

## Some oribatid mites (Acari) from the Falkland Islands

By  
P. BALOGH\*

**Abstract.** This paper gives the first report on the oribatid fauna of the Falkland Islands. Of the seven species having been observed three are described as new to science: *Phyllhermannia falklandica*, *Solenoppia pernettyae* and *Solenoppia usheri* spp. n. Some zoogeographical comments are added.

Through the courtesy of Dr. M. B. USHER (Department of Biology, University of York, U.K.) some vials with oribatid mites were received. This material – though it contains a low number of specimens of seven species only – is of great importance, since no oribatid species of the Falkland Islands had formerly been known. The following species were found in this material:

*Camisia segnis* (HERMANN, 1804): Falkland Islands, Port Stanley, 51°40' S, 58°50' W, 30 m above sea level, N facing slope, *Pernettya pumila* litter: 5 ex., peat: 7 ex. Coll. Joint Services Expedition, 10–24 December, 1984.

*Trimalacoethrus novus* (SELLNICK, 1921): Falkland Islands, Port Stanley, 51°40' S, 58°50' W, 30 m above sea level, N facing slope, *Pernettya pumila* litter: 1 ex. Coll. Joint Services Expedition, 10–24 December, 1984.

*Nodocepheus dentatus* HAMMER, 1958: Falkland Islands, Port Stanley, 51°40' S, 58°50' W, 30 m above sea level, N facing slope, peat, 0–3 cm: 1 ex. Coll. Joint Services Expedition, 1984.

*Granizetes curvatus* HAMMER, 1961: Falkland Islands, Port Stanley, 51°40' S, 58°50' W, 30 m above sea level, N facing slope, *Pernettya pumila* litter: 1 ex. Coll. Joint Services Expedition, 1984.

### *Phyllhermannia falklandica* sp. n. (Figs. 1–4)

Length 623  $\mu\text{m}$ ; width 340  $\mu\text{m}$ .

Prodorsum: Sensillus short with short stalk and short, abruptly dilated, spindle-shaped head. Interlamellar setae very small, lanceolate, pointed. Lamellar and rostral setae near each other, setiform, smooth, rigid. Prodorsum without sculpture.

\* Dr. Péter Balogh, ELTE Állatrendszertani és Ökológiai Tanszék (Department of Systematic Zoology and Ecology of the Eötvös Loránd University), 1088 Budapest, Puskin u. 3.

Notogaster: Surface of notogaster densely granulate, 16 pairs of short, pointed, lanceolate notogastral setae present.

Ventral side: Epimeral setal formula: 3-1-4-5. 6+3 pairs of genital setae present. The six setae of medial row very fine, setiform, the three of the second longitudinal row much longer, lanceolate. Two pairs of aggenital, 2 pairs of anal, 3 pairs of adanal setae present.

Remarks: This is the first *Phyllhermannia* species with short, spindle-shaped sensillus-head, 3-1-4-5 epimeral setal formula and densely granulate notogaster.

Material examined: Falkland Islands, Port Stanley, 51°40' S, 58°50' W, 30 m above sea level, N facing slope, *Pernettya pumila* litter, leg.: DR. STUART MARTIN. Holotype: 1 ex., paratype: 1 damaged ex. Coll. Joint Services Expedition, 10-24 December, 1984.

*Solenoppia pernettyae* sp. n. (Figs. 5-6)

Length 156  $\mu\text{m}$ ; width 103  $\mu\text{m}$ .

Prodorsum: Sensillus short with short stalk and globular head. Interlamellar setae short and thin. Lamellar costulae distinct only distally; apically curved and connected with an obscure, medially disappearing translamellar costula. Inside the curved part of costulae there is a small knob on each side bearing inwardly directed lamellar setae. Rostral setae marginal, far from each other.

Notogaster elliptoid, forward and backward narrowing; dorsosejugal suture arched. Nine pairs of fine, smooth notogastral setae. Setae  $c_2 (= ta)$  only with their alveoli represented.

Ventral side: Apodemata IV very slightly curved, almost straight and parallel with apodemata sejugal. A 1 ventral setae very short and fine. Four pairs of genital setae: two pairs far behind, two pairs far before. The distance between the 2nd and 3rd genital setae more than twice as long as the distance between 1st and 2nd. Lyrifissurae *iad* far from the anal plates.

Material examined: Falkland Islands, Port Stanley, 51°40' S, 58°50' W. 30 m above sea level, N facing slope, *Pernettya pumila* litter. Holotype: 1 ex, Coll. Joint Services Expedition, 10-24 December, 1984.

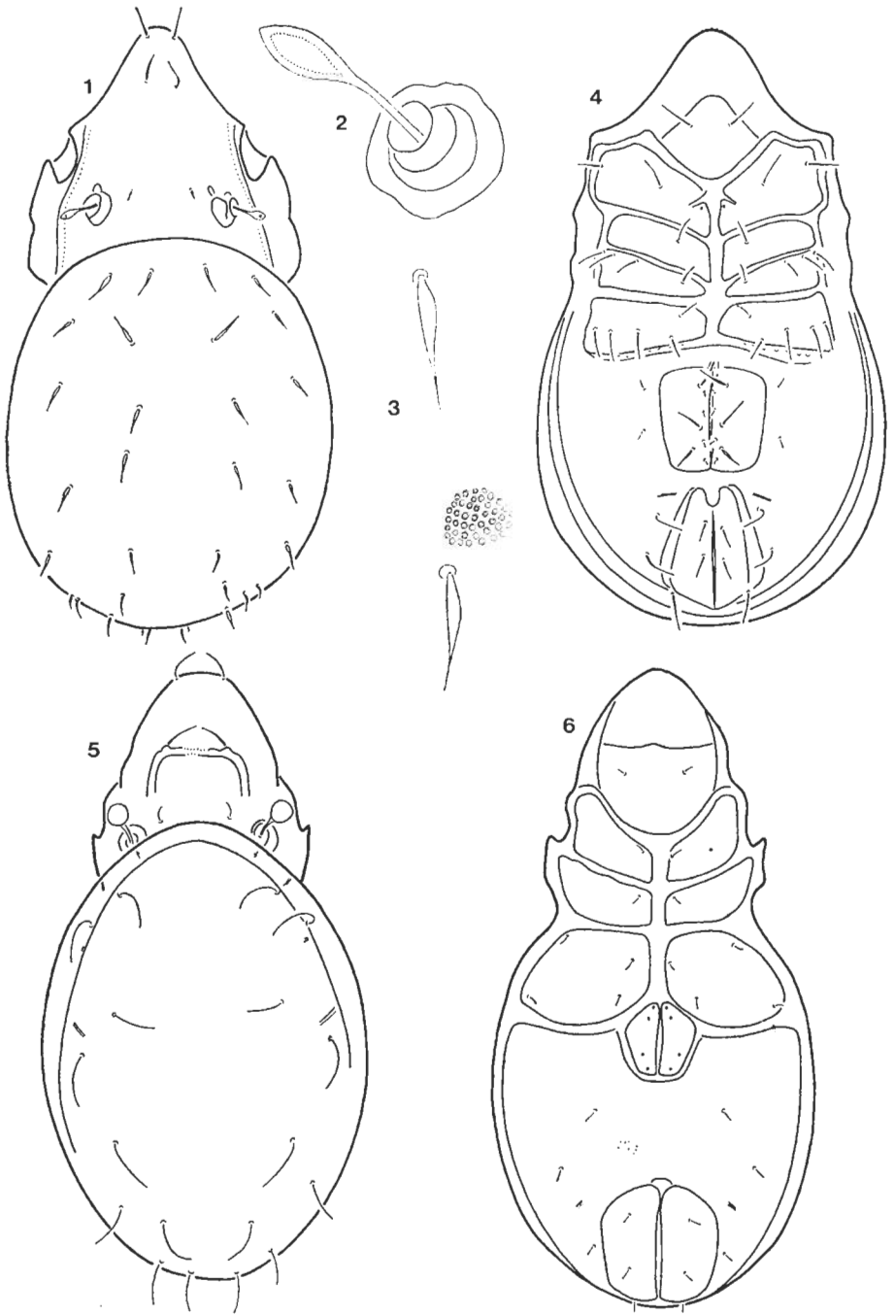
*Solenoppia usheri* sp. n. (Figs. 7-9)

Length 299  $\mu\text{m}$ ; width 152  $\mu\text{m}$ .

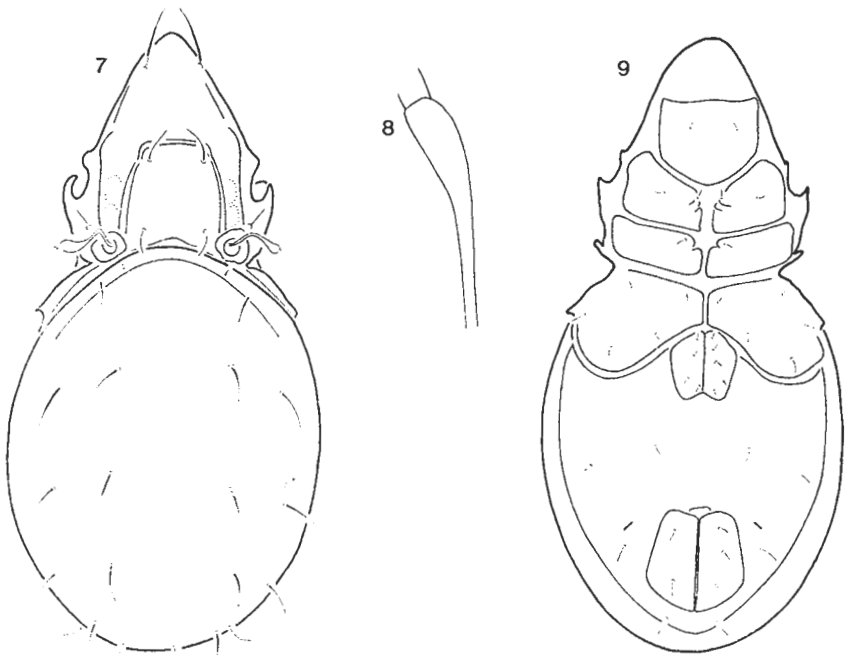
Prodorsum: Sensillus medium long, directed outward and backward, distal third gradually thickened, with obtuse end bearing two fine ciliae. Interlamellar and lamellar setae short, fine. Rostral setae about twice as long as lamellar setae, situated on the lateral part of rostral region. Lamellar costulae well developed but disappearing in the region of lamellar setae. Translamellar costula placed before the lamellar setae. The connection between translamellar and lamellar costulae disappearing. Exostigmatal setae easily observed, smooth.

Notogaster oval, with ten pairs of notogastral setae. The setae  $c_2 = ta$  extremely small, hardly visible. The remaining nine pairs short, fine and smooth.

Ventral side: All ventral setae very short. Four pairs of genital setae. (On the right side there are five pairs of genital and three pairs of anal setae!) Lyrifissurae *iad* far from the anal plates.



Figs. 1-4: *Phyllhermannia falklandica* sp. n. -- Figs. 5-6: *Solenoppia pernettyae* sp. n.



Figs. 7–9: *Solenoppia usheri* sp. n.

Mate ial examined: Falkland Islands, Port Stanley, 51°40'S, 58°50'W, 30 m above sea level, N facing slope, peat, 0–3 cm. Holotype: 1 ex. Coll. Joint Services Expedition, 10–24 December, 1984.

Two species in the list above, namely *Camisia segnis* (HERMANN, 1804) and *Trimalacoethrus novus* (SELLNICK, 1921) have been found in the Holarctic Region, in the South American Andes and in New Zealand. This interesting type of distribution has been mentioned in connection with *Mucronothrus rostratus* TRÄGARDH, 1931 in one of our recent papers (J. BALOGH and P. BALOGH, 1986). The distribution of these species covers the distribution of the *Nothofagus* species in the Southern Hemisphere.

We can quote two other species, *Nodocephus dentatus* HAMMER, 1958 and *Granizetes curvatus* HAMMER, 1961, by way of appropriate examples for those Transatlantic relationships, which were mentioned in detail by HAMMER (1968) and HAMMER and WALLWORK (1979). Among this two species, *Nodocephus dentatus* has hitherto been found in the South American Andes and in New Zealand, while this *Granizetes* species in South America only.

*Phyllhermannia falklandica* sp. n. bears no relation to any of the known species of *Phyllhermannia*. It seems possible that besides the four species in New Zealand and the three species hitherto known from Juan Fernandez Island and Chile, several new species are to be discovered.

One of the two species of Oppiidae found in the Falkland Islands, *Solenoppia pernettyae* sp. n. is one of the smallest oppids with its body length of 156  $\mu\text{m}$ . The other one, *Solenoppia usheri* sp. n. is one of the medium-sized species by 299  $\mu\text{m}$

body length. Both species belong to that artificial species-group, which possesses four pairs of genital setae and their lyrifissures are *iad* in apoanal position, i.e. far from the anal plate. It seems very interesting that — leaving some obviously convergent cases (i.e. some genera of the *Oppiella* group) out of consideration — a majority of the species with 4 genital setae occurs in the southern part of the Southern Hemisphere. Four species were found in the southernmost part of South America, 4 species in the southernmost part of Africa, 12 species in New Zealand, 2 species in the Subantarctic Region and 2 species in Hawaii. Northwards the number of species with 4 genital setae decreases steeply. One can observe a similar trend in the number of genital setae of the *Protoribates* group. Two European or rather Holarctic genera, *Protoribates* and *Rajskibates* have 4 genital setae, while the species of the genera with 3 or 3 pairs of genital setae (*Tuxenia*, *Totobates*, *Subulobates*, *Maculobates* etc.) inhabit the southern parts of South America, New Zealand, the subantarctic islands, Australia and Oceania. In the family Ceratozetidae, the genus *Cryptobothria* (with 3 genital setae) substitutes the genus *Punctoribates* on Macquarie Island (the latter one is similar but it has 6 pairs of genital setae). It is very unlikely that all these are not mere coincidences. It is most desirable to pay more attention to the research of the oribatid fauna of the areas in question (South Argentina, South Chile, Falkland Islands, southernmost South Africa and temperate Australia).

#### REFERENCES

1. BALOGH, J. (1983): A partial revision of the Oppiidae Grandjean, 1954 (Acari Oribatei). — Acta Zool. Sci. Hung., 29: 1–79.
2. BALOGH, J. & BALOGH, P. (1983): New oribatids (Acari) from the Pacific Region. — Acta Zool. Acad. Sci. Hung., 29: 303–325.
3. BALOGH, J. & BALOGH, P. (1986): Some oribatid mites collected in the Western Pacific Area. — Acta Zool. Hung., 32: 263–280.
4. HAMMER, M. (1968): Investigations on the oribatid fauna of New Zealand. Part III. — Kongs. Dansk. Vidensk. Selsk., Biol. Skrift, 16, 2, pp. 96, Pl. I–XXXIII.
5. HAMMER, M. & J. A. WALLWORK (1979): A review of the world distribution of oribatid mites (Acari, Cryptostigmata) in relation to continental drift. — Kongs. Dansk. Vidensk. Selsk., Biol. Skrift, 22: 4.