

A NEW PARASITIC NEMATODE FROM AN UNKNOWN SPECIES OF BAT

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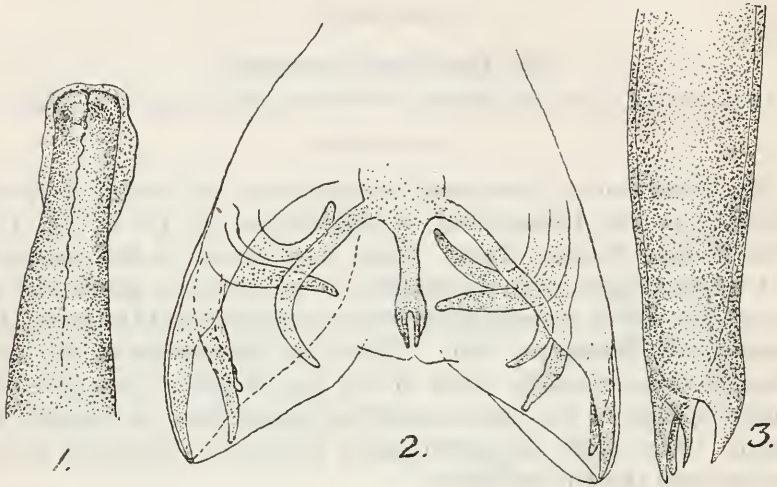
Of the Bureau of Animal Industry, United States Department of Agriculture

In a collection of specimens forwarded to the Bureau of Animal Industry in the Department of Agriculture by Dr. E. W. Price from College Station, Texas, there were found a few specimens of trichostrongyles from the intestine of an unknown genus and species of bat, which are considered to be a new species of the genus *Anoplostrongylus* Boulenger 1926. This is the first record of the occurrence of this nematode genus in the United States, the other two known species of the genus occurring respectively in Belgium and Brazil. The name *Anoplostrongylus delicatus* is proposed for the species from the United States.

ANOPLOSTRONGYLUS DELICATUS, new species

Diagnosis.—Characters of the genus. Male 4.25 mm. long by 120 μ in maximum width. The diameter of the head excluding the cuticular expansion is 21 μ . The cephalic cuticular expansion is from 46 to 50 μ long by about 38 μ wide. The esophagus is club-shaped, the anterior narrower portion being almost twice as long as the broader posterior portion. The total length of the esophagus is 350 μ , its diameter in the middle of the anterior narrower portion being 17 μ and its maximum diameter in the posterior portion being about 33 μ . The bursa spread out is 227 μ wide. The ventro-ventral ray is longer and narrower than the latero-ventral ray, these rays being divergent and their tips being separated by a distance of about 42 μ . The tip of the latero-ventral ray is more or less falcate. The tip of the externo-lateral ray which diverges from the common stem of the other two lateral rays terminates in an elongated knob. The postero-lateral ray is narrower and somewhat shorter than the medio-lateral ray, the tips of these rays being about 21 μ apart. The externo-dorsal rays are relatively long and terminate in knoblike tips. In the spread out

bursa the tips of the externo-dorsal rays are $122\ \mu$ apart. The dorsal ray, which is about $60\ \mu$ long, divides into two branches in its posterior third, each of the branches being more or less indistinctly divided. The terminal division is unequal, the outer terminal branches being shorter than the inner terminal branches. The spicules are slender, becoming gradually attenuated, and are $170\ \mu$ long. The proximal ends



Figs. 1-3—ANOPLOSTRONGYLUS DELICATUS. 1. ANTERIOR PORTION OF BODY; 2. MALE BURSA; 3. FEMALE TAIL.

of the spicules are separated by a distance of $58\ \mu$. The gubernaculum is $55\ \mu$ long. Female 5.7 mm. long by about $95\ \mu$ in maximum width. The head is 33 to $36\ \mu$ wide. The cephalic cuticular expansion is transversely striated, $70\ \mu$ long by about $47\ \mu$ wide. The esophagus is $352\ \mu$ long by $25\ \mu$ wide in its anterior narrower portion and about $50\ \mu$ in maximum diameter in its posterior portion. The vulva is located at

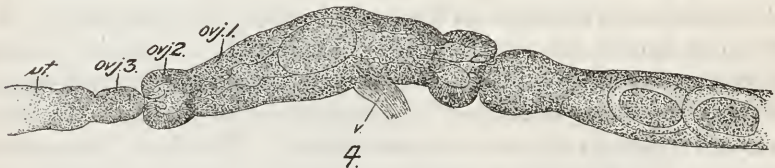


Fig. 4.—ANOPLOSTRONGYLUS DELICATUS. OVEJECTORS AND UTERUS. *ovj. 1.*, OVEJECTOR 1; *ovj. 2.*, OVEJECTOR 2; *ovj. 3.*, OVEJECTOR 3; *ut.*, UTERUS; *v.*, VAGINA.

a distance of 1.45 mm. from the posterior extremity. The ovejectors are well developed, their combined lengths being $403\ \mu$. The eggs are from 63 to $75\ \mu$ long by $42\ \mu$ wide. The tail terminates in a slender tip and has three terminal spikelike processes of which the dorsal one is more slender than the two ventral ones. The tail is from 84 to $110\ \mu$ long.

Host.—"Brown bat," genus and species unknown.

Locality.—College Station, Texas.

Location.—Intestine.

Type.—U.S.N.M. No. 27138. *Paratypes*. U.S.N.M. No. 27199.

The genus *Anoplostrongylus* has close affinities with the genus *Histiostongylus*, from which it has been recently separated by Boulenger (1926). The latter proposed the genus *Anoplostrongylus* on the basis of *Histiostongylus paradoxus* Travassos, 1918, and assigned to it *Strongylus tipula* van Beneden, 1873 (*Histiostongylus tipula* Travassos, 1918). It should be noted in this connection that Travassos (1921) observed certain differences between *Histiostongylus coronatus* of Molin and his own species, *H. paradoxus*, the most important of these being the absence of spines in the cephalic dilatation of *H. paradoxus*, and the occurrence of three spikelike processes on the tail in *H. paradoxus*, in contrast to the single spike in *H. coronatus*. He also noted that the spicules in his species have barbed distal extremities whereas in Molin's species the tips of the spicules are trifurcated. Despite these important differences between the two species, Travassos did not consider it desirable to establish a new genus for his species, but he stated that a reexamination of Molin's species would be necessary to establish the generic characters of the genus *Histiostongylus*.

Recently Boulenger (1926) described a new trichostrongyle from *Taphozous perforatus* from Egypt, which is generically identical with *H. coronatus* of Molin. On the basis of these two species Boulenger has given a generic diagnosis of the genus *Histiostongylus* which leaves no room for doubt that *H. paradoxus* Travassos represents a new genus. As has already been said Boulenger proposed the name *Anoplostrongylus* for the latter genus and assigned *Strongylus tipula* (*H. tipula*) to that genus.

On the basis of the three species of *Anoplostrongylus*, the genus may be defined as follows:

Trichostrongylidae with cuticle of head expanded forming a well-marked cephalic dilatation. Mouth cavity small, leading into a club-shaped esophagus. Female with vulva in the posterior third of the body, with well-developed ovejectors and divergent uteri. Tail short, ending in a slender tip and also provided with three spikelike processes. Male with a well-developed bursa, the latter with large lateral lobes and a small dorsal lobe. The ventro-ventral and latero-ventral rays more or less divergent; medio-lateral and postero-lateral rays with a common stem, close together, the externo-lateral ray diverging from them. Externo-dorsal rays relatively long, dorsal ray bifurcating distally. Spicules slender gradually attenuated. Gubernaculum present.

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