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These two volumes, in pdf format, are “intended for all who do research in and monitoring of marine ecosystems in the Arctic.” This is the first time that Atlantic and Pacific components of the fauna have been united in a comprehensive treatment. The fauna includes 229 species representing 20 orders and 46 families. Twenty-four of these species are found at the periphery of the region and, while mentioned, they do not warrant an individual species accounts. The Arctic fauna includes the agnathan *Myxine glutinosa* and 15 species of chondrichthyans. The most speciose actinopterygian families are zoarcids (35 species, including 24 in the genus *Lycodes*), cottids (29), liparids and pleuronectids, each with 17, gadids and stichaeids, each with 12, and agonids (11). These 133 actinopterygians compose 58% of the total fauna.

Volume I begins with a 10-page Introduction that includes a description of the Arctic Region and a summary of museum collections, fisheries surveys, and databases that served as reference material for the species accounts. The limits of coverage are Arctic waters with mean monthly water temperatures in winter between 2 and – 2 °C. The Introduction summarizes the “biotypes,” meaning lifestyles ranging from pelagic to benthic, and depth zones for the fishes. A remarkable 95.2% of Arctic species have either been previously DNA barcoded or were barcoded for this

project, and this information is used in sorting out taxonomic issues. The Introduction concludes with an overview of the zoogeographic patterns. My only comment on this section is that it would have been helpful if the Arctic map on page 2 was labeled with the names of the many seas, bays, and straits in the region.

Most of volume I consists of 205 species accounts arranged phylogenetically by family. The family accounts are short, a page or less. The species accounts run 1–2 pages and include all the essentials in a “Fishes of...” book: a line drawing of the species, a description of the distribution as well as a map, a morphological description, comments on size and age, notes on its habitat including depth range and preferred temperatures, and discussion and clarification of taxonomic issues. The distribution maps are centered on the North Pole and, depending on the distribution of the particular species, adjusted toward the Atlantic or Pacific. Distributions are indicated by shading and, while this may give the impression that they are approximate, they are extensively documented with references and museum specimens. Given the detail provided for the distributions, this information appears to have been a focus of the project, data that can be utilized in interpreting range expansions and contractions relative to the changing Arctic climate.

Volume II is a photographic identification guide and, with unlimited use of color, this is where the advantage of the pdf format becomes obvious. I like the idea of having this as a separate volume because it facilitates the identification process by not having to scroll through pages of text. There is one page for each species, ordered identically to the sequence in Volume I, with much more than just a typical left lateral view of each species. Frequently a page has

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a number of good color photos, from different perspectives, of unpreserved specimens, sometimes including color variants and juveniles, close-ups of diagnostic features, and line drawings of teeth or other elements important for identification. The photos have captioned leader lines pointing to important diagnostic features. I was surprised by the absence of taxonomic keys but, as noted on page 17 of Vol. I, most Arctic species can be identified without using meristic counts and measurements. If the liparid genus *Paraliparis*, with only two species, is taken as an example, the Arctic fauna obviously is not characterized by large radiations such as the nearly 50 morphologically similar species of *Paraliparis* from the Antarctic. However, I cannot help but wondering if keys might be helpful in identifying stichaeids, cottids, and zoarcids of the genus *Lycodes*.

At the end of Volume II, there is a useful Appendix consisting of an eight-page table that summarizes for each species its nomenclature, zoogeographic subregion, distribution by ocean, habitat, and depth zone.

I congratulate the 11 authors for their work on this project. As the Arctic environment changes in response to climate, we now have a definitive treatment of the fish fauna. As far as I am concerned, these authoritative volumes serve as an example of how to create a “Fishes of ...” book in a pdf format. The Norwegian Ministry of Foreign Affairs also deserves acknowledgement for the science it has supported by funding this project, and also for making the volumes available without charge.