

Review

Barnes, R. S. K. 1994: The brackish-water fauna of northwestern Europe. — Cambridge University Press. 287 pp. ISBN 0-521-45556-1. Paperback; price GBP 15.95.

Brackish water can be found wherever sea water mixes with freshwater. This happens regularly in river estuaries, but a variety of other kinds of brackish biotopes exist in Europe, including salt marshes, coastal lagoons and rock pools. The Baltic Sea is the most extensive brackish sea in the world. Because brackish-water ecosystems are usually spatially isolated from each other they possess distinct local characteristics. Common features for these transitory areas between the ocean and continental drainage area are instability and a relatively low biodiversity, with their euryhaline species adapted to salinity fluctuations. Although brackish-water ecosystems may be highly productive and of great environmental value, they are under increasing threat from hazards caused by human activities. From the Nordic point of view, all organisms living in the Baltic Sea are brackish-water biota *in sensu lato*. Consequently, the recent book by Barnes on the systematics of *The Brackish-water Fauna of Northwestern Europe* is a welcome and significant work; a comprehensive presentation of this topic has been lacking.

All biologists working in a brackish environment confront a practical problem: being forced to devote themselves to taxonomic literature on freshwater, marine, and even terrestrial fauna. R. S. K. Barnes (the author of popular textbooks in marine science) has collected and summarized data on the systematics and ecology of the invertebrates and fish which are commonly found in the British estuaries and surrounding waters.

The book has two sections. In the first chapters Barnes gives general information on the origin and diversity of the brackish-water habitats and communities as well as on the ecology of the biota. The first section is short and compact, with selected examples and references. The latter part of the book gives keys for the identification of animal groups and species. The keys are easy even for a non-specialist naturalist, and thus could be used, as the author suggests, in handling living sample organisms. To release unharmed animals after investigation, for instance, is good advice for routine field course participants. The systematic keys are followed by the ecological characterization and line drawings of the species with biogeographical notes.

Planktonic animals and meiofauna are outside the scope of *The brackish-water fauna*. On the other hand, the inclusion of insects in this marine biological handbook, is praiseworthy.

Although Barnes' book may be useful as a general faunistic review and field guide for those studying estuarine and salt marsh biotopes in the British Isles, it lacks treatment of Baltic waters. The author categorically excludes the Baltic area from "northwestern Europe", and yet the occurrence of species in the Baltic area is regularly referred to. This is highly confusing and obscure from the Nordic point of view, because unfortunately Barnes does not differentiate between the Danish belts and the Baltic Proper or the northern Baltic Sea. The species distributions along the salinity gradients in the Baltic belong to the classic and most illustrative examples of brackish-water biogeography. Recent investigations on the systematics, ecology and evolutionary biogeography of the typical Baltic invertebrate fauna would also be worthy of reference in a new handbook.

The graphics on the cover of the book and more than 100 pages with figures are promising at first sight. Unfortunately, the illustrations are conventional and of unsatisfactory quality to some extent. The first section of the book has examples of how to misuse computer graphics in figure-making (e.g. Figs. 16 and 17 of *Arenicola*, Fig. 20 of estuaries). Taxonomic illustrations are of better quality, practically all species being figured. However, also here some poor quality can be found, Fig. 36 of nemertines and nematodes as an example. The scale for the figures is often confusing; from Fig. 91 for instance, one could conclude that the size of *Sigara striata* is only half that of *S. dorsalis*, despite the fact that the two species are the same size and difficult to separate in reality.

The brackish water fauna of northwestern Europe by R. S. K. Barnes serves as good documentation of the difficulties confronted by any author in producing an extensive but cheap handbook on diverse fauna inhabiting a diverse range of habitats. I hope it encourages Baltic marine biologists to write a shorter review on the taxonomy, ecology and biogeography of the brackish-water fauna of "northeastern" Europe.

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