

OCCURRENCE OF *COPIDOGNATHUS LONGISPINUS* BARTSCH AND ILIFFE, 1985
(HALACARIDAE : ACARI) FROM THE INDIAN OCEAN

TAPAS CHATTERJEE

Department of Life Science, Regional College of Education, Bhubaneswar-751 007, Orissa

ABSTRACT

Copidognathus longispinus Bartsch and Iliffe, 1985 (Halacaridae : Acari) reported here for the first time from the Indian Ocean and away from its type locality. Males are described here for the first time.

INTRODUCTION

WHILE engaged in the biosystematics study of Halacaridae (Acari) along the Indian Coast, many new species and species heither to not recorded from Indian water have been encountered. The preliminary findings resulting in the reporting of 5 species viz. *Copidognathus gitae* Chatterjee, *C. sambhui* Chatterjee from east coast of India and *Atelopsalis pacifica* Bartsch, *Copidognathus hartwigi* Bartsch and *C. eblingi* Chatterjee from Andaman and Nicobar Islands of Bay of Bengal have already been given (Chatterjee, MS - a, b, c; Sarma and Chatterjee, MS - a, b). In the present investigation, *Copidognathus longispinus* Bartsch and Iliffe, 1985, a species heither to known based on a single female from Bermudean caves, Atlantic Ocean has been encountered among the algae *Jania rubens* collected from Chatam Island of Port Blair (Andaman Islands). Many males and females of *C. longispinus* were isolated and described in brief and reported here for the first time from the Indian Ocean.

The author expresses deep sense of gratitude to Dr. A. L. N. Sarma, Regional College of Education, Bhubaneswar for critically

going through the manuscript and constant guidance; to Dr. Ilse Bartsch, Biologische Anstalt Helgoalan, Hamburg, Germany for her ready help in providing the necessary literature and encouragement.

DESCRIPTION

Male : Idiosomal length of males ranged between 300 μ and 350 μ .

The various other measurements obtained from one of the specimens are as under :

	Length (μ)	Width (μ)
Idiosoma	309	172
AD (Anterodorsal plate)	151	109
OC (Ocular plate)	86	20
PD (Posterodorsal plate)	147	119
AE (Anterior epimeral plate)	89	130
GA (Genitoanal plate)	115	117
Go (Genital opening)	40	20
Gnathosoma	56	51

The dorsal plates are separate (Fig. 1 a). The frontal side of the AD is elevated and projected in the form of a triangular gable-like structure terminating as a stout strong spine anteriorly. Rosette pores are present lateral to gable-like area on either side forming two

areolae. The ds_2 (dorsal setae 2) present anteriorly on OC. Two corneae are present on OC of which, the anterior one is bigger than the posterior. In between the corneae rosette pores are present. The OC tapers posteriorly and the extreme end of it hidden under the

divergence of the costae anteriorly. The ds_3 , ds_4 and ds_5 (dorsal setae 3, 4 and 5) are embedded in the costae in the anterior, middle and posterior regions respectively. The cuticle outside the costae is reticulately panelled. A pair of adanal setae are present.

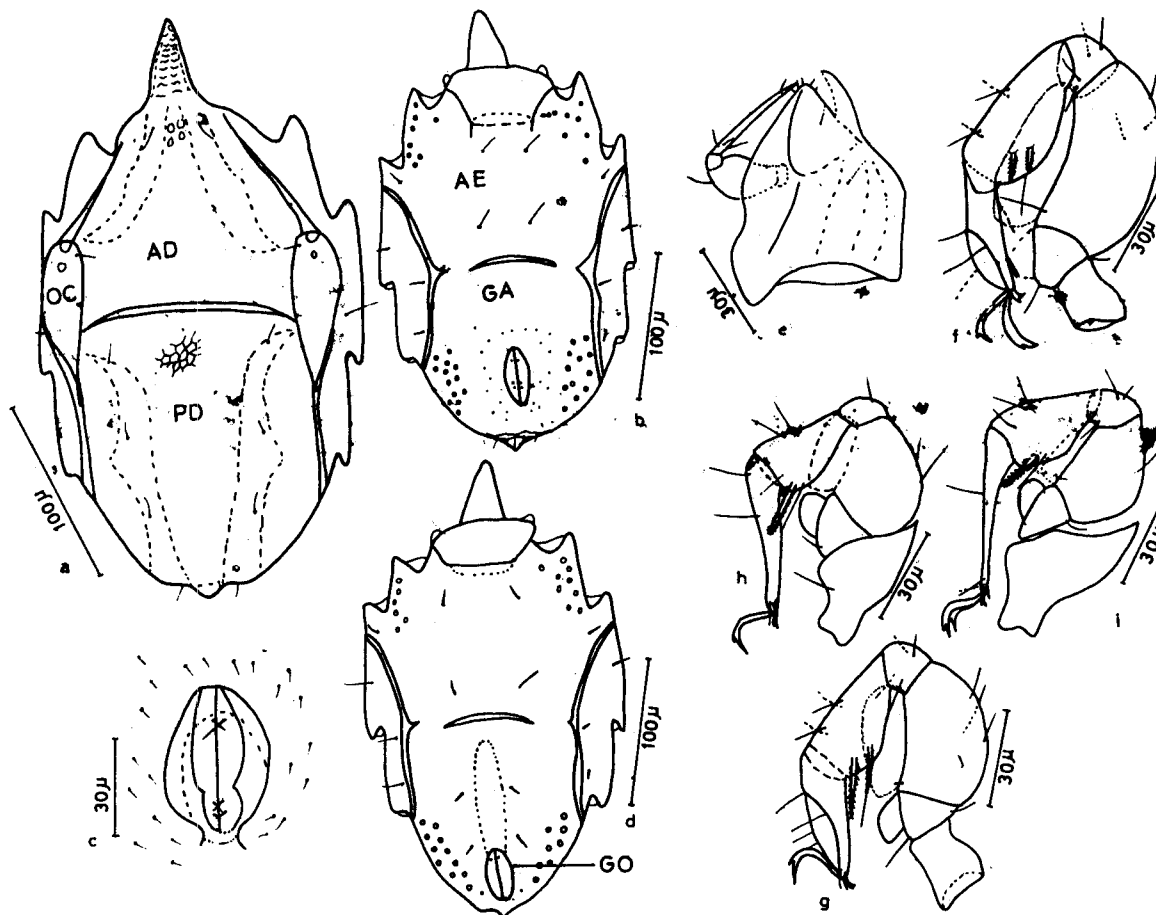


Fig. 1 a. *Idiosoma* (dorsal) — male, b. *Idiosoma* (ventral) — male, c. Magnified view of GO region showing SGS and PGS of male, d. *Idiosoma* (ventral) — female, e. *Gnathosoma*, f. Leg I, g. Leg II, h. Leg III and i. Leg IV.

PD. The PD with two costae transcing the entire length. The costae are long and gently curved and are of 2-3 pores wide. The distance between the costae increases with increasing

The anterior and posterior epimeral plates are fused laterally, but are separated medially by a membranous cuticle (Fig. 1 b). Lateral margin of AE (coxal field of Leg I and II)

with rosettee pores. AE bears three pairs of setae. First two pairs are present on 1st and 2nd coxal fields respectively. The 3rd setae is present medially near the median margin separating AE and GA. The Ep₁ (epimeral process I) is well developed and coxal in origin. PE bears few scattered rosettee pores. GA with paragenital areolae on either side of the genital opening and 11-15 pairs of PGS (perigenial setae) besides 3 pairs of SGS (subgenital setae) one located anteriorly and the other two posteriorly (Fig. 1 c).

Gathosoma stout, a pair of proto—, deuto—, trito— and basirostral setae are present. Gnathosoma is sculptured with coarse fovea ventrolaterally and with canaliculi ventromedially. Palp 4 segmented. Palpal femur bears one dorsal seta. Palpal trochanter and palpal patella are without any seta. Palpal tibiotarsus bears three basal setae and one minute distal eupathidia (Fig. 1 e).

The chaetotaxy of legs I-IV is as follows :

Trochanter	1-1-1-0
Basifemur	2-2-2-2
Telofemur	5-5-2-3
Patella	4-4-3-3
Tibia	7-7-5-5

The chaetotaxy of tarsi is discussed in the text.

Trochanter III and IV are triangular and are prolonged dorsally like a cornet. Ventral lamellae are present on basifemora of all legs (Fig. 1 f-i). All telofemora bear large hyaline ventrolateral and narrow ventromedial lamellae. Large quadrangular distal lamellae are present on tibiae I and II. Distal lamellae on tibiae III and IV are smaller. Telofemora III and IV with 0 and 1 ventral seta respectively. Tarsi I and II with well developed lateral membrane of claw fossae and are absent on tarsi III and

IV. Tarsus I bears 3 dorsal fossary setae, 1 solinidion, 1 profamulus, 3 ventral setae (one basal and two distal) and 4 PAS (parambulacral setae) (two doublet eupathids). Tarsus II bears 3 dorsal fossary setae, no ventral seta, 1 solinidion and 2 PAS. Tarsi III and IV have 3 dorsal fossary setae, 1 proximodorsal seta and 2 PAS.

All legs possess lateral claws. Lateral claws are faintly pectinate on ventral side (seen under oil immersion only) and with an accessory tooth on dorsal side. A bidentate median claw are present on all legs.

Female : Idiosomal length of females ranged between 300 μ to 360 μ (Fig. 1 d) The various other measurements obtained from one of the specimens are as follows :

	Length (μ)	Width (μ)
Idiosoma	304	169
AD	149	108
OC	84	20
PD	145	118
AE	91	165
GA	126	108
GO	36	22
Gnathosoma	55	52

Females resemble the males except in the structure of genitoanal plate. Three PGS are present on each side of the GO besides one pair of SGS.

Distribution : Inland marine caves of Bermuda, Andaman and Nicobar Islands (Present report).

Remarks : *C. longispinus* was first discovered and described from Bermuda by Bartsch and Iliffe (1985) based on one female only. The present study records the first discovery of a male of this species from the world seas. Further, it is also the first discovery of this species from the Indian Ocean and away from its type locality.

REFERENCES

BARTSCH, I. AND T. ILIFFE 1984. The halacarid fauna (Halacaridae, Acari) of Bermuda caves. *Stylogia*, 1 : 300-321.

CHATTERJEE, T. (MS - a). *Copidognathus gitae* a new species of Halacaridae (Acari) from Visakhapatnam Coast (Bay of Bengal). *J. Bombay. Nat. Hist. Soc.* (In Press).

————— (MS - b). A new species of *Copidognathus* (Halacaridae : Acari) from Chilka Lagoon (Bay of Bengal). *Ibid.* (In Press).

————— (MS - c). *Copidognathus eblingi* a new species of Halacaridae (Acari) from Andaman Islands (Indian Ocean). *Ibid.* (In Press).

SARMA, A. L. N. AND T. CHATTERJEE (MS - a). Occurrence of *Copidognathus hartwigi* Bartsch 1978 (Halacaridae, Acari) from the Indian Ocean. *Ibid.* (In Press).

————— AND ————— (MS - b). Record of *Atelopsalis pacifica* Bartsch 1985 (Halacaridae, Acari) from the Eastern Indian Ocean. *Ibid.* (In Press).