

like. The egg of *P. waubesensis* is pointed at both ends.

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Halocercus monoceris sp. n. (Nematoda: Metastrongyloidea) from the Narwhal, *Monodon monoceros*

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ABSTRACT: *Halocercus monoceris* sp. n. (Nematoda: Metastrongyloidea) obtained from the lungs of two narwhals, *Monodon monoceros* L., caught in the eastern Arctic is described and figured. Comparison is made with other members of the genus.

During the summer of 1970 Dr. M. Newman, Director of the Vancouver Public Aquarium, captured six specimens of the narwhal, *Monodon monoceros* L. One was obtained from Grise Fiord on the south coast of Ellesmere Island, N.W.T., and five from the area of Milne Inlet on the northeast coast of Baffin Island, N.W.T. All narwhals were successfully transferred to Vancouver, but within the next 4 months became ill and died.

Numerous specimens of a nematode of the

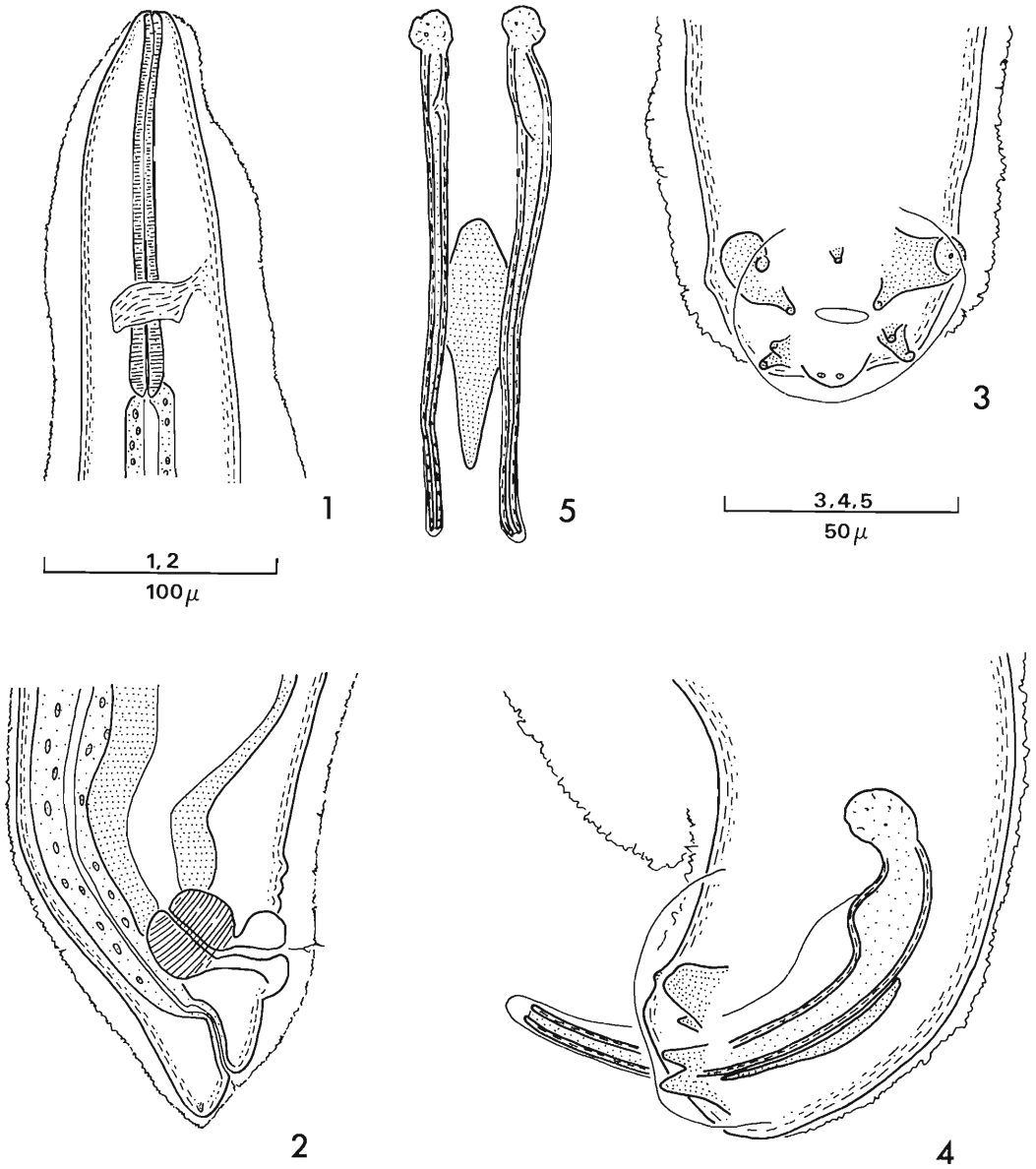
genus *Halocercus* Baylis and Daubney, 1925, were recovered from the bronchioles of two of these animals. Comparison with other members of the genus show that they represent a heretofore undescribed species.

All specimens, removed from formalinized lung tissue, were cleared and examined in phenol-alcohol. Diagrams were made with the aid of a Zeiss drawing tube. Unless otherwise stated, measurements are in microns.

Halocercus monoceris sp. n. (Figs. 1–5)

Pseudaliidae Railliet, 1916; Halocercinae Delyamure, 1952; *Halocercus* Baylis and Daub-

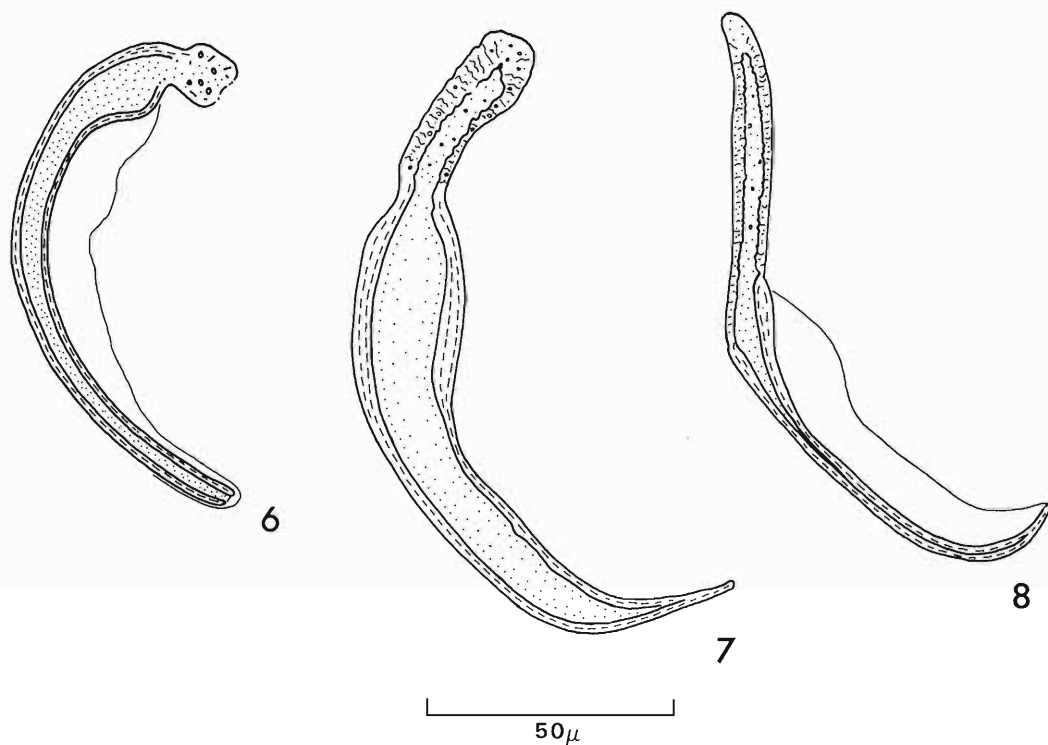
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Figures 1-5. *Halocercus monoceris* sp. n. 1, Anterior portion, female. 2, Posterior portion, female. 3, Posterior portion, male, ventral view. 4, Posterior portion, male, lateral view. 5, Spicules and gubernaculum, ventral view.

ney, 1925. Delicate, filiform nematodes. Buccal cavity absent. Lips absent. Cephalic papillae very difficult to discern. Cuticle without alae or striations. Teguminal sheath present.

MALE (based on two complete specimens and numerous fragments): Length 7.5 and 8.2 mm; maximum width excluding teguminal sheath 115-150. Esophagus simple, 155-165



Figures 6-8. Spicules of some *Halocercus* spp. 6, *H. monoceris* sp. n. 7, *H. invaginated* (USNM Helm. Coll. No. 36876). 8, *H. kirbyi* (USNM Helm. Coll. No. 36867).

long. Nerve ring 70-75 from the anterior extremity. Tail curled ventrally. Bursa distinct but small. Bursal rays reduced to little more than papillae. Ventral rays represented by one large papilla and a smaller pedunculate papilla both on a bulbous base. Lateral rays represented by two small pedunculate papillae. Dorsal papillae double, very small. A single median, stalked, preanal papilla present. Spicules short, 115-135 long, broadly curved with large membranous ventral alae. Gubernaculum 45-60 long, well chitinized.

FEMALE (based on five complete specimens and numerous fragments): Length 11-15 mm; maximum width excluding teguminal sheath 120-150. Esophagus 140-165 long. Nerve ring 70-85 from the anterior extremity. Tail conical, phasmids prominent. Anus 25-45 from the posterior extremity. Vulva salient, 70-100 from the posterior extremity, bounded usually both anteriorly and posteriorly by well-

developed labia. Vagina vera short, 35-45 long; muscular ejector short, 25-45 long; uteri double. Larvae (in utero) approximately 320 long and 15 wide; tail simple, without spine.

HOST: *Monodon monoceros* L.—narwhal.

HABITAT: Bronchioles.

LOCALITY: Vancouver Public Aquarium.

SPECIMENS: Holotype male, allotype female USNM Helm. Coll. 72129. Paratypes ADRI Parasite Coll. 912.

Discussion

There are, to date, 11 species of the genus *Halocercus* Baylis and Daubney, 1925, all parasitic in the lungs of cetaceans. Of the various species described, those characters necessary for species determination are all found associated with the posterior region of the male.

H. brasiliensis Almeida, 1933; *H. dalli* Yamaguti, 1951; *H. delphini* Baylis and Daubney,

1925; *H. kleinenbergi* Delyamure, 1951; *H. lagenorhynchi* Baylis and Daubney, 1925; and *H. pingi* Wu, 1929, are all much larger species with spicules greater than 500 in length (see Delyamure, 1955; Yamaguti, 1951).

Of those species with spicules less than 250 in length, *H. monoceris* sp. n. is distinguished from *H. ponticus* Delyamure, 1946, and *H. taurica* Delyamure in Skrjabin, 1942, by the lack of three well-defined lateral papillae, the presence of two ventral papillae, and by the morphology and size of the spicules; the spicules of the latter species without a knob-like capitulum and considerably longer.

H. sunameri Yamaguti, 1951, has spicules approximately twice the length of those of *H. monoceris*. There is only a single papillar termination representing the ventral ray. Yamaguti (1951) considered the ventral ray as one of the laterals; "... rudimentary bursa supported by two pairs of lateral rays and an unpaired posterior ray. The anterior lateral ray lying on a level with the cloacal aperture has a broad base and a minute papillary termination, whereas the posterior lateral ray . . . has a double termination." It is evident from the diagrams that Yamaguti erred in his interpretation and that the "anterior lateral" with the broad base and minute papillary termination is in reality the ventral ray.

The spicules of *H. invaginatus* (Quekett, 1841) Dougherty, 1943, are slightly longer than those of *H. monoceris* and have a well-defined elongate capitulum while the spicules of *H. kirbyi* Dougherty, 1944, although of similar size as those of *H. monoceris*, have an elongate capitulum and a conspicuous alar expansion in the middle of each spicule (Figs.

6-8). Both *H. invaginatus* and *H. kirbyi* have ventral rays with a single termination and lateral rays with three papillary terminations.

The presence or absence of cuticular ridges is usually considered to be a character at the generic level. Migaki et al. (1971) present a figure in which they note cuticular ridges and spines. Examination of cross sections of *H. monoceris* has failed to reveal any indications of longitudinal cuticular ridges.

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