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**ON A COLLECTION OF SCOLOPENDRID CENTIPEDES
(CHILOPODA : SCOLOPENDROMORPHA) FROM ORISSA WITH
NOTES ON SOME NEW DISTRIBUTIONAL RECORDS**

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INTRODUCTION

Being a tropical country with two hotspots of biodiversity India has no dearth of centipedes. The Centipede diversity of India is represented by 101 species, belonging to 11 genera under two families (Khanna, 2001). Systematic survey and studies of centipedes have so far been restricted to the Deccan, Western Ghats of Maharashtra, Indian Desert, and Western Himalayas (Jangi & Dass, 1984, Khanna 1994, 2001, 2003, Yadav 1993, Khanna and Yadav, 1997). Knowledge about the centipedes from Orissa is very scanty and fragmentary, with 7 species belonging to 5 genera and 2 sub-families so far known (Jangi & Dass 1984, Khanna 2001). The present study is based on a small collection of centipedes available in the Zoological Survey of India, Estuarine Biological Station, Orissa. In the present communication nine species of scolopendrid centipedes referable to 5 genera and 2 subfamilies pertaining to Orissa have been inventoried. Two species *viz.* *Asanada indica* Jangi & Dass and *Rhysida longipes longipes* (Newport) are reported here for the first time from the state. The collection is deposited in ZSI, EBS, Orissa.

SYSTEMATIC LIST

Class CHILOPODA

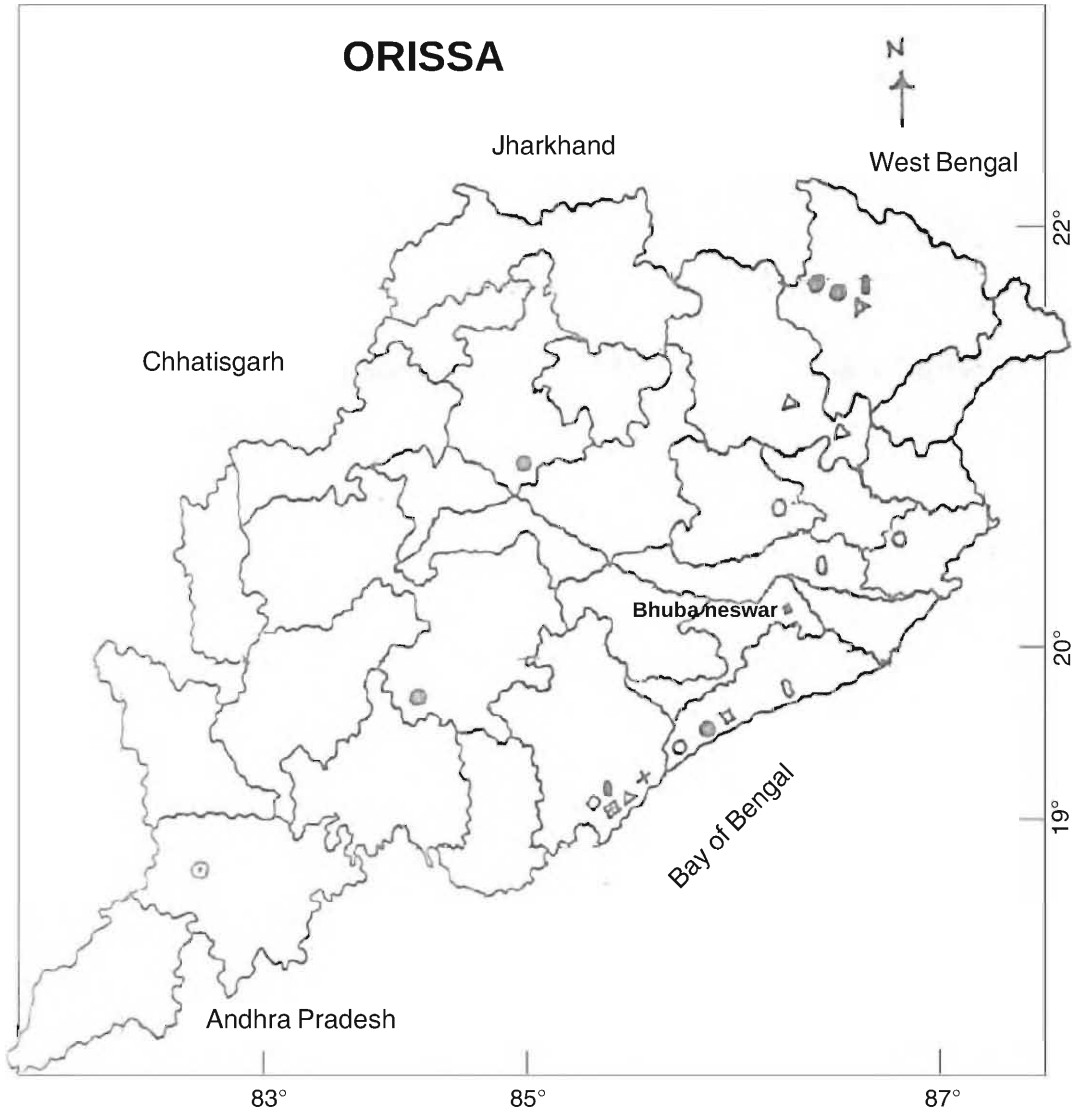
Order SCOLOPENDROMORPHA

Family SCOLOPENDRIDAE

Subfamily SCOLOPENDRINAE

Tribe SCOLOPENDRINI

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|---|---|---|-----------------------------------|
| ● | <i>Scolopendra morsitans</i> | + | <i>Otostigmus politus politus</i> |
| ○ | <i>Scolopendra amazonica</i> | ∅ | <i>Rhysida nuda nuda</i> |
| ⊙ | <i>Scolopendra indiae</i> | ■ | <i>Rhysida longipes longipes</i> |
| △ | <i>Cormocephalus dentipes</i> | ▣ | <i>Asanada indica</i> |
| □ | <i>Asanada agharkari singhbhumensis</i> | | |

1. *Scolopendra amazonica* (Bucherl)

1946. *Scolopendra morsitans amazonica* Bucherl. *Mem. Inst. Butantan*, **19** : 135-137.

1984. *Scolopendra amazonica* (Bucherl) : Jangi & Dass. *J. Scient. Indl. Res.*, **43**(2) : 29.

Diagonistic characters : 20th pair of legs without tarsal spur, prefemur of anal legs ventrally with 9 spines arranged in 3 rows of 3 each.

Material examined : 1ex. Gopalpur-on-sea (under stone), Ganjam dist., 27.vi.2005, coll. P.M. Sureshan (Reg. no. 3907).

Distribution : Cosmopolitan.

Remarks : It is a medium sized and common species of centipede. Jangi & Dass (1984) reported this species from Dhenkanal, Ganjam and Keonjhar Districts of Orissa.

2. *Scolopendra morsitans* Linnaeus

1758. *Scolopendra morsitans* Linnaeus. *Syst. Nat.* **10** : 638.

1984. *Scolopendra morsitans* Linnaeus : Jangi & Dass, *J. Scient. Indl. Res.*; **43**(2) : 29.

Diagnostic characters : 20th pair of legs with tarsal spur.

Distribution : Cosmopolitan.

Remarks : It is a large sized species, occurring more abundantly northwards and is the most dominant species of the Indo-gangetic plains. Jangi & Dass (1984) reported this species from Puri, Mayurbhanj and Sambalpur districts of Orissa. Not available in the present lot.

3. *Scolopendra indiae* (Chamberlin)

1914. *Trachycormocephalus indiae*, Chamberlin. *Ent. News*, Philadelphia. **25** : 390.

1987. *Scolopendra indiae*, Khanna. D.Phil. Thesis. Gharwal University. pp. 1-243.

Diagnostic characters : 21st tergite with a complete median suture; lateral margination only on 21st tergite; coxopleural process bearing three spines; anal legs short, prefemur with 3 dorso medial spines.

Distribution : India : Orissa, Maharashtra, Rajasthan.

Remarks : In India the species has a distribution, more or less restricted to Indo-Gangetic belt, and Deccan (Orissa). Jangi & Dass (1984) reported this species from Koraput district of Orissa. Not available in the present lot.

4. *Cormocephalus dentipes* Pocock

1891. *Cormocephalus dentipes* Pocock, *Ann. Nat. Hist. Ser.* **6, 7** : 66.

1984. *Cormocephalus pseudonudipes*, Jangi & Dass, *J. Scient. Indl. Res.*, **43**(2) : 37.

Diagnostic characters : All legs without tarsal spur; 21st tergite without a longitudinal median sulcus; lateral margination present on tergites anterior to 21st; maxillipedes with prefemoral process; anal legs in adult male tuberculate.

Material examined : 1 female, 1 male, Suniyer Dam : Mayurbhanj : Similipal Biosphere Reserve : 12.i.2003, coll. P.G.S. Setthy (Reg. no. 3679); 2 males, Bhajamari : Similipal Biosphere Reserve; 11.i.2003, coll. P.G.S. Setthy (Reg. no. 3666); 1 female, Hatighal (under stone) Similipal Biosphere Reserve, 13.ii.2003. coll. P.G.S. Setthy (Reg. no. 3713); 6 exs., Gopalpur-on-sea, Ganjam Dist., 1.xii.2004; 4 exs. 4.i.2005, coll. P.M. Sureshan (Reg. no. 3902, 3904); 1 ex. Gopalpur-on-sea, Ganjam district, 25.vi.2005, coll. P.M. Sureshan (Reg. no. 3906).

Distribution : India : Madhya Pradesh, Orissa, West.Bengal, Uttar Pradesh, Andaman and Nicobar Islands, Bihar, Delhi, Himachal Pradesh, Meghalaya, Mizoram and Uttaranchal.

Remarks : Jangi & Dass (1984) reported this species from Phulbani and Keonjhar districts of Orissa. It is endemic to India. The species appears commonly occurring in the area.

Tribe ASANADINI

5. *Asanada agharkari singhbhumensis* (Gravely)

1912. *Pseudocryptops agharkari singhbhumensis* Gravely, *Rec. Indian Mus.*, **7** : 417.

2001. *Asanada agharkari singhbhumensis*. Khanna. *Annals of Forestry*, **9**(2) : 205.

Diagnostic characters : Anal legs short and thick; paired longitudinal median sutures always complete on 20th tergite; 21st tergite more than twice as broad as long, 21st sternite at least nearly twice as broad as long; anal leg claw dorsally with a dent; colour grey with a dark line down the middle of the back between longitudinal grooves (in life) and blue (ultimately brown) with the dark black middle line (in spirit).

Material examined : 1 ex. Gopalpur-on-Sea, Ganjam District, 10-xii-04. coll. P.M. Sureshan (Reg. no. 3903); 2 exs. Gopalpur-on-Sea, Ganjam District, 29.vi.05, 30.vi.05 (Reg. nos. 3907, 3910), coll. P.M. Sureshan.

Distribution : India : Orissa, Bihar.

Remarks : Gravely (1912) described this species from Singhbhum district of Chota Nagpur near Chakradharpur. Jangi & Dass (1984) reported it from Barkuda island in Chilka Lake, Orissa. This species is endemic to Deccan Plateau.

6. *Asanada indica* Jangi & Dass

1984. *Asanada indica*, Jangi & Dass, *J. Scient. Indl. Res.*, **43**(2) : 38-39.

Diagnostic Characters : Longitudinal Median groove present on posterior half of anal leg prefemur and femur; 21st sternite nearly twice as broad as long, posteriorly narrowing, slightly arched and with a slight median notch at posterior margin.

Material Examined : 1 ex. Gopalpur-on-Sea, Ganjam District, 10.xii.04. coll. P.M. Sureshan (Reg. no. 3903).

Distribution : India : Maharashtra, Kerala, Delhi, Haryana, Rajasthan, Himachal Pradesh, Uttarpradesh and Uttranchal.

Remarks : This is the first record of the species from Orissa.

Sub-family OTOSTIGMINAE

Tribe OTOSTIGMINI

7. *Otostigma poilitus poilitus* Karsch

1881. *Otostigma politum*, Karsch, Berlin *ent. Z.*, **25** : 219.

1930. *Otostigma (O.) politus politus* Attems, *Das Tierr., Scolopendromorpha*, **54**(2) : 149.

Diagnostic characters : Claw of second maxillae with a spur; first 5-6 legs with two tarsal spurs and following legs up to 19th with a single tarsal spur; tergites smooth.

Distribution : India : Assam, Delhi, Himachal Pradesh, Kerala, Maharashtra, Meghalaya, Orissa, Sikkim, Uttaranchal, West Bengal.

Remarks : Jangi & Dass (1984) reported this species from Ganjam District, Orissa. It is an uncommon species. Not available in the present lot.

8. *Rhysida nuda nuda* (Newport)

1845. *Branchistoma nudum* Newport, *Trans. Linn. Soc.*, **19** : 412.

1930. *Rhysida nuda nuda*, Attems, *Das Tierr., Scolopendromorpha*, **54**(2) : 189-190.

1985. *Rhysida nuda*, Koch, *J. nat. Hist.*, **19** : 207.

Diagnostic characters : Coxopleural process not tipped with 3 spines, femoral spur absent on 1st leg; tergites preceding 21st ordinarily not marginate laterally and if at all a couple of them involved and that too incompletely and weakly.

Distribution : India : Assam, Andhra Pradesh, Haryana, Karnataka, Meghalaya, Maharashtra, Madhya Pradesh, Orissa, Tamil Nadu, Tripura and Uttar Pradesh.

Remarks : A medium sized centipede found usually under stones, bricks and also in moist soil. Jangi & Dass (1984) reported this species from Puri and Cuttack Districts of Orissa. Not available in the present lot.

9. *Rhysida longipes longipes* (Newport)

1845. *Brachistoma longipes* Newport, *Trans. Linn. Soc.*, London. **19** : 411.

1930. *Rhysida longipes*, Attems, *Das Tierr. Scolopendromorpha*, **54**(2) : 194.

1984. *Rhysida longipes longipes* (Newport). Jangi & Dass. *J. Scient. Indl. Res.*, **43**(2) : 49-50.

Diagnostic characters : Prefemur of anal leg with posteromedial spiny process; coxopleural process with lateral spine; tergites preceding 21st leg bearing segment clearly marginate laterally and several of them involved; tergites except anterior one with complete paramedian sutures.

Material Examined : 1 ex. Berhampur, Ganjam District 29.xii.2004, coll. P.M. Sureshan (Reg. no. 3905). 1 ex. Bhajamari, Simlipar Biosphere reserve, 11.i.2003, coll. P.G.S. Setthy (Reg. no. 3666).

Distribution : India : Assam, Andaman and Nicobar Islands, Delhi, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Uttaranchal, Uttar Pradesh, West Bengal, Arunachal Pradesh, Goa, Orissa and Karnataka.

Remarks : A cosmopolitan species, but known in Deccan from few places only. This is the first record of the species from Orissa.

Identification Key to the Scolopendrid Centipedes of Orissa

(For figures see Sureshan *et al.*, 2003)

1. Spiracles triangular, longish, parallel to the long axis of the body, each spiracle divided into an inner and outer chamber by tripartite valve 2
— Spiracles oval or round, with spiracular cavity undivided and fully exposed 7
2. Terminal leg segment with coxopleural process and pores; antennae not short, extending well beyond the first segment 3
— Terminal leg segment without coxopleural process and pores; antennae extraordinarily short, hardly extending backwards beyond the first segment of the body Genus : *Asanada* Meinert] 6
3. All legs without tarsal spur; cephalic plate bears 2 incomplete paramedian longitudinal sutures. Genus : *Cormocephalus* Newport. [21st tergite without a longitudinal median sulcus; lateral tergital margination present anteriorly to 21st; maxillepedes with prefemoral process; anal legs in adult male tuberculate] species *C. dentipes* Pocock
— Legs mostly with tarsal spur; cephalic plate without longitudinal sutures. Genus : *Scolopendra* Linnaeus (1st tergite opposed to or overlaying cephalic plate; a pair of spinules at the base of the claws of last leg) 4
4. Anal leg prefemur ventrally with nine spines arranged in three rows of three each anal leg prefemur, femur, and tibia in adult males dorsally flat and marginate 5
— Anal leg prefemur without such arrangement of spine; no such secondary sexual characters visible in males[only 21st tergite marginate]-*Scolopendra indiae* (Chamberlin)

5. 20th pair of walking legs with a tarsal spur*Scolopendra morsitans* Linnaeus
 — 20th pair of walking legs without tarsal spur *Scolopendra amazonica* Bucherl.
6. Anal leg claw dorsally with a dent (colour grey with a dark line down the middle of the back between the longitudinal grooves (in life) and blue (ultimately brown) with a dark middle line (in spirit) *A. agharkari singhbhumiensis* (Gravely)
 — Anal leg claw dorsally without a dent [Longitudinal median groove present on posterior half of anal leg prefemur and femur.] *A. indica* Jangi & Dass.
7. 9 pairs of spiracles, one on each leg bearing segments 3,5,8,10,12,14,16,18 and 20 [Claw of second maxillae with a spur] Genus : *Otostigmus* Porat. (First 5-6 legs with two tarsal spur and following legs upto 19th with a single tarsal spur; tergite smooth) *O. politus politus* Karsh.
 — 10 pairs of spiracles one on each leg bearing segments 3,5,7,8,10,12,16,18 and 20. [prefemur of maxillepede with medial dental process; first pair of spiracles not very large and sieve like] Genus : *Rhysida* Wood 8
8. Only 21st tergite laterally marginate [species *Rhysida nuda* Newport] (femoral spur absent on 1st leg; coxopleural process not tipped with 3 spines; tibial spur present)
 sub-species *nuda* (Newport)
 — Tergites preceding 21st clearly marginate laterally and several of them involved [coxopleural process with a lateral spine *R. longipes* (Newport)] (prefemur of anal leg with posterior medial spiny process)..... sub-species : *longipes* (Newport)

DISCUSSION

The present study reveals the occurrence of 9 species of Scolopendrid Centipedes belonging to 5 genera and 2 sub families in the state of Orissa. Out of these 6 species belong to subfamily Scolopendrinae and remaining to the subfamily Otostigminae. Scolopendrinae is represented by the tribes Scolopendrini with 4 species viz. *Scolopendra morsitans*, *Scolopendra amazonica*, *Scolopendra indiae* and *Cormocephalus dentipes* and tribe Asanadini with 2 species viz. *Asanada agharkari singhbhumiensis* and *Asanada indica*. *Scolopendra indiae* has a very limited distribution in India known only from Orissa, Rajasthan and Maharashtra. *Asanada indica* is reported here for the first time from Orissa. The subfamily Otostigminae is represented by 3 species viz. *Otostigmus politus politus*, *Rhysida nuda nuda* and *Rhysida longipes longipes*. Though a common species *Rhysida longipes longipes* is reported for the first time from Orissa. Though Orissa provides optimal topographic and climatic conditions, knowledge about the centipedes is very scanty. The reason for this is mainly the lack of serious faunal exploration and collection of specimens from the state. Extensive field collection is thus imperative to explore the rich fauna of Centipedes occurring in Orissa.

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