ON THREE NEW SPECIES
OF THE GENUS CRICONEMOIDES TAYLOR, 1936
(NEMATODA: CRICONEMATIDAE) FROM NORTH INDIA

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With 17 Figures in the Text
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The taxonomy of the genera Criconema Hofmänner and Menzel, 1914 and Criconemoides Taylor, 1936 presents some interesting problems. Taylor (1936) separated the two genera on the presence or absence of cuticular outgrowths. In Criconema the body annules are divided into retrorse scales or spines whereas in Criconemoides they are plain. Recently forms have been described by various workers e.g., Luc (1959), Fassuliotis and Williamson (1959), Andrassy (1962) and de Guiran (in press-personal communication) which do not fit exactly in either of the above mentioned genera. These worms appear to represent intermediate forms because they possess neither smooth annules nor prominent scales or spines, but have rough cuticular edges. In the present study also the species described hereunder as Criconemoides aberrans n. sp., and Criconemoides neoaxeste n. sp. are of the type that they fit neither of the genera. Except for the presence or absence of cuticular outgrowths, there is no other feature for the separation of these two genera. The en face view of the two genera i.e., presence of six lips in Criconema and four sublateral lobes in Criconemoides can be an additional character for their separation but sufficient data are not available because en face views of most of the species of the two genera are not known. In the opinion of the present authors neither will it be justified to erect a new genus for these aberrant forms because two boundaries will have to be defined instead of one, nor to synonymize the two genera, but to extend the definition of the genus Criconemoides to contain species with very slight ornamentation, because it is more like the ornamentation of larvae of some Criconemoides than like true scales and spines of the cuticle of Criconema. It may be said that Criconema are the neotenic forms of Criconemoides that have attained sexual maturity at an early stage of evolution and have retained the scales or the spines that some larvae of Criconemoides show.
Criconemoides aberrans n. sp.
(Figs. 1—6)

Dimensions. 20 Females: L = 0.45—0.54 mm; a = 7—11; b = 3.4—4.6; V = 92—95; Spear = 68—78 μ.

Holotype (female). L = 0.54 mm; a = 9; b = 4.2; V = 94; Spear = 75 μ.

Body short, thick, blunt at both ends and a little ventrally arcuate. Cuticle very thick, longitudinally wrinkled and marked with 41 annules. Each annule retrorse, 15 μ long in middle of body and bearing rough cuticular margins; the latter more pronounced in the posterior part of body where they appear as well-developed outgrowths on the last 6—7 annules. Head with two annules, the anterior one 27 μ in diameter, saucer-shaped and enclosing the lip region; the posterior one 24 μ in diameter and ringlike. En face view showing a central labial disc bearing four sublateral lobes equal in size. Amphidial apertures small, situated laterally near the mouth on the labial disc. Head framework weakly developed, confined to the first annule.

Spear strong, extending through 7 annules and consisting of a short basal part 20 μ long and an anterior portion 55 μ long. Basal knobs of spear 13 μ across with their margins directed anteriad. Esophagus comprising an amalgamated anterior cylindrical procorpus and a 21 μ wide median bulb terminating posteriorly into a small basal oesophageal bulb. Isthmus very short. Excretory pore not visible (in one paratype it is situated on 15th annule from the anterior end). Nerve ring enveloping the isthmus.

Vulva a transverse slit, about half the corresponding body diameter, located on 5th annule from the posterior end. Vagina a narrow tube extending inward and forward into a long swollen uterus. Ovary prodelphic and outstretched. Oocytes arranged irregularly in the anterior part of ovary but in a single row in the rest of it. Spermatheca not observed. Anus obscure. Caudal terminus bluntly rounded.

Male. Not known.

Holotype. Female; collected on October 27, 1962; slide number PNC/C—003, deposited in the Zoological Museum, Aligarh Muslim University, Aligarh, U. P., India.

Paratypes. 50 females; tube number PNC/C—003; other data same as for holotype.

Type habitat. Soil around the roots of Alucha, Prunus communis Huds.

Type locality. L. R. Bros. Nurseries, Saharanpur, U. P., North India.

Diagnosis and relationship. Criconemoides with the above measurements and description; distinctive in having 38—43 body annules; rough cuticular outgrowth on its body which are more pronounced on the last 10 annules; 68—78 μ long spear; excretory pore situated on 15th annule from the anterior end; vulva located on 4th or 5th annule.