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Macrochelidae from Hamburg (Acari, Mesostigmata), with descriptions of two new species¹⁾

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(With 23 figures)

Introduction

Through the kindness of Dr. GISELA RACK, Acarologist at the Zoologisches Museum of Hamburg, a series of 39 collections of Macrochelidae from the environs of Hamburg were made available to me for study. The collections represent four macrochelid genera and 16 species, two of which are described as new in this paper. Specimens were recovered from a wide variety of habitats including decayed wood, rodent nests, soil, bait traps and insects. A complete listing of collection sites and supplementary data is given below.

Mites were removed from collection vials, placed in lactophenol for 1–2 weeks, rinsed and mounted in HOYER's solution. Representative specimens were dissected prior to mounting. Procedures which were followed are outlined in KRANTZ (1970).

Collection List

Hamburg-Rahlstedt, Kleiner Hegen, Mischwald, G. RESPONDEK leg.

R 6 Bodenprobe.

Hamburg-Rahlstedt, Vogelschutzgehölz, 6. 4. 1965, G. RESPONDEK leg.

R 8 Eichenstubben.

R 12 Bodenprobe unter Wildfütterungsstelle.

Hamburg, Duvenstedter Brook, 11. 4. 1965, G. RESPONDEK leg.

R 13 verlassenes Mäusenest in hoher Grasbütte.

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- Hamburg-Rahlstedt, Kleiner Hegen, 20. 4. 1965, G. RESPONDEK leg.
R 19 halbzerfallener Fichtenstubben.
- Hamburg, Duvenstedter Brook, 25. 4. 1965, G. RESPONDEK leg.
R 25 verlassenes Mäuse(?)nest in hoher Grasbülte, Winterlager. — R 27 dasselbe wie R 25, nur einige Meter weiter. — R 28 dasselbe wie R 25, jedoch noch weiter entfernt. — R 29 verrotteter und bemooster Stubben von alter Kiefer. — R 30 aus hoher Grasbülte, Winterlager.
- Hamburg-Rahlstedt, 10. 5. 1965, G. RESPONDEK leg.
R 36 aus Abfallhaufen von Weißdorn und Gras.
- Hamburg, Duvenstedter Brook, 16. 5. 1965, G. RESPONDEK leg.
R 44 Moor, zusammengeworfenes, verrottetes Schilf- und Moorgras. — R 45 Moorwiese. — R 46 aus Sphagnum.
- Hamburg-Rahlstedt, Kleiner Hegen, 25. 5. 1965, G. RESPONDEK leg.
R 47 vollkommen verrotteter Eichenstubben.
- Hamburg, Volksdorfer Wald, 11. 8. 1965, G. RESPONDEK leg.
R 60 Bodenprobe unter Farnkraut.
- Hamburg-Rahlstedt, Vogelschutzgehölz, 22. 8. 1965, G. RESPONDEK leg.
R 65 vermodertes Holz einer Brücke. — R 66 unter alter Eiche. — R 68 aus *Trametes versicolor* an altem Eichenstubben. — R 69 Waldboden.
- Hamburg-Rahlstedt, Kleiner Hegen, 1. 9. 1965, G. RESPONDEK leg.
R 72 unter Birken-Borke. — R 73 aus Moospolster in einem Baumstubbentrichter. — R 75 unter Ebereschen-Rinde. — R 77 vermoderte Erle.
- Ahrensburg bei Hamburg, Moor, 9. 9. 1965, G. RESPONDEK leg.
R 78 aus morschem Holzpfehl am Rande des Moores. — R 81 morscher Stubben mit Moos.
- Hamburg-Rahlstedt, Kleiner Hegen, 23. 9. 1965, G. RESPONDEK leg.
R 93 feuchte Wiese in einem Graben. — R 94 Sandstelle.
- Hamburg-Langenhorn Nord, Müllplatz, 2. 5. 1957, H.-J. HASS leg.
H 7 Bodenprobe aus 10—20 cm Tiefe, Müllalter 0—1 Jahr. — H 11 Fangglas (Köder: Käse) Müllalter 0—1 Jahr. — H 17 Fangglas (Köder: Fleisch)
- Hamburg, Harburger Berge bei Hausbruch, 27. 5. 1959, G. ZACHARIAE leg.
Z 22 Buchenwaldboden.
- Hamburg, Meiendorf, 16. 8. 1965, H. SCHÄFER leg.
S 1 Komposthaufen.
- Holm bei Wedel/Holstein bei Hamburg, 25. 11. 1960, Dr. SEBELIN leg.
SE 1 aus feuchtem Stroh.
- Hamburg-Rattenlaboratorium, 15. 9. 1960, J. HENSCHER leg.
HE 1 von Fliege.
- Insel Helgoland (Nordsee), 16. 9. 1965, G. RHEINWALD leg.
RH 1 feuchtes Holz am Strand.
- Ingelheim/Rhein, 15. 9. 1960, H. LAUFERSWEILER leg.
L 1 aus Zucht von *Blaps* — species.
- Hamburg-Langenhorn, Müllplatz, 1957, H.-J. HASS leg.
A 16/60 von *Aphodius fimetarius* L.
- Hamburg-Rahlstedt, 10. 8. 1961, G. RESPONDEK leg.
A 11/61 von *Aphodius* spec.

Key to a collection of Macrochelidae from Hamburg and environs

1. Femur II armed with sclerotized spurs, seta mv of tarsus II modified into a thick spine (Fig. 3); vertical setae inserted on an anterior projection of the dorsal shield *Holostaspella* 2
 - Femur II smooth or, at most, with weak ridges, seta mv of tarsus II unmodified; without anterior projection of dorsal shield 3
2. Dorsal shield strongly ornamented in a punctate-areolate pattern; ventrianal shield punctate-areolate, distinctly broader than long, with four pairs of preanal setae *H. ornata* BERLESE
 - Dorsal shield uniformly punctate, without areolations or ridges; ventrianal shield punctate-reticulate, nearly as long as broad, with three pairs of preanal setae *H. punctata* n. sp.
3. Ventrianal shield with five pairs of preanal setae (Fig. 5) *Geholaspis* 4
 - Ventrianal shield with two or three pairs of preanal setae (Figs. 14, 15) 5
4. Chelicerae long and narrow, multidentate (Fig. 7); setae r_1 plumose, shorter than vertical setae (i_1) *G. (Longicheles) mandibularis* (BERLESE)
 - Chelicerae of normal dimensions and dentition (Fig. 6); setae r_1 smooth, considerably longer than setae i_1 *G. (Geholaspis) longispinosus* (KRAMER)
5. Dorsal shield strongly crenulate-reticulate; sternal shield extending posterolaterally to the level of the posterior angles of coxae III. Legs II-IV of males armed with spurs *Glypholaspis* 6
 - Dorsal shield smooth, punctate, reticulate or areolate; sternal shield not produced posterolaterally as above. Legs II and/or IV of males armed with spurs *Macrocheles* 7
6. Dorsomedian setae (i_4 — i_5 , z_3 , J_2) uniformly long, smooth or nearly so; i_4 attaining level of insertion of i_5 ; setae J_5 distinctly longer than S_5 (Fig. 8), posterior margin of dorsal shield evenly and minutely denticulate *Gl. americana* (BERLESE)
 - Dorsomedian setae short, plumose; i_4 not attaining level of insertion of i_5 , with one or two small accessory setae between i_5 and J_2 (? J_1); J_5 shorter than S_5 (Fig. 9), posterior margin of dorsal shield between insertions of J_5 with five or more projections *Gl. confusa* (FOÁ)
7. Ventrianal shield with two pairs of preanal setae (Fig. 15); setae J_3 present dorsally *M. opacus* (KOCH)
 - Ventrianal shield with three pairs of preanal setae; setae J_3 present or absent 8
8. Setae J_3 present *M. montanus* (WILLMANN)
 - Setae J_3 absent 9
9. Females with 1—3 pairs of postepigynial platelets (Figs. 13, 14) anterior to ventrianal shield 10
 - Females without platelets between epigynial and ventrianal shields 12
10. Epistome lacking lateral elements (Fig. 12); lateral and posterior margins of dorsal shield uniformly and minutely serrated; females with one pair of postepigynial platelets, males with distinctive spurs on legs II and IV. *M. superbus* HULL
 - Epistome with lateral elements (Fig. 20); margins of dorsal shield not as above; males with spurs only on legs II 11
11. Setae r_1 short, less than half the length of i_1 , i_1 with adjacent insertions; female with three pairs of postepigynial platelets (Fig. 14) *M. carinatus* (KOCH)
 - Setae r_1 long, equal or subequal in length to setae i_1 , insertions of i_1 well separated (Fig. 19); female with three or fewer pairs of postepigynial platelets *M. tardus* (KOCH)

12. Sternal shield with general punctate pattern, without reticulation; setae i_1 long, smooth or nearly smooth throughout (Fig. 21) *M. robustulus* BERLESE
 — Sternal shield with distinctive reticulate pattern; setae i_1 various, but always plumose distally 13
13. Insertions of setae i_1 well separated; all dorsal shield setae plumose (Fig. 17) *M. matris* HULL
 — Insertions of setae i_1 adjacent (Fig. 22); with both simple and plumose dorsal setae 14
14. Setae r_1 , z_2 — z_3 , i_4 — i_5 and J_2 (as labeled in Figs. 1, 22) simple, other dorsal shield setae distally or totally plumose; *linea obliqua anterior* (*l. o. a.*) a distinctive arch on the sternal shield (Fig. 18) *M. muscaedomesticae* (SCOPOLI)
 — Most of the dorsal shield setae smooth; sternal shield without distinctive *l. o. a.* 15
15. Setae r_5 simple; sternal shield with a characteristic *linea arcuata* (*l. arc.*) *M. glaber* (MÜLLER)
 — Setae r_5 distally plumose (Fig. 22); *l. arc.* of sternal shield indistinct, forming a portion of a punctate-reticulate median pattern (Fig. 23) *M. neoscutatus* n. sp.

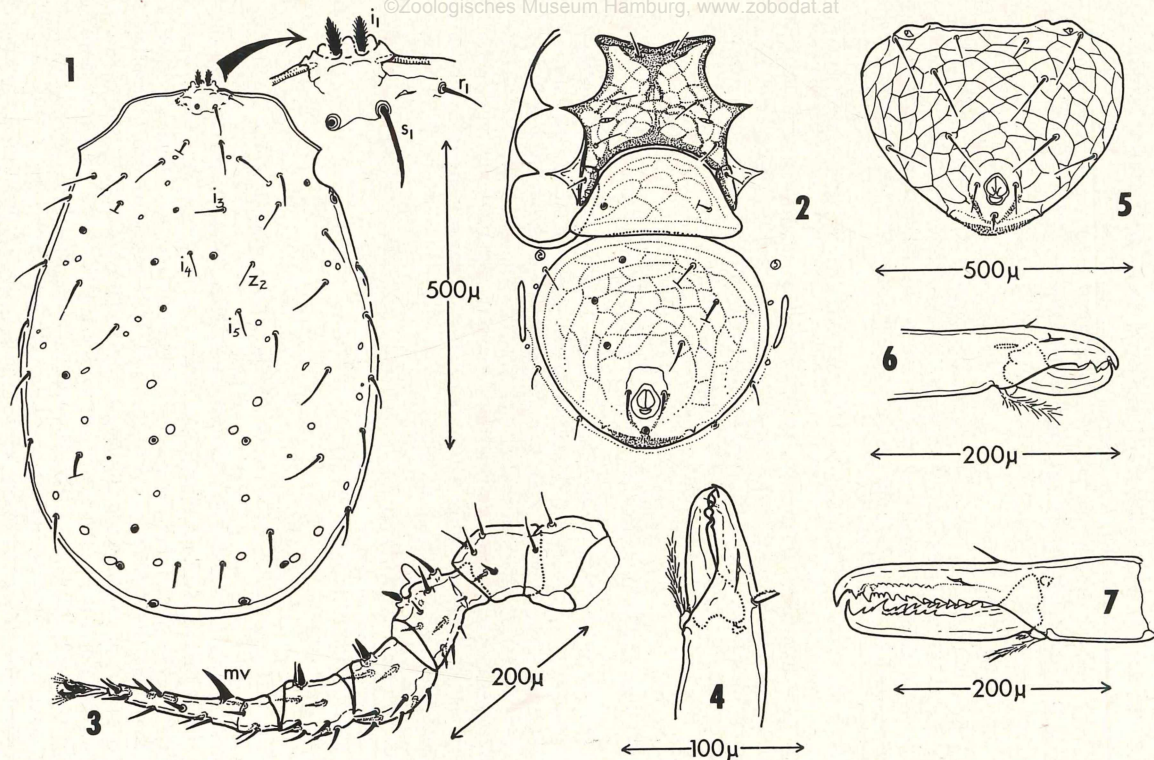
Holostaspella ornata BERLESE

Specimens of *H. ornata* have been collected throughout Europe and from Africa (KRANTZ 1967, KRAUSS 1970). Variations in length of various dorsal setae, and in details of dorsal and sternal ornamentation, may indicate the existence of varieties within the species *ornata*, or a species complex.

Collections: S_1 (2).

Holostaspella punctata n. sp. (Figs. 1—4)

Female. — Length of idiosoma = 866 μ ; width of idiosoma at widest point = 578 μ . — Dorsal shield (Fig. 1) ornamented in a simple punctate pattern, without areolations or ridges; setae i_1 short, strongly plumose, inserted on a knobbed anterior protuberance of the dorsal shield; insertions of i_1 widely separated. Setae r_1 subequal to i_1 , half the length of other anterodorsal setae; dorsomedian setae (i_3 — i_5 , z_2) comparatively short, smooth or nearly so, other dorsal setae weakly plumose; postero-median pores large. — Sternal shield (Fig. 2) with a distinctive punctate-reticulate pattern, crista posterior erecta (KRANTZ 1967) poorly developed in anterior portion, sternal setae simple. — Metasternal shields elongate, abutting posterolateral angles of sternal shield; metasternal setae not as long as sternals. — Epigynial shield broader than long, strongly punctate-reticulate throughout, epigynial setae simple. — Ventrianal shield slightly broader than long, rounded laterally, with three pairs of preanal setae. Metapodals narrow and elongate, laterad of ventrianal shield. Integument surrounding shields strongly striate, integumental setae simple. — Peritremes typical for the genus, looped laterally between coxae III—IV, each extending anteriorly in a peritremal shield and dorsally to the base of the anterior dorsal shield projection. Movable digit of chelicera (Fig. 4)



Figs. 1—4: *Holostaspella punctata* n. sp. female: 1 = dorsal shield, with detail of anterior protuberance. — 2 = venter. — 3 = leg II. — 4 = chelicera.

Figs. 5, 6: *Geholaspis (G.) longispinosus* (KRAMER) female: 5 = ventrianal shield. — 6 = chelicera.

Fig. 7: *Geholaspis (Longicheles) mandibularis* (BERLESE): female chelicera.

with a large median cusp and a smaller subterminal tooth; fixed digit notched distally, with three small median teeth; dorsal cheliceral seta broad, serrate on distal face; internal cheliceral brush strongly plumose, at least $\frac{2}{3}$ the length of the adjacent movable digit. Epistome tripartite, with central element forked and lateral elements flag-like, laterocoxal spurs strong, spinose. Femur II with ventral bifid spur (Fig. 3), seta mv of tarsus II spur-like; posterior paradactyli of tarsi II—IV deeply divided distally.

Male unknown.

Locality and habitat. — A single female specimen with the following data: Ahrensburg bei Hamburg, Moor, morscher Stubben mit Moos; 9. 9. 1965; G. RESPONDEK leg. (Collection R 81). The holotype female will be deposited in the collection of the Zoologisches Museum, Hamburg.

Discussion. — *H. punctata* is a member of the *sculpta* group both of FILIPPONI and PEGAZZANO (1967) and of KRANTZ (1967). The new species resembles *H. subornata* BREGETOVA and KOROLEVA (1960), in that both species lack the strong dorsal and ventral ornamentation typical of other members of the group. Unlike *H. ornata*, however, *H. punctata* has widely separated i_1 , short r_1 , and a reticulate sternal shield.

Geholaspis (Geholaspis) longispinosus (KRAMER) (Figs. 5, 6)

One of the more common macrochelid species from the Hamburg region, *G. longispinosus* was recovered from no fewer than 19 of the 39 collections examined. Comparisons with collections from Sweden, Norway and England reveal minor differences in setal lengths and ornamentation, but these are considered to be well within normal intraspecific variation. Specimens of *G. longispinosus* have been taken from rodent nests in Russia (BREGETOVA and KOROLEVA 1960).

Collections: R 8 (1), R 12 (1), R 13 (2), R 27 (1), R 28 (2), R 29 (3), R 30 (1), R 36 (4), R 45 (5), R 46 (3), R 47 (1), R 60 (1), R 68 (1), R 72 (1), R 73 (2), R 75 (1), R 78 (2), R 93 (2), Z 22 (7).

Geholaspis (Longicheles) mandibularis (BERLESE) (Fig. 7)

G. mandibularis is widely distributed in Europe (EVANS and BROWNING 1956) in litter, moss and compost. Collection sites from the Hamburg area include tree bark and forest soil. Examination of BERLESE's type specimens reveal that setae i_5 are quite long, extending well beyond the insertions of J_2 (as illustrated in VALLE 1953). The Hamburg collections differ in this respect, as do specimens illustrated from England and Russia (EVANS and BROWNING 1956, BREGETOVA and KOROLEVA 1960). EVANS and BROWNING refer to the variations observed in the form of the ventrianal shield and the chaetotaxy of the dorsal shield. Specimens in the Hamburg series do not appear to vary beyond these limits.

Collections: R 6 (1), R 19 (3), R 25 (2), R 69 (1), R 75 (4), R 77 (1).

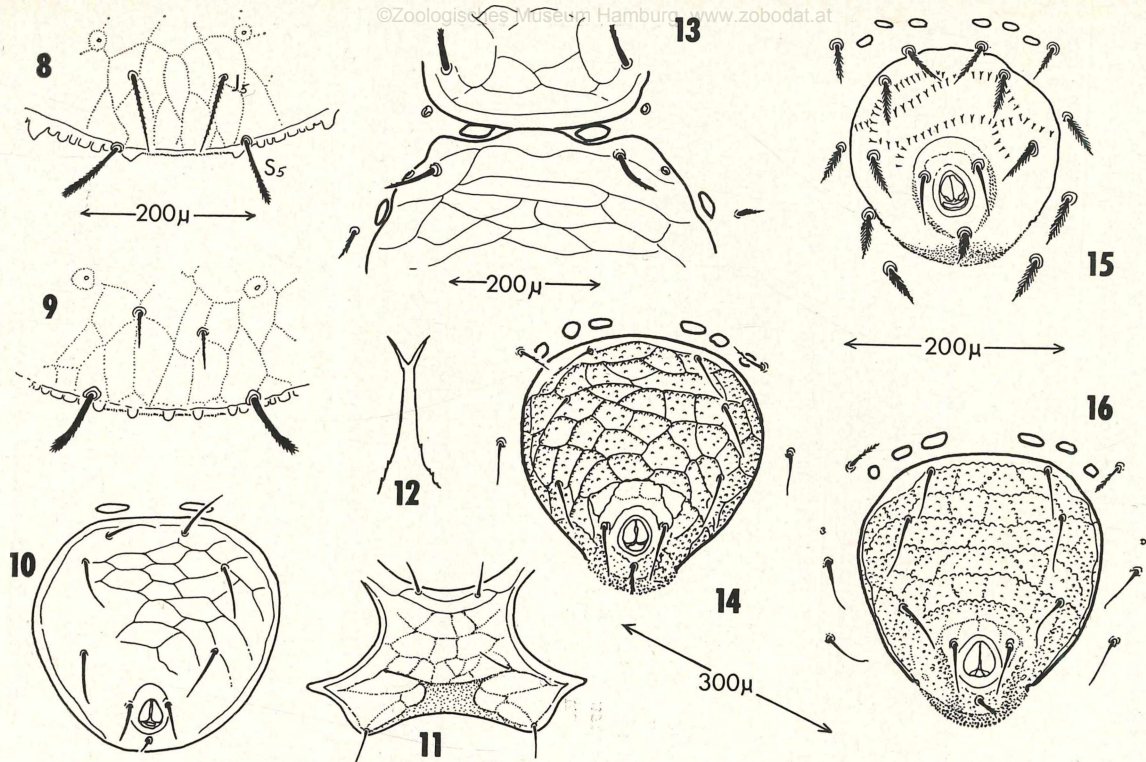


Fig. 8: *Glyphtholaspis americana* (BERLESE): Posterior portion of dorsal shield of female.

Fig. 9: *Glyphtholaspis confusa* (Folà): Posterior portion of dorsal shield of female.

Figs. 10—11: *Macrocheles montivagus* BERLESE female: 10 = ventrian shield. — 11 = sternal shield (Figs. 10 and 11 derived from drawings of specimen no. 188/20, BERLESE collection, Florence).

Figs. 12, 13: *Macrocheles superbis* HULL female: 12 = epistome. — 13 = portions of epigynial and ventrian shields, showing position of postepigynial platelets.

Fig. 14: *Macrocheles carinatus* (KOCH): ventrian shield of female.

Fig. 15: *Macrocheles opacus* (KOCH): ventrian shield of female.

Fig. 16: *Macrocheles montanus* (WILLMANN): ventrian shield of female.

Glyphtholaspis americana (BERLESE) (Fig. 8)

Although the type material of *G. americana* was collected in South America, the species has a range which includes Europe, Africa and Australia (FILIPPONI and PEGAZZANO 1960, KRANTZ and FILIPPONI 1964).

Collections: H 7 (1), H 17 (8).

Glyphtholaspis confusa (Foà) (Fig. 9)

Like *G. americana*, the range of *G. confusa* includes South America, Europe, Africa and Australia (FILIPPONI and PEGAZZANO 1960). Collections in the Hamburg series are confined to old refuse from cheese- and meat-baited traps (rodent?). *G. confusa* has been shown to be an effective predator of house fly eggs in North America (AXTELL 1961).

Collections: H 7 (3), H 11 (4), H 17 (1).

Macrocheles opacus (KOCH) (Fig. 15)

EVANS and BROWNING synonymized *M. opacus* with *Macrocheles* (*Nothrolaspis*) *aciculatus* BERLESE in 1956. KRAUSS (1970) recently figured two closely related mites which he identified as *M. opacus* (KOCH) and *M. opacus* var. *aciculatus* (BERLESE). His *M. opacus* possesses three pairs of preanal setae on the ventrianal shield, while *opacus* var. *aciculatus* appears identical to EVANS and BROWNING's *opacus* s. lat. For the purposes of this review, KRAUSS' var. *aciculatus* is considered as synonymous with *M. opacus* sensu EVANS and BROWNING. KRAUSS' *M. opacus* is herein referred to *M. terreus* CANESTRINI and FANZAGO 1877, a species related to *M. beieri* JOHNSTON (1970). Specimens of *M. opacus* sensu EVANS and BROWNING, a widely distributed species, were recovered from five collections in the Hamburg region.

Collections: R 8 (3), R 25 (1), R 30 (2), R 68 (1), R 75 (1).

Macrocheles montanus (WILLMANN) (Fig. 16)

KRAUSS (1970) has synonymized *M. montanus* with *M. montivagus* (BERLESE) and, on the basis of the dorsal setal condition and general ornamentation, the synonymy is plausible. Study of BERLESE's type material of *M. montivagus*, however, leads me to another interpretation which is illustrated in the following couplet:

a. Sternal shield strongly punctate posteromedially, sternal setae plumose distally; with three pairs of postepigynial platelets; ventrianal shield subtriangular *montanus*

b. Sternal shield without posteromedial ornamentation (Fig. 11), sternal setae simple; with a single pair of postepigynial platelets; ventrianal shield rounded (Fig. 10) *montivagus*

Collections: R 12 (9), R 94 (1).

Macrocheles superbis HULL (Figs. 12, 13)

M. superbis is a common inhabitant of beach wrack, estuarine litter and salt marshes both in Europe and in North America. Specimens also have been collected from gull nests in the Kuril Islands of Russia (BREGETOVA and KOROLEVA 1960).

Collections: RE 1 (7).

Macrocheles carinatus (KOCH) (Fig. 14)

M. carinatus occurs throughout Europe in a variety of substrates (EVANS and BROWNING 1956, KRAUSS 1970). Its general facies is shared by a number of other species, all of which might be said to comprise a species group. Included in the group are *M. montanus* (see above) and *M. tardus*, which is referred to below.

Collections: R 44 (3), R 65 (2).

Macrocheles tardus (KOCH) (Figs. 19, 20)

KRAUSS (1970) has reduced *M. tardus* sensu EVANS and BROWNING (1956) to synonymy under *M. tridentinus* (G. et R. CANESTRINI). In the same paper, he places three species of *Glyphtholaspis* (sensu FILIPPONI and PEGAZZANO 1960) in synonymy under *M. tardus* and includes figures of *tardus* strongly reminiscent of *Glyphtholaspis americana* (BERLESE). Thus, according to KRAUSS, *M. tardus* is a member of the „*Glyphtholaspis*-Gruppe“ of the genus *Macrocheles*, although he does not synonymize FILIPPONI and PEGAZZANO's genus *Glyphtholaspis* with *Macrocheles*. While such an interpretation may have merit, I feel that *M. tardus* sensu EVANS and BROWNING should be retained as a valid entity pending additional study.

M. tardus is a widespread species (EVANS and BROWNING 1956, BREGETOVA and KOROLEVA 1960, SCHWEIZER 1961) which is considered to be hygrophilic by some observers (FRANZ 1954). BREGETOVA and KOROLEVA (1960) report its occurrence in the nest of the red-backed vole, *Clethrionomys rutilus*. Three specimens from various habitats have been identified from the Hamburg region.

Collections: R 8 (1), R 12 (1), R 75 (1).

Macrocheles robustulus BERLESE (Fig. 21)

A cosmopolitan species, *M. robustulus* is a common inhabitant of manure and of vegetable compost, and often is found associated with coprophilous Coleoptera.

Collections: H 7 (8), H 17 (1).

Macrocheles matrius HULL (Fig. 17)

BREGETOVA and KOROLEVA (1960) report *M. matrius* as an inhabitant of nests of a variety of rodents throughout Russia. It is known to occur also

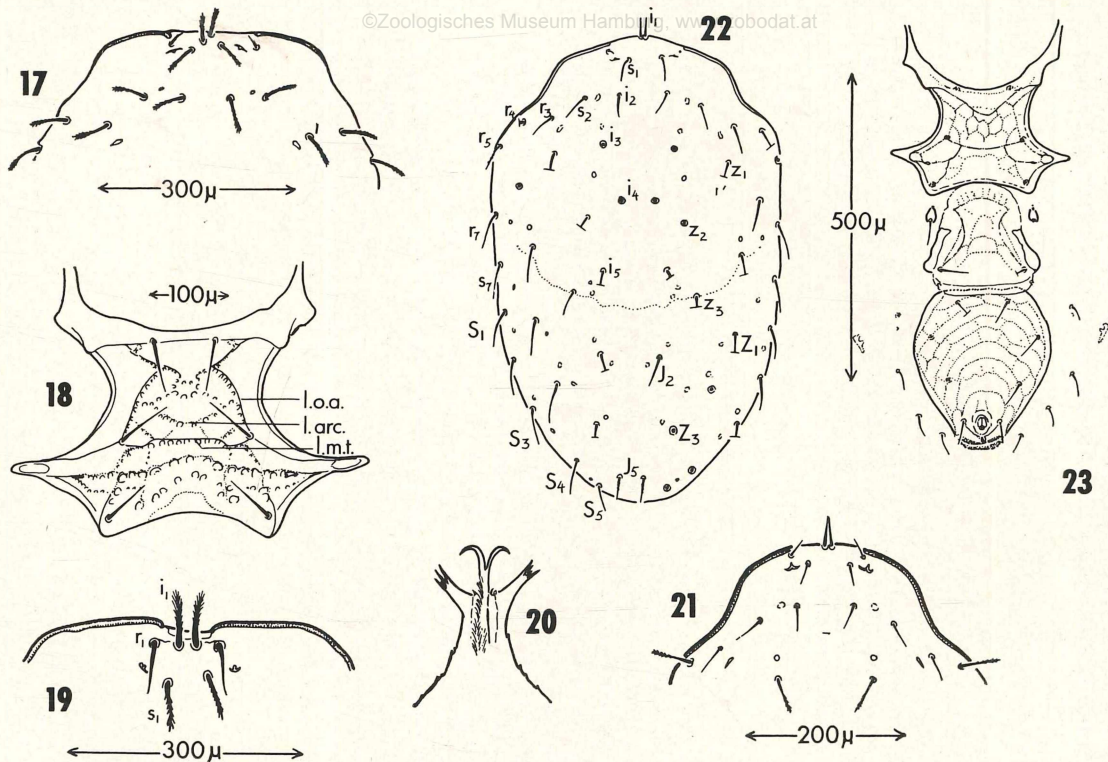


Fig. 17: *Macrocheles matrius* HULL: anterior portion of female dorsal shield.

Fig. 18: *Macrocheles muscaedomesticae* (SCOPOLI): sternal shield of female (l. o. a. = linea obliqua anterior; l. arc. = linea arcuata; l. m. t. = linea media transversa).

Figs. 19, 20: *Macrocheles tardus* (KOCH): 19 = anterior portion of female dorsal shield. — 20 = epistome.

Fig. 21: *Macrocheles robustulus* BERLESE: anterior portion of female dorsal shield.

Figs. 22, 23: *Macrocheles neoscutatus* n. sp. female: 22 = dorsal shield. — 23 = venter.

in association with coprophilous scarabs (GÖTZ 1952), in stored grain (HUGHES 1961), and in poultry manure (EVANS and BROWNING 1956). Specimens from the Hamburg collections were recovered from beetle cultures and from damp straw.

Collections: SE 1 (7), L 1 (7).

Macrocheles muscaedomesticae (SCOPOLI) (Fig. 18)

M. muscaedomesticae is a cosmopolitan species found associated with both insects and small mammals. A common associate of *Musca domestica*, this species has been found to be an effective fly egg predator in manure (PEREIRA and DE CASTRO 1945, WADE and RODRIGUEZ 1961).

Collections: HE 1 (7).

Macrocheles glaber (MÜLLER)

M. glaber is frequently encountered on coprophilous and necrophagous beetles and flies throughout Europe (SCHWEIZER 1961, KRAUSS 1970). Collections of „*glaber*“ from Asia, Africa and the Americas in the writer's collection apparently represent a number of closely related species of the *glaber* group sensu FILIPPONI and PEGAZZANO (1962).

Collections: R 44 (1), S 1 (7), SE 1 (1), A 11/61 (1), A 16/60 (1).

Macrocheles neoscutatus n. sp. (Figs. 22, 23)

Female. — Length of idiosoma = 780 μ ; width of idiosoma at widest point = 485 μ . — Dorsal shield (Fig. 22), punctate-reticulate throughout, with a poorly defined procurved line behind insertions of setae z_3 ; setae i_1 with adjacent insertions, plumose distally; r_5 also distally plumose, z_1 broken distally on type specimen but appearing plumose, i_3 lost; remaining setae simple except for J_5 which is weakly pectinate throughout. — Sternal shield (Fig. 23) punctate-reticulate, linea arcuata (as labeled in Fig. 18) indistinct, forming a portion of the general median ornamentation; linea media transversa distinct, curved posteriorly; sternal setae lost. — Metasternal shields ovoid, well separated from sternal shield; metasternal setae simple. — Epigynial shield little broader than long, ornamented in a pattern similar to that of sternal shield; epigynial setae simple, postepigynial platelets lacking. — Ventrianal shield subtriangular, rounded laterally and longer than broad; with a series of eight arched punctate lines traversing the shield between preanal setae I and the adanals (Fig. 23); preanal and adanal setae simple, postanal seta lost. Metapodals represented by a pair of small weak sclerites posterior to insertions of coxae IV. Integument surrounding shields striate, integumental setae simple. — Stigmata laterad of coxae III—IV; peritremes each extending anteriorly and dorsally to a point anterior to seta r_1 . Movable digit of chelicera with a median bidentate cusp and a more distal smaller tooth; fixed digit with a broad median cusp and a setate pilus dentilis; dorsal cheliceral seta simple,

peg-like; internal cheliceral brush short, extending distally $1/2$ the length of the adjacent movable digit. Epistome incomplete in available specimen, laterocoxal spurs small, inconspicuous. Genu IV with six setae.

Male unknown.

Locality and habitat — A single female specimen with the following data: Hamburg, Volksdorfer Wald, unter Farnkraut; 11. 8. 1965; G. RESPONDEK leg. (Collection R 60). The holotype female will be deposited in the collection of the Zoologisches Museum, Hamburg.

Discussion — While *M. neoscutatus* lacks a well defined *linea arcuata* on the sternal shield, its general facies would indicate an affinity with the *glaber* group of FILIPPONI and PEGAZZANO (1962). It is unfortunate that the available specimen lacks setae i_3 and distal portions of z_1 , since distal plumosity of these hairs would corroborate group placement. The ventrianal shield of *M. neoscutatus* is typical of members of the *glaber* group in the writer's collection, and shows a strong similarity to the ventrianal shield of *M. scutatus* (BERLESE), one of three species assigned to the group by FILIPPONI and PEGAZZANO (1962).

S u m m a r y

Examination of a series of 39 collections of Macrochelidae from Hamburg and environs resulted in recovery of 16 species, two of which are new. *Holostaspella punctata* n. sp. was collected in a decaying tree stump, and *Macrocheles neoscutatus* was recovered from under ferns.

Z u s a m m e n f a s s u n g

Die Untersuchung einer Serie von 39 Proben der Familie Macrochelidae von Hamburg und Umgebung hat die Feststellung von 16 Arten ergeben, wovon zwei neu sind. *Holostaspella punctata* n. sp. wurde in einem vermodernden Baumstamme und *Macrocheles neoscutatus* n. sp. unter Farnen gefunden.

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