the antenna, for example, setal armature of allobasis and first exopodite segment and proportion of certain segments are quite useful to distinguish most of the *Pontostratiotes* species described (Table 1).

On the other hand, significance of the proportion of each segment of exopodite and endopodite of the leg 1 is discussed here in order to clear up each taxonomic situation of *P. sixtorum* and *P. robustus* as far as possible. The leg 1 of the majority of the *Pontostratiotes* species so far known is characterized as follows: each first segment of both rami elongate, much longer than two apical segments combined (especially in endopodite); first endopodite segment forming a spinous or horny projection not only at outer distal angle but also at inner distal angle. Such the "typical" leg 1 is represented by *P. pacificus* (see Fig. 5-1) and

Table 1. Comparison of antennal characters among five species of *Pontostratiotes*.

character	species				
	<i>pacificus</i>	<i>unisetosus</i>	<i>abyssicola</i>	<i>sixtorum</i>	<i>robustus</i>
number of setae of allobasis	0	2	2	2	2
number of setae of first exopodite segment	2	1	2	2	2
apical endopodite segment much longer than allobasis	yes	no	no	no	no
first exopodite segment much longer than second and third segments combined	yes	yes	yes	no	yes

many other species. Dinet (1977) reported 12 species of *Pontostratiotes* from the Bay of Biscay, and all of them have these characteristics. *P. sixtorum*, however, is clearly different in these characters: each first segment as long as two apical segments combined; first endopodite segment with no projection at its inner distal angle. The leg 1 of *P. robustus* is more different from "typical": each first segment of both rami shorter than two apical segments combined; first endopodite segment with no projection at its inner distal angle. Incidentally, the leg 1 of *P. inermis* Por, 1969 approaches to that of *P. sixtorum* in the proportion of each segment.

Other than the characters in the leg 1, as already pointed out partially, *P. sixtorum* and *P. robustus* are alike in several characters which discriminate them from other congeneric species: presence of superficial reticulation on body integuments, prominent triangular rostrum, less developed armature of cephalic shield and thoracic pleurotergites, one-segmented exopodite of male leg 5, broad coxa of maxillipede, etc. In fact, if *P. sixtorum* had no spinous projection on the hind edge of its cephalic shield, I would remove the species from the genus and transfer it into a separate genus, probably together with *P. robustus*.

Connecting with the taxonomic status of these two species, treatment of *Stratiopontotes* and *Herdmaniopsis* is also problematic. Although it is uncertain whether *Herdmaniopsis* species have the pleurotergite on the first thoracic somite, I suppose rudimentary pleurotergite is present under cephalic shield as in *Stratiopontotes mediterraneus* reported in the present paper. In *P. sixtorum*, the first thoracic pleurotergite is well defined (though more reduced rather than in *P. pacificus* and others). The first thoracic pleurotergite of *P. robustus* is somewhat reduced dorsally, and of *S. mediterraneus* fairly reduced and very thin: Thus, it appears that a tendency toward degeneration is present among them. In addition to this tendency, degeneration of setal armature is probably present in certain appendages. The first endopodite segment of maxillipede is furnished with three or two setae in *Pontostratiotes* and *Stratiopontotes* species but none in *Herdmaniopsis* species. The third exopodite segment of leg 4, moreover, is furnished with three inner setae in *Pontostratiotes* species but two inner setae in

Stratiopontotes as well as *Herdmaniopsis*. It will be noteworthy that the last mentioned characteristic, the third exopodite segment of leg 4 with two inner setae, is commonly found in most genera and species of the family Cerviniidae, especially the subfamily Cerviniinae (see, for example: Brodzkaja, 1963; Por, 1969; Montagna, 1979, 1981). *Tonpostratiotes tenuipedalis* shows another extreme case of degenerative tendency; namely, two antennular segments fused (probably due to incomplete segmentation in certain copepodid stage), antenna lacking, and certain setae of leg 4 markedly dwarfed. *Tonpostratiotes*, however, has three inner setae on the third exopodite segment of leg 4 and three setae on the first endopodite segment of maxillipede as in the "typical" *Pontostratiotes* species.

Considering complicate relations of similarities and dissimilarities among these genera and species as discussed above, I chose to postpone rearrangement of problematic species and genera.