TWO NEW SPECIES OF THE GENUS *HEMICYCLIOPHORA* (NEMATODA: TYLENCHIDA) FROM MOUNT KENYA

BY

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*H. brzeskii* n. sp. differs from all known species of *Hemicycliophora* combining a posterior vulva with a short conical tail and a very long spicular sheath bearing a spine and enclosing the distal part of very long completely recurved spicules. *H. pseudochilensis* n. sp. differs from *H. chilensis* Brzeski, 1974 in having distinctly larger annules and a stylet with more rounded basal knobs showing a cavity.

During the Belgian Mount Kenya Bio-Expedition 1975 soil samples were collected around the roots of several plants in various ecological zones of Mount Kenya. The nematodes from these samples were immediately fixed in hot 4% formalin. In the laboratory they were extracted by a centrifugation-flotation method. They were then processed to pure glycerin by a modified Seinhorst method (De Grisse, 1969) and mounted between cover slips on aluminium slides. The symbols are those used by De Grisse (1964), except for PV/ABW, T/ABW and VA%T, introduced by Loof & Heyns (1969).

*Hemicycliophora brzeskii* n. sp.  
(Figs. 1 and 2)

Measurements

Population from Naru Moru Track. Females. Holotype: L = 1.27 mm; a = 20; b = 6; c = 21; V = 93; stylet = 107 μm; R = 211; Rex = 39; RV = 26; Rvan = 9; Ran = 16; PV/ABW = 2.2; T/ABW = 1.5; VA%T = 47; VT/VB = 2.1. Paratypes (n = 2): L = 1.23 mm; a = 21-24; b = 6; c = 21; V = 93; stylet = 106-108 μm; R = 206-216; Rex = 41-42; RV = 23-27; Rvan = 6-8; Ran = 16-18; PV/ABW = 2.5-2.6; T/ABW = 1.6-1.7; VA%T = 51-63; VT/VB = 2.2-2.3.

Males. Paratypes (n = 2): L = 0.76-0.79 mm; a = 26-27; b = 5; c = 11; T = 43; spicules = 98-108 μm; T/ABW = 3.3-3.6.

Population from Sirimon Track. Females (n = 18): L = 1.06-1.27 mm (1.18); a = 17-25 (20); b = 6-7 (6); c = 14-30 (22); V = 90-94 (92); stylet = 99-109 μm (104); R = 200-214 (208); Rex = 37-42 (39); RV = 23-35 (28); Rvan = 7-13 (10); Ran = 13-25 (17); PV/ABW = 2.0-4.0 (2.8); T/ABW = 1.1-1.9 (1.5); VA%T = 42-108 (75); VT/VB = 1.7-2.5 (2.2).

Male (n = 1): L = 0.69 mm; a = 24; b = 5; c = 10; T = 36; spicules = 98 μm; T/ABW = 3.6.
Description

Female (holotype). Body moderately slender, slightly curved after fixation. Outer cuticle rather closely adpressed to inner one, except in tail region. Annules of inner cuticle 7.2 \(\mu m\) (6.4-7.5 for paratypes) wide at mid-body; narrowing to 3.1 \(\mu m\) (3.2-3.5) at distal part of tail. Lateral field marked by a discontinuous single lateral line; where this line is interrupted, the body annules may show a few breaks (Fig. 2D); the cuticle bears numerous short longitudinal striae, mostly restricted to one annule, but sometimes continuing for several annules.

Head end truncated; labial disc not protruding from the lip region; lip region not clearly offset, in the holotype with two annules ventrally and three annules dorsally, first two annules difficult to distinguish (for the variation in head-annulation in other specimens: see Fig. 1: B, C) and the cuticular separation between lip region and rest of body is not at the level of the basal cephalic frame-work. Stylet slender, slightly dorsally curved; conical part 92 \(\mu m\) (88-89 \(\mu m\) in paratypes); basal knobs angular and directed backward, with cavity as illustrated on Fig. 1D. Isthmus of oesophagus approximately as long as terminal bulb. Nerve ring encircling anterior part of terminal bulb. Hemizonid two annules long, situated at beginning of intestine and making a slight bulge in cuticle. Excretory pore located on first (second for one paratype) annule behind hemizonid.

Ovary sometimes extending anteriorly to the conical part of the stylet; spermatheca spherical, lying ventro-lateral to the uterus (ventro-lateral or dorso-lateral for the paratypes and the specimens from Sirimon Track) and filled with rounded sperm. Anterior uterine sac is elongated and contains several developing eggs (a maximum of fourteen and a mean of about six). Vulva forms a conspicuous discontinuity in ventral body wall; vulval lips elongated. Post-vulvar region very short, in its anterior half (= vulva-anus region) subcylindroid, narrowing towards a dorsally convex and conoid tail. In some Sirimon Track specimens, the tail is more offset and uniformly conoid (Fig. 1G). Position of anus on outer cuticle difficult to distinguish, on inner cuticle not observed. Tail terminus finely rounded.

Male. Body annules 1.9-2.0 \(\mu m\) wide on mid-body and in tail region. Lateral field marked by two longitudinal lines, difficult to distinguish. Lip region rounded and not offset from rest of body; head sclerotization slightly developed. Stylet absent. Oesophagus degenerated: position of median bulb unclear, position of terminal bulb somewhat more distinct. Hemizonid conspicuous, three annules long, giving a slight bulge in cuticle, situated at oesophageal-intestinal junction. Excretory pore located on second or third annule behind hemizonid.

Spicules slender, very long and cephalated proximally; strongly curved to a U-shape with distal part resting against the body wall. A long (43 \(\mu m\)) spicular