

leaves 5 or 6 meters long. The burrowing cotyledon of the seedling is about 15 cm. long, the first sheath 8 cm., the second sheath 24 to 28 cm. and the first leaf about 70 cm. long, with the sheaths soon resolved into fine simple fibers as in *Ammandra*.

ZOOLOGY.—*The occurrence of Naobranchia occidentalis on the Pacific Coast of the United States.*¹ DEOGRACIAS V. VILLADOLID, Stanford University, California (Communicated by DAVID STARR JORDAN).

In April, 1925, I collected specimens of parasitic copepods from the gills of *Parophrys vetulus* (Girard), taken from off Point Reyes, California in water about 50 fathoms deep. The flounder was taken in a "paranzella" net, operated by the trawlers, "Henrietta" and "Three sisters" of the Paladini Fish Company, San Francisco.

In the following June and July I made a trip to Puget Sound in the interest of my flat-fish studies. On July 6, 7, and 8, I was with Captain Fred Weisse of Snohomish, Washington, in his trawler, "Bonita," fishing in Tulalip Harbor, Fort Susan Harbor, and Saratoga Passage, off Whidby Island, San Juan County. During this trip, I collected a number of the same parasites from the gills of *Parophrys vetulus* and *Hippoglossoides elassodon*, both of which are common flounders of Puget Sound. They were all taken by an otter trawl at a depth of about 40 to 60 fathoms. On June 28, 1925, I collected a few of these parasites from the gills of *Platichthys stellatus*, the common flounder of the Pacific Coast of the United States. These flounders were taken from fish traps in Mutiny and Admiralty Bays in water of about 10 fathoms.

The specimens were sent to Professor Charles B. Wilson, of Westfield, Massachusetts, a specialist on the group. To quote Professor Wilson, "The parasites you sent me from the gills of the small flounder, *Parophrys vetulus*, prove to be *Naobranchia occidentalis*, one of the Lernaeopodidae. The only other specimens of this parasite known were five females and one male taken from the gills of the Pacific cod, *Gadus macrocephalus*, at Chignik Bay, Alaska, by the "Albatross." You have thus added a new host and have brought the parasite within the limits of the United States. I will keep the specimens and add them to the collection in the National Museum."

It is of interest to note that *Naobranchia occidentalis* is more common

¹ Received February 12, 1927.

in the northern waters of the Pacific as it approaches its type locality, Chignik Bay, Alaska than in the southern part of its range.

At the present writing, *Naobranchia occidentalis* is known to occur from Point Reyes, California to Chignik Bay, Alaska, in water from 10 to about 50 fathoms deep, from the gills of the Pacific cod (*Gadus macrocephalus*) and three flounders, namely: *Parophrys vetulus* (Girard), the common California "sole" or the sharp-nosed "sole" of Puget Sound; *Platichthys stellatus* (Pallas), the starry flounder; and *Hippoglossoides elassodon* Jordan & Gilbert, the rough-back "sole" or the mud "sole" of the Puget Sound.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

THE GEOLOGICAL SOCIETY

424TH MEETING

The 424th meeting was held at the Cosmos Club, January 26, 1927, President BUTTS presiding. The Secretary announced the election to active membership of P. D. TRASK and MARIE STADNICHENKO.

Informal communications: O. E. MEINZER called attention to the Seventh Biennial Report of the State Engineer of New Mexico, recently published, which is likely to escape the notice of geologists but which contains five brief papers on ground-water hydrology prepared by members of the Division of Ground Water of the U. S. Geological Survey. These papers are based on investigations that were made possible by appropriations of the State Legislature two years ago. They are as follows:

1. *The Roswell Artesian Basin*, by A. G. Fiedler. This is a preliminary report on one of the most productive artesian basins in the United States, and is based on one of the most thorough and intensive studies of artesian conditions that has ever been made.

2. *The geology and artesian water prospects in the San Jose-Rio Puerco Valley, in Sandoval County*, by B. Coleman Renick. The geologic section includes rocks of pre-Cambrian, Pennsylvania, Permian, Triassic, Jurassic (?), Cretaceous, Tertiary, Pleistocene, and Recent age. Most of the strata are turned up along the western slope of the Nacimiento and San Pedro mountains, forming an artesian structure. Artesian conditions were predicted by Doctor Renick, and have since been demonstrated by test drilling. Thus, this investigation furnishes an example of an artesian basin that was discovered in the course of regular field work by the Geological Survey.

3. *Reconnaissance in Socorro County*, by Kirk Bryan. This brief paper reports the results of a reconnaissance preliminary to a geologic and ground-water survey that is still to be carried out. Shore features of an ancient lake, doubtless of Pleistocene age, were discovered in the San Augustin Plains, in Socorro and Catron counties. At its high stage, this lake reached above the present 6,900-foot contour, was at least 120 feet in maximum depth, and was about 25 miles long and 7 miles wide.



Villadolid, Deogracias V. 1927. "The occurrence of *Naobranchia occidentalis* on the Pacific coast of the United States." *Journal of the Washington Academy of Sciences* 17, 230–231.

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