

Notes on a collection of Austrian Macrochelidae with the description of *Macrocheles beieri*, n. sp.

(Acari — Parasitiformes)

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(With 6 figures)

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Through the kindness of Dr. MAX BEIER, Naturhistorisches Museum, Wien, I have been able to examine several collections of Austrian Acari. The collections include a number of interesting specimens of the gamasine family Macrochelidae, including one new species and four species previously unrecorded from Austria. Macrochelids currently listed (FRANZ and BEIER, 1948; FRANZ, 1954; WILLMANN, 1951) from Austria are: *Macrocheles carinatus* (C. L. KOCH), *M. decoloratus* (C. L. KOCH), *M. glaber* (J. MÜLLER), *M. merdarius* (BERLESE), *M. montanus* (WILLMANN), *M. muscaedomesticae* (SCOPOLI), *M. opacus* (C. L. KOCH), *M. penicilliger* (BERLESE), *M. plumiventris* HULL (= *fimicola* SELLNICK), *M. pulcherrimus* (WILLMANN), *M. subbadius* (BERLESE), *M. subbadius* var. *robustulus* (BERLESE), *M. tardus* (C. L. KOCH), *M. vagabundus* (BERLESE), *Holostaspella ornata* (BERLESE), *Geholaspis alpinus* (BERLESE), *G. longispinosus* (KRAMER), *G. mandibularis* (BERLESE).

Collection data for the mites reported herein are as follows:

- No. 283: Ex Laubstreu, Birkenwald (*Betula*); St. Corona am Wechsel; 17. VII. 1962; M. BEIER leg.
- 287: Gesiebe aus Faullaub und Farnwurzeln, Picetum-Fagetum auf Triaskalk; ca. 1200 m.; Obir-Massiv, Jovan-Berg, Karawanken, Carinthia; 19. VII. 1962; Dr. O. SCHEERPELTZ leg.
- 288: Gesiebe aus Faullaub und Moos auf kristallinem Schiefer, Piceto-Fagetum; ca. 700 m., Waschnigg, Umg. Eisenkappel, Carinthia; 8. VII. 1962; Dr. O. SCHEERPELTZ leg.
- 289: Same data as 288 except that collection was made at ca. 900 m. on 28. VII. 1962.

- 290: Same data as 288 except that collection was made at ca. 800 m. on 16. VII. 1962.
- 291: Gesiebe aus dem Laub und den Wurzeln von *Corylus avellana*; Coryletum auf Triaskalk; ca. 1000 m.; Stara Gora, Vellach-Tal, Karawanken, Carinthia; 25. VI. 1962. Dr. O. SCHEERPELTZ leg.
- 294: Ectoparasiten [sic!] an *Necrophorus vestigator* HERSCH. am Maus-Aas; ca. 700 m.; Vellach-Tal, Eisenkappel, Carinthia; 8. VIII. 1962; Dr. O. SCHEERPELTZ leg.
- 196: Gesiebe aus *Rhododendron* Laub und Wurzeln von *Pinus montanum*; ca. 2000 m., Gipfelregion, Obir-Massiv, Karawanken, Carinthia; 20. VI. 1962; Dr. O. SCHEERPELTZ leg.

For most of the species listed below I have given the name or names of authors upon whose redescription my identifications were based. These names follow that of the original describer.

Macrocheles carinatus (C. L. KOCH, 1839) EVANS and BROWNING, 1956.

No. 283: 2 females; No. 291: 9 females. A common and widespread European species.

Macrocheles glaber (J. MÜLLER, 1860) FILIPPONI and PEGAZZANO, 1962.

No. 294: 2 females. Many older records of this species are probably unreliable because of the recent discovery of a second, very similar, sympatric species, *M. perglaber* FILIPPONI and PEGAZZANO, 1962.

Macrocheles matrius (HULL, 1925) BREGETOVA and KOROLEVA, 1960.

No. 294: 1 female.

Macrocheles beieri, New Species

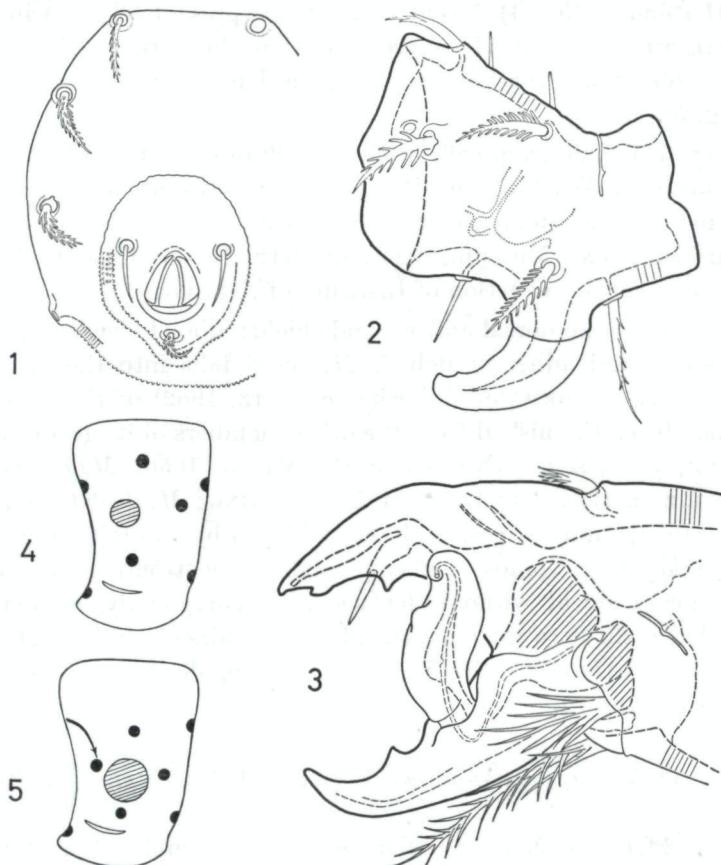
Female. Idiosoma 698 μ in length; elliptical; tapering posteriorly; with pronounced shoulders; much adherent debris present.

Dorsal shield with margins poorly defined; marginal denticles absent. Polygonally arranged microtrichiae (characteristic of *M. opacus*) lacking on shield. Chaetotaxy of shield as in *M. dentatus* except that D₇ are represented by 4 asymmetrically placed setae. Dorsal shield lightly punctate in central area; rest of shield obscured by debris.

Venter. Sternal shield typically macrochelid; ornamentation consisting of punctae and is intermediate between that of *M. opacus* and *M. dentatus* (comp. photographs in EVANS and BROWNING, op. cit.); shield 113 μ in length; 108 μ in width between coxae II. Metasternal shields free; small; elongate. Genital shield semicircular in outline behind genital slit; 138 μ in width. Distance between genital setae 99 μ . Three pairs of apodemes posterior to genital shield. Ventrianal shield (fig. 1) well separated (distance 63 μ) from genital shield; anteriorly truncate; ovoid posteriorly; with 3 pairs of plumose preanal setae. Paranal setae simple; postanal seta plumose.

Gnathosoma normal for Macrochelidae. Length of subcapitulum (from base to tip of corniculi) 180 μ . Chela with 1 subterminal and 1 central tooth on fixed digit; movable digit with 2 central teeth. Length of movable digit 69 μ . Dorsal cheliceral seta spinose. Corona and brush present at base of movable digit. Tectum similar to that of *M. opacus* but lateral processes free.

Legs of typical macrochelid facies; sculptured. Coxae I with 2 simple setae; anteroventral seta shorter than posteroventral seta. Coxae II with



Macrocheles beieri n. sp. Fig. 1. Ventri-anal shield, female. Fig. 2. Femur II, male; posterior aspect. Fig. 3. Chelicera, male; paraxial aspect. Fig. 4. Femur II, female; ventral aspect. Fig. 5. Femur II, male; ventral aspect.

anteroventral seta simple; posteroventral seta plumose. Coxae III with both ventral setae plumose. Coxae IV with single ventral seta plumose. Chaetotaxy of femur, genu, and tibia normal.

Tarsal lengths (measured along dorsal midline): I — 100 μ ; II — 123 μ ; III — 123 μ ; IV — 253 μ .

Male. Generally similar to female. Idiosomal lengths in 5 specimens available are 603, 614, 592, 603, 582 μ . Dorsal shield with neotrichy in region of D_7 . Ventral surface separated into sternigenital and ventrianal shields. Sternigenital shields 235, 245, 240, 240, 235 μ in length.

Chelicera (fig. 3) with spermatodactyl of macrochelid type.

Femur II (fig. 2) with hypertrophied ventral seta (calcar, spur of earlier authors). Leg IV without hypertrophied setae.

The second femora of the male and the female bear the same number of setae. In the female (fig. 4) 3 ventral setae are present whereas in the male (fig. 5) there are 4 ventrals. It is probable that the extra anteroventral seta of the male represents the ventrally displaced distal anterolateral seta (see arrow in fig. 5).

Holotype female from collection No. 290 in Collection of United States National Museum, Washington. Paratype males from collection Nos. 290 (2 specimens) and 288 (3 specimens). One paratype male has been deposited in the Naturhistorisches Museum, Wien; one in the British Museum (Nat. Hist.), London; remainder in Collection of Institute of Acarology.

In the form of the dorsal and ventral shields, dorsal chaetotaxy, plumose idiosomal setae, and adherent debris, *M. beieri* falls into the *opacus* group (= *Macroholaspis* OUDEMANS, following KRANTZ, 1962) of the genus *Macrocheles*. It may be distinguished from the other members of its group, *M. opacus* (C. L. KOCH, 1839) sensu EVANS and BROWNING, 1956; *M. opacus* (KOCHE) sensu SCHWEIZER, 1961, non EVANS and BROWNING; *M. dentatus* (EVANS and BROWNING, 1956); and *M. evansi* (BALOGH, 1958) by the following diagnosis: dorsal setae M_1 long, spinose, curving mediad; neotrichy in region of D_7 ; margin of dorsal shield without denticles; no polygonally arranged microtrichiae on dorsal shield; ventrianal shield with 3 pairs of preanal setae. It may also be mentioned that *M. beieri* is the only members of the *opacus* group for which males are known.

Geholaspis (Geholaspis) longispinosus (KRAMER, 1876) EVANS and BROWNING, 1956.

No. 287: 2 females; No. 288: 3 females, 2 deutonymphs; No. 290: 1 female.

A common and widespread European species. The nymphal instars have recently been described by HALASKOVA and KUNST (1960).

Geholaspis (G.) berlesei VALLE, 1953.

No. 287: 1 female; No. 288: 3 females; No. 289: 3 females; No. 290: 1 female. The species was previously known from Italy where it was found in mosses in fir and *Alnus* forests (VALLE, 1953).

Geholaspis (G.) pauperior (BERLESE, 1918) VALLE, 1953.

No. 287: 2 females; No. 288: 2 females; No. 289: 3 females; No. 290: 2 females; No. 296: 1 female. Previously reported from a number of localities in Italy by VALLE (1953).

Geholaspis (Longicheles) mandibularis (BERLESE, 1904) EVANS and BROWNING, 1956.

No. 287: 1 female; No. 289: 2 females; No. 290: 3 females; No. 291: 4 females. A widespread European species.

Geholaspis (L.) cf. *bulgaricus* BALOGH, 1958.

No. 291: 1 female. The species was previously known from Bulgaria where it was collected in montane beech and coniferous forests at heights

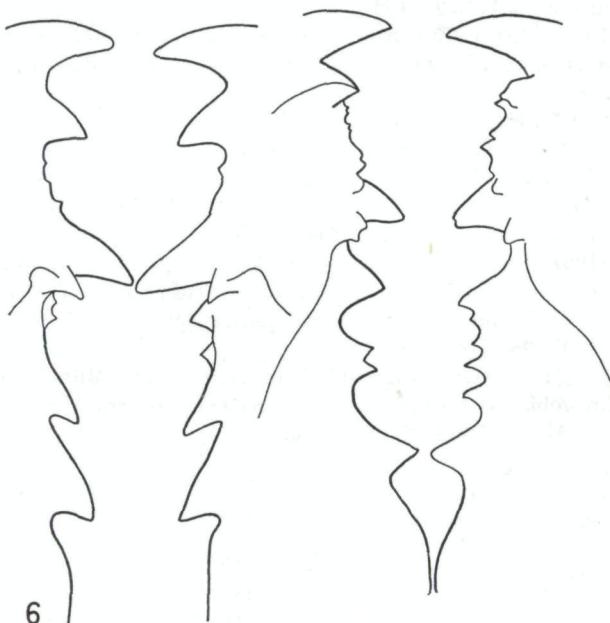


Fig. 6. *Geholaspis (Longicheles) cf. bulgaricus* BALOGH. Dentition of right and left chelae.

of 1400—1600 meters. My specimen does not conform precisely in cheliceral dentition to the figure given by BALOGH (1958). This feature is probably variable, however, as can be seen in a comparison of the minor teeth of the right and left chelae of my specimen (fig. 6).

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