

The corallum may consist of irregular plumose branches, amongst the smaller twigs of which occasional fusions occur, or (?) of a flattened fan-like reticulum. The spines are short and subtriangular or subcylindrical, never elongate and conical. The type species differs from *Aphanipathes* in the form and structure of the polyp as well as in the type of spine. *Antipathes flabellum*, Pallas, and a number of new species which are apparently allied to it, agree with *Aphanipathes cancellata*, n. sp., in having a fan-like reticulate corallum (which, however, is constructed on a different plan), but differ altogether in the type of spine. The polyps of these species are not known, but as the spines have a close resemblance to those of *Tylopathes crispa*, n. sp., I have provisionally included them under the same genus. It should, however, be noted that the genus *Antipathella* has a similar form of spine, but the mode in which the reticulum is formed in *Antipathes flabellum*, Pall., and the allied species, seems more nearly related to that in *Tylopathes crispa*, n. sp., than to the flabellate forms at present included in the genus *Antipathella*.

*Tylopathes crispa*, n. sp. (Pl. III. figs. 1-4).

In this species the chief branches, and the smaller ones which they bear, are crisped and arched inwards, forming saucer-like fronds, depressed in the centre, and having the majority of the branchlets and pinnules directed inwards.

The Challenger specimen consists of a number of fronds which have been detached from the stem or main branches. These may be 14 cm. long and 22 cm. broad. The chief branch of a frond bears a number of smaller branches, irregularly arranged, which are sometimes lateral, but more usually antero-lateral in position. The smaller branches vary from 4 to 12 cm. in length. Each bears a number of branchlets of variable length, but usually more elongate and crowded near the apex of a branch. These arise generally from a point somewhat in front of the true lateral margin, and are from 2 to 6.5 cm. in length. These again bear a very large number of simple or branched pinnules, varying from 0.3 to 2 cm. in length. The pinnules are arranged irregularly all around the axis of a branchlet, but only those which have a lateral or antero-lateral position become elongate and further subdivided. Near the base of a branchlet all the pinnules are short and simple or subsimple; those about 5 mm. long may bear one short secondary pinnule; others, about 7 mm. long, bear three or four secondary pinnules in various planes, but between them there are always a few arising from the anterior, posterior, or lateral surfaces which remain simple. The antero-lateral pinnules arising from the upper half of a branchlet are often longer; all bear numerous secondary pinnules which extend in various planes, and the longer secondary pinnules usually bear one or two of a tertiary series. One branchlet, 5.5 cm. in length, bears altogether about seventy pinnules, about thirty of which are more or less branched. The longer primary pinnules bear about twelve secondary pinnules to a centimetre (Pl. III. fig. 1).