

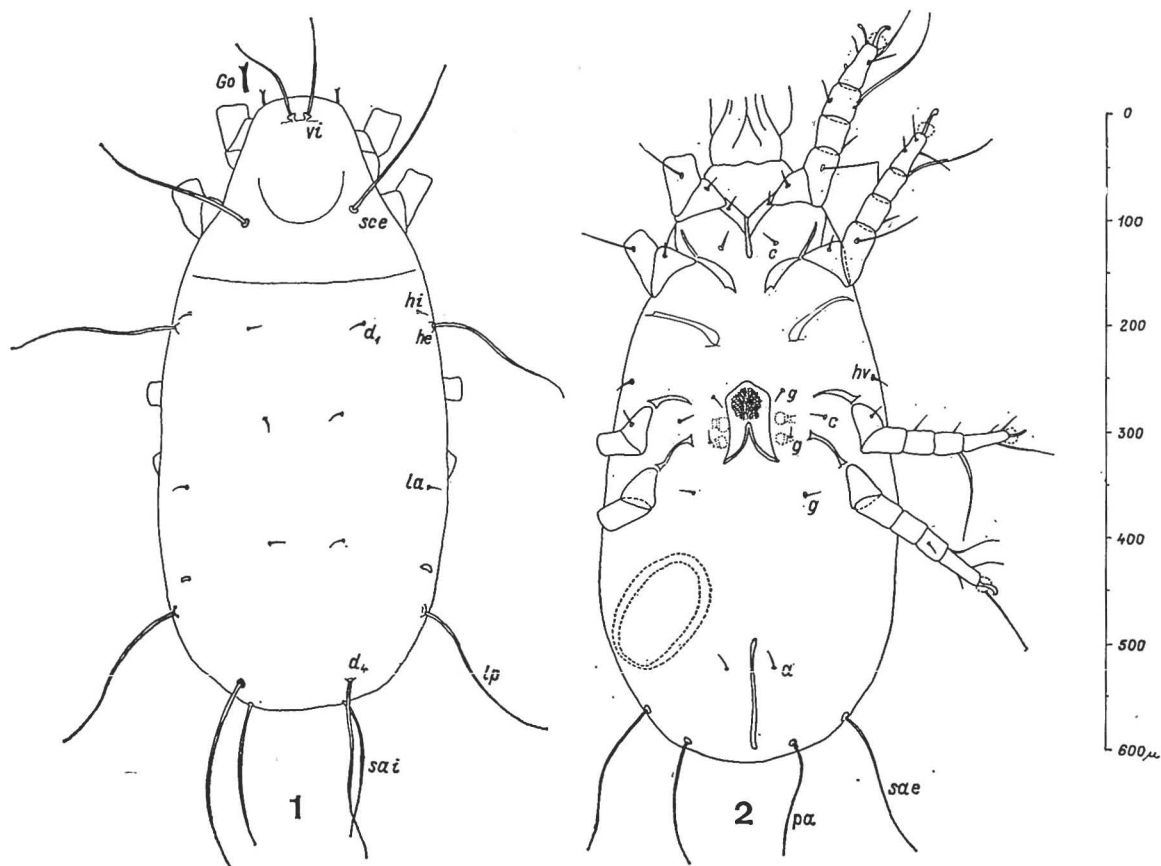
HISTIOGASTER SUDETICUS N. SP. (ACARINA, ACARIDAE) *

BY

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Histiogaster genus was described by BERLESE in 1883, and *Histiogaster carpio* (Kramer, 1881) is a type of this genus.

E. TÜRK and F. TÜRK (1957) in their key for determining Acaridae of Middle Europe included *H. carpio* (Kramer) male and female, describing once more its deutonymph. They claimed that *H. bacchus* Zachv. 1941 is a synonym of *H. carpio* (Kramer). They also described two new spe-



FIGS. 1-2. — *Histiogaster sudeticus* n. sp.
1) Dorsal side of a female; 2) Ventral side of a female.

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cies, namely male, female and deutonymph *H. stammeri* and deutonymph *H. oudemansi*. A review of North American species of Acaridae carried out by WOODRING (1966) includes again a description of *H. arborsignis* (Woodring, 1963) and supplementary descriptions of *H. anops* Griffiths, 1963 and *H. carpio* (Kramer, 1881). In addition this author described four new species : *H. rotundus*, *H. robustus*, *H. moseri* and *H. cyclopis*, collected in North America.

Histiogaster Berl. genus can be easily distinguished from all remaining species of the Acaridae family. All males, described up to date, have a characteristic projection of the epistosomal shield which has a 4-lobed, fan-like structure at the end. *H. stammeri* E. Türk and F. Türk, 1957, and the species *H. sudeticus* n. sp. described below, are exceptions. Females are more difficult to determine, but they are characterized by divided idiosoma ; the length of dorsal setae sc. e. he, d₄ (sometimes d₃) usually exceeds 1/4 of idiosoma length. On foot I there is ba in the form of a stout spine situated directly in front of w₁. The tarsal spine (e) of moderate size is at the end, whole legs of the female are short and thin. In the species described below the females differ from the remaining females of *Histiogaster* genus by the lack of the stout spine (ba) in legs I and lack of tarsal spine (e). More precise details on deutonymph of *Histiogaster* genus are also presented by WOODRING (1966).

A shortened morphological description, presented below, is quite sufficient to distinguish the species properly.

Histiogaster sudeticus n. sp.

FEMALE (Fig. 1-4). Idiosoma length ranges from 570 to 640 microns (most frequently 600 microns), 250-270 microns broad. In pregnant females the idiosoma breadth enlarges to 355 microns maximum.

The propodosoma (Fig. 1) of length 170 microns is about 230 microns broad at its base. Setae verticales internae (vi) 90 microns long, are placed on small stumps at about 10 microns distance

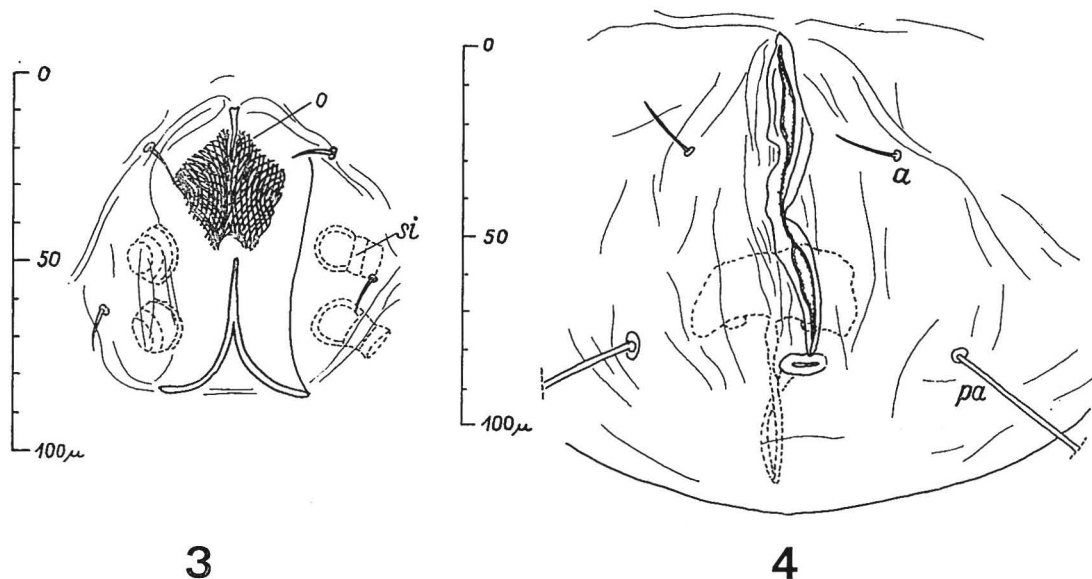


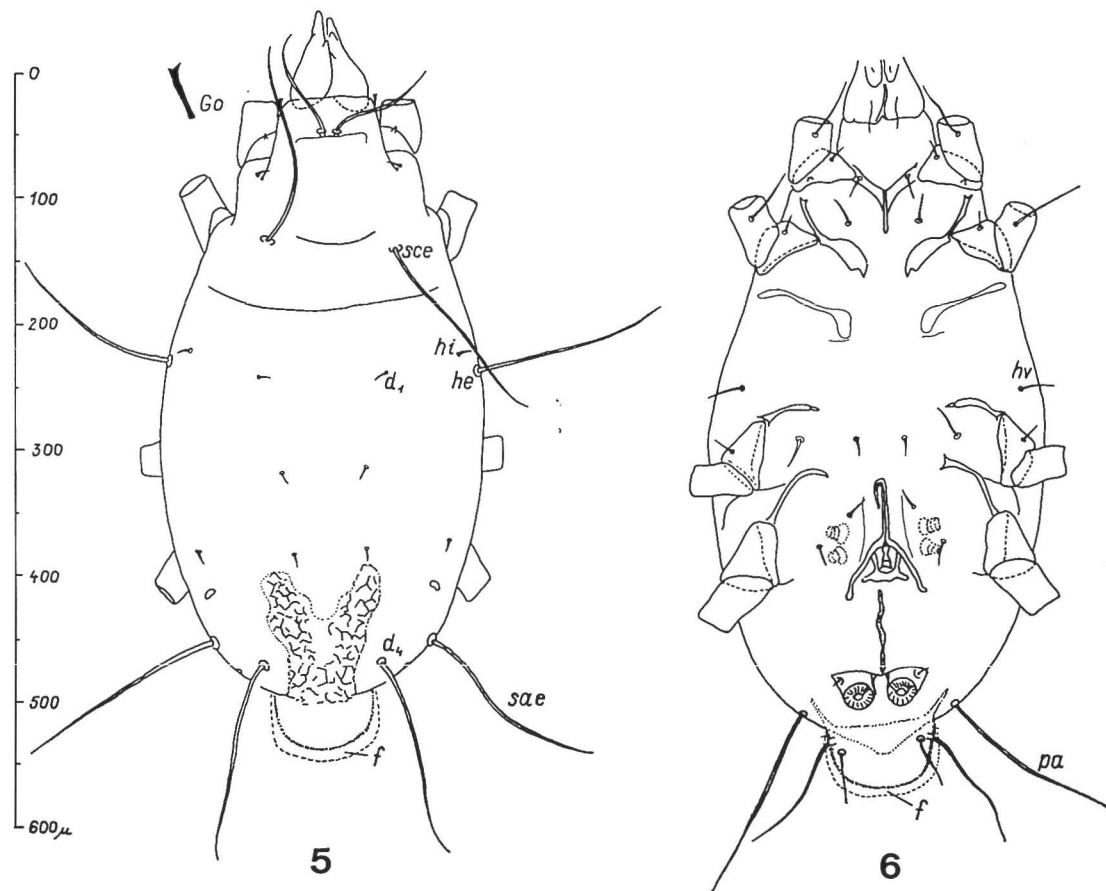
FIG. 3. — *Histiogaster sudeticus* n. sp.
3) Female genitalia ; 4) Seminal reception.

from each other. Setae supracoxales (ps) are almost invisible. Setae scapulares externae (sc e) are up to 160 microns long. The propodosomal shield is only slightly visible, only its frontal edge at the height of setae verticales internae (vi) is more distinct. Grandjean's organ (Go), 15 microns long, is bifurcated at the end, and one end is usually slightly shorter.

On the hysterosoma (Fig. 1) setae humerales externae (he) are 160 microns long, while setae humerales internae (hi), situated only 15 microns apart from them, are very short being only 10 microns in length. Similar is length of setae dorsales pairs 1, 2 and 3 (d_1 - d_3) and that of setae laterales (la). Near the hysterosoma edge are the setae laterales posteriores (lp) reaching in length up to 175 microns. The fourth setae dorsales (d_4) are 190 microns long. Setae sacrales internae (sai) are up to 140 microns long. On the hysterosoma end, above the setae laterales posteriores there is a pair of circular pores bean-shaped.

At the ventral side (Fig. 2) all the epimeres are clearly visible. The epimeres I are joined together forming a short sternum. The epimeres II, III and IV are detached, the epimeres II have semicircular enclaves at their ends. Setae coxales (c) are located on coxal surfaces I and III. Setae subhumerales (hv) are short (18 microns).

The genitalia of the female are situated between coxa of leg pairs III and IV (Fig. 2) and are surrounded by 3 pairs of setae genitales (g) 12 microns long. The sclerotized part of the vagina



FIGS. 5-6. — *Histiogaster sudeticus* n. sp.
5) Dorsal side of a male; 6) Ventral side of a male.

is not distinctly visible (Fig. 3). Two pairs of internal genital suckers (si) are of 13 microns diameter at the base. The striated common oviduct (o) is slightly longer than broad.

The anal slit (Fig. 4) is 110 microns long; at its sides in the frontal part there is a pair of setae anales (a) 15 microns long. The copulation opening is quite near to the anal slit. The bursa copulatrix is relatively short, shaped like a prolate truncated cone, the duct is narrow of 2 microns width and up to 100 microns length. It goes to the back and then to the front. Its topography in preparations can be slightly distorted. The valve bar of the duct is short, the base of spermatheca is without complicated folds. The setae sacrales externae (sae) (Fig. 2) are located at the ventral side at the very edge of hysterosoma and are up to 150 microns long. The setae postanales (pa) are up to 130 microns long and at first sight are approximately as long as sae, sai and d_4 .

MALE (Fig. 5-8):

The idiosoma without the protruding opistosomal shield fluctuates in the range from 420 to 520 microns in length and 250-270 microns in breadth. The opistosomal shield at the dorsal side (Fig. 5) has an irregular enclave in the front, with jagged edges. Its sides are wavy, much narrowed in the middle and enlarged at the back like a plate with very delicately frayed edge. It projects over the idiosoma edge by 20-45 microns and its width at the base is in the range of 30-80 microns. The whole plate is moderately sclerotized, covered with an irregular network. The fan (f), hardly perceptible, forms a 10-15 microns wide strip surrounding the external edge of the opistosomal plate. On the edge of the dorsal side (behind the fourth pair of legs), there

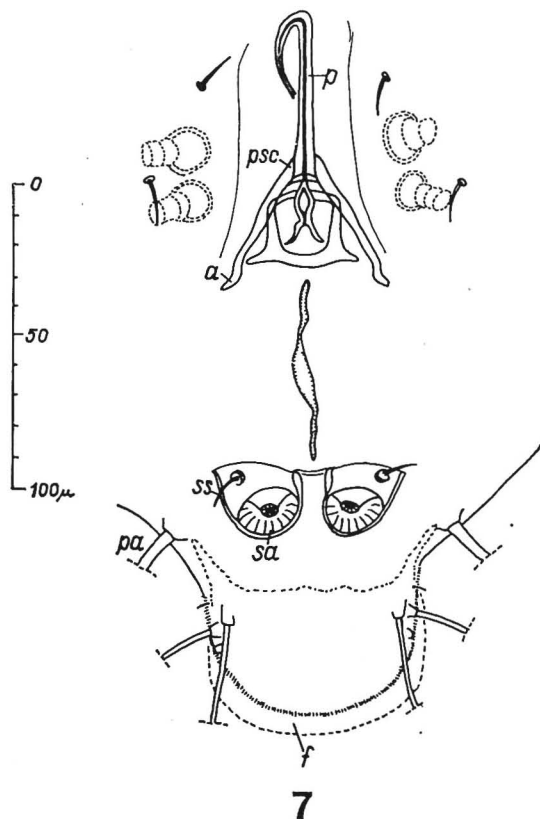


FIG. 7. — *Histogaster sudeticus* n. sp. Male genitalia.

is a pair of circular bean-shaped pores. The setae d_4 are slightly shorter in comparison with setae in a female and reach only 160 microns in length, while setae sae reach 170 microns.

Genitalia are situated at the ventral side between IV pair of coxa (Fig. 6). The internal genital suckers are of 12-18 microns diameter at the base, the suckers of the first pair are slightly bigger as a rule. The penis (p) is strongly chitinized. Penal support sclerites (psc) are moderately chitinized and their posterior arms (a) are bent slightly outwards (Fig. 7). The anal slit, 60 microns long, is slightly wrinkled in all prepared specimens. The anal suckers (sa) are large, 25 microns in diameter at the base. The sucker setae (ss) are up to 12 microns long and are located on pretty large bases. At the very edge of hysterosoma there is a pair of setae (pa) of 160 microns length. Two other pairs of setae, of 100 and 40 microns length respectively, are situated on the edges of the opistosomal plate. A pair of very short microsetae is above them.

Legs (Fig. 8) of a male are only slightly thicker than female legs and have characteristic suckers on the fourth pair.

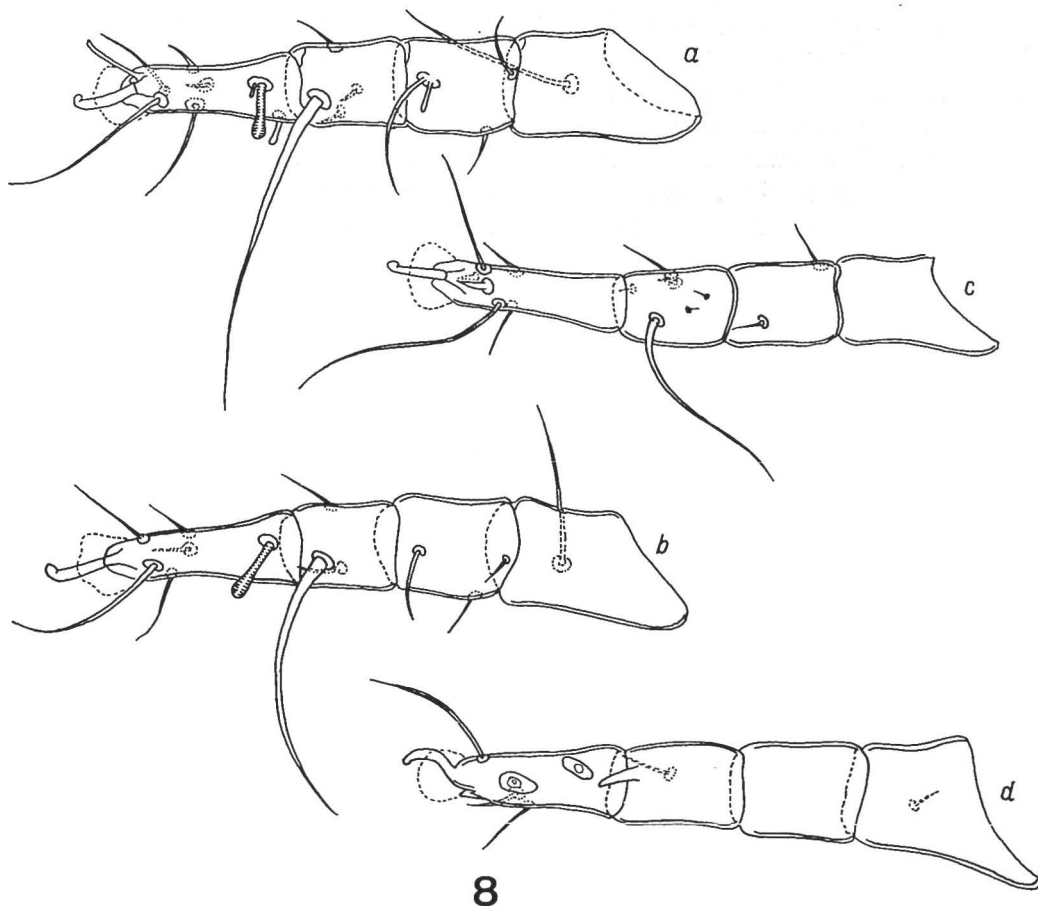


FIG. 8. — *Histogaster sudeticus* n. sp., Dorsal side of male legs.

Hypopus — unknown.

Location. The specimens of this species were collected in April, 1974, in the galleries of *Hylurgops palliatus* Gyll. in State Forest Range Międzyzylesie, Forestry Smreczyna, in a 95-year old spruce stand in mountain mixed forest at the southern border of Poland. A total number of 9 females and 8 males were found.

Types. The preparation containing the holotypes is in the authors collection in the Institute of Forest Protection of the Academy of Agriculture in Poznań and one stable preparation including 3 females and 2 males was transferred to the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

DISCUSSION

The newly described species *H. sudeticus* is in its appearance most similar to *Histiogaster stammeri* E. TÜRK and F. TÜRK, 1957. Differences in the size of individuals and in morphological structure seem to be considerable, the more so as the description by E. TÜRK and F. TÜRK (1957) was exceptionally short and enclosed small illustrations of this species at dorsal and ventral sides are hardly legible.

RÉSUMÉ

Sur le territoire de la Pologne, dans les montagnes des Sudètes, les auteurs ont trouvé une nouvelle espèce d'acarier du genre *Histiogaster* Berl., qu'ils ont déterminé comme *Histiogaster sudeticus* sp. nov.

L'espèce en question a été recueillie, en avril 1974, dans les galeries du Scolytide *Hylurgops paliatus* Gyll, dans une forêt de sapins âgés de 95 ans. On a procédé à la description des mâles et des femelles de la nouvelle espèce, rapprochés le plus par leur aspect extérieur de l'espèce *Histiogaster stammeri* E. Türk et F. Türk 1957.

SUMMARY

In Poland in the Sudeten Mountains, the authors discovered a new mite species of *Histiogaster* Berl. genus and named it *Histiogaster sudeticus* sp. nov.

This species was found in the galleries of *Hylurgops paliatus* Gyll in a spruce stand 95-year old, in April 1974. The authors described males and females which are most similar in their appearance to *Histiogaster stammeri* E. Türk and F. Türk 1957.

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