

Vives, F. and A.A. Shmeleva. – 2006. *Crustacea, Copépodos marinos I. Calanoida*. In: *Fauna Ibérica*, vol. 29. Ramos *et al.* (eds.), Museo Nacional de Ciencias Naturales, CSIC, Madrid. 1152 pp. ISBN: 84-00-07010-0 (for Fauna Ibérica); ISBN: 978-84-00-08515-5 (for volume 29). In Spanish

The accelerated advance of technological innovation that began in the late 70s has provided new research tools that have opened vast study fields. Nevertheless, in some cases using the latest techniques or equipment has only added a touch of class to the research, as the novelty of the methods does not always correspond to the real degree of scientific creativity or significance of the work carried out. The fact is that, frequently, the scientific world subliminally gave extra appreciation bonus to the "cool" research fields that use front-line technologies, so the resulting papers usually have a considerable curricular return. However, many studies that use a classical methodology, which is generally time consuming, result in science that is hardly publishable, less rewarding in curricular terms, and less prestigious. Taxonomy and Systematics, which were included in the last category, became less and less appreciated and experts were on the border of extinction. Taxonomic research fell into disgrace, and in some cases its specialized publications were qualified as "grey literature". Painfully acquired skills, applied to apparently obscure or unimportant groups of organisms, appeared to be almost useless compared to modern research. However, in order to know who is doing what in Nature, taxonomy is absolutely essential, and unless we can identify the different characters in the living theatre, our understanding of the play will be either partial, wrong or both.

Thanks in part to the popular success of the term "biodiversity" (whatever the meaning given to it by scientists, the media and politicians) and the general concern for the future of our living planet, this negative tendency has been reversed, and what is more promising, classical and new methodologies (i.e., molecular techniques) can be closely linked in modern taxonomy. The uninterrupted existence

since 1990 of an ambitious scientific project sponsored by the Spanish Ministry of Education and Science, and devoted to the exhaustive taxonomic revision and updating of knowledge of the fauna and flora from the Iberian Peninsula is a clear indication of the effort made in Spain to reverse the situation.

This is the 29th volume corresponding to *Fauna Ibérica (Iberian Fauna)*, the ambitious scientific and publishing project launched by the *Museo Nacional de Ciencias Naturales* and the *Consejo Superior de Investigaciones Científicas (CSIC)* in order to make a modern revision of the Iberian fauna. This is the first of two volumes devoted to the *Copepoda*, a group of crustaceans of the utmost importance in marine ecosystems. It deals with the order *Calanoida*, which represents the bulk of marine plankton and a crucial link in pelagic food webs. A second volume corresponding to marine copepods will be devoted to the remaining Copepod orders, and is expected to be ready for publication soon.

This updated revision of the calanoid copepods is necessarily a thick, heavy book. It opens with an introduction of more than 100 pages that includes not only a solid discussion on the systematic position and phylogeny of copepods, but the generalities of the external and internal morphology (musculature, nervous and reproductive system, vision and other receptors) of adults and juveniles, their biology and ecology, from reproduction, swimming behaviour, feeding and growth, to their role as predators (and prey), and even sampling and study methods. In itself this introduction contains the main traits of copepods and their role in marine pelagic systems. Geographically the study extends well outside the limits of Iberian waters, covering the whole Mediterranean, and the Atlantic from the latitude of Bretagne to Cape Vert, including the Canary Islands.

The main outcome of this exhaustive revision of the *Calanoida* group (there are more than 1000 bibliographic references) is the detailed description of more than 500 species accompanied by 560 figures. In total, this accounts for more than 3000 drawings and schemes of the main morphological characteris-

tics of the species, which are all very clear and in many cases the personal achievement of the first author. No less important are the updated identification keys. Like Russian dolls, a key for the Copepod orders leads towards a general key for families inside the order Calanoida; inside each family there is a key for the different genera, and inside each genus, a separate key for the male and female individuals of each species. For each species the authors have included the valid name, the authority that made the description and gave the name, and the corresponding bibliographic reference. This is followed by the specific morphological characteristics corresponding to both sexes, accompanied as mentioned above by detailed drawings that facilitate identification. Data on their geographic distribution, and particularities of their biology, such as depth preference, seasonal occurrence and feeding habits, complete the information given for each species. An appendix that includes a list of synonyms and their combinations, followed by the alphabetic index of the taxonomic names, close the volume and help reading and finding particular species.

The book was intended to be the *vademecum* that would contain all the taxonomic and systematic information on the Iberian marine copepods. Very seldom does a long awaited event reach the level of expectation it has aroused. The publication of this monograph by F. Vives and A.A. Shmeleva is one of

these rare cases and, I am glad to add, has largely surpassed the highest hopes of those that knew about the work underway. But really it could not be otherwise, given the high scientific level, scholarship, enthusiasm and working capacity of Prof. Vives, who is the soul of the book. The scientific value of the book is unquestionable. It is not only a useful tool for current and future copepodologists, but also the successful compendium of a life time devoted to science in general and to copepods in particular.

The inevitable, although somewhat excessive, weight and volume of the book (you will not carry it in your pocket!), the curious arrangement of the figure captions in three columns, and some errors that have slipped the proof corrections are minor editing problems. The publication of the book in Spanish will make it accessible to a large number of readers, and even those who are not so familiar with the language will be able to cope with the terminology. Nevertheless, its translation into English would open the possibility of enlarging the range of potential users.

I am waiting eagerly for the publication of the second volume dealing with the remaining groups of marine Copepods!

MIGUEL ALCARAZ  
Institut de Ciències del Mar, CSIC