A NEW SPECIES AND SOME NEW RECORDS OF BASIROTYLEPTUS (NEMATODA: DORYLAIMIDA: (BELONCHINAE) FROM AUSTRALIA AND MALAYSIA

BY

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A new species Basirotyleptus heynsi obtained from soil around roots of a peach orchard in South Western New South Wales, Australia is described. It is distinguished by a distinct bend in the basal part of the spear, flanged spear extension and by a prominent posterior uterine sac. The males of B. eximius (Siddiqi & Khan, 1964) Siddiqi & Khan, 1965 described by Sauer in 1966 are transferred to B. heynsi n. sp. New records of Basirotyleptus spp. from Australia and Malaysia are given as well as their supplementary descriptions.


All measurements have been taken from specimens relaxed by gentle heat, fixed in F.A. 4:1 and processed to glycerine by Seinhorst’s method.

Basirotyleptus heynsi n. sp.

(Fig. 1)

syn. Basirotyleptus eximius apud Sauer, 1966
nec B. eximius (Siddiqi & Khan, 1964) Siddiqi & Khan, 1965

In 1966 Sauer collected 4 specimens from Boeil Creek, New South Wales which he considered as conspecific with Basirotyleptus eximius. These specimens included 2 males which were the first record of males for B. eximius. Since 1966 many more specimens have been collected from the same locality and habitat. Considering certain distinguishing features of all these specimens, I am convinced that there is sufficient evidence to erect a new species.

Males of B. eximius then, are not known.

1) This work was done at C.S.I.R.O., Division of Horticultural Research, Merbein, Victoria, Australia.
Measurements

Holotype female: $L = 0.52$ mm; $a = 24$; $b = 5$; $c = 26$; $V = 2^{61}$. Spear $= 12 \mu$m.

Paratype females (30): $L = 0.51 (0.45-0.59)$ mm; $a = 22 (18-28)$; $b = 4.8 (4.4-6.2)$; $c = 23 (19-27)$; $V = 25(21-33)$ (56-63). Spear $= 11.3 (10.0-12.0) \mu$m.

Paratype males (18): $L = 0.49 (0.44-0.56)$ mm; $a = 25 (22-29)$; $b = 4.6 (4.2-5.4)$; $c = 22 (20-25)$; $T = 48 (42-58)$ %. Spear $= 11.3 (10.0-12.0) \mu$m; spicule $= 19.2 (15-21) \mu$m.

Spicules were measured along midline.

Description

Body, when relaxed by heat, curved ventrally in the shape of an open C but curvature somewhat more pronounced in the posterior part of the male. Body cylindroid, tapering gradually at each end. Cuticle and subcuticle striated. Radial elements present in inner layers of cuticle; sometimes inconspicuous. Lateral chords 5-6 \mu m wide. Lateral body pores not visible. Amphids cup-shaped, two-thirds head width, their apertures almost as wide as base of lip region. Lip region with rounded outer contours, set off by a distinct and sharp constriction. Lip region $\pm 1.2$ times width of constriction and 0.4 to 0.6 width of body at base of esophagus. Stoma shape of inverted funnel, sclerotized part 10-13 \mu m or 5/6th head width. Sclerotization of stoma anterior to spear point less pronounced. Spear guiding ring situated at base or close to base of sclerotized part of stoma. Spear 10-12 \mu m long, slender, straight except for base which is bent dorsally. Spear extension 9-12 \mu m, about as long as spear, flanged at base. Esophagus typical of the genus, slender with a pyriform basal bulb, about half body width. Cardia $\pm 3 \mu$m long, usually indistinct. Nerve ring at 45-60% of the esophageal length from anterior end. Pre-rectum 42-69 \mu m long. Rectum 12-15 \mu m long, equals anal body width.

Tail 18 to 27 \mu m long, dorsally convex-conoid, terminus very slightly digitate. Tail 1.4 to 2.2 anal body widths long.

Vulva transverse, post equatorial. Vagina 7-9.5 \mu m, extends 0.25 to 0.5 body widths with a cross-shaped lumen. Distance between base of esophagus and vulva 154-243 \mu m. Female prodelphic, posterior uterine sac 35-70 \mu m long or 1.7 to 3.5 (2.3) body widths, mostly filled with spermatozoa. Anterior reproductive branch normal, ovary reflexed 53-87% of the distance back to the vulva, oocytes mostly in a single row, uteri in most specimens packed with spermatozoa. Eggs 63-72 \mu m long and 23-27 \mu m wide present in 4 \female samples, all from August 1967 samples.

Paratypes males: similar to females in general morphology. Two testes, width about half body width at region of testes. Both testes $\pm$ the same length, between 33-90 \mu m. Spermatozoa cylindroid. Spicules dorylaimoid, 15-21 \mu m. Ventro-submedian, pre-anal paired supplements 6 to 10 \mu m from cloacal aper-