In the calyces these spiny scales are arranged transversely around the periphery, and form new areas of spiny scales, each scale with concave deeply-toothed lower edge and convex upper edge, over which spines project. These scales are bent on the surface so as to correspond to the curvature of the body wall. Height to breadth in mm.—0·05–0·18; 0·07–0·14; 0·07–0·1.

The scales of the tentacles are similarly formed, and spiny.

Colour in spirit, yellowish-white.

This species was first described by Lamarck, and has been very well figured by Lamouroux.

Habitat.—Station 162, off East Moncœur Island, Bass Strait; depth, 38 fathoms; bottom, sand and shells. Three specimens.

The specimen in the Jardin des Plantes in Paris was collected by Peron and Lesueur from Australia.

During the voyage of the "Gazelle" one example was obtained off the north-west coast of Australia from a depth of 50 fathoms.

Genus 3. *Acanthoisis*, n. gen.

Colony branched, the ramification takes place in one plane, plume-like. The cœnenchyma is relatively thick and allows the jointed axis to show through only at the beginning of the stem. The polyps are arranged in close spirals on the stem and branches. They are cylindrical and upright, arising with broad bases, evenly truncated at the end. The tentacles are short, not retractile; in repose they bend together inwards over the opening of the calyx from their origin, so that they lie horizontally over the opening of the calyx and close it. The points are then bent inwards and the pinnules folded in, forming an eight-rayed star.

The axis consists of horny and calcareous joints, of which the calcareous joints in the stem are about twice as long as the horny ones. The branches on both sides arise from the calcareous joints, but sometimes so high up that the first horny joint of the branch at the same time touches the horny joint of the stem. This relation, however, only occurs in the older, thicker branches. The calcareous joints exhibit deep longitudinal furrows, which are separated from one another by sharp longitudinal ribs. The edge of each rib is split into sharp teeth, which stand upright in the middle of the joint, but at the two ends are bent towards these. The deep furrows between the ribs are partially filled, with warty, spindle-shaped spicules, which accompany the longitudinal canals. The overlying cœnenchyma contains longitudinally placed, flat, longish calcareous bodies with strongly toothed edges, unsymmetrically shaped; in the polyps these calcareous bodies become larger and broader, and are deposited peripherally in the body wall with the toothed edges interlocking. In the tentacles similarly formed calcareous bodies are