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Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel

Acari: Oribatida (Part II)

By B. M. Bayoumi and S. Mahunka

Abstract: The Oribatid material from the northern part of the Indian Peninsula has been examined. Three species proved to be new for science and for one of them the erection of a new genus appears justifiable (Neohermannia gen. n.).

The present article is the second of a series in which the writers deal with Indian Oribatid mites. In the first contribution (BAYOUMI et MAHUNKA, 1979) the authors have described seven new species belonging in the Ptyctima group. In the present occasion, however, three interesting oribatid mites are dealt with, among them one required the establishment of a new genus.

The material has been collected by Dr. W. Wittmer, Natural History Museum, Basel and his colleagues during their expeditions to the Indian Peninsula.

The holotype and a part of paratypes are deposited in the Natural History Museum, Basel (NHMB), some paratypes in the Hungarian Natural History Museum (HNHM) at Budapest and others in the collection of the Zoological Department, Faculty of Science, Tanta, Egypt (ZDT); and in the Museum D'Histoire Naturelle, Genève (MHNG).

On this occasion the writers wish to thank most sincerely Dr. W. Wittmer for collecting the material and allowing to study it.

* A few other Himalayan species are described as a result from additional Museum's expeditions.

Neohermannia nov. gen.

Diagnosis: Family Hermanniidae. Rostrum rounded. Rostral and lamellar setae marginally situated, rod-like. Interlamellar setae short, phylliform. Sensillus long, straight, rigid, with a roughened distal end. Notogaster elliptical in contour. 35 (?) pairs of notogastral hairs present, among which hair ta comparatively long and directed anteriorad. Epimeral setal formula: 3-1-5-5. Genital plates provided with 11+3 pairs of setae. Two pairs of aggenital, 2 pairs of anal and 3 pairs of adanal setae present. All legs monodactyle. Except one, all setae of femur of leg I are thickened, rod-like or phylliform (Fig. 5).

Type species: *Neohermannia trichosa* n. sp.

Remarks: The new genus comes closest to *Hermannia* Nic., 1855, but it is characterized by the presence of strong notogastral neotrichy.

Neohermannia trichosa n. sp.

Measurements: length: 721-826 μ , width: 381-486 μ .

Prodorsum: Rostrum broadly rounded. Rostral and lamellar hairs marginally situated, rod-like, approximately equal in length. Interlamellar hair short, phylliform and arising near bothridium. Sensillus long, straight, rod-like and roughened distally. Posterior to the bothridium there is a pointed chitinous protuberance arising on basal part of prodorsum, with its tip directed towards notogaster.

Notogaster (Fig. 1): Elliptical in outline. 35 (?) pairs of notogastral hairs present. All hairs (Fig. 4) rough, with a thickened basal part and of variable lengths. Hair ta relatively long, directed anteriorad. Hair te, in addition to the pair of hairs located on the centromedian area of notogaster, much shorter than rest of notogastral hairs. Most notogastral hairs marginally situated on notogaster, grouping and forming a distinct neotrichy. A small notogastral chitinous protuberance present lateral to hair ta, with its tip directed opposite to that of prodorsum one.

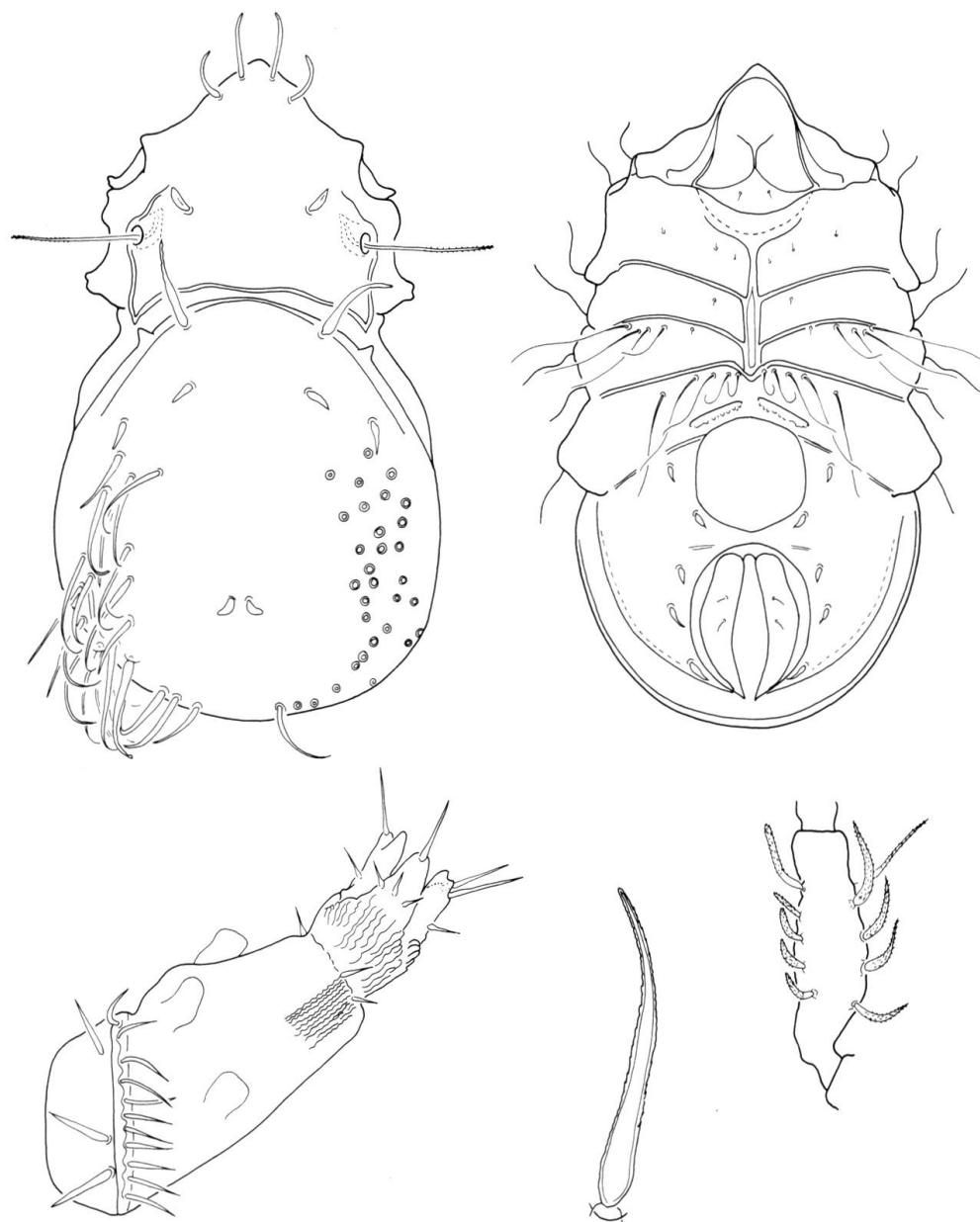
Epimeral region (Fig. 2): Apodemes running very similar to that in genus *Hermannia* Nic., 1855. Epimeral surface smooth. Among epimeral hairs 1a, 1b, 1c, 2a and 3a much shorter than rest.

Anogenital region: Inner margin of genital plate with 11 pairs of thick hairs, other 3 pairs longer and thicker standing somewhat more inward (Fig. 3). Two pairs of thick aggenital; 2 pairs of thin, short, simple anal hairs and 3 pairs of thick adanal hairs present.

Material examined: Holotype: Bhutan: 87 km from Phuntsholing, 22.V.1972, W. Wittmer; 9 ex. paratypes from the same locality.

Holotype and 4 ex. paratypes in NHMB, 3 ex. (384-PO-78) in HNHM, 1 ex. in ZDT, 1 ex. in MHNG.

Remarks: The newly described species is without relatives among the species belonging in the family Hermanniidae, characterized by its notogastral neotrichy.



Figs. 1-5: *Neohermannia trichosa* n.sp. 1, dorsal side. 2, ventral side. 3, genital plate and ovipositor. 4, hair ta, 5, femur I.

Eremobelba wittmeri n. sp.

Measurements: length: 470–486 μ , width: 292–299 μ .

Prodorsum (Fig. 6): Its microsculpture shows the same pattern characteristic of the genus. Interbothridial pair of chitinous crests small, crescent-shaped. Interlamellar hair setiform, long, apically reaching almost to insertion point of lamellar hair. Sensillus long, setiform, smooth, slightly recurving with a tapering end. Exobothridial hair long and smooth. Bothridial border rounded.



Figs. 6–7: *Eremobelba wittmeri* n. sp. 6, dorsal side. 7, ventral side. 8, *Eremobelba bellicosus* Bal. et Mah., 1967, prodorsum.

Notogaster: Cerotegument formed of evenly scattered minute areolae, covered with secretory granules. All notogastral hairs long, flagelliform.

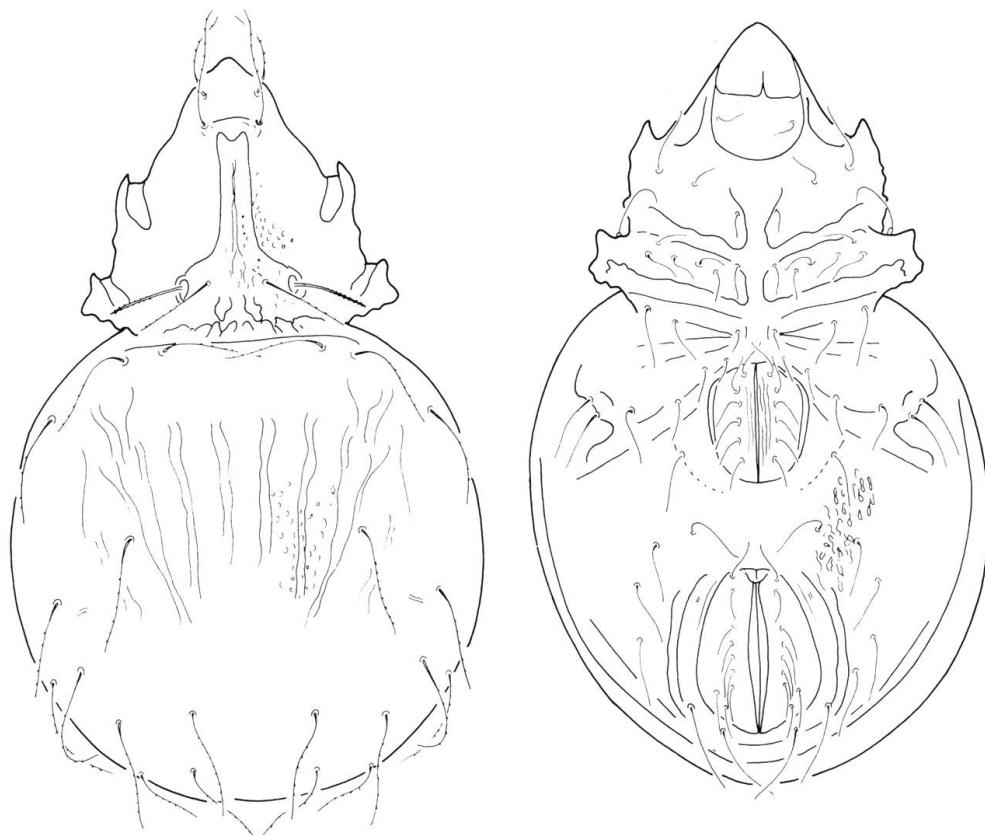
Epimeral region (Fig. 7): Similar to that characteristic for genus. Setae 1a, 1c, 2a, 3a, 4a and 4c simple; whereas setae 1b, 3b, 3c and 4b ramifying (3–4 branched).

Anogenital region: Five pairs of simple genital and 2 pairs of anal setae present. Aggenital-adanal neotrichy distinct, all setae relatively short and thickened (except the most posterior three pairs).

Material examined: Holotype: Bhutan: Phuntsholing, 15.IV.1972, W. Wittmer; 1 ex. paratype: from the same sample. Holotype in NHMB, 1 ex. paratype (383-PO-78) in HNHM.

Remarks: The cerotegument of the following *Eremobelba* species, in addition to the newly described species, is not polygonally arranged but evenly scattered:

1. *Eremobelba japonica* Aoki, 1959 – Japan.
2. *Eremobelba hamata* Hammer, 1961 – Peru.
3. *Eremobelba bellicosa* Balogh et Mahunka, 1967 – Vietnam.



Figs. 9–10: *Carinabella tuberculata* n.sp. 9, dorsal side. 10, ventral side.

However, the first two species possess short interlamellar hairs, thus the new species could only be related to *E. bellicosa* (Fig. 8). Both can be safely separated by body size measurements (*E. bellicosa* being much larger), shape of interbothridial chitinous crests, in addition to the number of branches of the ventral stellate setae (7–8 branches in *E. bellicosa* and 3–4 branches in the new species).

The new species is respectfully dedicated to Dr. W. Wittmer, the collector of the present material.

Carinabella tuberculata n. sp.

Measurements: length: 907–1037 μ , width: 608–656 μ .

Prodorsum (Fig. 9): General pattern resembles that characteristic for genus. Rostrum rounded. Rostral hairs setiform, incurved, outer border slightly barbed. Lamellae in the form of elevated thick ridges, touching each other, situated in centro-median area of prodorsum and diverging laterad posteriorly. Lamellar hairs setiform, slightly barbed and about $\frac{2}{3}$ length of lamellae. Interlamellar hair robust, barbed and as long as lamellar one. Exobothridial hair simple, fine and inserted lateral to bothridium. Surface of prodorsum foveolate, posterior border ornamented with tubercles.

Notogaster: Oval in contour. Eleven pairs of relatively long, barbed notogastral hairs present. Notogastral integument evenly foveolate, provided with faint longitudinal ribs on anterior half of notogaster.

Epimeral region (Fig. 10): Apodemes strong and running similar to that characteristic for the genus. Epimeres sculptured with scattered circular depressions. Epimeral setal formula: 3–6–3–6.

Anogenital region: Genital plate approximately square in outline, carrying 6 pairs of simple, curved genital hairs. One pair of aggenital hairs present. Anal plate ovoid in shape, narrowing anteriorly. 9–10 pairs of simple anal hairs present. 6–8 pairs of adanal hairs arranged around anal field. Adanal fissure (iad) hardly discernible. Ventral surface roughly sculptured, reticulate.

Material examined: Holotype: Kashmir: Gulmarg, 2650/3000 m, 1.III.1976, W. Wittmer; 3 ex. paratypes: from the same locality. Holotype and 1 ex. paratype in NHMB, 1 ex. (385-PO-78) in HNHM, 1 ex. in ZDT.

Remarks: It appears that the taxa belonging in the family Eremaeidae Sellnick, 1928 are liable to show neotrichy. Thus, the separation of the genera included in this family needs a high degree of accuracy. It is our opinion that the final clarification of the recently

established genus *Carinabella* HAMMER, 1977 could only be settled through future examinations, since our newly described species represents an evident transitional state and assures the presence of variability. It appears to us that the shape of lamella in this species-group constantly differs from that of all known *Eremaeus* species. For this reason, however, we included our new species in the genus *Carinabella* HAMMER, 1977.

The new species differs from the type-species (*C. pulchra* HAMMER, 1977) in shape of sculpture in the interbothridial area, epimeral setal formula and numer of ano-adanal hairs.

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