

A CHECKLIST OF CENTIPEDES (CHILOPODA: SCOLOPENDROMORPHA) FROM CENTRAL INDIA

Vinod Khanna

Zoological Survey of India, Northern Regional Station, 218, Kaulagarh Road, Dehra Dun, Uttaranchal 248195, India
Email: drvkhanna@sancharnet.in

ABSTRACT

The present communication deals with a collection of scolopendrid centipedes collected by the scientists of Central Regional Station, Zoological Survey of India, Jabalpur, Madhya Pradesh, from the Achanakmar-Amarkantak Biosphere Reserve and adjoining areas in Chhatisgarh and Madhya Pradesh, including Panchmarhi Biosphere Reserve. Eleven species of the Scolopendrid centipedes, two species of Geophilid centipedes and one of millipede have been reported from the study area, of which *Cormocephalus pygmaeus* has been reported for the first time from Central India and Amarkantak Biosphere Reserve.

KEYWORDS

Achanakmar-Amarkantak Biosphere Reserve, centipedes, central India, checklist, *Cormocephalus pygmaeus*, *Scolopendridae*

The perusal of available references (Gravely, 1910; Attems, 1930; Ahmed, 1983; Jangi & Dass, 1984; Khanna, 2001, 2005) reveal the occurrence of 10 species of scolopendrid centipedes from central India, including Madhya Pradesh and Chhatisgarh. During the present museum study on the material collected by the scientists of the Central Regional Station, Zoological Survey of India, Jabalpur, Madhya Pradesh, from the Achanakmar-Amarkanatak Biosphere Reserve and adjoining areas in Chhatisgarh and Madhya Pradesh, including Panchmarhi Biosphere Reserve, the author came across only four species viz., *Scolopendra morsitans*, *Scolopendra amazonica*, *Rhysida longipes longipes* and *Cormocephalus pygmaeus*. *Cormocephalus pygmaeus* is a first record from the area thus raising the number from 10 to 11. This is surprising as the area should be very rich in centipede diversity, on account of its diverse topography and climate, having low lying areas in north and north-west of Gwalior, Malwa plateau, Satpura range, Narmada valley and Vindhya, with Sal forests and very good rainfall. Jangi and Dass (1984) have already reported rich diversity of centipedes from Deccan India, of which the central India comprises a major part.

The state of Madhya Pradesh is bounded by Chhatisgarh in the east, Rajasthan and Gujarat in the west, Uttar Pradesh in the north and Maharashtra in the south. Chhatisgarh is bounded by southern Jharkhand and Orissa in the east, Madhya Pradesh and Maharashtra in the west, Uttar Pradesh and western Jharkhand in the north and Andhra Pradesh in the south.

The Achanakmar-Amarkantak Biosphere Reserve covers a part of Shadol, Dindori and Bilaspur districts of Madhya Pradesh and Chhatisgarh, falling in the 6th Biogeographic Zone and the Province 6A - the Deccan Peninsula-Central Highlands. The

major part of A-ABR lies in Chhatisgarh (Bilaspur district) and the remaining part of the area extends into Dindori and Shahdol districts of Madhya Pradesh (Bhatnagar & Rao, 2004). The Amarkantak range is spread over an area of 835km² with 2 circles namely Amarkantak circle (336km²) and Bhundocona circle (499km²). The Amarkantak plateau represents tropical moist deciduous forests. The valleys have Sal (*Shorea robusta*) as the dominant species. The vegetation abruptly changes to mixed forests on the plateau and slopes.

Systematic Account

Class: Chilopoda

Order: Scolopendromorpha

Family: Scolopendridae

Tribe: Scolopendrini

1. *Scolopendra morsitans* Linnaeus, 1758

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

1903. *Scolopendra morsitans*, Kraepelin, *Mitt. Mus.*, Hamburg, 20: 250.

1977. *Trachycormocephalus jodhpurensis*, Khanna, *Orient. Ins.*, 11(1): 151-156.

Type Locality: In India

Material Examined: Chhatisgarh: Bilaspur Distt. (ABR): Chhaprawa Rest House (Amarkantak Biosphere Reserve), 7.vi.2004, 1 ex. 14.vi.2004, 1 ex., Coll. Dr. A. Singh; Bilaspur: Atariya Rest House, Amarkantak Biosphere Reserve, 6.v.2005, 1 ex., Coll. Dr. A. Singh; Madhya Pradesh: Hoshangabad, Dhain (Panchmarhi Biosphere Reserve), 19.ii.2003, 2 exs.; Mandai, Nagduwari River (Panchmarhi Biosphere Reserve), 25.ii.2003, Coll. M.L. Koshta and Party.

Distribution: India: Assam, Arunachal Pradesh, Andhra Pradesh, Andaman & Nicobar Island., Bihar, Bengal, Chhatisgarh, Delhi, Gujarat, Himachal Pradesh, Haryana, Jammu and Kashmir, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Meghalaya, Manipur, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Tamil Nadu, Tripura, Sikkim, Uttar Pradesh and Uttaranchal.

Zoogeographical Distribution: In all tropical and temperate zones of the world.

Remarks: Previously known from Hoshangabad, Jabalpur Balaghat and Mandal District of M.P. and Shahdol, Amarkantak (Chhatisgarh), the species has been presently recorded from Atariya, Chhaprawa areas of Amarkantak Biosphere Reserve, Chhatisgarh and Panchmarhi Biosphere Reserve, Hoshangabad, Madhya Pradesh. The species here also occurs sympatrically with its sibling *Scolopendra amazonica* (Bucherl) without hybridization.

2. *Scolopendra amazonica* (Bucherl), 1946

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

Type Locality: Amazonia (Brazil).

Material Examined: Madhya Pradesh: Hoshangabad, Nazarpur (Panchmarhi Biosphere Reserve), 10.ii.2002, 2 exs., coll. Dr. Y.N. Gupta.

Distribution: India: Andaman & Nicobar Island, Arunachal Pradesh, Delhi, Chhatisgarh, Goa, Gujarat, Kerala, Karnataka, Madhya Pradesh,

Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh and Uttaranchal. *Elsewhere*: Brazil, North and South America, Australia, Sudan.
Remarks: Previously known from Dewas, Hoshangabad, Jabalpur and Rewa (M.P.) and Shadol (Amarkantak Biosphere Reserve), Chhatisgarh, presently recorded from Nazarpur in Panchmarhi Biosphere Reserve.

3. *Scolopendra subspinipes subspinipes* Leach, 1815

1815. *Scolopendra subspinipes subspinipes*, Leach, *Trans. Linn. Soc.*, London, 11: 383.

Distribution: India: Andaman & Nicobar Island and Tamil Nadu.

Elsewhere: in all tropical and sub tropical lands with exception of Mediterranean region.

Remarks: Previously known from Jabalpur, this species is not available for study in the present collection.

4. *Cormocephalus dentipes* Pocock, 1891

1891. *Cormocephalus dentipes*, Pocock, *Ann. Nat. Hist.*, Ser.6, 7: 66
 1984. *Cormocephalus pseudonudipes*, Jangi and Dass, *J. Scient. Indl. Res.*, 43(2): 37.

Type Locality: India: Bengal

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

Remarks: Previously recorded from Shahdol (Amarkantak Biosphere Reserve), Jabalpur and Balaghat, this species is not available for study in the present collection.

5. *Cormocephalus pygmaeus* Pocock, 1892

1892. *Cormocephalus pygmaeus*, Pocock, *J. Bombay nat. Hist. Soc.*, 7(2): 140.

1930. *Cormocephalus (Cormocephalus) pygmaeus*, Attems, *Das Tier., Scolopendromorpha*, 54(2): 97.

1976. *Cormocephalus (s.str.) pygmaeus*, Vazirani & Khanna, *Newsl. Zool. Surv. India*, 2(1): 25-26.

1987. *Cormocephalus pygmaeus*, Khanna, D. Phil Thesis, Univ. of Garhwal, pp. 1-243.

Type Locality: India: Chennai (Tamil Nadu)

Material Examined: Chhatisgarh: Bastar, Rowghat, 15.vii.2002, 1 ex. Coll. Dr. Kailash Chandra.

Distribution: India: Assam, Andaman & Nicobar Island, Bihar, Chhatisgarh, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttaranchal and West Bengal.

Elsewhere: Myanmar, Nepal.

Remarks: This is the first record of the species from Chhatisgarh and central India.

6. *Cormocephalus pilosus* Jangi, 1955

1955. *Cormocephalus pilosus* Jangi, *Ann. Mag. Nat. Hist.*, 8: 74

Type Locality: India: Nagpur (Maharashtra).

Distribution: Maharashtra, Madhya Pradesh and Chhatisgarh.

Remarks: Jangi and Dass (1984) recorded this species from Betul, Balaghat and Shahdol Districts (Amarkantak BR), but not available in the present collection.

Tribe: Asanadini

7. *Asanada agharkari* (Gravely), 1912

1912. *Pseudocryptops agharkari*, Gravely, *Rec. Indian Mus.*, 7: 416.

1930. *Pseudocryptops agharkari*, Attems, *Das Tierr., Scolopendromorpha*, 54(2): 127.

1978. *Pseudocryptops agharkari*, Jangi & Dass, *J. nat. Hist.*, 12: 423-426.

Type Locality: India: Taloshi, Mumbai, Maharashtra, Orissa

Distribution: India: Andaman & Nicobar Island, Bihar, Maharashtra, Madhya Pradesh, Orissa (Indian endemic, Deccan Plateau).

Remarks: The species has been known from Jabalpur, Panchmarhi and Balaghat Districts of Madhya Pradesh. Not available for study in the present collection.

8. *Asanada sukhensis* Jangi and Dass, 1984

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

Type Locality: India: Sukha, Patan Road, Jabalpur (Madhya Pradesh)

Location of the Types: NZC, Zoological Survey of India

Distribution: Kerala, Madhya Pradesh, Orissa

Remarks: Previously known from Hoshangabad and Jabalpur (M.P.) this species has not been recorded in the present collection.

Subfamily: Otostigminae

Tribe: Otostigmini

9. *Rhysida nuda nuda* (Newport) 1845

1845. *Branchiostoma 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.

Type Locality: Paramatta, New South Wales, Australia

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

Elsewhere: Myanmar, Sri Lanka, Australia, North America (Mexico), Paraguay (Indo-Australian, Neotropical)

Remarks: Previously known from Balaghat and Jabalpur, (M.P.) and Shahdol, Amarkantak (Chhatisgarh), the specimens of this species are not available for study in the present collection.

10. *Rhysida nuda immarginata* (Porath) 1876

1876. *Branchiostoma immarginatum*, Porath, *Bih. Svenska Ak.*, 4 (7): 24.

1926. *Rhysida nuda immarginata*, Attems, *Das Tierr., Scolopendromorpha*, 54(2): 190.

1985. *Rhysida immarginata*, Koch, *J. nat. Hist.*, 19: 205-214.

Type Locality: Manila, Philippines

Distribution: Assam, Andaman & Nicobar Island, Arunachal Pradesh, Delhi, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh and West Bengal.

Elsewhere: West Africa, Myanmar, Philippines, Venezuela, Guatemala (Oriental and Palaearctic)

Remarks: Previously known from Jabalpur (M.P.) only. Not available in the present collection.

11. *Rhysida longipes longipes* (Newport), 1845

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

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

Type Locality: Not known

Material Examined: Madhya Pradesh: Hoshangabad: Bee Fall, Panchmarhi, 16.ii.2002, 2 exs. M.L. Koshta.

Distribution: Arunachal Pradesh, Andaman & Nicobar Island, Delhi, Goa, Karnataka, Maharashtra, Madhya Pradesh, Uttar Pradesh, Uttaranchal and West Bengal.

Elsewhere: Australia, East and West Africa, Madagascar, Seychelles, Mexico, Central and South America (Oriental, Indo-Australian, Palaearctic, Ethiopian, Nearctic and Neotropical).

Remarks: Previously recorded by Ahmed (1983) from Balaghat and Jangi and Dass (1984) from Durg, the species is being presently recorded from Panchmarhi Biosphere Reserve, Hoshangabad.

In addition to above the collection belonging to two species of centipedes belonging to the order Geophilomorpha of the class Chilopoda and one species of the class Diplopoda (Millipede) have been collected but could not be identified for want of sufficient expertise and literature.

Order: Geophilomorpha**Sp.1.**

Material Examined: Madhya Pradesh: Betul (PBR), Kantawadi Village, Shahapur, near Machna River, 20.ii.2002, 2 exs., Coll. Dr. Y.N. Gupta; Hoshangabad (PBR), Nagduwari River, Mandai, 25.ii.2003, 1 ex., Coll. M.L. Koshta.

Sp.2.

Material Examined: Hoshangabad (PBR), Kesla, 11.ii.2003, 1 ex., Coll. Dr. Y.N. Gupta; Near Tawa Dam, Tawanagar, 13.ii.2004, 2 ex., Coll. Dr. Y.N. Gupta; Apsara Vihar, Panchmarhi, 12.ii.2003, 1 ex., Coll. M.L. Koshta; Takapar, Mandai, 26.ii.2003, 1 ex., Coll. M.L. Koshta.

Class: Diplopoda**Sp.1.**

Material Examined: Chhatisgarh: Bilaspur, Sambhar Dasan Road, 8.vi.2004, 2 ex; Bastar, Rowghat Forest, 15.vii.2005, 1 ex.

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AN UNUSUAL CLUTCH SIZE IN SARUS CRANE (*GRUS ANTIGONE ANTIGONE*) AT KODAIYA WETLAND, UTTAR PRADESH

Rajeev Chauhan¹ and Devendra Kumar²

¹ Secretary General, Society for Conservation of Nature, 576, Karamganj Punjabi Colony, Etawah, Uttar Pradesh 206001, India
² Divisional Forest Officer, Shrawasti, Uttar Pradesh, India

The Indian Sarus Crane (*Grus antigone antigone*) is the only resident species of Gruidae, south of the Himalayas. Apart from the Black-necked Crane (*Grus nigricolis*), it is the only species of crane breeding within the Indian subcontinent (Ali & Ripley, 1980). One-third of the total Indian population of Sarus Cranes occur in the two districts of Etawah and Mainpuri in Uttar Pradesh (Sundar *et al.*, 1999; Chauhan & Kumar, 2000). The Wildlife Institute of India had established a field station in Etawah in 1999 to conduct a research project entitled "Impact of land use changes on habitat and ecology of Sarus Crane (*Grus antigone*) in India". We worked as volunteers for this project during which we made many observations. The normal clutch size in Sarus Crane is two with one egg clutch being infrequent as observed in Gujarat (Mukherjee *et al.*, 2000) and three egg clutches were rare.

On 23 August 2001, we observed three nests with two eggs and two nests with one egg at Saifai and Kodaiya of district Etawah and Mainpuri. At Kodaiya, we found a nest situated in the middle of a wetland. The nest was built of *Typha* reeds and *Eichornia* and was surrounded by tall *Typha* reeds. It was difficult to verify the clutch size, but we observed the incubating female having difficulties with the nest. During her absence we observed that the nest had four eggs. Later, we learnt from the people of Rahin village in Etawah district that they had noticed a nest with three eggs in a neighbouring wetland. This is to report the first record of a four-egg clutch of Sarus Crane in the wild.

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