NEMATODE PARASITES OF *Pleurobrachia pileus* (Figs. 5–12)

The detection of nematodes in *Pleurobrachia pileus* was to a large extent dependent on examining the ctenophore alive as the characteristic movements of the parasites so readily betrayed their presence. In preserved material it was only if the nematode was large in size relative to its ctenophore host that it was sufficiently obvious for it to be identified as a non-host structure. As it was not always possible to study living material of *P. pileus* some nematodes will not have been noted, as even in living material of the host they were frequently of such small size, and of rather similar shape, that they were at first sight mistaken for a mesogloeal muscle fibre. All the material from the Taranaki area was preserved, so that it is possible that minute nematodes may have been overlooked. Nematodes were not found in *P. pileus* from Otago Harbour, but as collection extended over only four days it is probable that their absence is not a true indication of their occurrence in Otago Harbour.

Ten nematodes were collected from *P. pileus* between April, 1964, and January, 1965, from Wellington Harbour. Location of the tows was as described in the trematode section above. The North Taranaki Bight material of *P. pileus* yielded three nematodes. Two larval nematodes were also found in *Sagitta bipunctata* from this same area.

Live nematodes were killed and fixed in 10% formalin. Clearing was in all cases carried out with glycerine by proceeding from formalin to 50% to 70% ethanol and thence to a 10% solution of glycerine in 70% ethanol. The cleared specimens were mounted in glycerine jelly. Use of this method proved very satisfactory for the nematode material as all the characteristic structures showed to advantage.

Identification of the nematode larvae was made from two unpublished theses (Brunsdon, 1953 and 1956) lodged with the Victoria University of Wellington, Library. All nematodes, including those found in the chaetognaths from the Taranaki area are larval forms of the Order Ascaroidea Railliet and Henry 1915; Family Ascaridae, Cobbold, 1864; Subfamily Arisakinae, Railliet and Henry, 1912, and the genus *Contracaecum* Railliet and Henry, 1912. The genus *Contracaecum* has lips and interlabia present in adults and late larvae. A boring tooth is conspicuous in earlier larvae. An oesophagus is present with a reduced ventriculus from which arises an oesophageal appendix. Also present is an intestinal caecum. Adults, and to some extent larvae also, are stomach and intestinal parasites of fish, marine mammals and birds. The presence of the larvae of this genus in a coelenterate host is recorded here for the first time.

Eight types of the larvae of *Contracaecum* were described by Brunsdon, (Types I to IV in 1953 and Types IA, IB, IIA and IIIA in 1956).

KEY TO BRUNSDON'S TYPES OF LARVAL NEMATODE

[Based on data from the present material and Brunsdon, 1953; 1956]

1	(10)	Larvae possessing a boring tooth	(Fig. 14.)
2	(7)	Larvae with conical tail	(Figs. 38, 39.)
3	(4)	Tail lacking a terminal spine	Type IB. (Fig. 35.)
4	(3)	Tail terminating in a spine.	
5	(6)	Tail on a rounded cone with single terminal spine; a long intestinal caecum and an exceedingly long (20.37mm) oesophageal appendix; body length, 28.15 mm	Type IIA. (Fig. 38.)