

A NEW NEMATODE, *SINCOSTA* ABERRANS, NEW GENUS,  
AND NEW SPECIES FROM A RODENT

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The specimens described here are from a collection made by Dr. H. W. Graybill at Monmouth Junction, N. J., from the small intestine of a "wild mouse."<sup>1</sup> This nematode belongs to the family Trichostrongylidae Leiper, 1912, and the subfamily Heligmosominae Travassos, 1914. This species appears to belong to a new genus, for which the name *Sincosta* is proposed.

I wish to thank Dr. M. C. Hall, chief of the zoological division, and Dr. E. W. Price, of the same division, for suggestions in connection with the study of this worm.

*SINCOSTA*, new genus

*Generic diagnosis.*—Heligmosominae: Worms delicate and whitish in color when preserved. Cephalic cuticle inflated, usually asymmetrically (fig. 1). Male bursa well developed, definitely asymmetrical and indistinctly trilobed. The bursal rays (fig. 2) are asymmetrical to some extent and in the type and only known species are as follows: The ventro-ventral and the latero-ventral rays on both sides of the bursa are united in about their proximal third, with the latero-ventral ray on the right side considerably thicker and somewhat longer than the other rays. The externo-lateral, medio-lateral, and postero-lateral rays on both sides of the bursa are united in at least their proximal third, are divergent distally and are of about equal size. Each externo-dorsal arises from a thickened heavy base, and usually one base exhibits a knob on its median aspect and the other base a corresponding depression opposite it. Dorsal ray absent. This lack of a dorsal ray is the most striking of the generic

<sup>1</sup> The original source of the material was designated by Mr. H. W. Graybill in 1923 as a "wild mouse" and no further information could be obtained from him as to the identity of the host.

characters. Spicules (fig. 3) bifurcated for most of their length. Female with vulva near anus; ovejector and sphincter well developed. The eggs are oval and embryonated within the uterus in the one species in the genus represented in our material.

*Type species.*—*Sincosta aberrans*, new species.

SINCOSTA ABERRANS, new species

*Specific diagnosis.*—*Sincosta*: Cuticle (fig. 1) of cephalic region coarsely striated transversely. The head measures about  $34\mu$  in diameter. Four submedian papillae and 2 lateral amphids present. The esophagus is about  $480\mu$  long by  $42\mu$  in diameter near its posterior extremity. Nerve ring not observed.

*Male* loosely coiled several times, 4 to 7.8 mm. long with a maximum diameter of 110 to  $140\mu$  immediately in front of the bursa. The bursa (fig. 2) is large and composed of two unequal lateral lobes, the right being the larger, with an indistinct dorsal lobe present. The rays of the bursa, in most cases, terminate near the edge of the bursa. The ventro-ventral and the latero-ventral rays on the left side are thick, short, and united in their proximal half, while the equivalent rays on the right side are as thick, but are much longer and are united in their proximal third. The externo-lateral, medio-lateral, and the postero-lateral rays on the right side are united in their proximal third, and those on the left side in their proximal half; on both sides they are divergent and of about equal thickness distally. Each externo-dorsal (fig. 2) arises from an enlarged base, of which the left base usually exhibits, on its median aspect, a slight depression corresponding to and opposite a knob on the right base. The externo-dorsals may be unequal in length; these rays are more slender than the other rays, and may or may not be branched, the absence of the branches being the usual condition. However, as observed in one specimen, branching occurred about  $50\mu$  from the distal end of the left externo-dorsal, the size of the branch being approximately the same as the terminal portion of the ray. Dorsal ray absent. Spicules (fig. 3)  $475$  to  $500\mu$  long, and bifurcated posteriorly along most of their length, the bifurcation occurring from  $30$  to  $76\mu$  from the proximal end.

It is assumed here that the peculiar situation as regards the dorsal-ray system is due to the suppression of the dorsal ray and the persistence of the externo-dorsals. An alternative interpretation is that two dorsal rays are present and the externo-dorsals are suppressed. We accept the first alternative temporarily.

*Female* 15 to 19.2 mm. long by  $100\mu$  to  $200\mu$  in diameter in the immediate prevulvar region and tightly coiled in an elongated spiral (fig. 4). The vulva (fig. 5) is a transverse slit located 350 to  $450\mu$  from the end of the tail and is supplied with a series of convergent

muscles; immediately posterior to it is a prominent cuticular ridge. A small cuticular spine is located on the tip of the tail, forming a mucronate tip. The anus is located about  $90\mu$  from the tip of the tail. The muscular ovejector, including the sphincter, is 350 to  $450\mu$  long. The eggs are oval, thin shelled, 56 to  $66\mu$  long by about  $35\mu$  wide, and embryonated within the uterus in our material.

*Host*.—"Wild mouse."

*Location*.—Small intestine.

*Locality*.—New Jersey (Monmouth Junction), United States.

*Type specimen*.—Cat. No. 25475, U. S. National Museum Helminthological Collection.

The outstanding characters in this genus and species in comparison with other forms in the subfamily Heligmosominae or with strongyles in general, is the absence of the dorsal ray. The branching of an externo-dorsal, found in one specimen, and the enlarged base of each externo-dorsal with the accompanying knob and depressions found in all specimens, may or may not be vestigial remnants of the dorsal ray. The alternative possibility, already noted, that the rays present are dorsal rays, would suggest that the branching was a remnant of a suppressed externo-dorsal ray. Subsequent developments in helminthology may afford definite evidence in support of one of these alternatives.

#### REFERENCES

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#### EXPLANATION OF PLATE

*Sincosta aberrans*, new species

*an.*, anus; *e. d.*, externo-dorsal ray; *e. l.*, externo-lateral ray; *int.*, intestine; *l. v.*, latero-ventral ray; *m. l.*, medio-lateral ray; *ovej. 1, 2, 3*, ovejectors; *p. l.*, postero-lateral ray; *sp.*, spicules; *ut.*, uterus; *vul.*, vulva; *v. v.*, ventro-ventral ray.

FIG. 1. Anterior end of male.

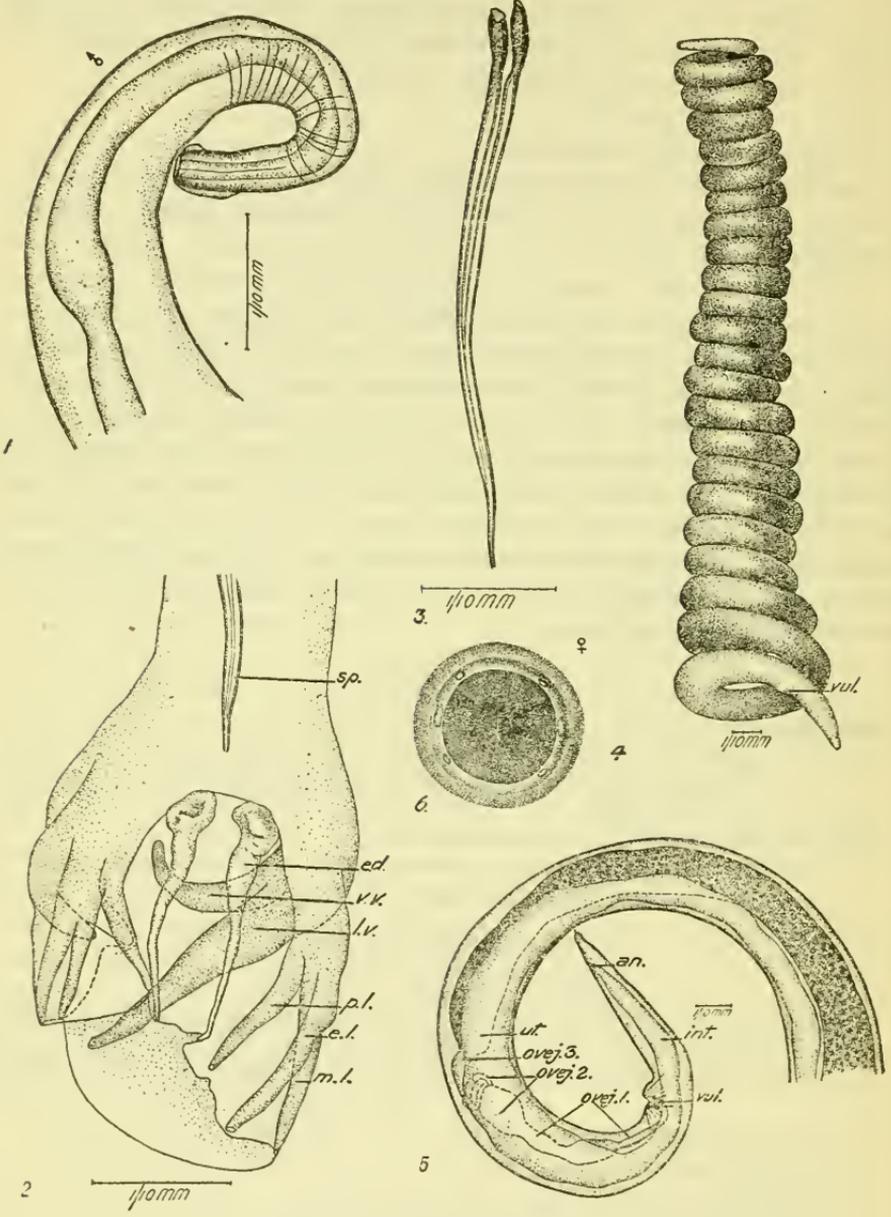
2. Dorsal view of bursa.

3. Spicules.

4. Female showing characteristic tight spiral coil.

5. Posterior end of female showing genital organs.

6. Head, en face view. Enlarged.



SINCOSTA ABERRANS, NEW SPECIES

FOR EXPLANATION OF PLATE SEE PAGE 3

