

and one-fourth in the total, without caudal. It is very broad above, the width of the interorbital space being two-fifths of the length of the head; eye rather small, one-seventh of the length of the head in adult specimens, but comparatively larger in young ones. Cleft of the mouth of moderate width, the maxillary extending to below the middle of the eye; jaws even in front. Nostrils small, close together, nearer to the end of the snout than to the eye. Teeth minute, in a single series. Præoperculum with several small spinous processes on the margin. Bones of the head generally soft and flexible.

The upper profile rises abruptly from the interorbital space and describes a gentle curve to the end of the dorsal fin. The anterior rays of the latter are short, but the rays gradually increase in length backwards, those inserted on the posterior descending part of the curve being the longest. Anal fin similar in shape to the opposite part of the dorsal fin. Caudal fin rounded, with a semicircular base. Caudal peduncle with a narrow fringe of the skin above and below. Pectoral broad, rounded, as long as the post-orbital portion of the head; ventrals much shorter, inserted immediately behind the vertical from the base of the pectoral fin. Vent nearly in the middle of the length of the body.

The skin is naked, groups of minute spines indicate the course of the lateral line; also the rays of all the fins are beset with minute spines.

The gills are well developed; the gill-rakers are thin, membranaceous, flexible papillæ, and as a broad membrane is stretched in the concavity of the arches, each branchial arch bears a series of gill-rakers inside as well as outside of the membrane. Pseudo-branchiæ large, with a series of gill-rakers, similar to those of the branchial arches, along the base.

The fish is of a very light coloration, transparent below the dorsal and above the anal; its upper half is marked with large blackish spots, irregular in shape, smaller on the head and neck than on the rest of the body; they form a series along the base of the vertical fins, which are similarly spotted.

I have examined two specimens from California, of which one is 11 and the other 7 inches long.

Family TRACHINIDÆ.

Bathyraco.

Bathyraco, Günth., Ann. and Mag. Nat. Hist., 1878, vol. ii. p. 18.

Body elongate, subcylindrical; tail tapering and very attenuated behind; head depressed, with the snout much elongate, spatulate; mouth wide, horizontal, with the lower jaw prominent; eyes very large, vertical, close together. Scales very small,