Habitat.—Two specimens were obtained by the U.S. Fish Commission; one $8\frac{1}{2}$ inches long in lat. 28° N., long. 87° 43′ W., at 1430 fathoms; the other, $2\frac{1}{2}$ inches long, off Dominica in 330 fathoms.

Diplacanthopoma, n. gen.

Body compressed, elongate, covered with small and thin scales; lateral line very indistinct; head rather depressed, naked, with thin bones and wide muciferous channels. Eye of moderate size. Nostrils far apart, the posterior widely open, in front of the eye, and the anterior at the extremity of the snout. Operculum with two spines, one pointing backwards, the other situated behind the angle of the præoperculum and pointing downwards; præoperculum unarmed. Snout not swollen, broad, depressed, the upper jaw slightly overlapping the lower; barbels none. Mouth of moderate width; bands of villiform teeth in the jaws, on the vomer and the palatine bones. Tail attenuated; vertical fins confluent; ventrals close together, reduced to a pair of simple filaments and inserted somewhat behind the isthmus below the middle of the operculum. Gills four, with lanceolate, widely-set gill-rakers, and well-developed laminæ. Pseudobranchiæ none.

Diplacanthopoma brachysoma, n. sp. (Pl. XXIII. fig. C).

The greatest depth of the body is below the origin of the dorsal fin, and contained twice and one-third in the distance of the extremity of the snout from the vent. The head is about as deep as broad, its length being equal to the distance of the vent from the root of the ventral fins, and more than one-half of the length of the body exclusive of the tail. The vent is nearer to the snout than to the root of the caudal. Eye of moderate size, without orbital fold, as long as the snout, one-fifth of the length of the head and equal to the width of the flat interorbital space. Mouth of moderate width, the maxillary extending somewhat behind the eye and being slightly dilated behind. All the teeth are in narrow villiform bands, that of the vomer being open and \wedge -shaped. The superficial bones of the head are thin, and those of the infraorbital ring and of the mandible dilated for the reception of the wide mucous canals. Of the opercular spines the horizontal is remarkably long, much longer than the lower vertical one.

The vertical fins are completely united, and, owing to the great attenuation of the tail, no caudal portion can be distinguished. The rays are very thin, closely set, and of moderate length. Origin of the dorsal fin immediately behind the root of the pectoral, and that of the anal immediately behind the vent. Pectoral fins rather narrow, inserted on a short, broad, and partly free pedicle; they are longer than the postorbital portion of the head; ventrals half as long as the distance of their root from the vent.