

armature; operculum with a strong spine above. Distance of the vent from the root of the pectoral more than the length of the head.

Scales minute; also the entire head, even the space between the nostrils, covered with minute scales. Lateral line indistinct for the greater part of its course.

The dorsal fin is, like the anal, enveloped in a thick, scaly skin. It commences with short rays above the middle of the pectoral fin. The pectoral is rounded, broad, and remarkably short, about half as long as the head. Ventrals inserted below the angle of the præoperculum. Each ventral filament is bifid, the inner part being the longer.

Brown; darker behind, lighter in front. Fins blackish. Cavity of the mouth grey, peritoneum black.

Total length,  $29\frac{1}{2}$  inches; length of the head,  $5\frac{3}{4}$  inches; length of ventral filament, 3 inches; distance of the vent from the snout,  $12\frac{1}{2}$  inches. This specimen is the largest deep-sea fish obtained by the Expedition.

*Habitat*.—South of Yedo, near Yokohama, Japan, Station 237; depth, 1875 fathoms. One specimen.

Without causing more injury to the unique specimen than is consistent with its preservation, the following points could be made out as regards its abdominal organs.

The œsophagus is provided with about ten deep, parallel folds, some of which coalesce where the œsophagus passes into the stomach, forming then only seven deep and broad folds. The stomach is short, without cæcal prolongation behind, simply bent towards the right at its posterior extremity, and passing immediately into the intestine. A duodenal division cannot be distinguished. The walls of the stomach are very thick, and strengthened by an outer stratum of longitudinal muscular fascicles. Externally the pylorus is marked by a slight constriction, pyloric appendages being absent. Internally the pyloric passage is indicated by a very low circular fold, on which the longitudinal folds of the mucous membrane of the stomach terminate, and behind which the villosities of the intestinal tube begin. I do not recollect any other fish in which the mucous membrane of the intestine shows an equally developed villous texture. The villosities are long, coarse, and densely packed, transversely lamellar or pointed, becoming lower in the vicinity of the rectum. Rectum short, separated by a deep circular valvular fold from the upper part of the intestine; its mucous membrane has a reticulated surface. The intestinal tract makes one and a half convolutions, and the mesenteric blood-vessels are singularly wide and thick-walled.

The liver is very large, occupying about one-third of the abdominal cavity, viz., the whole of its left side, extending nearly to its hinder end. Its anterior transverse portion bends over into a very short and narrow right lobe. The gall-bladder is large, entirely separate from the liver, sending a narrow duct into the intestine a considerable