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New and little known species of ptyctimous mites (Acari, Oribatida) from Cameroon

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Abstract

Altogether 24 species of ptyctimous mites were found in sifting litter samples from the Cameroon. Twelve new species of the ptyctimous mites, *Indotritia montkoupensis* sp. nov., *Acrotritia furca* sp. nov., *Acrotritia quasidivida* sp. nov., *Hoplophthiracarus kumboensis* sp. nov., *Hoplophthiracarus reticulatus* sp. nov., *Hoplophthiracarus spinus* sp. nov., *Stegana nacus (Rhacaplacarus) quaternarius* sp. nov., *Austrophthiracarus bicarinatus* sp. nov., *Protrophthiracarus diatropos* sp. nov., *Protrophthiracarus korupensis* sp. nov., *Protrophthiracarus preptos* sp. nov., *Atropacarus (Hoplophorella) gibbus* sp. nov., from the Cameroon are described and figured. Seven species are recorded for the first time for the Cameroon oribatid mite fauna. A comparison of morphological similarities with the most closely related species is presented. Taxonomical notes and additional information for two ptyctimous species: *Acrotritia ardua* (C.L.Koch, 1841), *Arphthiracarus sculptilis* (Niedbala, 1988), were added. Keys for Afrotropical species of genera *Hoplophthiracarus* and *Protrophthiracarus* are presented.

Key words: Oribatid, ptyctimous mites, Phthiracaroidea, Euphthiracaroidea, new species, taxonomy, morphology, Cameroon

Introduction

The present contribution dealing with the description of new species of ptyctimous mites from soils of Cameroon is based on determination of sifting litter material collected by Dr V. Grebennikov (Canada, Ottawa) from three forest localities in Cameroon, which were rich in ptyctimous species. Our knowledge on the fauna of ptyctimous mites from Cameroon is comparatively scarce. Niedbala (1998, 2001, 2002) had surveyed ptyctimous fauna of the Afrotropical Region and recorded 148 ptyctimous species in total. However, only three species from the superfamily Euphthiracaroidea (*Acrotritia comtae* (Mahunka, 1983), *A. ardua* (C.L.Koch, 1841), and *Microtritia tropica* Märkel, 1964) and five species of the superfamily Phthiracaroidea (*Phthiracarus parabaloghi* Niedbala, 1983 (Niedbala 1983b), *Plonaphacarus machadoi* (Balogh, 1958), *Protrophthiracarus dignus* (Niedbala, 1983) (Niedbala 1983b), *Atropacarus (Hoplophorella) stilifer* (Hammer, 1961) and *Atropacarus (Hoplophorella) vitrinus* (Berlese, 1913) have been recorded only from the two localities, Batouri and Kounden, studied to date in Cameroon.

Material and methods

The soil samples were collected by using a leaf litter sifting method and were partly extracted using a Winkler apparatus. All of the extracted mite specimens were preserved in 85% ethanol, then cleared on slides with 80% lactic acid and mounted on temporary slides with glycerol. Observations, figures and measurements were made

- All setae of notogaster not spiniform, obtuse distally, four pairs of lyrifissures *ia*, *im*, *ip*, *ips* present 7
- 7. Rostral setae not reaching the end of rostrum, vestigial setae f_1 located posterior of setae h_1 *H. ambiguus* Niedbala, 1982
- Rostral setae extending beyond the end of rostrum, vestigial setae f_1 located anteriorly of setae h_1
..... *H. discrepus* Niedbala, 1982

Key for Afrotropical *Protophthiracarus* species

- 1. Both interlamellar and lamellar setae similar in shape and length, long, thick, erect, similar to notogastral setae 2
- Interlamellar and lamellar setae of different shape, interlamellar considerably longer than lamellar, at least lamellar setae different in shape from notogastral setae 3
- 2. Distance between interlamellar and rostral setae shorter than length of interlamellar setae, median sigillar field shorter than laterals, lateral carinae of prodorsum reach the end of rostrum *P. diatropos* **sp. nov.**
- Distance between interlamellar and rostral setae longer than length of interlamellar setae, median and laterals sigillar fields narrow, long and similar in length, lateral carinae of prodorsum reach the sinus *P. dignus* (Niedbala, 1983) (Niedbala 1983b)
- 3. Heterotrichy of notogastral setae, dorsal setae longer or shorter than lateral setae 4
- Notogastral setae similar in length and shape 5
- 4. Dorsal notogastral setae c_1 , d_1 , e_1 , h_1 and ps_1 twice thicker and slightly shorter than lateral setae, sensilli short with widened head, widely obtuse distally, ciliate at distal end *P. preptos* **sp. nov.**
- Dorsal setae c_1 , d_1 , e_1 , h_1 and ps_1 longer than lateral setae, sensilli elongate, gradually thickening, without well separated head
..... *P. mayottei* Niedbala, 2001
- 5. Interlamellar setae long, erect, covered with small spines in distal end, similar in shape to notogastral setae, lamellar setae short, spiniform 6
- Interlamellar and lamellar setae very short, procumbent, different from notogastral setae 7
- 6. Rostral setae long and distanced, deep sinus posterior of rostral setae present, vestigial setae and four pairs of lyrifissures present, setae ad_2 of anoadanal plate situated near paraxial border, at level of an_1 setae *P. korupensis* **sp. nov.**
- Rostral setae short and positioned near each other, absence of sinus between rostral setae, absence of vestigial setae and presence of two pairs of lyrifissures, setae ad_2 remote from paraxial border situated at level of an_2 setae
..... *P. venustus* (Niedbala, 1983) (Niedbala 1983b)
- 7. Rostral setae directed inward, notogastral setae lanceolate *P. prominens* (Balogh, 1958)
- Rostral setae straight, notogastral setae covered with cilia, slightly similar to aspergillum *P. araios* Niedbala, 2001

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