VII. Bathylaimus, new genus.

This genus is apparently related to *Oncholaimus*. The mouth-cavity is large and two-chambered, the posterior chamber being much the smaller, but there is an entire absence of the teeth characteristic of *Oncholaimus*. The lips are converted into powerful grasping organs armed with tactile hairs. The three caudal glands are small, and are confined to the tail. The rather short equal spicula are enlarged at the distal extremity and slide in guides of unusual size. The ductus empties through a distinctly chitinous outlet. The testicle has a segmented appearance owing to the peculiar way in which the spermatozoa are developed.

B. australis, n.sp. $\frac{2{\cdot}5}{1{\cdot}4}\ \frac{6{\cdot}3}{1{\cdot}6}\ \frac{17{\cdot}}{1{\cdot}8}\ \frac{'51^{20}}{2{\cdot}4}\ \frac{94{\cdot}}{{\cdot}9}$ 2·mm. The thin transparent skin is destitute of striæ, but bears hairs throughout the length of the worm, those on the head and at the end of the tail being the more conspicuous on account of their greater length. The conoid neck terminates in a head somewhat rounded in front and bearing, somewhat in front of the middle of the anterior part of the pharynx, twelve setæ arranged as follows: one long one on each lateral line; a long one and a short one on each of the four submedian lines. The larger of these setæ are somewhat longer than the head is wide. Each of the three lips is bidentate at the extremity, and armed just below the summit with two curved hairs which project forward

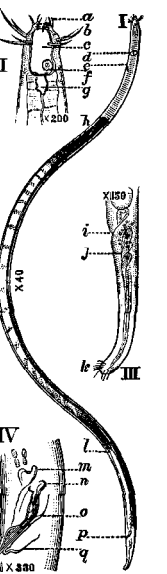

Fig. 9.—I, male of *Bathylaimus australis*. II, III, and IV, the head, tail, and anal region of the same worm more highly magnified.

a, labial setæ.
b, cephalic setæ.
c, pharynx.
d, nerve-ring.
e, excretory pore.
f, lateral organ.
g, posterior chamber of pharynx.
h, blind end of testicle.
i, anus.
j, three caudal glands.
k, hairs at terminus of tail.
l, posterior end of testicle.
m, beginning of cloaca or rectum.
n, proximal end of spiculum.
o, *q*, accessory piece.
p, anus.

and inward,—manifestly tactile hairs. The lateral organs are one-sixth as wide as the head; they appear to be circular with a central button, but are really spiral, and are situated as far behind the cephalic setæ as the latter are behind the mouth. There are no eye-spots. The pharynx is double, the anterior chamber being half as wide as the head and twice as long as wide, and the posterior chamber being half as wide and one-fourth as long as the anterior part. Both chambers are tolerably uniform in diameter, but the anterior expands a little in the region of the cephalic setæ. The conoid œsophagus is separated from the intestine by a distinct but not deep cardiac collum. The intestine is three-fourths as wide as the body, and its thin wall is built of small cells of such a size that about sixteen side by side make the circumference. The intestine commonly contains what appears to be vegetable matter. The length of the rectum equals that of the anal diameter of the body. There is a ventral gland. The nerve-ring is slightly oblique. The slightly incurved tail ends in a blunt rounded terminus one-third as wide as the base of the tail. The three small caudal glands are confined to the tail.

$\frac{2{\cdot}5\ \ 6{\cdot}\ \ 18{\cdot}\ \ -M\ \ 95{\cdot}}{1{\cdot}4\ \ 1{\cdot}6\ \ 1{\cdot}7\ \ 2{\cdot}\ \ 1{\cdot}5}$ 2·mm. The tail of the male closely resembles that of the female. There is no bursa or other supplementary organ, and apparently no papillæ. The two equal linear spicula are slightly bent near the middle, and are enlarged near the pointed distal extremity; they are one and one-third times as long as the anal body-diameter, or about one-third as long as the tail, and their proximæ are cephaloid by expansion. The large accessory pieces are three-fourths as long as the spicula and are in contact with them in the distal half. The narrow ejaculatory duct is three times as long as the tail, and has a chitinous outlet parallel with the spicula. The spermatozoa appear to develop in batches, and the testicles, therefore, present a peculiar appearance,—as if separated by thick transverse walls into a number of chambers, or as if in a manner segmented.

Hab.—Port Jackson, New South Wales, Australia, 1891.

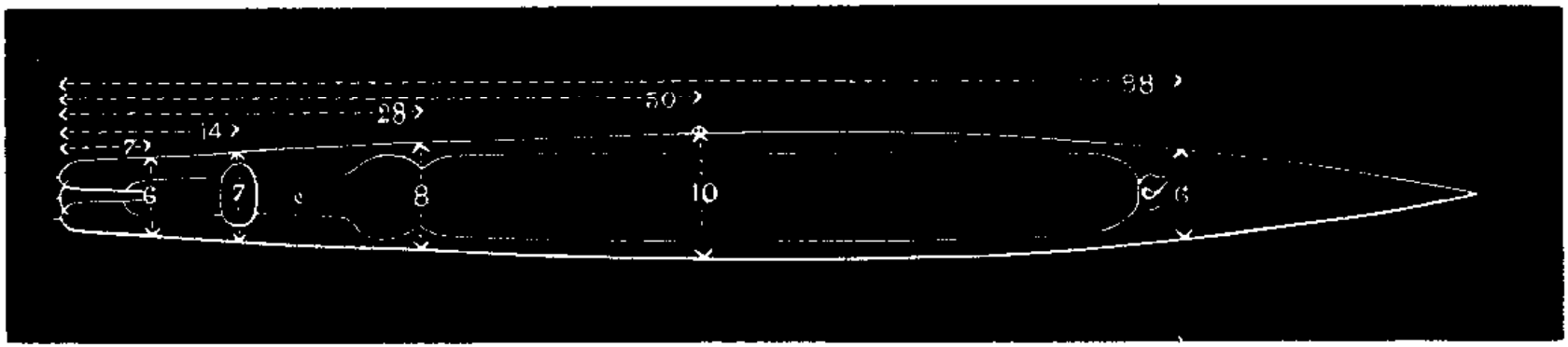

FIG. 1.—Diagram in explanation of the descriptive formula used for Nematode worms; 6, 7, 8, 10, 6 are the transverse measurements, while 7, 14, 28, 50, 88 are the corresponding longitudinal measurements. The formula in this case is:—

$$\frac{7 \cdot \quad 14 \cdot \quad 28 \cdot \quad 50 \cdot \quad 88 \cdot}{6 \cdot \quad 7 \cdot \quad 8 \cdot \quad 10 \cdot \quad 6 \cdot}$$

The unit of measurement is the hundredth part of the length of the worm, whatever that may be. The measurements become, therefore, percentages of the length.

The measurements are taken with the animal viewed in profile; the first is taken at the base of the pharynx, the second at the nerve-ring, the third at the cardiac constriction, the fourth at the vulva in females and at the middle (M) in males, the fifth at the anus.