OCCURRENCE OF A RATFISH IN THE COLUMBIA RIVER ESTUARY

A ratfish, *Hydrolagus colliei* (Lay and Bennett), was captured in the Columbia River estuary, near the Oregon shore, on 24 August 1972. Commercial fishermen Howard and Mark Simonsen captured the specimen near buoy 21, approximately 8 km upstream from the mouth of the river. They were fishing for salmon in 8 m of water with a dacron gillnet of 8 ⅝-inch mesh and an effective fishing depth of between 10 and 12 m. The fish was caught at 2030 h during an incoming tide; the actual depth, temperature, and salinity at place of capture are unknown. At the time of capture, however, our monitoring station, 3.2 km farther upstream, indicated a water temperature of 13.4°C and a salinity of 5‰ at a depth of 10 m. The salinity was increasing and reached 31‰ 5 h later. The ratfish was an adult male, 445 mm in length, weighing 460 gm (Figure 1). There are no known methods of determining the ages of chimaeroids, including the ratfish (Simmons and Laurie, 1972). The specimen was preserved and is now part of the collection at the facility of the Northwest Fisheries Center, National Marine Fisheries Service, at Hammond, Oreg. Although ratfish are distributed along the coast of western North America from southeastern Alaska to Baja California, including the upper Gulf of California (Hart, 1973), this is the first record of one appearing in the Columbia River estuary. In fact, no chimaeroid has been recorded from any estuarine water (Carl L. Hubbs, Scripps Institution of Oceanography, University of California at San Diego, La Jolla, CA 92037, pers. commun).

"*Hydrolagus colliei* is the only species of chimaera reported from the west coast of the United States, and, unlike other species in the family, it generally inhabits relatively shallow water." (Halstead, 1970). According to Hart (1973), ratfish are common visitors to shallow Canadian waters but are most abundant at 92 to 275 m in inside waters and at 183 to 366 m in outside waters. He also reports that they are "in deeper water toward the south (as in northern California)". The occurrence in the deeper water toward the south is real and significant, but they may not occur in deeper waters off northern California because that is an area of extremely cold ocean temperatures (Carl L. Hubbs, pers. commun.). Day and Pearcy (1968) captured ratfish off the Oregon coast at depths between 40 and 200 m. Ratfish are weak swimmers, mostly noctural in behavior, but have been seen swimming at the surface in southeastern Alaska and British Columbia waters (Goode and Bean, 1895).

Maximum spawning activity is in late summer and early fall (Sathyaneson, 1966). On 26 June 1957, a large concentration of ratfish became

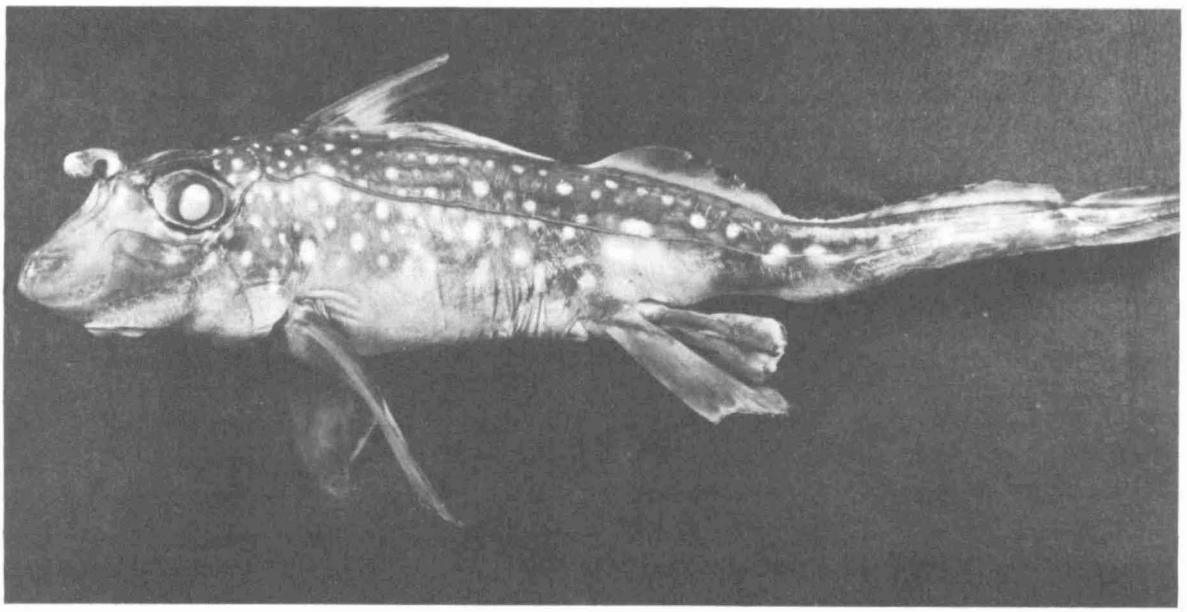

FIGURE 1.—Ratfish, *Hydrolagus colliei*, captured in the Columbia River estuary.

trapped in the tide pools of Cape Arago, Oreg. It was suspected they were spawning near shore (Jopson, 1958).

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UNUSUAL OCCURRENCE OF AN EASTERN BANDED KILLIFISH IN THE LOWER COLUMBIA RIVER

The recorded geographic range for the eastern banded killifish, *Fundulus diaphanus diaphanus*, is in the waters of the Atlantic coastal states from South Carolina north to Newfoundland. They occur in lakes, quiet rivers, and Atlantic coast estuaries (Hubbs and Lagler, 1958).

On 19 August 1971, an eastern banded killifish was collected by the National Marine Fisheries Service on the Oregon side of the Columbia River about 75 km upstream from Astoria. The fish, shown in Figure 1, was taken in shallow water with a 100-m long beach seine. River temperature

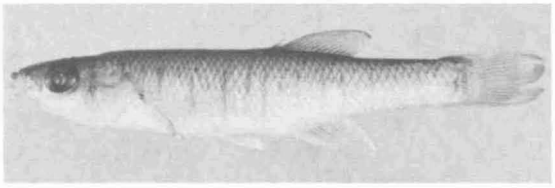

FIGURE 1.—Eastern banded killifish, *Fundulus diaphanus diaphanus*, captured in the lower Columbia River.

on the date of capture was 19°C. The specimen was 59 mm in standard length, and coloration was similar to that described by Trautman (1957) for the species, olivaceous on the dorsal surface with a light yellow ventral surface. This specimen also possessed an iridescent blue-green stripe horizontally along each side, which faded rapidly after capture. It is now in the collection of the National Marine Fisheries Service Biological Field Station at Hammond, Oreg. Additional specimens have not been taken in the area, and the authors conclude that the presence of the fish was probably due to an unauthorized release.

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