

ON SOME EARTHWORMS FROM EASTERN HIMALAYAS

By

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INTRODUCTION

Our knowledge of the earthworm fauna of the eastern Himalayas is mainly based on the works of Stephenson (1923), Gates (1937, 1945, 1951, 1958), and the four recent papers by Julka (1975), Julka and Halder (1977), and Soota and Halder (1977a & b), but it is still far from complete. So in order to augment the existing information the first author undertook during August—September, 1977, and May, 1978, two faunistic surveys of parts of Sikkim and adjoining areas of West Bengal at altitudes ranging from 900m—4000m.

The present report is based on the study of the earthworms collected during these surveys. Some other lots from Bhutan and Darjiling District, W. B., and now present in the unnamed collection of the Zoological Survey of India, have also been included. The collection comprises 13 species of 9 genera and 3 families, of which 5 species from Sikkim and one from Bhutan from new locality records, and 3 show interesting morphological variations.

Family MONILIGASTRIDAE

Drawida nepalensis Michaelsen, 1907

Material : 2 exs. ; Z. S. I. Reg. No. An 1069/1 ; on the road to Pakyong, alt. 1050 m, 20 km S of Gangtok, Sikkim ; 24. v. 1978 ; coll. *T. D. Soota*.

Remarks : This species is recorded for the first time from Sikkim.

Family MEGASCOLECIDAE

Subfamily MEGASCOLECINAE

Tribe Dichogastrini

Dichogaster bolau (Michaelsen, 1891)

Material : 2 exs. ; Z. S. I. Reg. No. An 1070/1 ; Rimbi, W. Sikkim, alt. 1200 m ; 15. v. 1978 ; coll. *T. D. Soota*.

Remarks : This species is recorded for the first time from Sikkim.

Dichogaster saliens (Beddard, 1893)

Material : 4 exs. ; Z. S. I. Reg. No. An 1071/1 ; Rimbi, W. Sikkim, alt. 1200 m ; 15. v. 1978 ; coll. *T. D. Soota*,

Remarks : In the first example, a pair of circular papillae present in 15/16 in *a a*. In the second and third, a small transverse pit present in 15/16 in *a a*. In the fourth, genital markings lacking in 15/16 but male porophores are in circular papillae.

This species is recorded for the first time from Sikkim.

Tribe Megascolecini

Amyntas diffringens (Baird, 1869)

Material : 19 exs. ; Z. S. I. Reg. No. An 1072/1 ; midway between Sukiapokri and Jorpokri, Darjiling Dist.; 13. iii. 1977. 13. exs. ; Z. S. I. Reg. No. An 1073/1 ; Palmajoa Forest Rest House compound, Darjiling, alt. 2250 m ; 15. v. 1977 ; coll. *P. Roy*. 8 exs. ; Z. S. I. Reg. No. An 1074/1 ; Gangtok, Sikkim, alt. 1500 m ; 20. viii. 1977. 11 exs. ; Z. S. I. Reg. No. An 1075/1 ; Deorali, Gangtok, Sikkim ; 20. viii. 1977. 16 exs. ; Z. S. I. Reg. No. An 1076/1 ; Manibhanjan, Darjiling Dist., alt. 2000 m ; 6 & 7. v. 1978. 9 exs. ; Z. S. I. Reg. No. An 1077/1 ; Rimbi, W. Sikkim, alt. 1200 m ; 15. v. 1978 ; coll. *T. D. Soota*.

Amyntas hawayanus (Rosa, 1891)

Material : 7 exs. ; Z. S. I. Reg. No. An 1078/1 ; Mangan, 67 km N of Gangtok, Sikkim, alt. 1500 m ; 9. ix. 1977. 1 ex. ; Z. S. I. Reg. No. An 1079/1 ; Deorali, Gangtok, Sikkim ; 20. viii. 1977. 38 exs. ; Z. S. I. Reg. No. An 1080/1 ; Simikchandi, 50 km N of Gangtok ; 21. viii. 1977 ; coll. *T. D. Soota*.

Tribe Perionychini

Perionyx excavatus Perrier, 1872

Material : 12 exs. ; Z. S. I. Reg. No. An 1081/1 ; Manul, 75 km N of Gangtok, Sikkim, alt. 1470 m ; 8. ix. 1977. 13 exs. ; Z. S. I. Reg. No. An 1082/1 ; Mangan, 67 km N of Gangtok, Sikkim, alt. 1500 m ; 9. ix. 1977 ; coll. *T. D. Soota*.

Remarks : The following morphological variations were observed in 2 specimens from Manul. In one, male pores three-paired on xvii and single on the left side on xviii ; prostates three—each corresponding to a male pore. In the other specimen, spermathecal pores three—one on the right side in 7/8 and one each on the left sides of 8/9 and 9/10. Female pores on xv and male pores on xix. It is possibly due to regeneration of its anterior part.

This species is recorded for the first time from Sikkim.

Perionyx jorpokriensis Julka, 1975

Material : 11 exs. ; Z. S. I. Reg. No. An 1083/1 ; Palmajoa, Darjiling ; 15. v. 1977 ; coll. *A. K. Mukherjee*.

Perionyx variegatus (Michaelsen, 1907)

Material : 1 ex. ; Z. S. I. Reg. No. An 1084/1 ; Nathang, 120 km NE of Gangtok, Sikkim, alt. 4000 m ; 28. v. 1978 ; coll. *T. D. Soota*.

Remarks : This species is recorded for the first time from Sikkim.

Family LUMBRICIDAE

Aporrectodea rosea (Savigny, 1826)

Material : 7 exs. ; Z. S. I. Reg. No. An 1085/1 ; Lachung, 140 km N of Gangtok, Sikkim, alt. 3000 m ; 8. ix. 1977 ; coll. *T. D. Soota*.

Dendrodrilus rubidus (Savigny, 1826)

Material : 31 exs. ; Z. S. I. Reg. No. An 1086/1 ; Byakar, Bhutan ; 17. i. 1978 ; coll. *S. S. Saha*. 104 exs. ; Z. S. I. Reg. No. An 1087/1 ; Nathang, 120 km NE of Gangtok, Sikkim, alt. 4000 m ; 28. v. 1978 ; coll. *T. D. Soota*.

Remarks : Clitellum saddle shaped, xxvi—xxxi ; tubercula pubertis xxvii—xxx, just lateral to *b* ; male pores near *m b c* ; male tumescence in xv reaching *b* but not closing *c* ; spermathecae lacking, presumably caused by the athecal parthenogenetic reproduction (A morph).

This species is recorded for the first time from Bhutan.

Eisenia foetida (Savigny, 1826)

Material : 1 ex. ; Z. S. I. Reg. No. An 1088/1 ; midway between Sukiapokri and Jorpokri, Darjiling Dist. ; 13. iii. 1977 ; coll. *P. Roy*. 25 exs. ; Z. S. I. Reg. No. An 1089/1 ; Manibhanjan, Darjiling Dist. ; 7. v. 1978. 1 ex. ; Z. S. I. Reg. No. An 1090/1 ; Gangtok, Sikkim ; 14. viii. 78 ; coll. *T. D. Soota*.

Eiseniella tetraedra (Savigny, 1826)

Material : 4 exs. ; Z. S. I. Reg. No. An 1091/1 ; Manibhanjan, Darjiling Dist., alt. 2000 m ; 6 & 7. v. 1978 ; coll. *T. D. Soota*.

Octolasion tyrtaeum (Savigny, 1826)

Material : 11 exs. ; Z. S. I. Reg. No. An 1092/1 ; Nathang, 120 km NE of Gangtok, Sikkim, alt. 4000 m ; 28. v. 1978 ; coll. *T. D. Soota*,

SUMMARY

The paper reports twelve species of earthworms from Sikkim and adjoining areas and one species from Bhutan. These include 5 new locality records from Sikkim and one from Bhutan. Morphological variations in three species have also been recorded.

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