PERIODICUM BIOLOGORUM
Vol. 96, No. 4, 419–420, 1994

UDC 57 : 61
CODEN PDBIAD
ISSN 0031–5362

Conference paper
Extended abstract

Contribution to the re–classification of the family *Majidae*

ZDRAVKO ŠTEVČIĆ

Center for Marine Research, Ruđer Bošković Institute, Giordano Pagliaga 5, 52210 Rovinj, Croatia

Received November 3, 1994

The spider crabs *(Crustacea, Decapoda, Majidae)* are well delimitated and are one of the largest brachyuran families. They had been described by Samouelle *(7)* as *Maiadea* and the name was corrected by Neumann, *(6)* into *Majidae*. The family is characterized by: anteriorly narrowed cephalothorax: surfaces covered with hooked hairs; antennulae longitudinally plicated; basal antennal segment fused with epistome and often with front; chelipeds very mobile, homoiochelic, far projecting beyond the anterolateral margin of the carapace, fingers straight; sternal sutures 4/5 to 7/8 interrupted; posterior thoracic sternites radially directed. The majids exhibit an extreme diversity in their shape and structure. In particular, the following structures are used as systematic characters: size and shape of pseudorostral horns, spines and tubercles on the dorsal surface of carapace and lateral margins, shape of interantennular septum, shape of basal antennal segment, size of antennal peduncles and their visibility in the dorsal view, structure of orbits, length of chelipeds and walking legs.

During the long history study of the majids their classification scheme has been often changed, depending on the degree of knowledge of systematic characters and affinities of carcinologists. The taxon under study was established by Samouelle *(7)* as a family, but later the spider crabs were divided into many families and subfamilies. The most detailed re–classification was made by Dana *(3)* who classified the majid crabs into 7 families with 22 subfamilies. Similarly, Neumann *(6)* divided them into 5 families and 34 subfamilies. Thereafter, the carcinologists became more careful in classification and recognized only one family. So Alcock

TABLE 1

Classificatory scheme of the family Majidae.

Family MAJIDAE Samouelle, 1819

Subfamily MAJINAE Samouelle, 1819
- Tribus Majini Samouelle, 1819
- Tribus Cyclacini Dana, 1851
- Tribus Naxiini Stimpson, 1851
- Tribus Prionorhynchini Dana, 1851
- Tribus Eurynomini Neumann, 1878
- Tribus Paramicippini Dana 1851

Subfamily PLIOSOMINAE subfam. nov.

Subfamily MITHRACINAE MacLeay, 1838
- tribus Mithracini Mac.Leay, 1838
- Tribus Pericerini dana, 1851
- Tribus Micippini Dana 1851
- Tribus Thoini trib. nov.

Subfamily PLANOTERGINAE Števčić, 1991

Subfamily TYCHINAE Dana, 1851
- Tribus Tychini Dana, 1851
- Tribus Oithonini Dana 1851

Subfamily +MICROMAJINAE, Beurlen, 1930

Subfamily PISINAE Dana, 1851
- Tribus Pisini Dana, 1851
- Tribus Libiniini Dana, 1851
- Tribus Salacini Dana, 1851

Subfamily EURYNOLAMBRINAE subfam. nov.

Subfamily EPIALTINAE MacLeay, 1838

Subfamily INACHINAE MacLeay, 1838
- Tribus Inachini MacLeay, 1838
- Tribus Inachoidini Dana, 1851
- Tribus Lambrachaeini trib. nov.

Subfam. →

Presented at the 5th Congress of Croatian Biologists, Pula, October 3–7, 1994

(1) included all spider crabs into only 4 subfamilies, and 7 alliances. In his monograph, Balss *(2)* recognized 5 subfamilies. He still mentioned 3 new subfamilies which he had established previously, but he did not reclassify the genera into these new subfamilies. Recently, Griffin and Tranter *(4)* recognized 7 subfamilies.

The frequent re–classifications of the majids indicate that their classificatory scheme is far from satisfactory and that a general revision is badly needed. Accordingly, all suprageneric taxa re–ranked and re–arranged *(study in progress)*. The results are presented in Table 1. In this study, as a basis, the last most complete monograph of Griffin and Tranter *(4)* was used. As it is visible from the table, the majority groups were previously described and only two new subfamilies, *Eurynolambrinae* and *Pliosominae*, and two new tribes, *Thoini* and *Lambrachaeini*, were added *(diagnoses in addition)*. The genus *Eurynolambrus* was previously classified either into *Parthenopidae* or *Cancridae*, and *Pliosoma* into *Atelecyclidae*, but they are true majids *(5)*, although they have not been previously clasified into any of the majid subfamilies. Their shapes were also so different at first sight from the typical majids that they were classified in other groups. *Thoe* and *Hemus* have some characters in common in which they differ from other members of the subfamilies *Mithracinae*. Furthermore, it is noteworthy that Griffin and Tranter *(4)* considered that *Lambrachaeus* does not belong to the majids, because of his long second gonopod. Some hindrances in classification were caused by the *Inachoidini* and *Salacini* since their structure is different from others with the sternum and carapace fused in a special manner. However, these taxa are classified according to the majid systematic characters mentioned above, so their specifity is expressed in their status of tribes. The systematic position of *Lambrini* is not quite clear: either *Pisinae* or *Majinae*? At present they are placed, according to Griffin and Tranter *(4)*, into *Majinae*. Only the systematic status and position of the *Pyrinae Dana*, 1851 has so far not been solved, due to insufficient information in the literature.

In the proposed classificatory scheme there is another innovation: arrangement of majid subtaxa. In the majority of previous schemes the *Inachinae* are placed at the beginning of the scheme, and *Majinae* behind. Such a classification is based on the erroneous hypothesis that simple orbits in *Inachinae* are primitive and complex orbits of *Majinae* derived. But the primitive *Eubrachyura* have orbits with a similar structure to the *Majinae*, and later the orbital spines were step by step reduced to absent.

≥Addition: Diagnoses of new taxa.

Eurynolambrinae. Cephalothorax transversally oval. Carapace vaulted, overlapping the ambulatory legs. Pseudorostrum very short. Ambulatory legs cristate.

≥*Pliosominae*. Cephalothorax round ovate. Pseudorostrum bispinose. Epistome short and overlapped by maxillipeds. Two posterior pairs of ambulatory legs compressed, upper margin wide and lamellate.

≥*Thoini*. Cephalothorax subtriangular. Orbits not projecting laterally beyond general outline of carapace, preorbital tooth absent, intercalated spine present. Ambulatory legs cristate.

≥*Lambrachaeini*. Cephalothorax posteriorly rectangular, anteriorly triangular. Pseudorostrum single, elongate, slender. Ambulatory legs long. Second gonopod longer than the first one.

REFERENCES

1. ALCOCK A 1895 Materials for a carcinological fauna of India, No. 1. The Brachyura Oxyrhyncha. *J Asiat Soc Bengal 64:* 157–291
2. BALSS H 1957 Decapoda. VII Systematik. *In:* Bronns H G Klassen und Ordnungen des Tierreichs. 5 (1) 7 (12): p 1505–1672
3. DANA J D 1851 On the classification of the maioid Crustacea of Oxyrhyncha. *Amer J Sci Arts (2) II:* p 425–434
4. GRIFFIN D J G, TRANTER H A 1986 The Decapoda Brachyura of the Siboga Expedition. Part VIII *Majidae*. Siboga Expeditie. Monogr. XXXIV C4 (Lv. 148): p 1–335
5. GUINOT D 1979 Données nouvelles sur la morphologie, la phylogènese et la taxonomie des Crustacés Décapodes Brachyoures. *Mem Mus natl Hist nat A 112:* 1–354
6. NEUMANN R 1878 Systematische Ubersicht der Gattungen der Oxyrhynchen:Catalog der Podophthalmen Crustaceen des Heidelberger Museums. Beschreibung einiger neuer Arten. J. Hirschfeld. Leipzig, p 39
7. SAMOUELLE G 1816 The entomologist's useful compendium, or an introduction to the knowledge of British insects. London, p 496