Genus	Vol. 8(1): 145-152	Wrocław, 30 III 1997

Cornigamasus ocliferius sp. n., a new gamasid mite from Poland (*Acari*: *Parasitidae*)

MACIEJ SKORUPSKI[1] and WOJCIECH WITALIŃSKI[2]

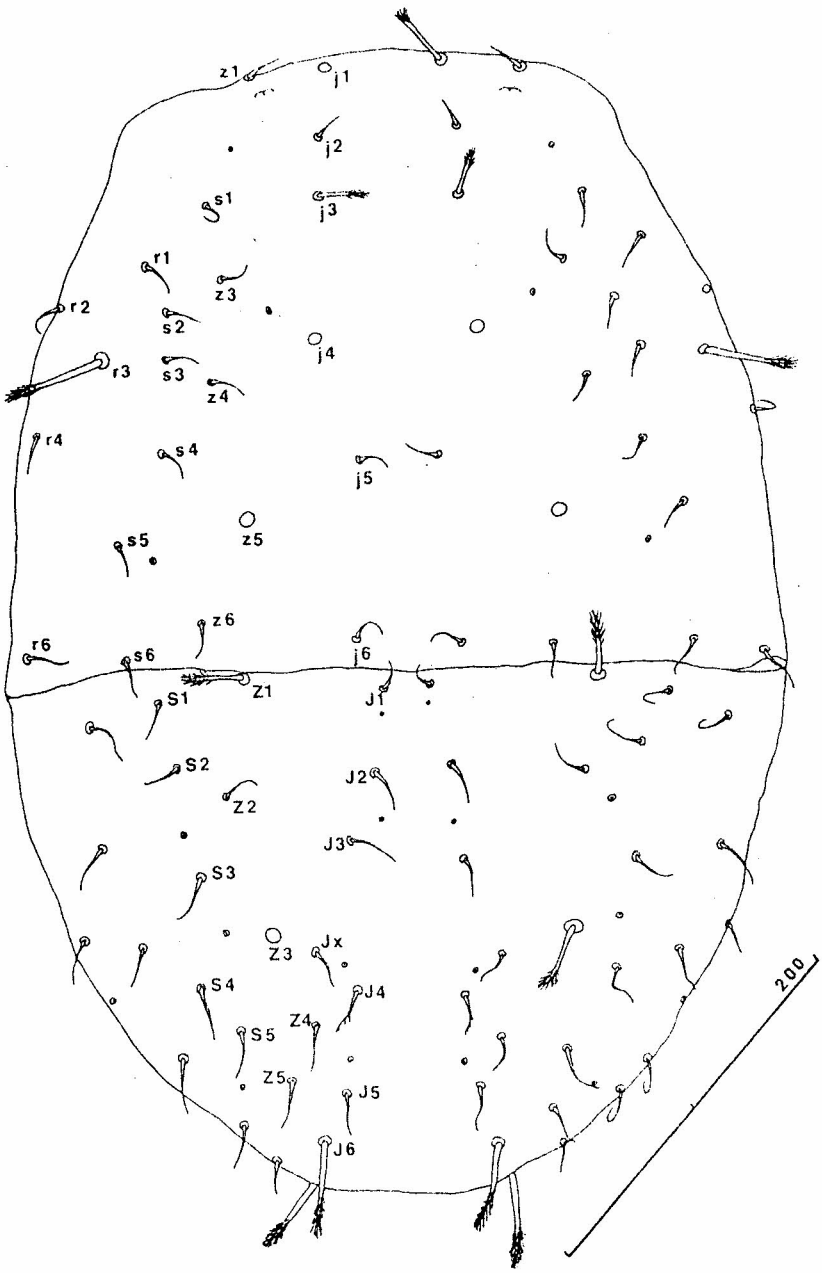
[1]Department of Forest and Environment Protection, Agriculture University, Wojska Polskiego 71c, PL-60625 Poznań, Poland
[2]Institute of Zoology, Jagiellonian University, Ingardena 6, PL-30060 Kraków, Poland

ABSTRACT. The male of a new mite species *Cornigamasus ocliferius* (*Parasitidae*) from Pieniny National Park, Southern Poland, is described. The female has not been found.

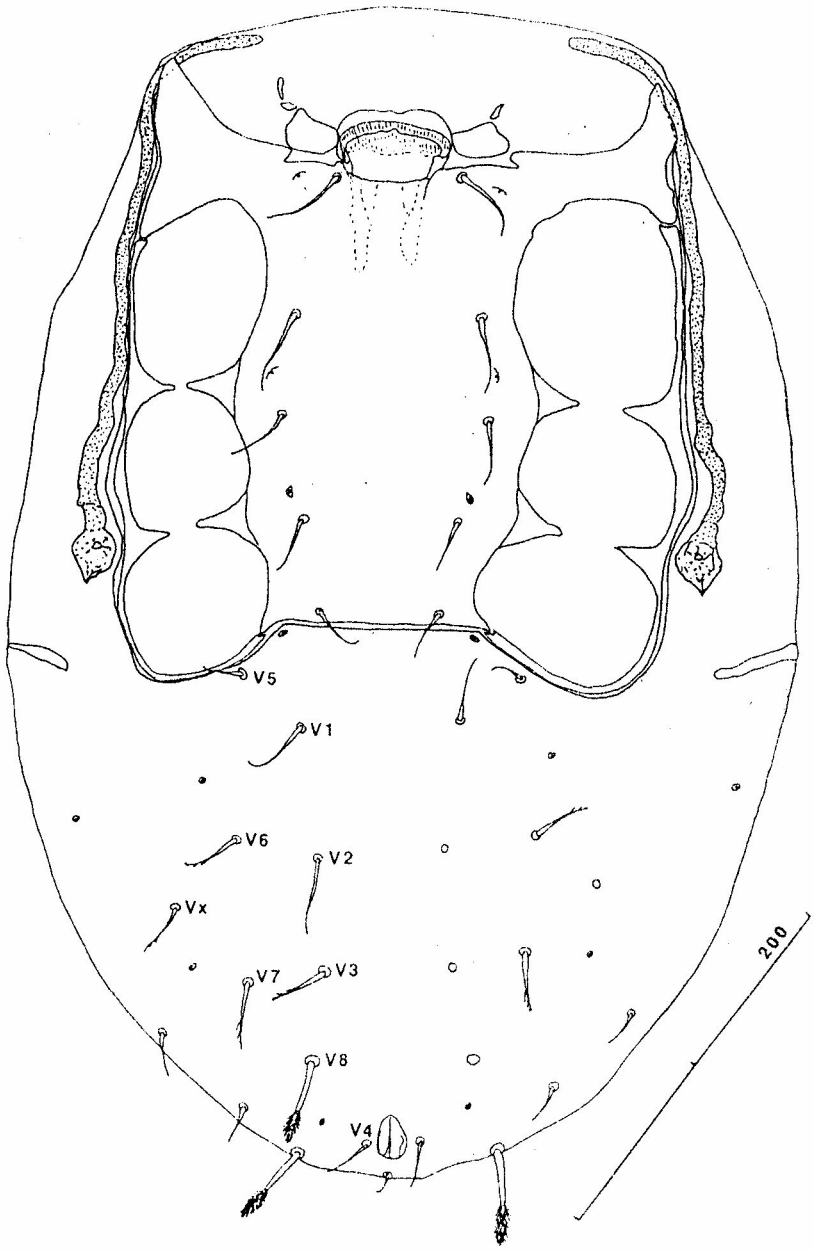
Key words: acarology, taxonomy, *Gamasida*, *Parasitidae*, new species, Poland

INTRODUCTION

Cornigamasus EVANS et TILL, 1979, is a well defined, but very small genus as it contains six species of Palearctic distribution: *C. imitans* ATHIAS-HENRIOT, 1980 - from Mongolia; *C. karachiensis* (ANWARULLAH et ALI KHAN, 1969) - from Pakistan; *C. lunariformis* ATHIAS-HENRIOT, 1980 - from Algeria; *C. lunarioides* ATHIAS-HENRIOT, 1980 - from Iceland; *C. lunaris* (BERLESE, 1882) - widely distributed in Palearctic including Greenland and Iceland; *C. quasilunaris* ATHIAS-HENRIOT, 1980 - from France. The females and males have been described in *C. lunaris* (BERLESE, 1882), while in *C. karachiensis* (ANWARULLAH et ALI KHAN, 1969) only females are known. In other species, only deutonymphs have been described. The most characteristic feature of the genus are corniculi - slender and long, extending beyond palp trochanter/femur joint; they are grooved to accommodate salivary styli. The other characteristics are as follows: male dorsal shield entire with transverse suture, female and deutonymph with separate podonotum and opisthonotum. The central part of anterior margin of female opisthonotum concave. Setae *z*5 of dorsal hexagon (after HYATT 1980) different in



1.*Cornigamasus ocliferius* sp. n. - male, dorsal side of idiosoma



2.*Cornigamasus ocliferius* sp. n. - male, ventral side of idiosoma

form from *j*5 and *j*6. Seta *al* of palp femur setose, setae *al*1 and *al*2 of palp genu spatulate. Male chelicerae symmetrical. Tritosternum in male absent. Legs of deutonymph and female without spurs; leg II in male spurred.

We present a description of a *Cornigamasus* male from Poland, belonging to a yet unknown species. This is - besides *C. lunarioides* ATHIAS-HENRIOT, 1980, *C. lunaris* (BERLESE, 1882) and *C. quasilunaris* ATHIAS-HENRIOT, 1980 - the fourth species of *Cornigamasus* known from Europe.

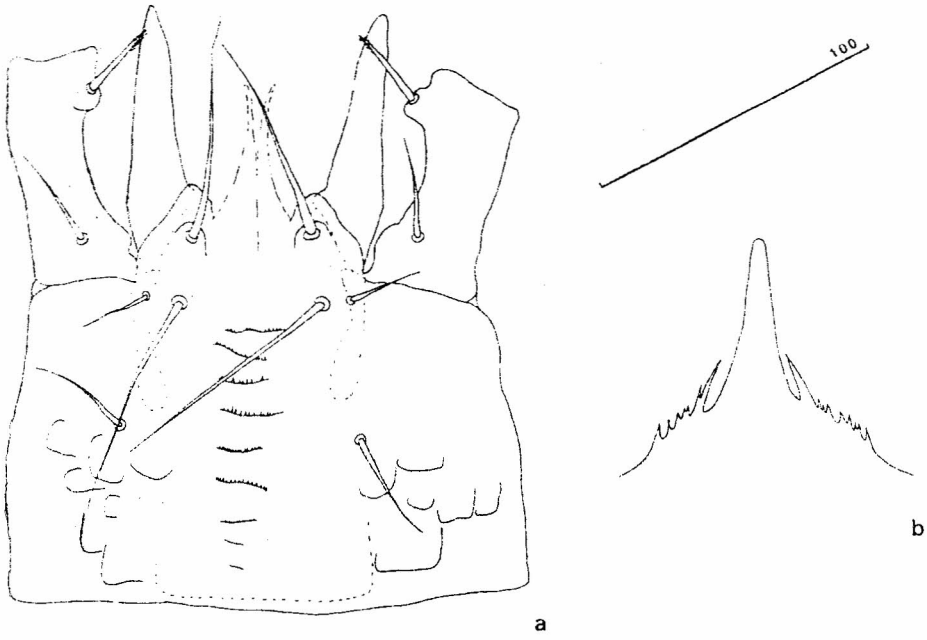
***Cornigamasus ocliferius* sp. n.**

DIAGNOSIS

Male: Legs I, II, and IV richly armed with tubercles and spurs.

DESCRIPTION

Male (Fig. 1): Idiosoma (415 x 600 μm) completely sclerotized, podonotum (320 μm long) and opisthonotum (280 μm) separated by transverse suture. Dorsal chaetotaxy (after HYATT, 1980) similar to that in *C. lunaris* but seta *j*3 on podonotum is enlarged

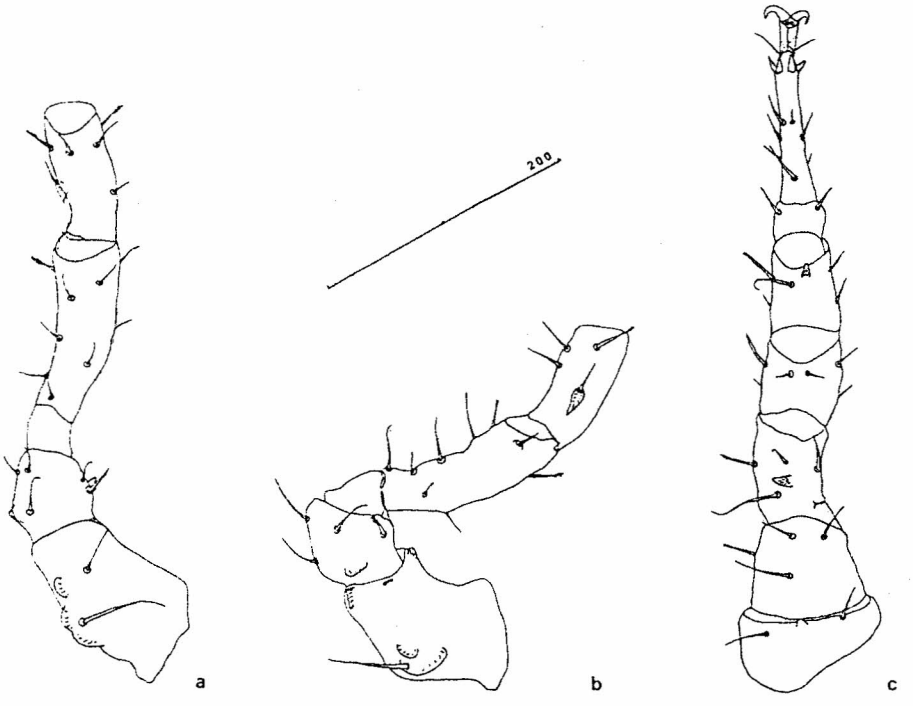


3. *Cornigamasus ocliferius* sp. n. - male, hypostom and palptrochanters (a) and tectum (b)

and pilose; seta *J*4 on opisthonotum is finely pilose, seta *J*5 is setose but not stout, and an additional seta *J*x is present. Thus, on podonotum there are five pairs of stout and pilose setae: *j*1, *j*3, *r*3 and (presumably) *j*4 and *z*5. On opisthonotum there are only three pairs of stout and pilose setae: *J*6, *Z*1, *Z*3 - not four as in *C. lunaris*. The other setae are small and simple.

On the ventral side (Fig. 2), the genital opening is flanked by platelets with fragmented anteriormost parts. The genital lamina with delicate, regularly arcuate anterior border; the tritosternum absent. Anterior margin of sternum possesses the shallow concavity between setae *st*1, and two indentations facing the lateral margins of presternal platelets. The sternal and opisthogastric shields are separated by suture. The sternogenital region bears simple setae, whereas in ventroanal region - like in *C. lunaris* - there are two pairs of stout and pilose setae located anteriorly (*V*8) and posteriorly to the anus. Long peritremes terminate in front of coxae I.

Gnathosoma (Fig. 3a). The corniculi are long and slender, extending far beyond the anterior margin of palp trochanter. The tectum (Fig. 3b) possesses central large

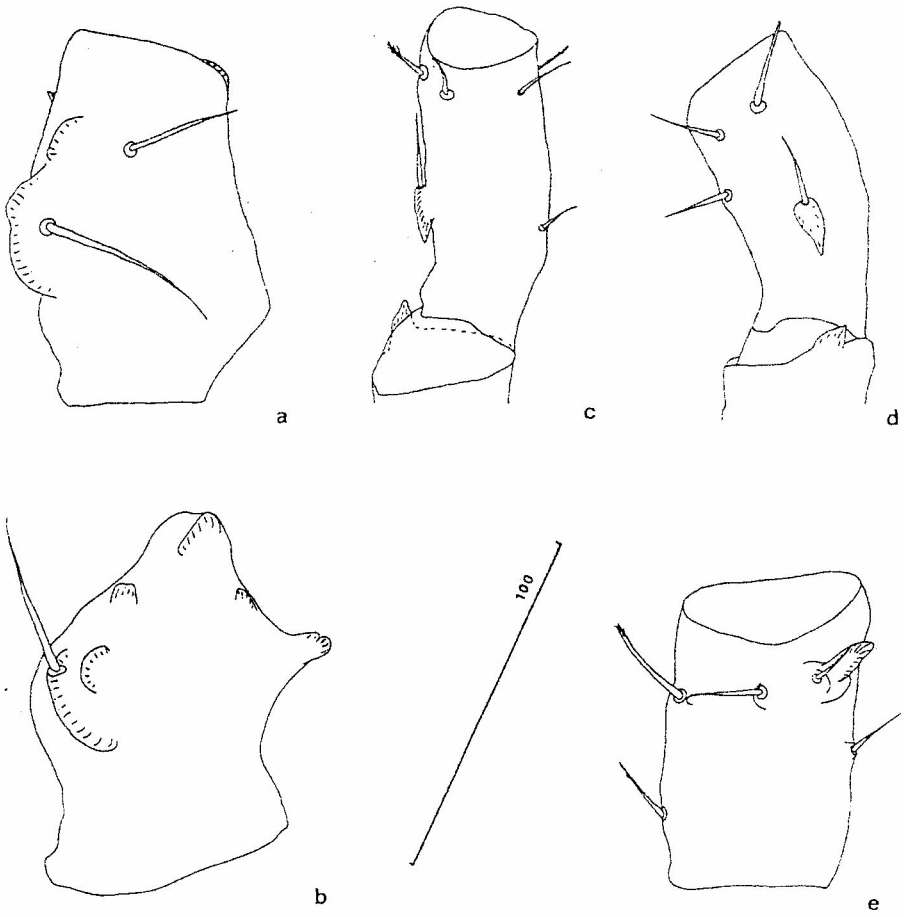


4. *Cornigamasus ocliferius* sp. n. - male, legs I (a,b) and leg II (c)

and smooth prong, whereas the remaining edges are denticulate. The chelicerae seem to be symmetrical as observed in whole mounted preparation, and movable digit is fitted with one relatively large tooth.

The palp trochanter with adaxial side distinctly arcuate (concave). The concavity extends between the low tubercle at the trochanter base and the well pronounced tubercle bearing *v*1 seta. The distance between both palp trochanter setae is very large. Seta *v*1 is finely pilose at the end, whereas *v*2 is simple.

Leg I (Fig. 4a, b). The armature of leg I is as follows: coxa (Fig. 5a, b) with three broad tubercles in midregion and three minute tubercles at the distal margin of article. Trochanter I bears pointed spur and blunt tubercle located on the opposite side. Distal margin of the femur with sharp spur, which can cooperate with a very characteristic spur on the genu (Fig. 5c, d). Dorsal, convex surface of the femur shows some concavities as revealed by visible undulation of the covering cuticle. Genu possesses



5. *Cornigamasus ocliferius* sp. n. - male, coxae I (a, b), genu I in two aspects (c, d) and genu IV (e)

one spur, unusual since it is directed proximally (towards femur) and bears distally directed seta. Tibia and tarsus are devoid of any armature.

Leg II (Fig. 4c). The chaetotaxy is inconspicuous. There are two conical spurs located ventrally on the femur and tibia. The apophysis on femur is directed laterally, whereas that on tibia distally.

Leg III does not bear any spur or tubercle.

Leg IV bears one conical spur on genu, located on an elevation in the distal part of the article (Fig. 5e).

TAXONOMIC AND MORPHOLOGICAL REMARKS

The mites of the genus *Cornigamasus* can be easily identified due to their conspicuous, very slender and long corniculi. Deutonymphs and females have legs without spurs, but in males leg II is armed. The described male of *Cornigamasus ocliferius* n. sp. can be distinguished from males of *C. lunaris* (spurs exclusively on leg II) since it has a very rich armature on legs I, II and IV. The other very characteristic feature of the new species is leg I, with tubercles on coxa and spurs on trochanter, femur and genu - the latter combined with seta in a very unusual manner. Leg II has conical spurs on femur and tibia. Leg IV has a conical spur on genu. Moreover, there is one noticeable difference in chaetotaxy: seta *J5* on opisthonotum in *C. lunaris* is stout and pilose, whereas that in *C. ocliferius* is small and simple.

Finally, it should be noted that the high diversity in the morphology of mites identified as *C. lunaris* by many authors has prompted MICHERDZIŃSKI (1969) and ATHIAS-HENRIOT (1980) to suspect that the name was in fact used for more than one species. Such an opinion may be further supported by (1) the shape of endogynium, (2) the number of denticles on movable digit of the female chelicera (four - MICHERDZIŃSKI, 1969; three - other authors) and (3) male leg II armature. The endogynium in this species is shown either as relatively narrow and ovoidal, with its width smaller than distance between epigynial setae (MICHERDZIŃSKI 1969; KARG 1993), or as a broad structure, equal to or wider than that intersetal distance (DAVYDOVA 1969; HOLZMANN 1969; HYATT 1980). Interestingly, KARG (1993) documented - as a variation for *C. lunaris* - two different legs II of two specimens belonging to two distinct populations (German and Swiss) of that species. For us, it seems most likely that the specimen from Switzerland (fig. 406c in KARG 1993) represents *C. lunaris* (BERL.) sensu HYATT, 1980, but the second specimen (from Germany) belongs to a distinct, probably new species. In any case, all previously known males of *Cornigamasus* bear spurs exclusively on legs II.

The specimen of *C. ocliferius* was checked against all males of *C. lunaris* from BERLESE's collection in Florence. Every male specimen in that collection is doubtless *C. lunaris* sensu HYATT, 1980.

ETYMOLOGY

The specific epithet (lat. *ocliferius* = being conspicuous) refers to the fact that the species is very characteristic and markedly different from the known males of the genus, thus it is possible to identify it at first sight.

MATERIAL EXAMINED

1 male (holotype, No. MS 82/1) - 23.07.1991, Majerz, Pieniny Mountains, Pieniny National Park, Southern Poland, decomposing haystack and litter (organic matter) deposited at the margin of coniferous (spruce) forest.

The holotype is deposited in the Department of Forest and Environment Protection, Agriculture University, Poznań.

ACKNOWLEDGEMENTS

The authors owe their gratitude to the Istituto Sperimentale per la Zoologia Agraria in Florence and especially to Dr. R. NANELLI for making the BERLESE's collection of mites available.

REFERENCES

ANWARULLAH, M., ALI KHAN, B., 1969. A new species of *Eugamasus* from Pakistan (*Acarina*: *Parasitidae*). Acarologia (Paris) **11**: 524-526.

ATHIAS-HENRIOT, C., 1980. Contribution á lá definition, á lá composition ét á lá geographie du genere *Cornigamasus* EVANS et TILL, 1979 (*Acari*: *Parasitiformes*, *Parasitidae*). Folia Entomol. Hung. **41**: 9-18.

BERLESE, A., 1882. Note Acarologiche. Atti R. Ist. Veneto Sci. **8**: 619-647.

DAVYDOVA, M. S., 1969. Identification key to the mites of the family *Parasitidae* OUDEMANS, 1901, in Western Siberia. Akad. Nauk SSSR. Novosibirsk, 102 pp. (In Russian).

EVANS, G. O., TILL, W. M., 1979. Mesostigmatic mites of Britain and Ireland (*Chelicerata*: *Acari*, *Parasitiformes*). An introduction to their external morphology and classification. Trans. Zool. Soc. Lond. **35**: 139-270.

HOLZMANN, C., 1969. Die Familie *Parasitidae* OUDEMANS, 1901. Acarologie (Nürnberg) **13**: 3-55.

HYATT, K. H., 1980. Mites of the subfamily *Parasitinae* (*Mesostigmata*, *Parasitidae*) in the British Isles. Bull. Br. Mus. Nat. Hist. (Zool.) **38**: 237-378.

KARG, W., 1993. *Acari* (*Acarina*), Milben *Parasitiformes* (*Anactinochaeta*). Cohors *Gamasina* LEACH, Raumilben. Tierwelt Dtschl. 59: 523 pp.

MICHERDZIŃSKI, W., 1969. Die Familie *Parasitidae* OUDEMANS, 1901 (*Acarina*, *Mesostigmata*). PWN Kraków, 690 pp.