

Known fish species living in the Salish Sea increases in new report

September 30 2015, by Michelle Ma

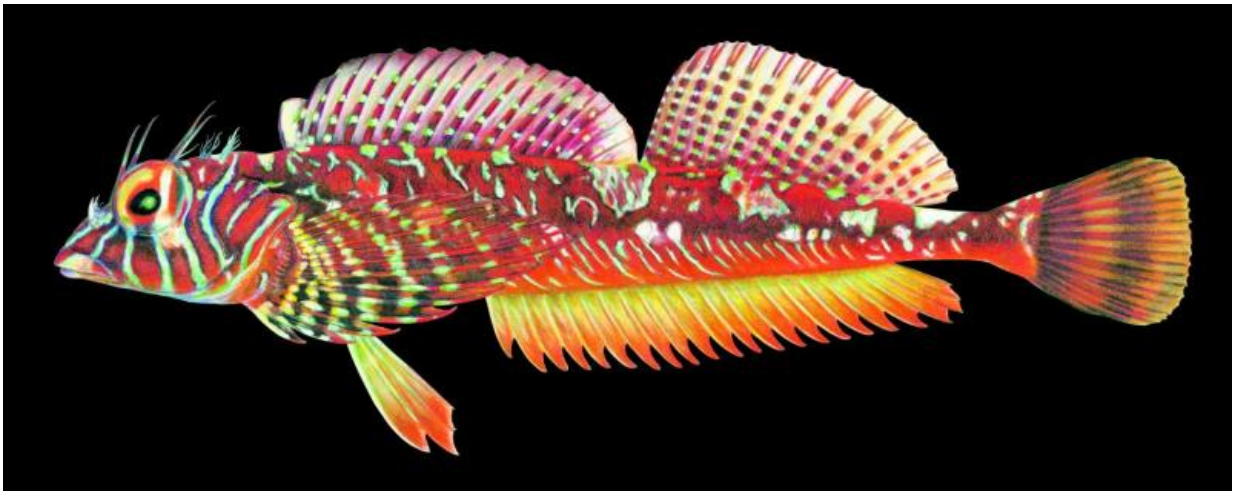


Illustration of the longfin sculpin (*Jordania zonope*). Credit: Joseph R. Tomelleri

Coho salmon, Pacific halibut and even the dogfish shark are familiar faces to many people in the Salish Sea region. But what about the Pacific viperfish, northern flashlightfish, dwarf wrymouth or the longsnout prickleback?

These colorfully named species and others are compiled in a new, 106-page [report](#) that documents all of the fishes that live in the Salish Sea, a roughly 6,500-square-mile region that encompasses Puget Sound, the Strait of Juan de Fuca, the Strait of Georgia, the San Juan Islands and

the Canadian Gulf Islands.

In total, 253 fish species have been recorded in the Salish Sea, and that's about 14 percent more than in the last count, said Ted Pietsch, co-author of the new report and a University of Washington emeritus professor of aquatic and fishery sciences.

Previous surveys never fully captured the total number of fish species, though Salish Sea bird and mammal species are documented in full.

"It's quite astonishing to think that people haven't really known what's here in any detail," Pietsch said. "In preparing this report, we've really turned over every stone to make sure we have every fish species ever recorded from our inland marine waters."

The paper's other author is Jay Orr, a scientist with the Alaska Fisheries Science Center and a former graduate student of Pietsch's. Their exhaustive report represents the first thorough survey and analysis of Salish Sea fishes in 35 years.



Illustration of kelp greenling (*Hexagrammos decagrammus*). Credit: Joseph R. Tomelleri

"Fishes of the Salish Sea: A compilation and distributional analysis," published online Tuesday by the National Oceanic and Atmospheric Administration, includes a full taxonomic list as well as an analysis of geographic distribution and relative local abundance, along with common and scientific names and key references to learn more about each species. Some of the fishes are depicted in hand-drawn images by artist Joe Tomelleri, so accurate and life-like that they are easily mistaken for photographs.

The report is a precursor to a book coming out in a year or two that will feature Tomelleri's drawings of all 253 Salish Sea [fish species](#).

This report and the eventual book will be useful for scientists, anglers, educators and others in identifying Salish fishes, tracking the distribution and abundance of known species, assessing the health of their habitat and determining when these populations might be in danger of disappearing.

"If you don't first know what you have, it's impossible to know what you might be losing," Pietsch said.

Pietsch and Orr scoured multiple sources to determine whether each species listed in the report lives or was known to live in the Salish Sea region, also known as the inland marine waters of Washington and British Columbia. Their primary source was the vast fish collection of the UW Burke Museum of Natural History and Culture—which now contains more than 11 million specimens—and they looked also at other

major fish collections along the West Coast, including those at the University of British Columbia, the Royal British Columbia Museum in Victoria, B.C., and the California Academy of Sciences in San Francisco.

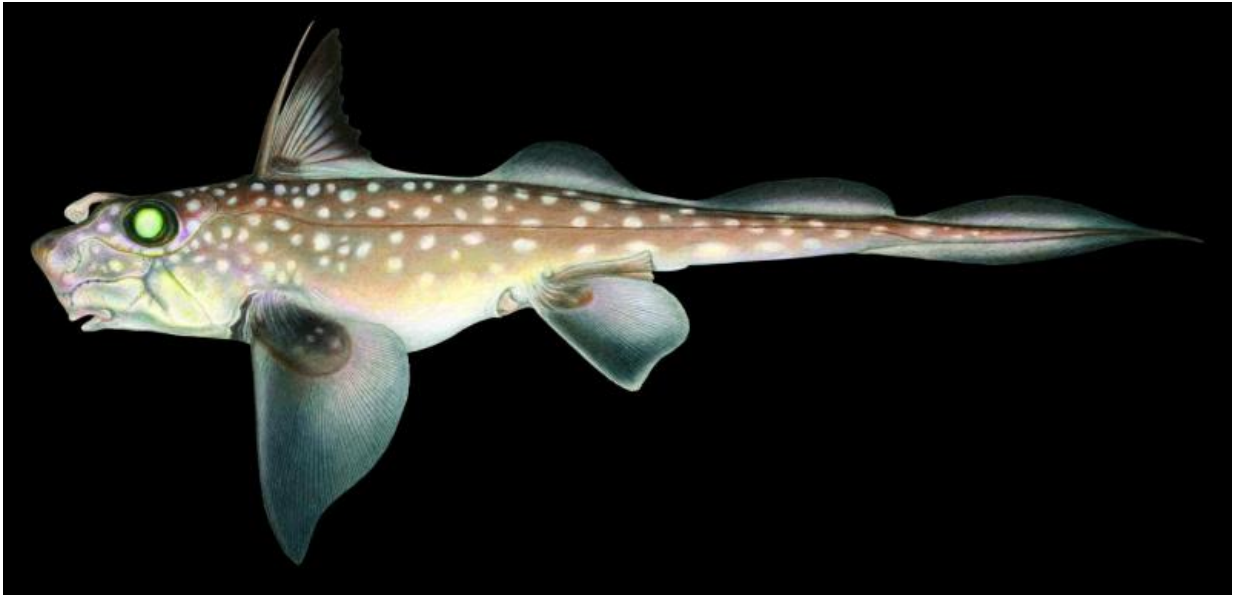


Illustration of spotted ratfish (*Hydrolagus coliei*). Credit: Joseph R. Tomelleri

Each species described in the report had to have a corresponding specimen or a good-quality photograph to ensure its existence, past or present. The Burke Museum contains archived specimens of nearly all of the 253 species.

Some of the newly added species include the prickly sculpin, Bering eelpout, spotted cusk-eel and the halfbanded rockfish. Including them in the full report means these species were seen and documented in the region sometime in the past, but weren't represented on the last survey list, which was published in 1980.

In total, 37 new species were added, and five [species](#) were removed from the list because researchers couldn't find evidence of their presence in the Salish Sea.

The online publication and upcoming book capture knowledge gained from Pietsch's 37 years of teaching and archiving specimens at the UW. The professor and curator of fishes at the Burke Museum retired this past summer.

More information: Report: spo.nmfs.noaa.gov/pp18.pdf

Provided by University of Washington

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