

A NEW SPECIES OF HOOKWORM FROM A NORTH AMERICAN RACCOON

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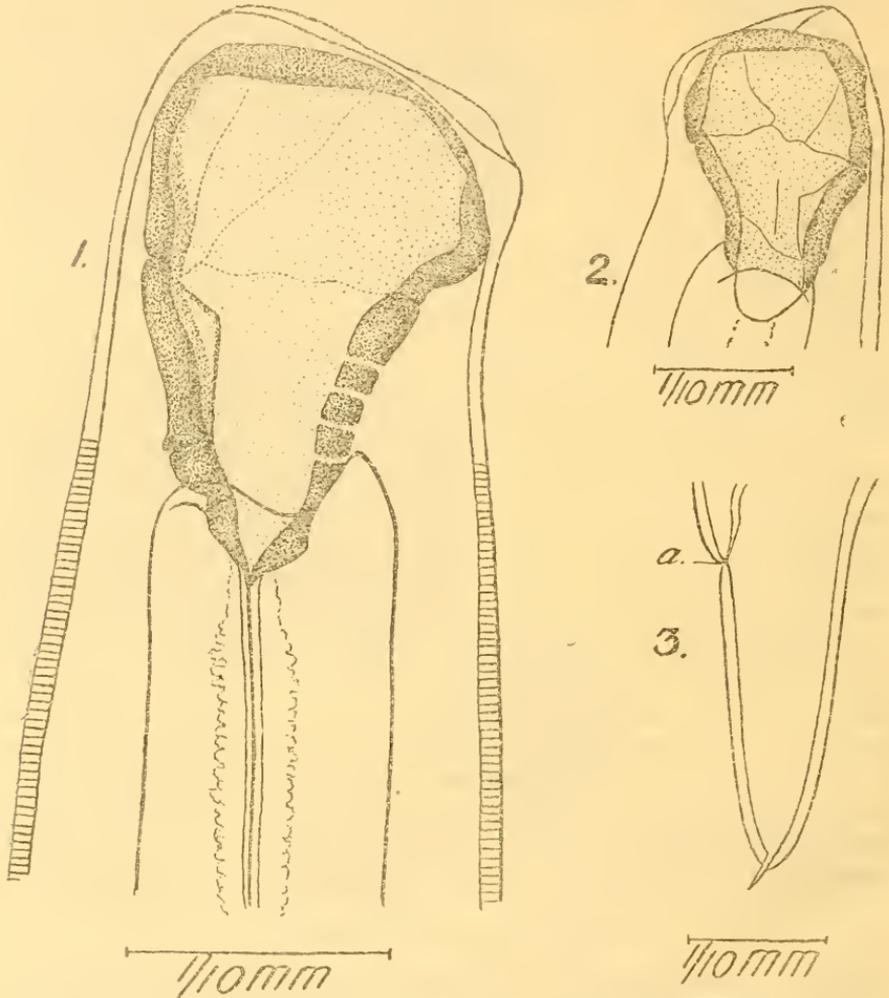
In the course of a post-mortem examination of a raccoon (*Procyon lotor*) that was captured in Prince Georges County, Maryland, on February 7, 1925, by Dr. W. S. Gochenour of the Bureau of Animal Industry, a number of hookworms were found in the duodenum. Associated with the parasites lesions resembling those usually produced by hookworms were observed in the intestinal mucosa.

Heretofore three species of hookworms have been recorded from raccoons of the genus *Procyon*. Molin (1861) has described *Dochmius bidens* and *D. maxillaris* from a South American raccoon (*Procyon cancrivorus*). These species were transferred to the genus *Uncinaria* by Stossich (1899). Baylis and Daubney (1923) have described a third species, *Tetragomphius procyonis* from a raccoon (*Procyon*, species) at the Zoological Garden, Calcutta, India. These authors note that their species may be identical with one of Molin's species but that Molin's descriptions are so incomplete that the species are unrecognizable. Like Baylis and Daubney the present writer has been forced to disregard Molin's species because the imperfections of the descriptions make recognition impossible. The form from *Procyon lotor* is therefore considered to be of a new species. For this species the name *Uncinaria lotoris* is proposed.

UNCINARIA LOTORIS, new species

In their normal location on the mucosa of the intestine the worms were considerably twisted. After being placed in hot alcohol they straightened out. The cuticle is very finely striated transversely. The ventral wall of the mouth capsule presents a moderate curvature when viewed from the side (fig. 1). The mouth capsule is considerably longer than broad, its actual size varying in different specimens. In lateral view, the distance from the anterior extremity of the body to the base of the mouth capsule was found to vary from 162 to 216 μ .

and the greatest width measured from the cuticle on the dorsal surface to the cuticle of the ventral surface of the head was found to vary from 107 to 144 μ in different specimens. The surface of the mouth capsule as observed in a lateral view of the worm, presents a number of sutures that divide it into five sections (fig. 2). Two sutures



FIGS. 1-3.—*UNCINARIA LOTORIS*, NEW SPECIES. 1, ANTERIOR END OF WORM VIEWED FROM THE SIDE. 2, SURFACE VIEW OF THE ANTERIOR END OF THE WORM, FROM THE SIDE, SHOWING THE SUTURES. 3, POSTERIOR END OF FEMALE. *a.*, ANUS; *d.*, DORSAL RAY; *c. d.*, EXTERNO-DORSAL RAY; *e. l.*, EXTERNO-LATERAL RAY; *gub.*, GUBERNACULUM; *l. v.*, LATERO-VENTRAL RAY; *m. l.*, MEDIO-LATERAL RAY; *p. l.*, POSTERO-LATERAL RAY; *sp.*, SPICULE; *v. v.*, VENTRO-VENTRAL RAY

are transverse, the more cephalad suture being longer and extending across the anterior portion of the capsule, the other suture extending across the posterior portion of the capsule. Two sutures are longitudinal, extending from the anterior wall of the capsule to the more cephalad of the transverse sutures. The latter is irregular in shape

and extends from what appears to be a joint in the dorsal wall of the capsule to a corresponding joint in the ventral wall of the capsule. The posterior transverse suture extends from what appears to be a joint in the ventral wall of the capsule and runs diagonally cephalad to the dorsal wall of the capsule but does not meet a joint. The sutures are best seen in a surface view of the capsule. They are not superficial grooves, but extend quite deeply into the capsule, and are still visible, in part, in deeper focus (fig. 1). In a lateral view of the mouth capsule the dorsal wall presents a series of narrow lacunae (fig. 1). In dorsal view these spaces appear as a series of circular openings arranged in two rows, one on each side of the dorsal gutter. In most specimens only from four to five openings

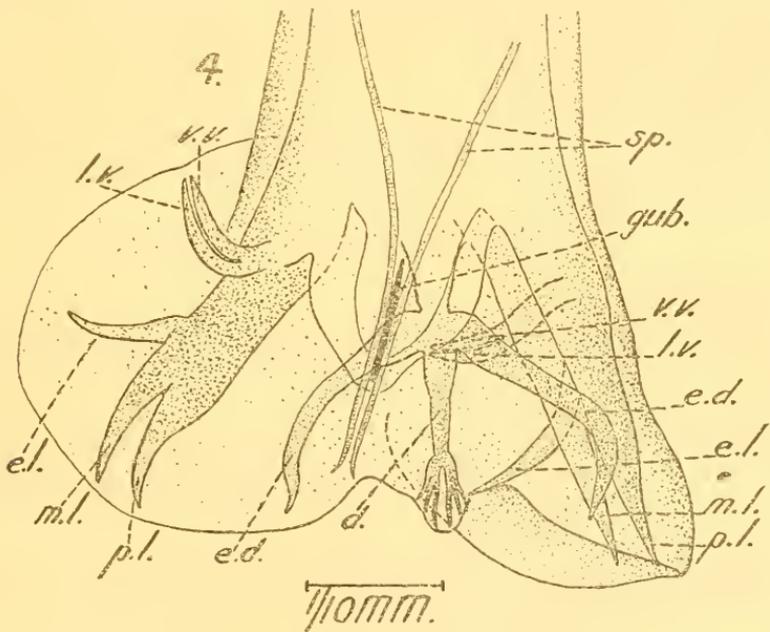


FIG. 4.—*UNCINARIA LOTORIS*, NEW SPECIES. POSTERIOR END OF MALE. FOR LETTERING, SEE PREVIOUS FIGURES

can be distinguished on each side of the dorsal gutter. The number of distinguishable openings on each side of the dorsal gutter was found to exceed five in several specimens examined, the maximum number of openings that could be seen on each side being nine. The two ventral teeth are triangular in shape, the apex of the triangle being rather sharp. The esophagus is from 558 to 738 μ long by 144 to 198 μ in maximum width. The nerve ring is located at a distance of from 400 to 440 μ from the anterior extremity of the body. The excretory pore is slightly posterior to the nerve ring and the cervical papillae are a little posterior to the excretory pore.

Male.—The male is from 5.5 to 6 mm. long by 234 to 254 μ in maximum width. The lateral lobes of the bursa (fig. 4) are a little

more than semicircular in shape. The postero-lateral ray is thicker than the medio-lateral ray. All the rays with the exception of the dorsal ray are more or less sharply pointed at the ends and do not reach the margin of the lobes. The terminal portion of the dorsal ray is bifurcated, each branch being tridigitate. The spicules are slender and tubular from 738 to 828 μ long and terminate in finely pointed ends. The gubernaculum is an elongate slender structure about 90 μ long.

Female.—The females are from 7 to 11 mm. long by 306 to 324 μ wide. The position of the vulva corresponds approximately to the beginning of the posterior third of the body. The distance from the anus to the tip of the bristle that is inserted in the end of the bluntly rounded tail is from 180 to 234 μ (fig. 3). The eggs are from 71 to 76 μ long by 41 to 46 μ wide.

Host.—*Procyon lotor*.

Location.—Duodenum.

Locality.—Prince Georges County, Maryland.

Type specimen.—U. S. National Museum, Helminthological Collections No. 26070.

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