

*Diplophos pacificus*, n. sp. (Pl. IV. fig. B).

D. 12. A. 53. P. 9. V. 7.

The length of the head is one-fifth of the total length, the greatest depth one-tenth. Snout thrice as long as the eye, and the maxillary extending far behind the eye, nearly to the præopercular angle; eye one-seventh or one-eighth of the length of the head. Cheek covered by the enlarged suborbital bones. Dorsal fin higher than the body, its origin nearer to the end of the snout than to the root of the caudal fin; its last rays are opposite to those of the anal. Anal extending to within a short distance of the caudal fin, its anterior rays are longest, but shorter than those of the dorsal; ventral fin rather long, reaching to the origin of the dorsal fin, more than twice as remote from the pectoral as from the dorsal. A singular spine-like projection opposite to the last anal ray may be an accidentally detached portion of the root of the caudal fin, or represent a rudimentary adipose fin.

The phosphorescent organs are arranged as in *Diplophos tænia*, but are more developed, having a silvery centre with a black ring, not only those of the main series but also the smaller ones of the secondary series. Another series of small organs runs along the middle of the side of the body and seems to be a specialized lateral line. Other luminous organs, but very indistinct, can be seen on the hyoid bone.

Brownish, with silvery lustre.

A single young specimen of this interesting fish was obtained on September 2, 1875, in Mid-Pacific (lat. 5° 54' N., long. 147° 2' W.), in the tow-net which had been attached to the dredge. Although the dredge descended to a great depth, there is no doubt that the specimen was obtained close to the surface; it is 37 mm. long, that is, nearly of the same length as the typical specimen of the Atlantic species. It had been mounted as a microscopic preparation in glycerine, and has suffered considerably from this mode of preservation. Although nearly of the same size as the types of the Atlantic species, it is more advanced in development, as is evident from a comparison of the luminous organs.

*Fundulus nigrofasciatus*, Lesueur.

A specimen, 1½ inches long, was obtained on the passage from Tenerife to St. Thomas, West Indies, in the tow-net, in company with other pelagic surface fishes.

The capture in mid-ocean of a species inhabiting the fresh and brackish waters of the Atlantic States of North America is of great interest. It illustrates the way in which reputed fresh-water species are spread to distant coasts by crossing wide expanses of ocean. The wide and irregular distribution of Cyprinodonts generally is probably to be thus accounted for.