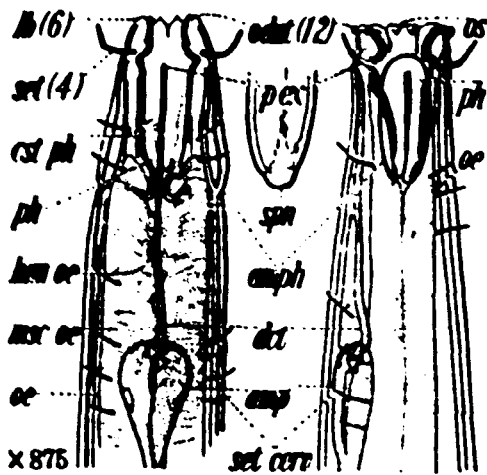


AXONOLAIMUS ANTARCTICUS n.sp.

14. *A. antarcticus* n.sp. $\frac{1}{0.7}$ $\frac{8}{1.6}$ $\frac{13}{1.7}$ $\frac{20-34-35}{2.3}$ $\frac{92}{1.6}$ \rightarrow 2.0mm—The layers of the transparent cuticle are traversed by fine transverse striæ. In addition to the cephalic setæ there is apparently also a set of four subcephalic setæ opposite the base of the pharynx. There are scattered cervical setæ. The faintly conoid neck ends in a subtruncate head which is continuous or set off by a broad, almost imperceptible, shallow constriction. The distinct, conoid, somewhat acute, well developed lips are immobile to such an extent that the lip region may become even revoluted. The odontia are not so strongly developed as in some other *Axonolaimi*. The lips, even when

everted, do not show very distinct traces of odontia, at least in balsam specimens; but there are really six of them and each is two-parted,—that is, each odontium presents two separate, equal, subacute, arcuate-conoid, distal elements. The amphids are of typical axonolaimoid form. While they are undoubtedly referable to the helicoid type of amphid, they have the appearance of being bent double in front and the two subequal parts laid close together, so that the amphid appears as an elongated affair rounded at both ends, but particularly in front. The two branches are slightly different in length,—the dorsad slightly the longer; otherwise the amphid appears to be a quite



symmetrical affair. The œsophagus behind the pharynx is three-fourths, at the nerve-ring three-fourths, and finally two-thirds as wide as the corresponding portion of the neck. The lining of the œsophagus, which is a distinct feature throughout its length, finds its main optical expression as a single axial refractive element. The initial cells of the intestine, very close to the cardiac collum, stain more strongly than the remaining ones. The intestine becomes at once two-thirds as wide as the body; the lining of the lumen stains with acid carmine.

The inconspicuous rectum extends inward and forward from the anus. Anal muscles have been distinctly seen. Granules of a yellowish color apparently exist in the cells of the intestine. The tail is convex-conoid, then cylindroid in the posterior fourth, where it is one-third to one-fourth as wide as at the anus; it ends in a somewhat swollen or rounded, unarmed, symmetrical spinneret. The three caudal glands, of saccate form, are located in a loose tandem in the anterior half of the tail. The ducts of the caudal glands are distinct and end in elongated ampullæ near the spinneret. The longitudinal chords are probably about one-third as wide as the body. The ellipsoidal renette cell, located three body-widths behind the base of the neck, is two-thirds as wide as long. The nerve-ring is accompanied by obscure nerve cells. The large, elevated, somewhat conspicuous vulva is half as wide as the body. From it the large cutinized vagina extends inward at right angles halfway across the body. The straight elongated uteri extend in opposite directions; they contain thin-shelled, smooth, elongated eggs about as long as the body is wide, which apparently are deposited before segmentation begins. The eggs have been seen one at a time in each uterus. As seen in the balsam specimen the shell of each egg presents a longitudinal mark, which, however, may be a wrinkle due to shrinkage. The proximal parts of the outstretched ovaries are broad, but taper to become one-fourth as wide as the body and contain about fifty ova each, arranged single file.

$\frac{0.9}{0.8} \dots \frac{7}{1.3} \dots \frac{0.5}{1.5} \dots \frac{70-M}{1.9} \dots \frac{93}{76 \text{ or } 1.8} \dots 2.4 \text{ mm}$ —The stoutish, sub-uniform,

allowish spicula, which at their widest part, namely at the middle, are one-fifth as wide as

the corresponding portion of the body, present two denticles at their tips. The spicula

are so strongly arcuate as to appear somewhat semicircular, and are one and one-half
 times as long as the anal body diameter. They are strongly cephalated by expansion in
 such a fashion that their proximal ends lie opposite the body axis. In oblique view
 the cephalic ends of the spicula appear bifurcated and one and one-half to two times
 as wide as the shaft. There are two bent, stoutish, strong gubernacula joined together
 and presenting an apophysis two-fifths as long as the spicula,—blunt, half as long as
 the anal body diameter, and extending backward at almost an angle of ninety degrees;
 the free ends, close together, appear to lie somewhat ventrad of the body axis. There
 are seven preanal, ventral, supplementary organs and possibly more, occupying a distance
 about equal to three body diameters. They are subequidistant, inconspicuous,—
 hardly more than mere innervations,— and occupy a space two to three times the length
 of the spicula. There are about ten ventrally submedian setæ on the tail of the male.
 No oblique copulatory muscles have been observed. The ejaculatory duct is half as
 wide as the corresponding portion of the body and leads to the narrow tapering testes,
 and finally becomes about one-third as wide as the body. Two tail lengths in front
 of the anus of the male there is a longitudinal series of finely granular cells one-third
 as wide as the body, placed close one after the other. The first four are arranged in a
 moniliform manner, the remainder in pairs side by side. There are about twelve of
 these in all. These are probably the special glands found in male nemas, emptying
 into the cloaca.