

**STUDIES OF PLANT AND SOIL NEMATODES. 9.
TRICHODORUS LOBATUS N. SP. (NEMATODA:
TRICHODORIDAE), A STUBBY-ROOT NEMATODE
ASSOCIATED WITH CITRUS AND PEACH TREES**

By R. C. COLBRAN* M.Agr.Sc., Ph.D.

SUMMARY

Trichodorus lobatus n. sp., described from soil around the roots of *Citrus sinensis* Osbeck (sweet orange), has a longer oesophageal lobe than other species of the genus. It most closely resembles *T. teres* Hooper, from which it is distinguished by the abundance of males, presence of spermathecae, shape of the cutinized pieces near the vulva and absence of a supplementary pore anterior to the spicules.

Several hundred males, females and larvae of the species of *Trichodorus* described in this paper were recently found around the roots of *Citrus sinensis* Osbeck (sweet orange) and *Alpinia caerulea* (R.Br.) Benth. (a wild ginger) in containers of soil from the bank of the Brisbane River at Indooroopilly. The roots of the latter had superficial light-brown lesions probably caused by the feeding of this nematode.

Both sexes of *T. lobatus* n. sp. were found by the author in a collection of nematodes from a peach orchard at Gosford, New South Wales, made in 1957 by Dr. E. J. Anderson, Pineapple Research Institute of Hawaii.

Measurements, except those of the holotype and allotype, which were mounted in glycerine, were made on specimens immediately after they had been mounted in water and killed by gentle heat.

* Division of Plant Industry, Queensland Department of Primary Industries.

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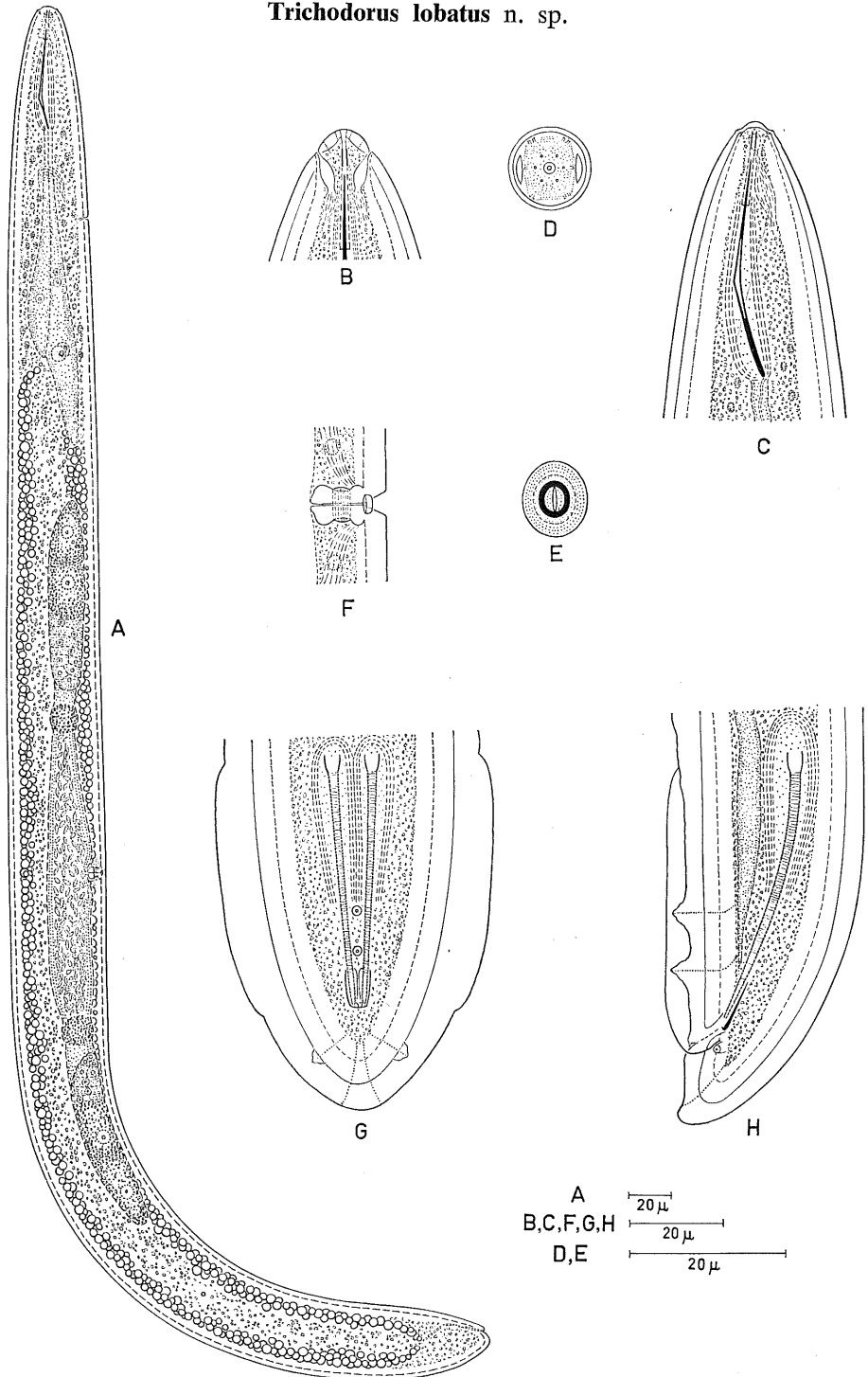
Trichodorus lobatus n. sp.

Fig. 1.—*Trichodorus lobatus* n. sp. A, female; B, dorso-ventral view of female head; C, lateral view of female head; D, en face view of female; E, ventral view of vulva; F, lateral view of vagina; G, posterior end of male in ventral view; H, posterior end of male in lateral view.

Females (10).— $L = 852-1033 \mu$; $a = 19.0-25.3$; $b = 4.9-6.6$; $V = 53.5-54.2$; onchiostyle = $47.1-52.9 \mu$.

Holotype.— $L = 630 \mu$; $a = 14.2$; $b = 5.9$; $V = 54.4$; onchiostyle = 47.2μ .

Body cylindrical, practically straight when relaxed by gentle heat. Cuticle without transverse striae, attached to body at lips, vulva and anus. Fine transverse striae on subcuticle. Excretory pore opposite anterior end of oesophageal bulb; pair of lateral pores midway between vulva and anus, not exactly opposite; caudal pores subterminal. Amphids vase-shaped, apertures ellipsoidal. Stoma a cylindrical guiding tube, one-third as long as onchiostyle, thickened at anterior end. Oesophagus with slender, subcylindrical anterior portion and sac-like basal bulb with ventral lobe 0.9 times as long as body-width at oesophago-intestinal junction. Intestine with a cylindrical guiding tube, one-third as long as onchiostyle, thickened at anterior end to lobe. Oesophago-intestinal valve not observed. Vulva a longitudinal slit surrounded by a subcuticular cutinized ring. Vagina surrounded by a circular muscle band. Ovaries paired, opposed, reflexed to spermathecae. Anus subterminal.

Males (10).— $L = 678-948 \mu$; $a = 15.8-21.2$; $b = 4.9-6.8$; onchiostyle = $42.2-52.0$; spicules = $53.2-59.1 \mu$; gubernaculum = $10.0-13.0 \mu$.

Allotype.— $L = 723 \mu$; $a = 17.4$; $b = 5.9$; onchiostyle = 42.2μ ; spicules = 58.4μ ; gubernaculum = 11μ .

Excretory pore opposite anterior end of oesophageal bulb; two large ventral supplementary papillae 14μ and 27μ from anus ($14.0-18.2 \mu$ and $27.0-35.4 \mu$ in paratypes); a pair of large ventrosubmedian papillae posterior to anus; caudal pores subterminal. Testis prodelphic, outstretched, about two-thirds as long as body, widest at proximal end. Anterior lip of cloaca with a pair of small finger-like cuticular processes. Spicules practically straight, constricted a short distance from proximal end, marked by transverse striae posterior to constriction. Gubernaculum swollen and slightly hooked distally, lateral margins folded ventrally, forming with the central keel two semi-cylindrical troughs through which the spicules move.

Type habitat.—Virgin soil in open eucalypt forest.

Type locality.—Queensland: bank of the Brisbane River near the Queensland Department of Primary Industries Science Laboratories, Indooroopilly, Brisbane.

Types.—Holotype (female) slide Reg. No. G. 3565 and allotype (male) slide Reg. No. G. 3566 in the Queensland Museum; paratypes in the Queensland Department of Primary Industries Nematology Collection.

Diagnosis.—*T. lobatus* n. sp. resembles *T. christiei* Allen, 1957, *T. minor* Colbran, 1956, *T. tunisiensis* Siddiqi, 1963, and *T. teres* Hooper, 1962, in having a definite oesophageal lobe. *T. lobatus* is separated from these species

by the greater length of the lobe; from *T. minor* and *T. christiei* by the longer onchiostyle, direction of the vulva slit and position of the excretory pore in relation to the oesophageal bulb; from *T. teres* by the occurrence of males and females in approximately equal numbers, presence of spermathecae, shape of the cutinized pieces near the vulva and absence of a supplementary pore anterior to the spicules; from *T. tunisiensis* by the absence of prevulvar lateral pores in the female and ventral pores other than the excretory pore in the male.

ACKNOWLEDGEMENT

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