Acanthella, nov. gen.

Name, a diminutive noun formed from ἄκανθα, a thorn, in allusion to the spine-bearing terminations of the branches.

Generic Character. *Trophosome.*—Hydrocladia pinnately disposed; hydrocladia-bearing branches terminating in simple jointed prolongations in which the places of the hydrocladia are taken by spine-like appendages.

Gonosome not known.

The genus *Acanthella*, so far as regards its trophosome, represents among the Eleutheroplean section of the Plumularidæ the genus *Acanthocladium* of the Statoplea. The peculiar terminations of the branches are essentially the same in both, and the lateral spines which these support are in both cases the morphological equivalents of hydrocladia. No part of the gonosome was present in the specimens of the only species referrible to *Acanthella*.

Acanthella effusa, Busk, sp. (Pl. VI.).

Plumularia effusa, Busk, Voyage of the "Rattlesnake," 1852, vol. i. p. 400.

Trophosome.—Colony attaining a height of twelve inches; main stem springing from a dense mass of entangled filaments, monosiphonic, giving off a multitude of scattered subdivided branches, which carry the hydrocladia, every subdivision ending in a spine-like continuation which is composed of numerous internodes, each internode supporting two or more stout blunt spines; hydrocladia one-tenth of an inch in length. Hydrothecæ pitcher-shaped, with entire margin, adnate by their whole height to the rachis; mesial nematophore single, springing from a point close to the base of the hydrotheca, lateral nematophores springing from points close to its margin; hydrocladial internodes separated from one another by a very well-marked joint, and each carrying a hydrotheca.

Gonosome not known.

Acanthella effusa is a remarkable and beautiful species, and, like *Acanthocladium* affords in the curious terminations of its branches an example of the extent to which the hydrocladia may be modified, and yet allow of the recognition of their homological significance.

A very obvious transition may be traced from the simple spines, which occur towards the distal extremity of the branch, backwards into the true hydrotheca-bearing ramuli. In fact some of the posterior or more proximal spines still carry near the base a single hydrotheca, with its mesial and lateral nematophores. These spines are also borne on the summit of a thick process from the internode, while the more distal spines are not only quite destitute of hydrothecæ, but are directly confluent by their base with the internodes which carry them. In the angle between these more distal spines and the sup-