ISSN 0375-1511

Rec. zool. Surv. India : **113**(Part-1): 35-37, 2013

A NEW SUBSPECIES OF THE GENUS *GALUMNA* HEYDEN 1826 (ACARINA: ORIBATIDA: GALUMNIDAE) FROM MAHARASHTRA, INDIA

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INTRODUCTION

von Heyden (1826) established the genus *Galumna* with *Notaspis alata* Hermann, 1804 from Germany as the type under the family Galumnidae Jacot, 1925. The super family Galumnoidea Jacot, 1925 is one of the superfamilies under suborder Cryptostigmata of the order Acarina. These mites are commonly known as galumnid mites. The"characteristically- shaped" galumnid mites possess two wing-like "pteromorphae" at both sides of notogaster giving them a conspicuous look. Most of these mites are highly pigmented and heavily sclerotized.

They are inhabiting in all types of soil but predominantly found in soil, litter, humus and compost heaps. Galumnids have a worldwide distribution including Antarctica. The total number of species stands at 169 and 9 subspecies are there under this genus *Galumna* Heyden, 1826 (Subias, 2009).

In India, a total of 16 species of *Galumna* are known till date. Of these, six species have been described from India as new to science (Pearce, 1906; Ewing, 1910; Deb and Raychaudhuri, 1975; Haq and Adolph, 1980). The present report is based on the material collected from Maharashtra, Nagzira Wildlife Sanctuary collected during the educational trip in the area.

The measurements of the specimens have been given in micron (µm). The type specimens on which the description of new taxa is based, is deposited in the National Zoological Collection, Zoological Survey of India, Kolkata (Regd. No. 4245/17).

DESCRIPTION OF SUBSPECIES

Galumna (G.) crenata indica ssp. nov.
(Figs. 1-3)

Colour: Reddish brown. Hysterosoma with fine punctuation and granulated areas of weak chitinization.

Measurments: Length of the body: 376; width of the body: 282; length of sensillus: 55.5; length of genital plate: 48; length of anal plate: 74; width of genital plate: 59; width of anal plate: 85; distance between aggenital setae: 56.

Prodorsum: Prodorsum finely punctated. Lamellar setae originate in between *L* and *S* lines. Lamellar setae very short. Rostral setae not visible and rostral setal pit could not be identified even. Interlamellar setae very short but positions of interlamellar setae clearly observed. Sensillus directed outwards, head club- shaped with dense and short bristles. *hy* comperatively small, oval in shape.

Notogaster: Dorsosejugal suture absent. Pteromorphae with strongly developed median and radiating ridges. Pteromorphae with granulation which are comperatively larger and different from the fine punctuation of the dorsal side. Notogaster with 4 pairs of area porosae. *Aa* largest and bean-shaped. *A*3 almost round in

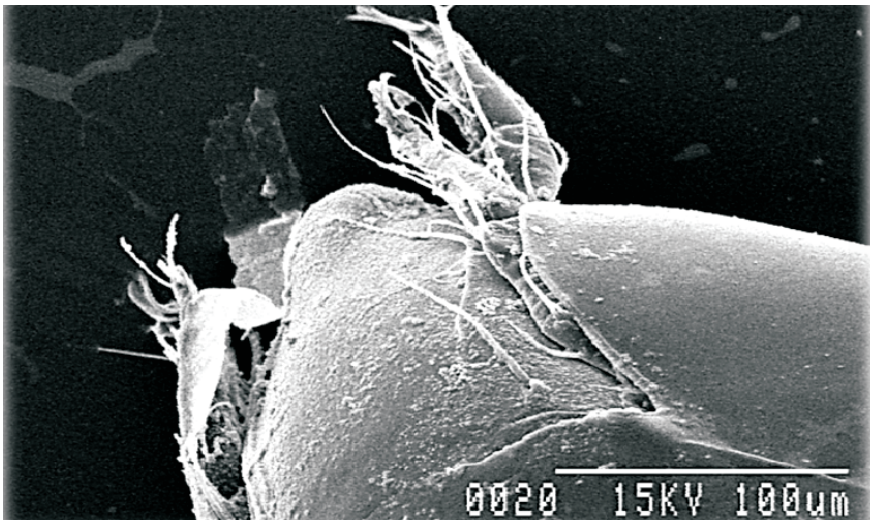

Fig. 1 : SEM photographic view of the prodorsum of *Galumna (G.) crenata indica* ssp. nov. showing the granulation.

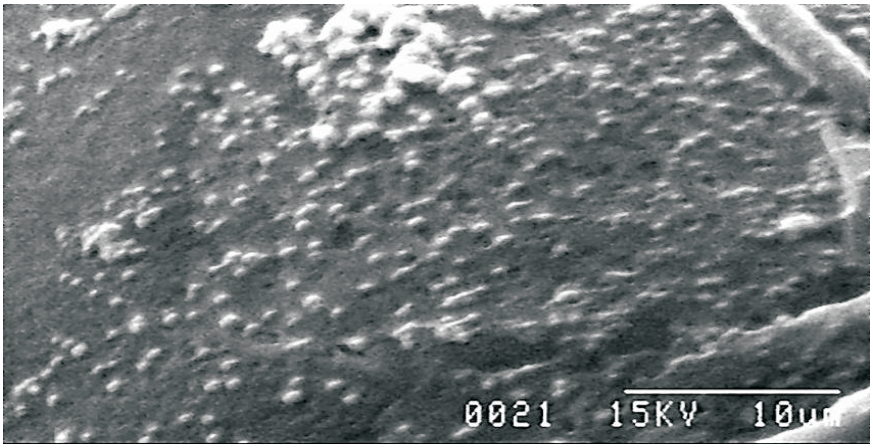

Fig. 2 : A close view of the granulation on dorsal side of the *Galumna (G.) crenata indica* ssp. nov.

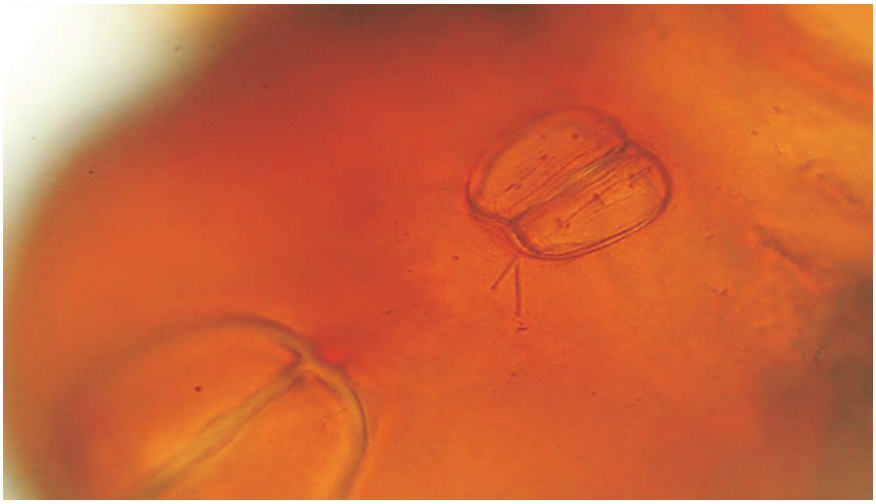

Fig. 3 : Ventral plate showing the genital plate with longitudinal lines and the fine punctuation around the genital plate of the *Galumna (G.) crenata indica* ssp.nov.

shape. According to size, the three pairs of area porosae as follows: *A1*> *A2*> *A3.* 10 pairs of notogastral setae present.

Ventral side: A crenate line present across the hypostome. All ventral setae smooth. Genital plate with 6 pairs of simple genital setae. Anterior two genital setae closely situated. The first set of anterior genital setae exceptionally long. Aggenital setae placed almost equidistant position from genital and anal plates. Anal plates narrow anteriorly and having 2 pairs of simple setae. *iad* very much close to lateral margin of anal plates. *ad2* closer to *ad1*. *ad3* in front of *iad*.

Material examined: HOLOTYPE: Adult female, India: Maharashtra, Nagzira forest, 13.i.2009, from soil and leaf litter, coll: S. Sarkar. PARATYPE: 1 adult female, data same as for Holotype.

Disrtibution: Maharashtra (Nagzira Wildlife Sanctuary), India.

Remarks: The present new species comes close to *Galumna (Galumna) crenata* Deb and Raychaudhuri, 1975 and *Galumna (Galumna) crenata uttarkashii* Sarkar, Sanyal and Chakrabarti, 2007 in general body shape, indistinct rostral setae, and a clear crenate line which passes across the hypostome, absence of dorso sejugal suture and similar sensillus. It also differs from *Galumna (Galumna) crenata uttarkashii* Sarkar, Sanyal and Chakrabarti, 2007 by the structure of sensillus, the punctuation on dorsal side, and the shape of notogastral area porosae. Hence, the new subspecies, differs from *Galumna (Galumna) crenata* and *Galumna (Galumna) crenata uttarkashii* by the dense granulation on the pteromorphae and fine punctuation on dorsal side, the small, rounded A_3, short but well observed lamellar setae and inter lamellar setae and exceptionally long first pair of anterior genital setae.

SUMMARY

The new subspecies ***Galumna (G.) crenata indica*** ssp. nov. from Nagzira Wildlife Sanctuary, Maharashtra, India is described and illustrated along with affinities with *Galumna(G). crenata* Deb and Raychaudhuri, 1975. The new subspecies differs from *crenata* by the dense granulation on the pteromorphae and fine punctuation on dorsal side, the small, rounded A_3, short but well observed lamellar setae and interlamellar setae.

ACKNOWLEDGEMENTS

The authors are thankful to the Director, Zoological Survey of India, Kolkata for providing laboratory facilities. They also express thanks to the Head of the Department of Zoology, University of Kalyani for providing necessary infrastructural facilities.

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