

Genus *THORACOSTOMA* Marion, 1870  
*Thoracostoma campbelli* Ditlevsen, 1921

(Fig. 4a-d)

TYPE-LOCALITY. Campbell Island, South Pacific.

MATERIAL STUDIED. Luderitz Bay : 2♂♂, 3♀♀, 1 larva, LU 19.

MEASUREMENTS (in mm).

	2♂♂		♀♀	Larva
Body-length	16.40,	18.20	15.40 - 18.20	13.20
Body-breadth	0.27,	0.27	0.22 - 0.23	0.21
Head-diameter	0.06,	0.05	0.05	—
Length of oesophagus	2.51	2.61	2.55 - 2.62	2.20
Length of tail	0.12,	0.12	0.12	0.10
Distance of nerve-ring from anterior end of body	0.71,	0.71	0.65 - 0.67	0.60
Anal diameter	0.18,	0.17	0.15 - 0.16	0.15
Length of spicules	0.25,	0.27	—	—
Length of gubernaculum	0.14,	0.19	—	—
Distance of vulva from anterior end of body	—	—	10.00 - 11.10	—

DESCRIPTION. This species is a comparatively large member of the genus *Thoracostoma*, and specimens in the present sample measure up to 18.2 mm in length. The cuticle is fairly smooth, although very fine longitudinal striations appear to be present. Transverse striations have not been made out. As noted by Ditlevsen

(1921), there is a well-marked constriction of the head in the region of the cephalic setae.

The arrangement of the cephalic sense organs is typical of the genus, and there is a crown of six papillae situated far anteriorly and surrounding the mouth. Further back there is a ring of ten short cephalic setae, two of which are close together on each of the dorso-lateral and ventro-lateral surfaces, and a single seta on each lateral surface.

The cephalic capsule extends posteriorly to *c.* 40–45  $\mu\text{m}$  from the anterior end of the body. It is divided posteriorly into six lobes, separated by furrows which widen to form six fenestrae. The two lateral fenestrae in which the amphids are situated are markedly rounded or oval (Fig. 4a). The four fenestrae on the latero-dorsal and latero-ventral sides are slightly less pronounced and more elongate horizontally. On each of the lobes lying between the furrows there are several openings or loculi that vary in shape and number. Sometimes there are three or four loculi, some of which may not be very wide, and sometimes only two transversely elongate openings. As Ditlevsen noted in his specimens there does not appear to be any regular arrangement of the shape and number of the loculi. The anterior region of the cephalic capsule is divided into six lobes, but they can only be seen clearly in an apical view. A fairly well-defined cephalic ring is seen to surround the mid-region of the capsule.

Posteriorly to the cephalic capsule and surrounding the head there are several rows of small granules which form a band *c.* 10  $\mu\text{m}$  wide. There are several setae in the cervical region, although they are not arranged in clearly-defined rows.

There are two prominent cordiform cuticular structures on each lateral side of the tri-radiate mouth. The walls of the buccal cavity are lined with a thickened cuticle.

An excretory pore has not been made out. The nerve-ring is quite pronounced and surrounds the oesophagus fairly far forward. There is no bulbous swelling at the posterior end of the oesophagus.

*Male.* The testes appear to be paired, but the extremity of one of them could not be clearly seen in the two specimens available. The two spicules are comparatively short and stout and compare well with Ditlevsen's illustration. The gubernaculum which surrounds the distal ends of the spicules also compares quite well with Ditlevsen's description. A mid-ventral supplementary organ lies opposite the mid-region of the spicules, a feature typical of the genus *Thoracostoma*. There are two rows of about twenty to thirty setae situated anteriorly to the cloaca and extending just posteriorly to the latter in the ventro-lateral lines. Anteriorly to the supplement there are two rows of papillae, six pairs in one specimen and seven in the other. There are several small setae on the rounded posterior end of the tail.

*Female.* The ovaries are paired, opposed and reflexed. Two eggs have been observed in the uterus of one specimen. They measure 0.53  $\times$  0.19 mm and 0.53  $\times$  0.15 mm. The vulva is situated about two-thirds of the total length of the body from the anterior end. The tail is fairly short and the tip bluntly rounded, similar to that in the male.

REMARKS. This species, originally found off Campbell Island, 52°30'S, 169°10'E (Ditlevsen, 1921), is widely distributed in the southern hemisphere. The present

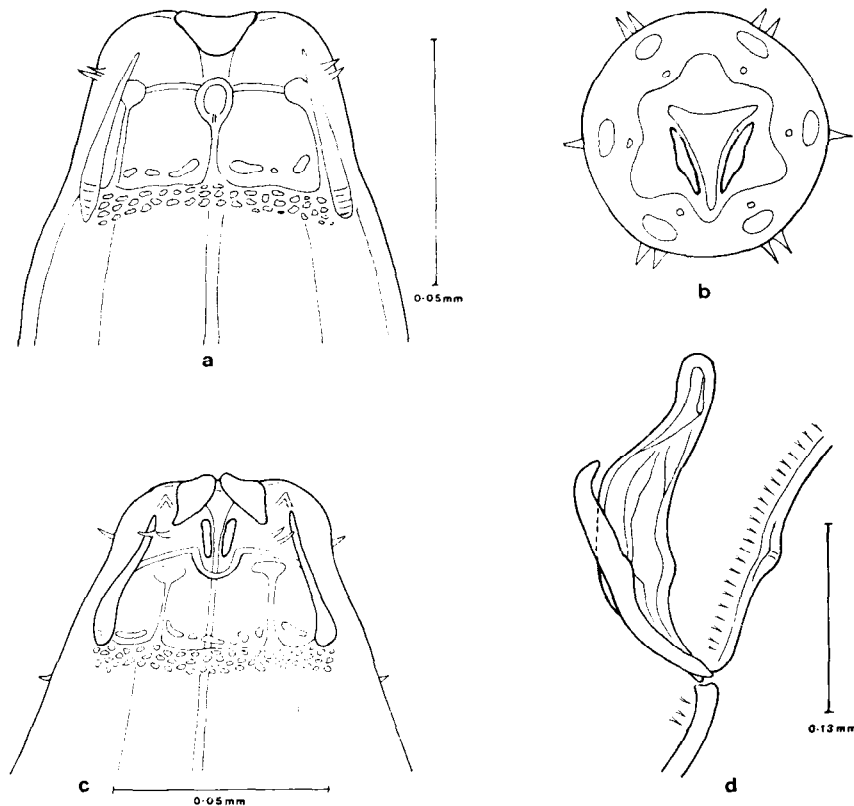


FIG. 4. *Thoracostoma campbelli* Ditlevsen, 1921. (a) Lateral view of head ; (b) Apical view of head ; (c) Ventral view of head ; (d) Spicule and gubernaculum (a and b to same scale).

specimens from Luderitz on the coast of South West Africa agree in nearly all respects with Ditlevsen's description. They, however, lack pigment spots in the cervical region. Ditlevsen's specimens possessed cyathiform pigment spots, a feature quite common in the genus *Thoracostoma*. Ditlevsen also noted that as there was no lens to be seen it may be supposed that it had been diluted by the preservative fluid, or had disappeared in some other way, which often happens to preserved specimens of freeliving nematodes. In the specimens from Luderitz it seems that the pigment spots, as well as the lens, have completely dissolved out.

**GEOGRAPHICAL DISTRIBUTION.** Campbell Island, South Pacific (Ditlevsen, 1921), Kerguelen Islands (Stekhoven & Mawson, 1955 ; Mawson, 1958 ; Platonova, 1958, 1968) ; Macquarie Island (Stekhoven & Mawson, 1955 ; Mawson, 1958), Heard Island (Mawson, 1958), off the coast of Chile (Wieser, 1953), off the coast of South West Africa (present report).