

Some Interesting Oribatuloidea Woolley, 1956 from the Hawaiian Islands (Acari, Oribatei)

By

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Abstract. One new genus, *Scriptoripoda* gen. n., four new species, *Oripoda prominens*, *Scriptoripoda excellens*, *S. tenorioae*, *Tenuilamellarea hawaiiensis* spp. n. and a new subspecies, *Campbellobates acanthus hawaiiensis* subsp. n., are described. The geographical distribution of Lamellareidae and *Campbellobates* WALLWORK, 1964 is discussed.

In the course of the elaboration of the Hawaiian oribatids some highly interesting species were found. Their descriptions and the author's remarks connected with their range are given in the following.

Oripoda prominens sp. n.

(Fig. 1A–B)

Length: 303 μm , breadth: 213 μm .

Prodorsum: Sensillus short, with capitate head and short, thin stalk. Setae medium long, thin, smooth, originated near dorsosejugal suturae. Setae *le* similar to setae *in*. Setae *ro* long, originated marginally. Rostrum broad. Lamellae short, marginal.

Notogaster: Pteromorphae protruding; dorsosejugal suture reaches to the interlamellar setae on prodorsum; anterior margin straight. Notogaster finely punctuated. 10 pairs of notogastral setae. Setae p_1 , p_2 , p_3 and r_2 shorter, the remaining ones somewhat longer. 4 pairs of sacculi.

Ventral side: 2 pairs of genital, 1 pair of aggenital, 2 pairs of anal, 3 pairs of adanal setae. Setae ad_1 in adanal, ad_3 in preanal position. Ventral and anal plates finely punctuated.

Material examined: Hawaii: Maui; Olinda, 9. X. 1968, Makawao Forest Reserve; moss on a lying, decomposing *Metrosideros* stem; 1 holotype; leg.: J. BALOGH.

Remarks: The form of the dorsosejugal suture combined with the position of setae *in* present only on this species.

Scriptoripoda gen. n.

2 pairs of genital, 1 pair of aggenital, 2 pairs of anal, 3 pairs of adanal setae. Pori *iad* in adanal position. Dorsosejugal suture arched forwards, hence notogas-

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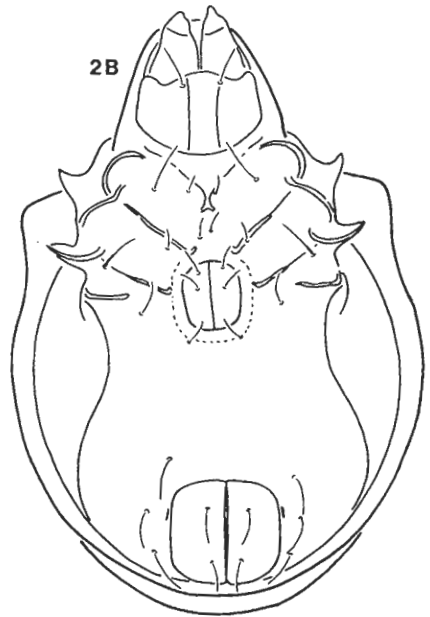
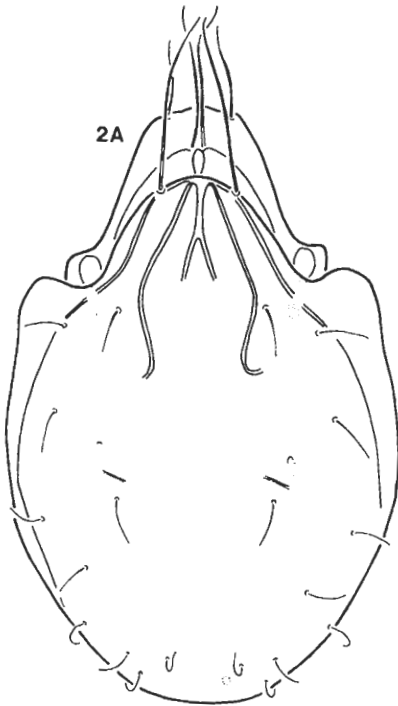
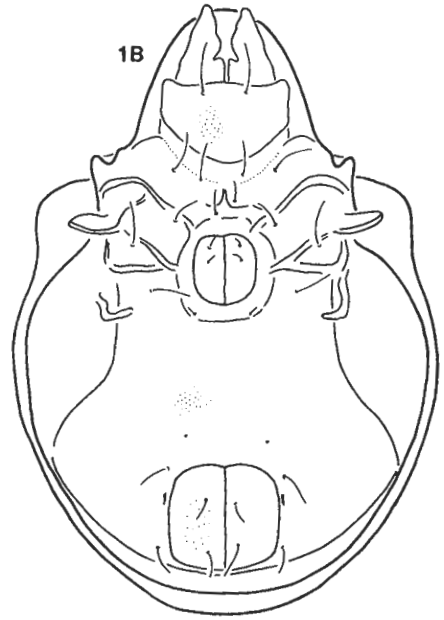
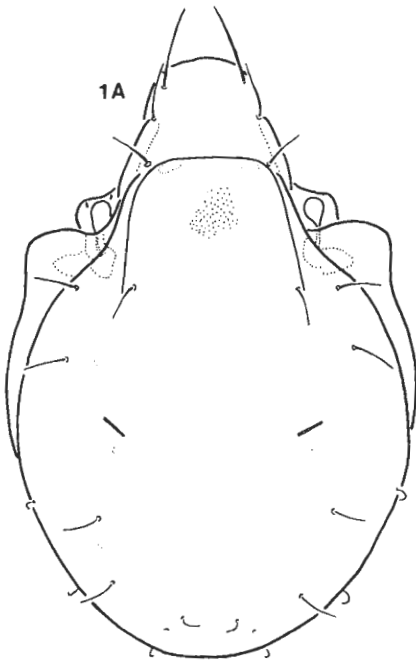


Fig. 1. *Oripoda prominens* sp. n. A: dorsal side; B: ventral side.
Fig. 2. *Scriptoripoda excellens* sp. n. A: dorsal side; B: ventral side

ter covers the basal half of prodorsum. Lamellae short, convergent or connecting; lamellar setae originating near the dorsosejugal suture. There is a chitinous structure, forming a letter M on the anterior part of the notogaster, near the dorsosejugal suture.

Type-species: *Scriptoripoda excellens* sp. n.

Remarks: *Scriptoripoda* gen. nov. derived from *Oripoda* BANKS, 1904. Distinctive characters: 1) short, converging or connecting lamellae, 2) dorsosejugal suture arched forwards, 3) peculiar chitinous structure on the anterior part of notogaster.

Scriptoripoda excellens sp. n.

(Fig. 2A–B)

Length: 254 μm ; breadth: 176 μm .

Prodorsum: Sensillus short, capitate; their stalk covered. Setae *in* very long, much longer than the prodorsum, originated in the dorsosejugal suture. Setae *le* originating near each other, on the basal half of the prodorsum, they are much longer than the prodorsum. Lamellae peculiar: placed immediately before the dorsosejugal suture, connecting medially. Setae *ro* far of each other, medium long. Rostrum broad, truncated. Legs tridactylous.

Notogaster: Dorsosejugal suture arched forward, hence the anterior part of notogaster covered the basal part of prodorsum. On the anterior part of prodorsum there is a chitinous structure, forming a letter M. 10 pairs of notogastral setae: setae p_1 – p_3 and r_2 somewhat shorter. Only 3 pairs of sacculi: sacculi *Sa* invisible.

Ventral side: 2 pairs of genital, 1 pair of aggenital, 2 pairs of anal, 3 pairs of adanal setae. Setae ad_1 and ad_2 in adanal, ad_3 in preanal position.

Material examined: Hawaii, Maui, Haleakala, nearly on the top (about 2980 m), 8. X. 1968, in scattered shrubs with very poor litter and humus; 1 holotype; leg. J. BALOGH.

Remarks: Occurs under extreme ecological conditions; evolved presumably in the Hawaiian Islands.

Scirptoripoda tenorioae sp. n.

(Fig. 3A–B)

Length: 340 μm ; breadth: 226 μm .

Prodorsum: Sensillus short, capitate; with covered stalk. Setae *in* and *le* short; originating far from each other on the basal half of prodorsum. Lamellae short, convergent, apices much nearer to dorsosejugal suture than to rostrum. Rostrum broad, reminds of *Anoripoda* SELLNICK, 1959, laterally with two incisions. Setae *ro* a little longer than setae *in* and *le*. Rostrum broadly truncated.

Notogaster: Dorsosejugal suture and chitinous structure similar to those of *Sc. excellens* sp. n. 10 pairs of notogastral setae: position and length as in *Sc. excellens* sp. n. 4 pairs of sacculi: sacculi *Sa* present.

Ventral side: 2 pairs of genital, 1 pair of aggenital, 2 pairs of anal, 3 pairs of adanal setae. Position and length as in *Sc. excellens* sp. n.

Material examined: Hawaii Island, 6. X. 1968, kipuka on N slope Hualalae, lava soil with 2–5 cm high moss and lichens; 1 holotype; leg. J. BALOGH.

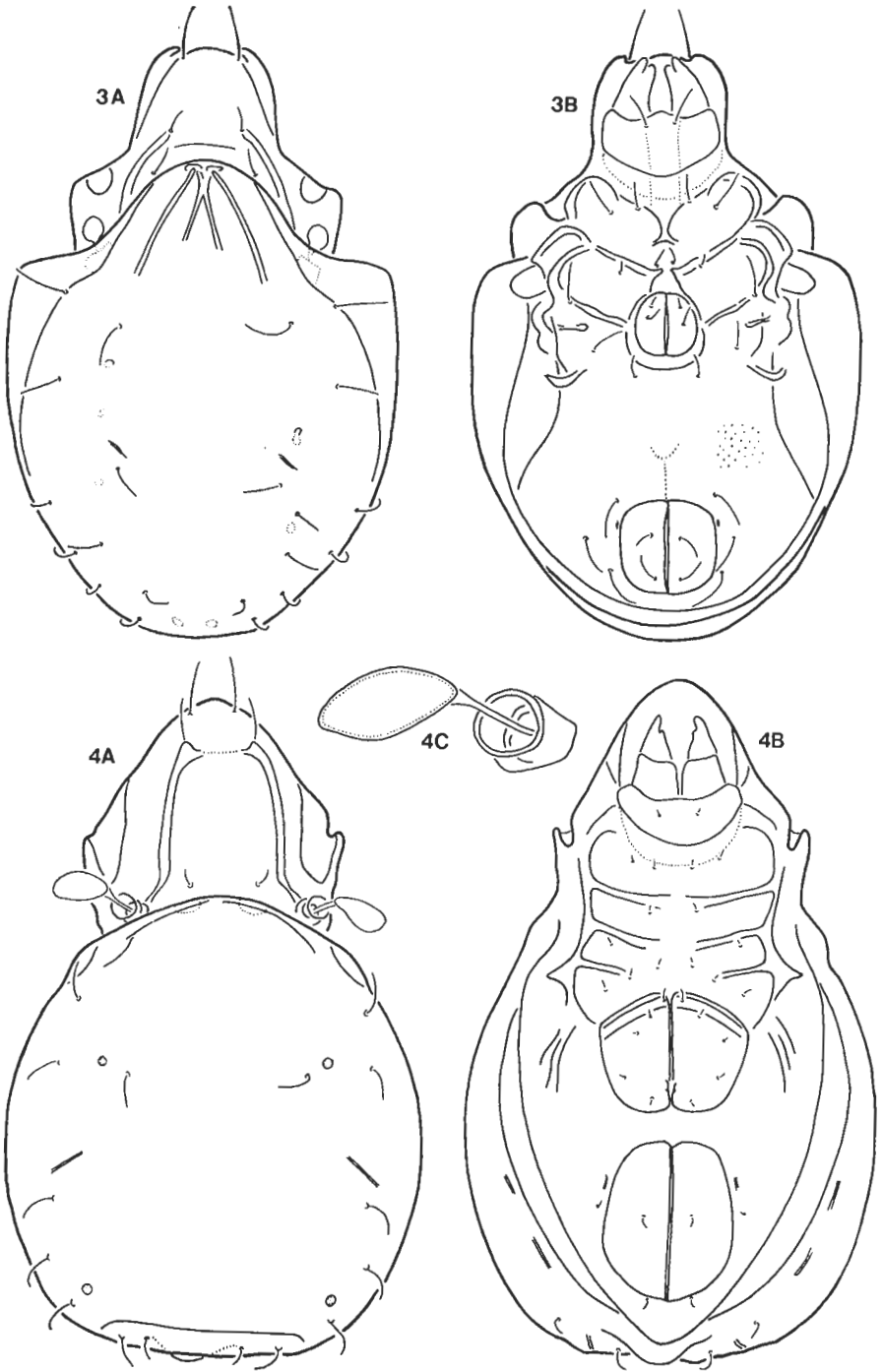


Fig. 3. *Scriptoripoda tenorioae* sp. n. A: dorsal side; B: ventral side
 Fig. 4. *Tenuelamellarea hawaiiensis* sp. n. A: dorsal side; B: ventral side; C: sensillus

Remarks: The second species of *Scriptoripoda* differs from the typical species in the form and position of the lamellae and in the length of prodorsal setae.

Dedicated to DR. JOANN TENORIO, acarologist, Honolulu, Bernice P. Museum, for her extensive help during the acarological exploration of the area.

Tenuelamellarea hawaiiensis sp. n.

(Fig. 4A-C)

Length: 221–246 μm ; breadth: 144–160 μm .

Prodorsum: Sensillus medium long, with flattened, capitate head. The head smooth, without ciliae or granulation. Setae *in* very short and thin, setae *le* and *ro* somewhat longer, fine. Lamellae almost parallel, with short cuspis and evanescent translamellar line. Rostrum obtuse, without incision.

Notogaster: 9(?) pairs of short, thin, notogastral setae. (Probably the setae *ms* are hardly discernible?). 1 or 2 pairs of notogastral setae originating in the ventral side. At each shoulder there is a small horizontal pteromorpha. 2 pairs of small areae porosae. Posterior margin of notogaster broadly truncated.

Ventral side: Epimeral setal formula: 2–1–2–2. 5 pairs of genital setae; no aggenital setae. 1 pair of anal, 2 pairs of adanal setae. Genital and anal plates great, occupying almost the total length of the ventral plate.

Material examined: Hawaii, Maui, Olinda, 9. X. 1968, Makawao Forest Reserve, *Metrosideros* litter; 1 holotype, 6 paratypes.

Remarks: This species is one of the greatest surprises presented by the Hawaiian oribatid fauna. The authors described *Tenuelamellarea* SUBIAS & ITURRONDOBEITIA, 1978 from Spain (Yurre, Vizcaya), found on 4 specimens of the species *hispanica* SUBIAS & ITURRONDOBEITIA, 1978, collected in a deciduous forest in September, 1977. Up to now 4 species of the family Lamellareidae J. BALOGH, 1972 are known. To the genus *Lamellarea* KOK, 1968 belong three species: *L. ardua* KOK, 1968; *L. digitata* KOK, 1968 and *L. forceps* KOK, 1968; all three of them live in South Africa. The species found in Hawaii bears an extreme resemblance to the species *Tenuelamellarea hispanica* and differs from it only in the smooth sensillus and some quantitative characters. However, the great geographic distance and the difference in climate make hardly uncertain that identical species could be in question. Found on the present disjunct range – South Africa, Spain, Hawaii Islands – one cannot say anything certain about the zoogeographic significance of the family Lamellareidae.

Campbellobates acanthus hawaiiensis subsp. n.

This species was described by WALLWORK in 1964 from the Campbell Islands. In 1966 HAMMER described 3 species of New Zealand of the genus. All 4 species live in moss or lichen growing on the soil, on rotten branches or stones. The 2 specimens collected in the Hawaii Islands lived similarly in moss. Interestingly, the Hawaiian specimens do not resemble the species of New Zealand but the one of the Campbell Islands. They can be distinguished only by slight quantitative differences. The only qualitative difference is that the epimeral region of the Hawaiian specimens is decorated with longitudinal, slightly blurred wavy lines. No similar structure has been described in any species. The length of the examined 2 specimens are 275 and 291 μm .