selective power, however, must have been exercised, for the alimentary canal contained greyish mud in which small *Globigerinæ* and other Foraminifera, an occasional sponge-spicule, and numerous Coccoliths were found.

The body-wall presents a largely developed hypoderm, that along the ventral arch being especially massive. The nerve-cords are comparatively large, elongated from above downward, so as to present the aspect of an olive, or together of a double cocoa-nut. They are placed outside the circular muscular coat, which is moderately developed. The longitudinal dorsal muscles are somewhat less extended than usual in the group, and are thin. The attachment of the fibres suspending the alimentary canal alone disconnect them. The longitudinal ventral, on the other hand, are proportionally extended as well as massive, and the hiatus between them is moderate. The oblique are moderately developed, and are fixed to the circular just outside the nerve-area. The anterior glands and perivisceral corpuscles occur in the body-cavity.

The type differs from any known form in regard to the structure and arrangement of the branchiæ (which appear to be diagnostic). The hooks, however, have certain relations with *Thelepus*, but differ from the known genera in the direction of the mucro. The number of the bristle-bundles is the same as in *Phenacia*, De Quatrefages, viz., twenty pairs.

Euthelepus chilensis, n. sp. (Pl. LI. figs. 4, 5; Pl. XXVIIIA. figs. 14, 15).

Habitat.—Trawled at Station 299 (off Valparaiso), December 14, 1875; lat. 33° 31′ S., long. 74° 43′ W.; depth, 2160 fathoms; bottom temperature 35°·2, surface temperature 62°·0; sea-bottom, blue mud.

The longest fragment measures about 35 mm., with a diameter anteriorly of 2·5 mm. As usual the tough lining of the tube has prevented early percolation of the spirit, so that the greater part of the animal is pulpy.

This is another example of the remarkable type observed in *Euthelepus setubalensis*, and apparently intermediate between the Ampharetidæ and the present family. Anteriorly are a number of large crenate tentacles, longest dorsally and diminishing on each side ventrally. The latter form a fan-shaped series in the preparation, probably partly due to the effect of compression (the animals having been preserved in their tubes). The dorsal tentacles are very long and thick, extending in the specimens to the seventh or eighth bristled segment. Moreover, they are not marked by grooves, though some of the short ventral forms show a basal furrow. They arise as in *Thelepus* from the truncated cephalic region, and completely occupy the lobe all round. The buccal segment bears no processes. The next segment (the first bristled) has at its anterior border a pair of long smooth subulate branchiæ, which taper