

THORACOSTOMA DEMANI n.sp.

(Fig. 7 a-d.)

Stations 29, 39, 41, 42, 88, 105, 106, 107.

Female: L = 19-28 mm.; α = 50-62; β = 5.3-6.5; γ = 107-133; V = 55-63%.

Male: L = 20-25 mm.; α = 50-58; β = 5.2-6; γ = 111-117.

This is a long species of *Thoracostoma*, of relatively thick build and even width, the body tapering very little until just in front of tail, and in the oesophageal region.

The head is truncated, the mouth not inclined, and the head diameter increases suddenly behind the cephalic setae. Eyes are not present.

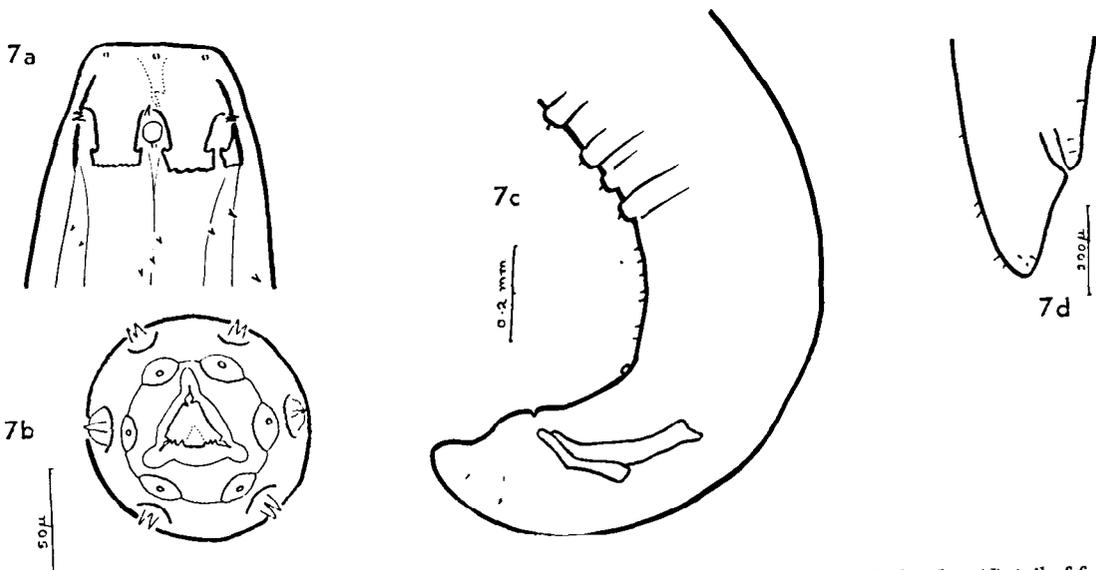
The cuticle bears numerous setae, all of small size. The length of the cephalic setae is 1/10-1/11 of the corresponding head width.

The helmet is an "open" type; the lobes are usually flattened posteriorly, often with an irregular border, and they are separated by wide channels, the lateral channels often wider than the sub-median; the fossae through which the setae emerge are large. No lacunae were seen in any specimen. The head width at the level of the base of the helmet is 1.6-1.8 times the helmet length. The dorsal lip of the mouth bears about six small teeth, the two subventral lips each two teeth (fig. 7b). A large dorsal tooth is present in the buccal capsule.

In no female is there more than one ripe egg present; this is sometimes in the anterior uterus, sometimes in the posterior; the ripe egg is unusually long, 1.1-1.4 mm. by 0.3 mm. The length of the female tail is about equal to its breadth.

Male.—The posterior end of the body is always curved ventrad, sometimes in a spiral of $1\frac{1}{2}$ turns. The spicules are 0.3 mm. long and the gubernaculum 0.2 mm. long. The length of the tail, 0.2-0.22 mm., is equal to or slightly more than the anal breadth, and the median preanal organ is about the same distance in front of the anus. The posterior most pair or preanal papillae is 0.3 mm. or more in front of this organ, and the number of preanal setigerous papillae varies from 5 to 9 pairs, extending in a row from 0.6 mm. to 1.05 mm. A row of setae extends on each side from the adanal region to the most posterior paired papilla.

This species is distinguished from other Southern species by the form of the helmet, and the absence of eyes. As in the case with *T. anocellatum* (see below), the form of the spicular apparatus distinguishes it from species in the subgenus *Pseudocella*.



7. *Thoracostoma demani*: (a) and (b) lateral and ventral views of head, to same scale, (c) tail of male; (d) tail of female.

COLLECTING STATIONS CONCERNED IN THIS REPORT

In Volume I., Pt. 1, of this series (Biological Organization and Station List) the type of fauna and the nature of the sea-floor at each station are not mentioned. The following amplifying notes deal with all stations south of the sixtieth degree of south latitude which yielded nematodes for examination. This information has been compiled from the Biological Log kept during the period concerned. An attempt was made to ascertain the names of the species of marine life recorded as most numerous at the various stations, but since many groups have not yet been reported on, this was not possible.

STATION 29 : 66° 28' S., 72° 41' E., T M L (Large Monagasque Trawl) : 1,266 m.

Good haul, large numbers of stones (erratics), some large. Animals suffered from milling of stones. No mention of predominant fauna. Forams and nematodes "many".

STATION 39 : 66° 10' S., 49° 41' E., T M L : 300 m.

Big haul characterized by silicious sponges with glass rope spicules. *Synapta*—like Holothurian common ; many Polyzoa of different species.

STATION 40 : 66° 12' S., 49° 37' E., T M L : 300 m.

Good clean haul ; Polyzoa and crinoids abundant.

STATION 41 : 65° 48' S., 53° 16' E., T M L : 193 m.

Large haul. Trawl full of sponges and sponge mud : glass rope sponge predominant. Much mud with very many molluscs : many ophiuroids. Later, operating at this station with the Large Otter Trawl (O.T.L.), the catch comprised a striking haul of alcyonarians, holothurians "many", compound ascidians "common".

STATION 42 : 65° 50' S., 54° 23' E., T M L : 220 m.

Haul essentially as at Station 41, T M L.

STATION 88 : 67° 008 S., 142° 36' E. At Commonwealth Bay, King George V. Land.

Collections ashore on rocks and in ice at Cape Denison, also dredging (DRS) from motor boat in Boat Harbour, and between the latter and the Mackellar Islets amongst kelp, 2-7 fathoms. Red and brown algae, nematodes in holdfast, &c. 3.5-4.5 m

STATION 90 : 66° 21' S., 138° 28' E., D R L : 640 m.

While being hauled, dredge following the sea-floor came suddenly into shallower water, so may contain specimens from various depths. Coralline bottom with small stones : small amount of grey sandy mud on lip of dredge.

STATION 100 : 65° 48' S., 89° 49' E., D R L : 393 m.

Representatives of most groups present. No note as to bottom, or predominance of any fauna.

STATION 103 : 67° 03' S., 74° 29' E., D R L : 437 m.

Mud bottom (ooze). All groups represented, none referred to as abundant.

STATION 105 : 67° 46' S., 67° 03' E., D R L : 163 m.

No mud, only a few small erratics. Dominant forms listed as :—(1) Large club-like compound ascidians ; (2) Large simple free ascidians with hairy test ; (3) Transparent ascidian-like *Clavellina* ; (4) Several spp. of sponges. Pycnogonids, asteroids, and ophiuroids abundant. Nematodes very abundant in test of a large ascidian.

STATION 106 : 67° 38' S., 64° 52' E., D R L : 210-17 m.

Very little taken as dredge struck rock bottom. Kelp, *Lithothamnion* ; nematodes in holdfasts, also polychaetes and nemertean.

STATION 107 : 66° 45' S., 62° 03' E., D R L : 219 m.

Dredging on an off-shore submarine bank. Fine grey mud. Ophiuroids and Polyzoa chief animals. Nematodes among sponge spicules. Later the Large Otter Trawl brought up a catch with Polyzoa as the dominant group : calcareous and chitinous species.