

*Bathypathes alternata*, n. sp. (Pl. IX. figs. 7-10).

Stem slender, straight or slightly flexuose, bearing alternate lateral branches, the lower ones longer and, in their distal portions, gracefully incurved, the others gradually becoming shorter towards the apex. Spines short, thorn-like, with a broad base, not in a distinct spiral, in some cases appearing as if disposed in irregular verticils.

A single specimen of this species from Station 246 measures 18.5 cm. in length, and the stem near the base has a diameter of 0.6 mm. In general appearance this form approaches *Bathypathes patula*, but is more slender; the branches are regularly alternate, instead of being subopposite, and the spines are more numerous and without regular arrangement (Pl. IX. figs. 7-10).

The stem has a dilation at the base, by which the specimen is attached to a small stone. It is nearly straight, but has a slight curve to the right in the lower portion. The basal 7.5 cm. of the stem is without branches. In the succeeding 10.2 cm. thirteen branches are given off on the right side, and twelve on the left. These are lateral, and pass out at a moderate acute angle in the lower portion, but above, the angle is not so wide. At first the branches, which are regularly disposed, are about 4 mm. apart, in the middle portion they are a little more crowded, but towards the apex the interval is again increased. The lowest branches are 10.5 cm. long, and in their distal half are gracefully curved upwards, so as to approach the stem. The others have a similar arrangement, but become shorter and shorter towards the apex, until the final ones are only 2 to 2.5 cm. long. The diminution in length is gradual. The branches are nearly in one plane, and the breadth of the specimen across the lower branches is 14 to 15 cm.

The zooids, which are only preserved on a few of the branches, are of the same type as in *Bathypathes patula*, but smaller. The gastro- and gonozooids are of equal size (excepting in the reproductive season?), and are separated by a space equal to half the length of the zooids. In the basal portions of the branches the zooids are more distant, as is frequently the case in other species. They average 1.4 mm. long and 0.65 mm. broad. The mouth in the gastrozooids is elongated in a direction transverse to the axis of the branch.

The sclerenchyma is black in the lower portion of the stem and branches, and nearly smooth, becoming fulvous and more distinctly spinose above.

The spines are in seven or eight irregular longitudinal rows, and are thorn-shaped, flattened, and have an elongated base. They are not disposed in regular spirals, and, indeed, in some parts appear as if in irregular verticils. The spines are disposed in longitudinal rows, four of which may be seen from one aspect. They are more numerous in some rows than in others, and the members of a row are from two to five lengths apart.

*Habitat*.—Station 246; July 2, 1875; lat. 36° 10' N., long. 178° 0' E.; depth, 2050 fathoms; bottom, Globigerina ooze. One specimen.