

Marine Fishes of the Arctic

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Recognition of global climate change and the concomitant increased research in Arctic seas have revealed significant knowledge gaps, reviewed recently in the Council of Arctic Flora and Fauna (CAFF) Arctic Biodiversity Assessment. The chapter on marine fishes demonstrated the need for a comprehensive review and assessment of distribution, taxonomy, and biology. The atlas and guide under current development will provide a baseline reference for identifying marine fish species of the Arctic region and evaluating changes in diversity and distribution.

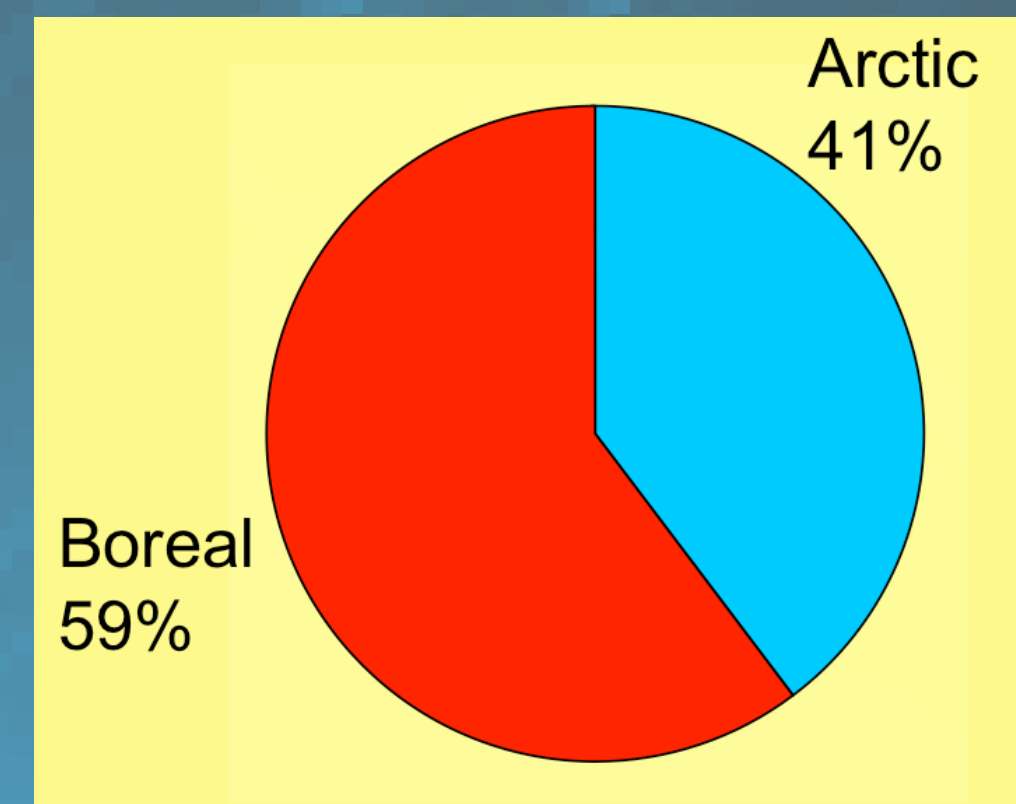
Marine Fishes of the Arctic builds on a guide to the Pacific Arctic marine fishes which is nearing completion and has been developed under the Russian–American Long-Term Census of the Arctic sponsored by the U.S. NOAA Arctic Research Office and the Russian Academy of Sciences. That work will now be expanded to cover the Atlantic Arctic, with expertise from additional world-rekowned Arctic fish specialists as well as the CBMP’s Marine Fish Expert Network. The atlas will provide global distribution maps for each species, descriptions of their morphology and characteristics for identification, and information on habitat, diet, and life history.

Marine Fishes of the Arctic is in the planning stage and its format will be the main topic at the kick-off meeting in Bergen, 5–6 December. The work is funded by the Norwegian Ministry of Foreign Affairs and the project period is 2015–2017.

ARCTIC REGION

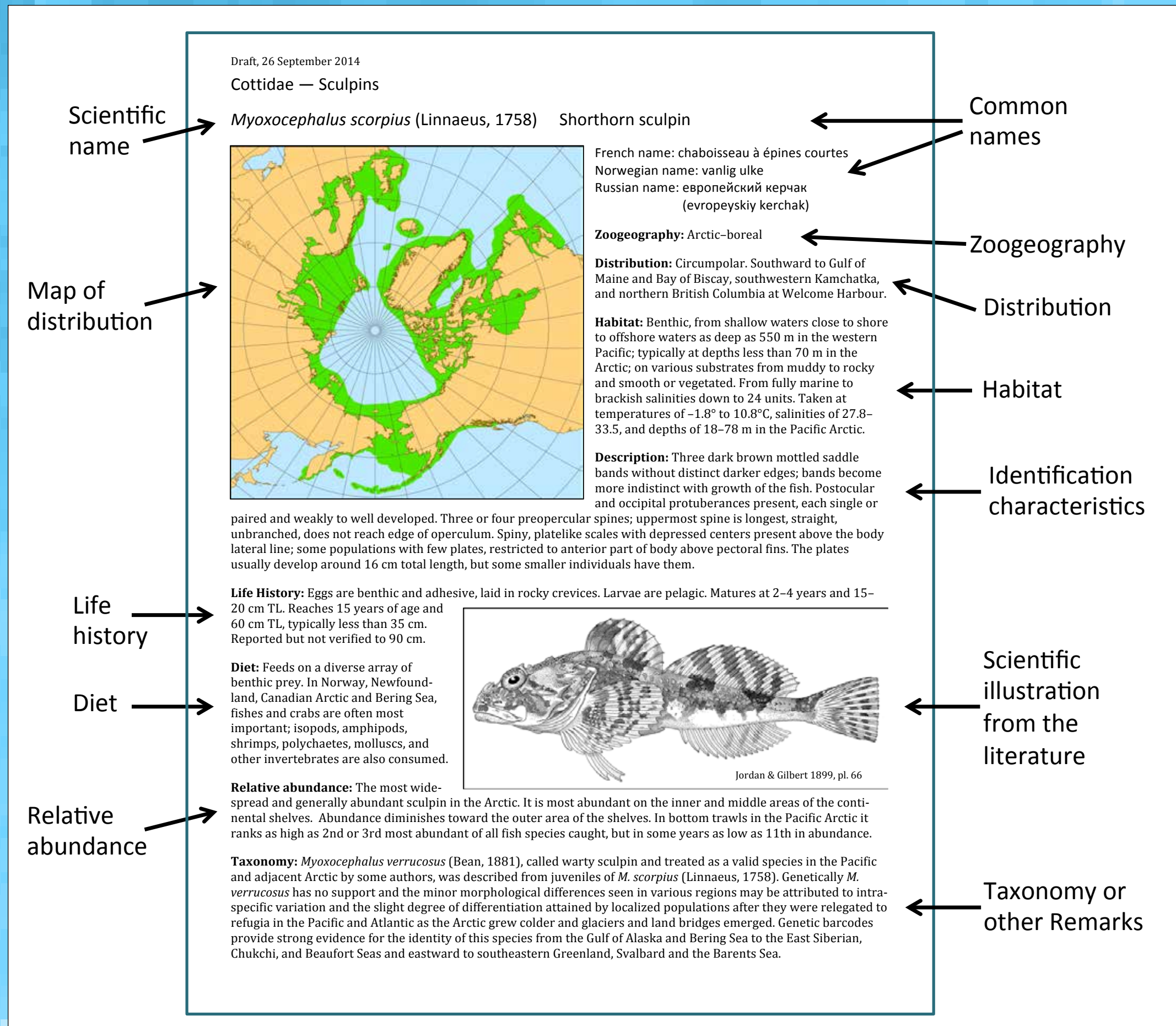


Arctic Region, defined as it pertains for marine fishes. Truly Arctic marine fish species are rarely found outside of this region. Many warmer-water, Boreal species have penetrated into this region.



Altogether, about 240 fish species inhabit the Arctic Region. The Boreal species have been moving into the Arctic for millennia as the glaciers and sea ice retreated and land bridges disappeared. At present the region has more Boreal than truly Arctic species and the trend continues as the climate warms.

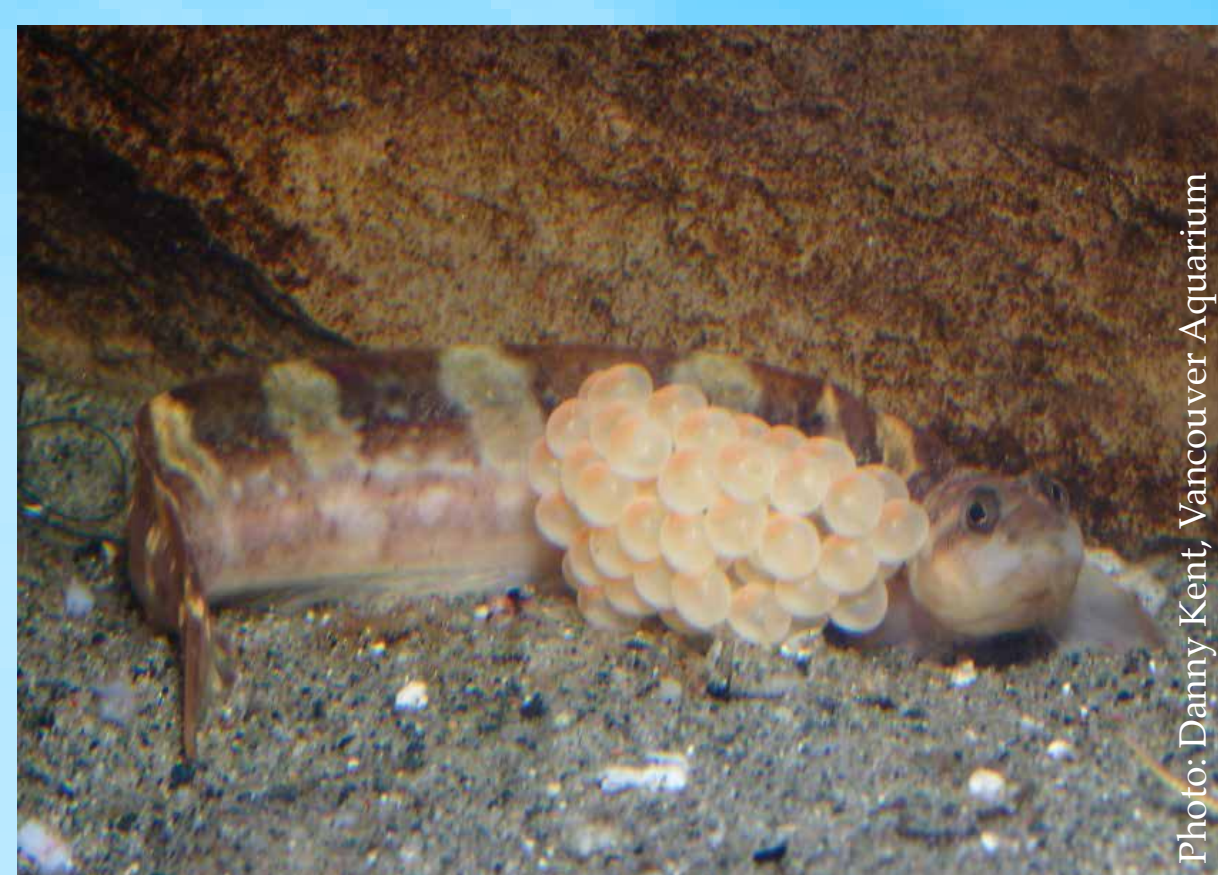
SPECIES ACCOUNTS



Species accounts will include several kinds of information. A References section with literature as well as sources of previously unpublished data will be included.

LIFE HISTORY

Information on major life history features from spawning to maximum size and age will be included.

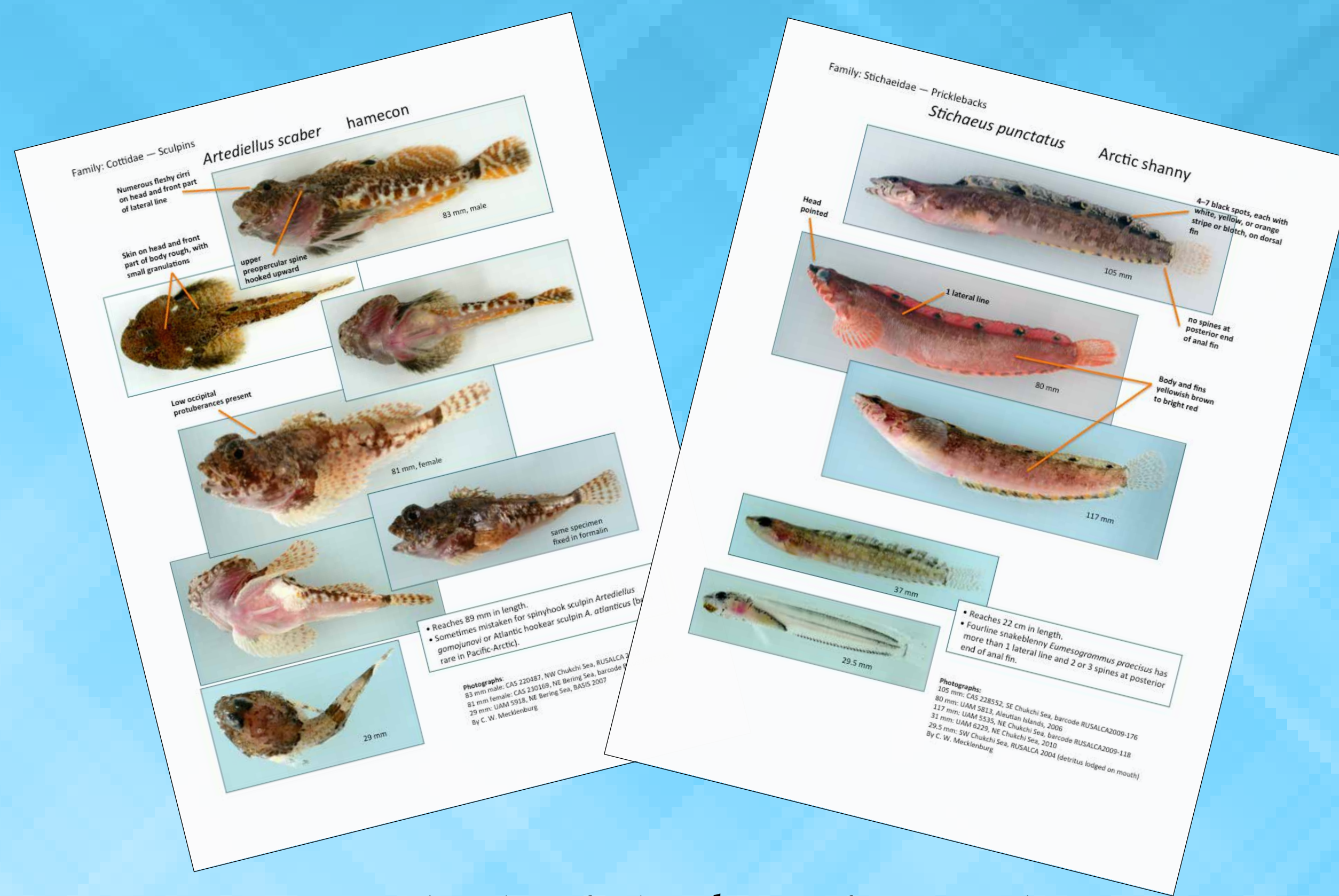


TRADITIONAL KNOWLEDGE



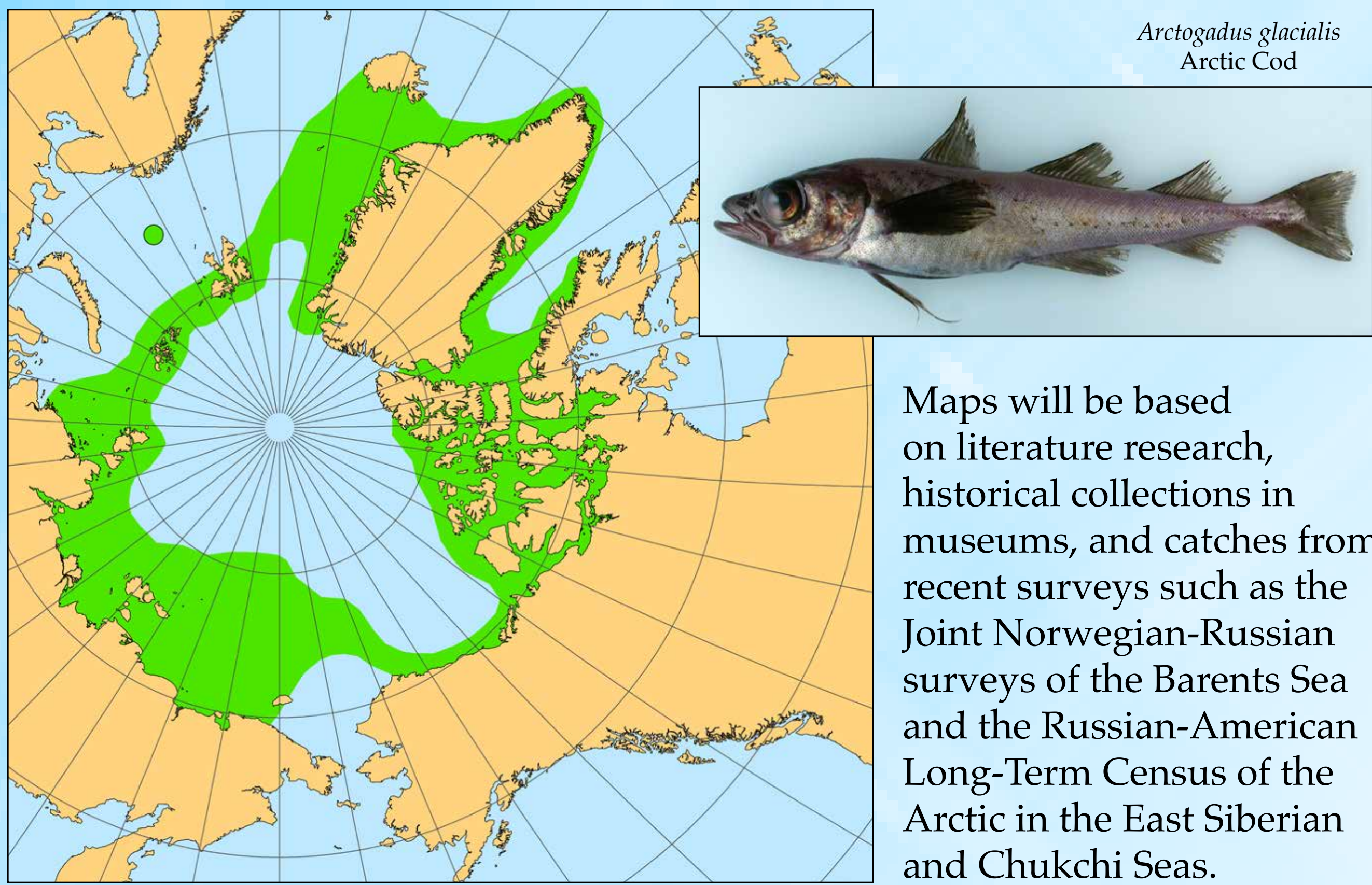
Where possible, information from traditional knowledge holders will be incorporated.

PHOTO IDENTIFICATION



Species may be identified without reference to keys by searching the photo identification pages which point out the essential features of each species.

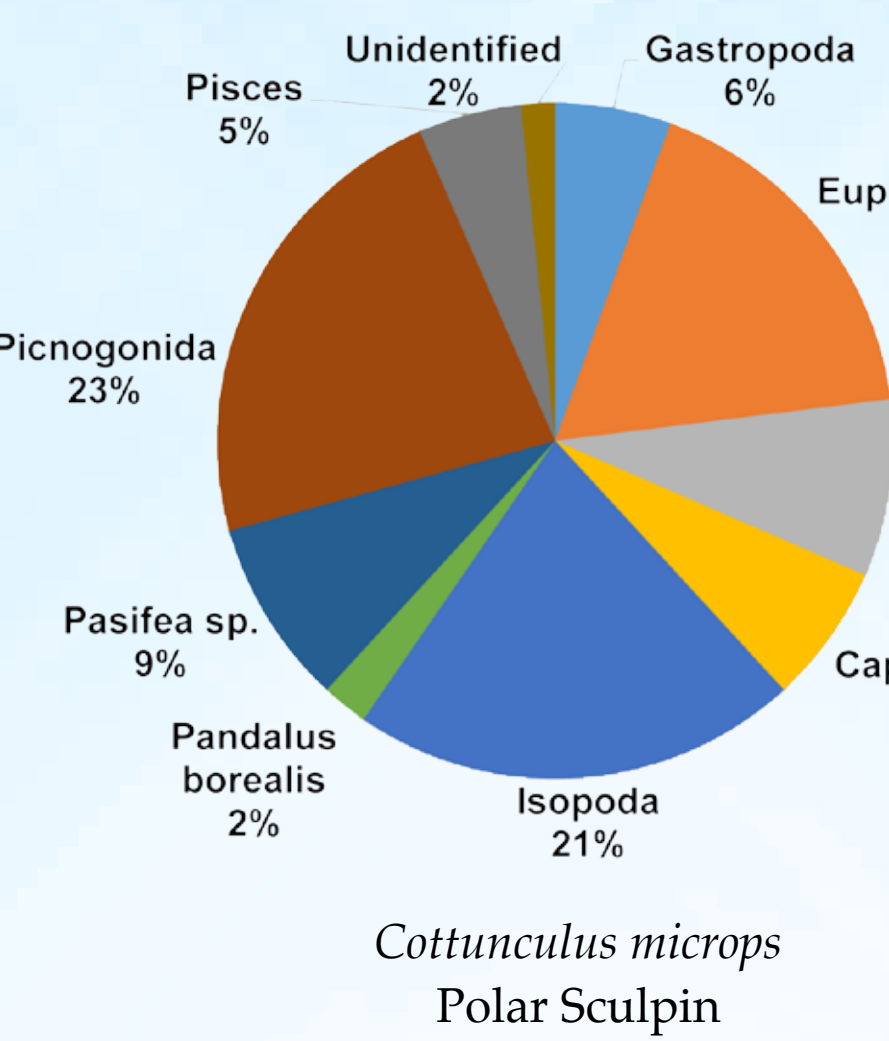
SPECIES MAPS



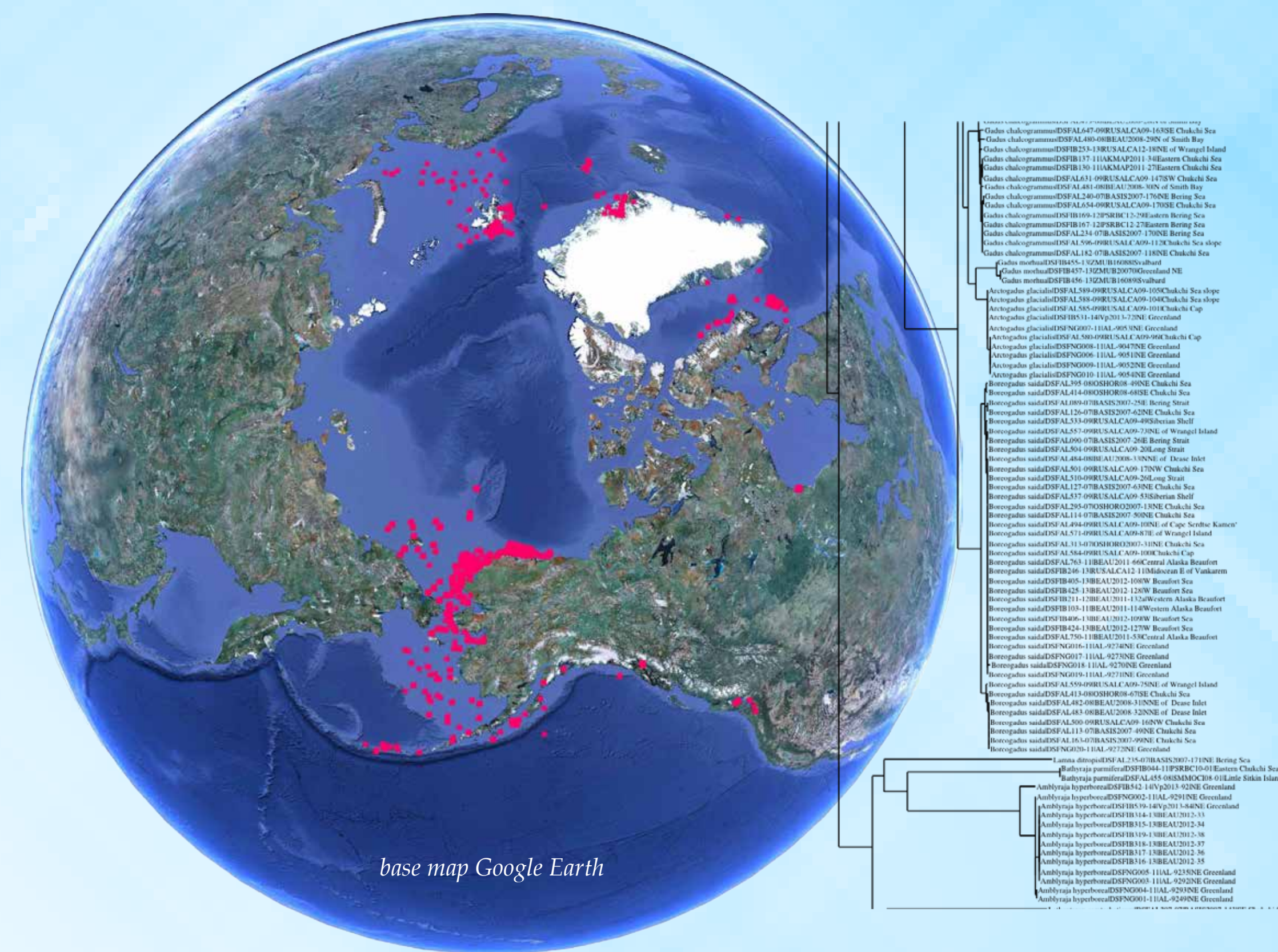
Maps will be based on literature research, historical collections in museums, and catches from recent surveys such as the Joint Norwegian-Russian surveys of the Barents Sea and the Russian-American Long-Term Census of the Arctic in the East Siberian and Chukchi Seas.

DIET

Recent research on diets will be summarized.



BARCODE REFERENCE LIBRARY



Completion of the Arctic marine fish barcode reference library is a part of this project. The barcodes can be used to identify difficult specimens and aid in resolution of controversial taxonomy. Pink dots represent the collection localities for the 1,445 barcoded fish specimens currently in the library.