

CALYPTRONEMA (DILAIMUS) MAWSONI n.sp.

(Fig. 42, a-f.)

Kerguelen Island : Stations 9, 15, 47, 51, 52, 59, 62.

♀ (4x) : L = 7.0-8.6 mm. ;  $\alpha$  = 41-52 ;  $\beta$  = 6.0-7.2 ;  $\gamma$  = 54-65 ; V = 52-59%.

j (1x) : L = 5.2 mm. ;  $\alpha$  = 37 ;  $\beta$  = 5.8 ;  $\gamma$  = 40.

Heard Island : Station 19.

♀ (1x) : L = 6.4 mm. ;  $\alpha$  = 43 ;  $\beta$  = 7.0 ;  $\gamma$  = 62 ; V = 55%.

Macquarie Island : Station 83 ; Coll. I, J, K, L, N.

♀ (5x) : L = 5.8-7.9 mm. ;  $\alpha$  = 34-49 ;  $\beta$  = 6.0-7.2 ;  $\gamma$  = 59-69 ; V = 53-60%.

♂ (4x) : L = 5.3-7.7 mm. ;  $\alpha$  = 44-59 ;  $\beta$  = 6.2-8.6 ;  $\gamma$  = 38-55.

j (1x) : L = 6.4 mm. ;  $\alpha$  = 49 ;  $\beta$  = 8.5 ;  $\gamma$  = 58.

The male worms from Macquarie Island occur in the same collections as the female, and are judged to belong to the same species because of the similar tail shape and peculiarities of the caudal glands (see below). One young specimen from Station 51 is apparently a male in a larval stage ; the buccal capsule is present, just similar to that of the female, a well developed pigment mass is associated with the lens, and the early stages of development of the spicular apparatus can be seen.

The species is close to *C. (D.) denticulatum* (Micoletsky 1930) but has been separated from it chiefly by the shorter tail, and in the male by the smaller amphid, longer main cephalic setae, and relatively shorter second submedian cephalic setae.

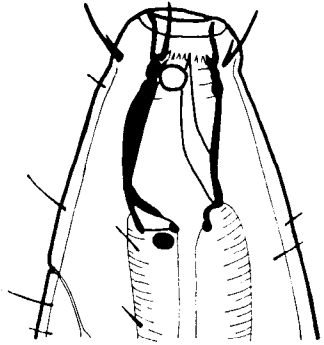
The body is more slender in the adult male than in the female. The cuticle in some specimens shows distinct criss-cross striation. The tail in both sexes is an elongate cone, and in the female the taper is more pronounced in the proximal than in the distal half. The tail length is 1.4-2.3 and 1.7-2.1 times the anal breadth in the female and male respectively. The caudal glands and their ducts are very distinct ; the ducts in all specimens have a characteristic swelling at the level of the anus, followed anteriorly by a constriction and then further widening. The swelling may be elongate (fig. 42c) or wider and spherical, depending apparently on the contents, and the ducts between the anus and the prominent pear-shaped glands may be distended in places with a brown homogenous secretion. There are a few fine short setae near the tip of the tail.

In the female the anterior end bears four longitudinal sublateral rows of long stout nuchal setae as well as some near the excretory pore. The longer cephalic setae are about half the cephalic breadth, and the shorter only a third of the longer. The labial papillae were not seen to be setigerous. The round amphid is about a sixth of the corresponding head breadth. The buccal capsule is 30-36 $\mu$  long with an average width of 12 $\mu$  ; the anterior band is denticulate and lies at the level of the bases of the cephalic setae. The lenticulate bodies lie at, just in front of, or just behind, the base of the buccal capsule, but in no case are they so far behind as figured and described by Wieser for *C. retrocellata*. The stomatal tooth reaches to the row of denticles.

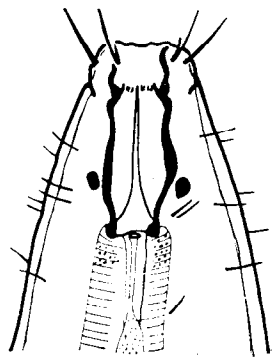
The excretory pore in the adult female lies close to the level of the base of the buccal capsule. In the juveniles and very young females (up to 5.8 mm. long) it lies further back, nearly two lengths of the buccal capsule behind the anterior end. The ventral gland lies a short distance (about a tenth of the length of the oesophagus) behind the base of the oesophagus. The nerve ring lies 1/2.1-1/3.8 of the length of the oesophagus from the anterior end.

In the male the longer cephalic setae are two-thirds of the head breadth and the four shorter submedian setae about a quarter of the longer. The eyes are well developed, the lenses one and a half head breadths behind the anterior end. The amphid opening is slit-like, its width 1/3.5 of the head breadth. The excretory pore is on a level with the eyes. A curious fold in the cuticle encircles the head, merging laterally with the lower border of the amphid. The oesophagus is present but not distinct. The ventral gland is situated as in the female.

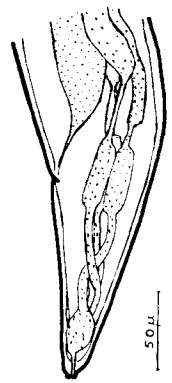
The spicule is slender and rounded at the tip ; its length, 130-150 $\mu$ , is 2.0-2.4 times the anal breadth. The gubernaculum is about 30 $\mu$  long, exclusive of a poorly sclerotised hook at the dorsal end. In front of the anus are about nine pairs of small setigerous papillae. No other anal armature is seen. The male is very similar to that described by Wieser for *C. retrocellatum* Micoletsky 1930.



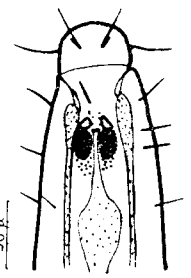
42 a



42 b

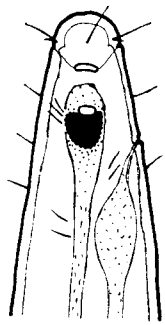


42 c

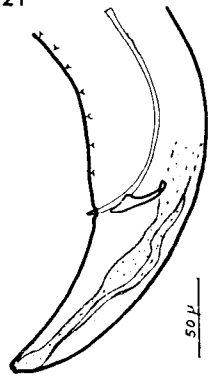


42 d

42 e



42 f



42. *Calyptonema (Dilaimus) mawsoni* a, and b, lateral and ventral views of head of female to same scale; c, tail of female; d, and e, ventral and lateral views of head of male, to same scale; f, posterior end of male.

## KERGUELEN ISLANDS.

- STATION 5 : D.R.S., 20m. Off Jeanne d'Arc. Trawling made near belt of kelp ; brownish green mud and some weeds. Echinoids most numerous, other groups represented.
- STATION 9 : Shore collecting stations on islands in Bras Bossière. Nematodes from intertidal mussel bank.
- STATION 12 : D.R.S., 4-5m. ; off Grave Island, Island Harbour ; kelp and red algae common ; many organisms on kelp holdfasts. All groups represented in haul. Polyzoa and a colonial ascidian most numerous.
- STATION 15 : D.R.S., 55m. ; in channel between Hog Island and Blakeney Island. The striking character of the haul was presence of ascidians of several types ; many small invertebrates were found in a common globular silicious sponge.
- STATION 47 : 49° 50' S., 69° 33' E., off south coast of Kerguelen ; D.R.L., 150m. Small stones and gravel ; main features were red ophiuroids and white holothurians.
- STATION 48 : Swain's Bay, near Swain's Haulover. Shore collecting.
- STATION 49 : D.R.S., 2-20m. Western end of Long Island in a little, sheltered harbour with steeply shelving bottom. Dredge full of kelp and red and green algae, bottom of grey-green sand. Ophiuroids, echinoids, and asteroids common ; polychaetes and crustacea numerous.
- STATION 50 : D.R.S., 10m. Grotto Bay. Much kelp and other weed ; echinoids and polychaetes common.
- STATION 51 : D.R.S., 40-50m. Supply Bay. Polychaetes common, many small invertebrates in " roots of common globular silicious sponge ".
- STATION 52 : Bras Bolinder, near head of Greenland Harbour :
1. D.R.S., 20-30m., much kelp and large mussels ; many sponges, polychaetes and ascidians.
  2. Intertidal collections from beneath boulders.
- STATION 53 : D.R.S., 20-30m. Near mouth of Peace River. Calcareous worm tubes common, also silicious globular sponges, harbouring many invertebrates.
- STATION 54 : head of Greenland Harbour ; intertidal collections. A rich fauna.
- STATION 55A : D.R.S., 10-20m. Between Islets in Colbeck Passage, off N.W. end of Long Island. Some kelp, some stinking black mud ; fauna similar to that in other hauls at this depth.
- STATION 55B : D.R.S., 1-5m. Near head of Bras Enzensperger, Royal Sound. Much sand, kelp, and *Ulva* ; numerous small gastopods attached to weed.
- STATION 56A : Rivett Arm, intertidal collection. Very rich fauna in this area, extending down steeply shelving shore line.
- STATION 56B : D.R.L., 50m. ; near Green Island. Good haul, common globular sponge plentiful, with slimy dark green mud. Polychaetes, nematodes, ophiuroids, holothurians, and a large variety of simple ascidians were noted as common.
- STATION 58 : D.R.L., 50m. In Hydrography Channel, a short distance S.E. from Green Island. Good haul, with slimy dark green mud ; common globular sponge plentiful ; polychaetes nematodes, ophiuroids and holothurians, and a large simple ascidian noted as " common ".
- STATION 59 : O.T.L., 47m. Royal Sound, about a mile N.E. of Suhm Island. Large haul of invertebrates from good trawling bottom. Main feature was large numbers of a big translucent ascidian and a rich pink holothurian.
- STATION 60B : Shore collection from Suhm Island. Nematodes from " dripping rock 10 feet above sea level ".
- STATION 60C : Shore collection from small island in Navalo Harbour.
- STATION 61 : intertidal collection from southern part of Antares Island. Nematodes from rock pool.
- STATION 62 : Poincaré Peninsula opposite Murray Island ; shore collections ; nematodes from intertidal rock pools.

STATION 64 : 49° 32' S., 70° 33' E., 2.3.30, O.T.L., 91m.; off entrance to Royal Sound.

A "very good haul of invertebrates", including cidaroids, red ophiuroids, numerous lamellibranchs, and ascidians.

Collections 103, B100 : Jeanne d'Arc ; among algae on beach.

Collection B173 : Long Island, Royal Sound : Intertidal, under stones.

Collections 752, 753 : 15.2.30, Jeanne d'Arc. Low Spring Tide level, under stones.

Collection 755 : 15.2.30 ; Tarn at head of Greenland Harbour, in green slime.

Collections 771, 772 : 15.2.30 ; Jeanne d'Arc. From sponge washed up on beach.

Collection 788 : 15.2.30 ; Jeanne d'Arc. Low Spring Tide level, under stones, among coelenterates.

Collections 789, 790, 792 : 16.2.30 ; Jeanne d'Arc, intertidal.

Collection 855 : 23.2.30 ; Green Rock, near Island Harbour, Royal Sound. Semi-stagnant pool high up on beach.

Collection 865 : 23.2.30 ; off Murray Island, among kelp.

Collection 930 : 27.2.30 ; Antares Island, intertidal pool, with hydrozoa and crustacea.

#### HEARD ISLAND.

STATION 19 : 53° 05' 30" S., 73° 24' E., Shore collection along beach of Atlas Cove. Nematodes from algae washed up on shore.

#### CROZET GROUP.

Collection from American Bay, Possession Island ; nematodes from algae taken at 12m.

#### MACQUARIE ISLAND.

##### B.A.N.Z.A.R.E. COLLECTIONS.

Station 81B : 54° 29' S., 158° 58' E. ; ashore at Buckles Bay. "Great masses" of *Durvillea* growing here.

Station 83 : 54° 42' 30" S., 158° 54' 30" E. Off Lusitania Bay ; D.R.L., 69m. Dominant forms were pectens, Veneridae, *Waldheimia* (brachiopod). Most invertebrate phyla represented.

##### A.A.E. COLLECTIONS.

The following collections were made at Macquarie Island by the A.A. Expedition during 1912-1913. The reference letters under which they are listed here follow in alphabetical sequence with those given to A.A.E. Antarctic collections recorded in Section 2 of this Report :—

G. Littoral.

H. Among seaweeds, probably at the north end of the Island.

I. Shore collection.

J. Low tide.

K. Below low tide.

L. Rock scrapings from below low tide, mostly sponges.

M. West coast, among green algae and oligochaetes.

N. North end of island, scrapings from rocks below low tide level.

O. Towntnet off North-East Bay, 19.6.12, "mainly Copepods, some Radiolaria".