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OBSERVATIONS ON THE NEMATODE GENERA *ORIENTYLUS* AND
CALVATYLUS (ROTYLENCHOIDINAE : HOPLOLAIMIDAE) WITH
DESCRIPTIONS OF THREE NEW SPECIES

BY

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The genera *Orientylus* and *Calvatylus* which were proposed by Jairajpuri & Siddiqi (1977) have been defined in detail and also compared with related genera of Hoplolaimidae. Two new species of *Orientylus*, *O. geraerti* n. sp. from India and *O. varus* n. sp. from Malawi have been described. Four species of the genus *Rotylenchus*, viz., *R. helicus* Husain & Khan, 1967; *R. citri* Rashid & Khan, 1973; *R. siddiqii* Mulk & Jairajpuri, 1976 and *R. secundus* Mulk & Jairajpuri, 1976 are being transferred to *Orientylus*. A new species of *Calvatylus*, *C. heredicus* n. sp. from Heredia, Costa Rica has been described and compared with the type species, *C. calvus* (Sher, 1965) Jairajpuri & Siddiqi, 1977.

SOME FACTORIAL INVOLVEMENT IN NON-PARASITISATION
OF MAIZE BY *HETERODERA AVENAE*

BY

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Both screenhouse and field experiments, conducted during 1971-75, revealed that maize was not parasitised by Haryana population of *Heterodera avenae*. This study alludes to involvement of perhaps a different pathotype or some other factors, visualised and mentioned in this paper.

EFFECT OF PESTICIDES AND FERTILIZERS SINGLY AND IN
COMBINATION ON THE ROOT-KNOT NEMATODE
INFESTING *MUNG*

BY

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The soil application of aldicarb (1.5 kg ai/ha) alone or in combination with nitrogenous (12.5 kg N/ha) and phosphatic (40.0 kg P/ha) fertilizers significantly reduced the nematode population and their galls on the roots. The highest reduction of 84-85% in the population of nematodes over the control recorded in treatment with aldicarb plus nitrogen plus half phosphorous was significantly higher as compared with 66 per cent reduction in treatment where aldicarb was applied alone. The differences in the population of nematodes and their galls in the control and treatments with nitrogenous and phosphatic fertilizers individually or in combination were non-significant. The treatments consisting of aldicarb gave appreciably higher yields. Application of nitrogenous and phosphatic fertilizers both individually and in combination gave non-significant differences in yield over the control.

DEVELOPMENTAL BIOLOGY OF *CHILOPLACUS SYMMETRICUS*

BY

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The developmental biology of *Chiloplacus symmetricus* was studied by culturing these nematodes in malt-peptone agar in petri dishes. The eggs are laid mostly in the single-celled stage and the cleavage starts about an hour after egg laying. The cells in the anterior part are hyaline and divide more rapidly than those in the posterior part. Invagination begins about a day after laying and the juvenile hatches after about another 48 hours. During the life cycle there are four moults. The juvenile stages can be distinguished chiefly on the basis of their body size and the developing gonad. The two sexes can be distinguished from the second moult onwards. Cells forming the reproductive system divide only during the moulting period.

EFFECT OF DIFFERENT FACTORS ON THE MOVEMENT OF
NEMATICIDES IN ALIGARH SOIL USING
THIN-LAYER-CHROMATOGRAPHY

BY

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The effect of pH, organic matter, CaCO_3 and hydrogen and sodium saturated soils on the mobility of dazomet, oxamyl and dichlorofenthion by employing soil TLC technique has been studied. In extreme pH ranges the mobility of the nematicides used in the present studies increases, whereas CaCO_3 content or organic matter brings about a decrease in mobility.

**AEROTYLENCHUS SAFRONI N. GEN., N. SP. (NEMATODA :
TYLENCHIDA) FROM KASHMIR, INDIA**

BY

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Aerotylenchus safroni n. gen., n. sp. collected from soil around roots of safron corm (*Crocus sativus*) from Pampore, Kashmir differs from *Irantylenchus*, (Kheiri, 1972) Andrassy, 1976 in the shape of spear knobs, position of dorsal oesophageal gland orifice, shape of female tail and in the presence of aerolations in lateral field.

SOIL AND PLANT-PARASITIC NEMATODES FROM MAHARASHTRA,
INDIA. III. *BASIRIA NASIKENSIS* N. SP. AND *CRICONEMOIDES*
MONGOMORGUM SP. N. (TYLENCHIDA : NEMATODA)

BY

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Basiria nasikensis n. sp. collected around the rhizosphere of *Triticum aestivum* L. has 0.6-0.8 mm long body, 9-10 μ m long spear, opening of dorsal oesophageal gland 3-4 μ m from spear base, four smooth incisures, long post-uterine sac, subclavate tail and prominent lateral sclerotization, extending up to 3 body annules in the body. *Criconemoides mongomorgum* n. sp. collected around *Gossypium hirsutum* L. has reflexed ovary, 0.46-0.61 mm long body, 63-70 body annules, 66-72 μ m long spear and V = 88-92.