

## Marine Fishes of Arctic Canada

Edited by Brian W. Coad and James D. Reist. 2017. University of Toronto Press. 632 pages and 200 illustrations, 74.96 CAD, Cloth or E-book.

Thoroughly describing the marine fishes of Arctic Canada is an enormous undertaking. Not only are there many known species (221), but the Arctic marine environment is notoriously difficult to survey owing to the presence of sea ice, remoteness, and the extreme environmental conditions. Many species will therefore be underrepresented in studies owing to small survey effort, and entire regions may be entirely unsampled, especially in the northernmost areas where sea ice never melts. In *Marine Fishes of Arctic Canada*, the authors expertly describe all 221 species of marine fishes that are known in Arctic Canada but, most importantly, acknowledge the data limitations for these species. Unlike other guides that attempt to draw species ranges on maps, this guide simply shows the locations where the species has been found in Arctic Canada and puts it in the context of where the species is found in the rest of the world. These points on the map are a direct acknowledgement of the vast, remote nature of the region and that, with more survey effort, these species may be found in other areas. These 221 species include 37 species that were not previously included in lists of Canadian Arctic marine fishes. The "Checklist of Species" also lists extralimital species that are found adjacent to Canadian Arctic waters, and may be found in the Canadian Arctic with increased survey effort.

The authors also provide impressive details about each species, with more than 400 pages dedicated to species accounts. The amount of information presented for each species is tempered by how common they are in the region and how much they have been studied. For example, 6.5 pages are devoted to Arctic Char (*Salvelinus alpinus*), whereas Threadfin Grenadier (*Gadomus longifilis*) is described in just over one page. While

Arctic Char is found throughout the Canadian Arctic, Threadfin Grenadier has only been observed once in the Canadian Arctic. When applicable, an exhaustive list of common names is included, such as the 57 different names for Arctic Char.

While most of the text is devoted to detailed species accounts, the first 72 pages focus on defining the context of the book, including rationale for the book and history of fisheries research in the Canadian Arctic, providing background information on the Arctic (environment, climate, and habitat), sources of knowledge used in the text (scientific research, traditional ecological knowledge, and fisheries), and information on scientific names, technical terms, and the collection and preservation of specimens. This background information allows the less knowledgeable reader to gain a fuller appreciation of the amount of effort put into this volume and provides important context for the species accounts. Finally, for novice ichthyologists, the authors provide a detailed key for identification of families and species. Not only do they provide good drawings of the species, but they also draw the characteristics being described in the key, which can be very useful for those unfamiliar with fish anatomy.

Overall, *Marine Fishes of Arctic Canada* is an excellent text for anyone interested in detailed accounts of fish in the Canadian Arctic. The guide includes sufficient details and references for serious scientists, but also provides excellent coverage of information for the amateur naturalist or interested lay-person.

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