

**A DESCRIPTION OF *GEOPHILUS PROXIMUS* C. L. KOCH, 1847
(CHILOPODA, GEOPHILOMORPHA)**

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Geophilus proximus C.L.Koch has only been recorded once with certainty in the British Isles; the drawings given here are from Norwegian specimens kindly provided by Bjarne Meidell and the description is based on these and on the literature, notably Brolemann (1930) and Kaczmarek (1979). Almost certainly all earlier records said to be of this species from Britain were of *Geophilus insculptus* Attems. Meidell (1969) distinguishes it from the latter species; Enghoff (1971) has drawings of the apices of the second maxillae and of the ventral aspect of the terminal segments as the chief distinguishing characteristics.

DESCRIPTION

Length: up to 40mm. According to Matic (1972) males are much shorter than females (25mm).

Trunk segments: 45-51 (males), 45-55 (females). The British specimen was a female of 49 leg pairs, the specimens examined here had 47-51 pairs. Only females appear to be found in Fennoscandia.

Colour: Pale yellowish with the head a little darker.

Head: Somewhat (about 1.2x) longer than broad (Figure 2).

Antennae: 2.5 times the length of the head (Figure 3).

Clypeus: With post-antennal, intermediate and posterior pairs of setae (Figure 10). The clypeal area seems somewhat variable between specimens but is distinct.

Labrum: Median portion is described as undivided (e.g. Brölemann, Fig. 239 & Kaczmarek, Fig. 63) but in the specimens examined it appears to be divided. Lateral portions with about 7 or so fimbriae which are wider at the base and show a sudden narrowing as seen in the most lateral ones in our drawing (Figure 11), a shape that might be described as "caudate". The labia in the three specimens dissected showed very much damaged fimbriae but this particular shape (illustrated in Brölemann's Figs. 239 & 240) seems characteristic.

Mandibles: (Figure 9)

Maxillae: First maxillae with coxal and femoral palps (lappets). Second maxillae with a distinct claw (Figure 8).

Forcipular tergite: Trapezoid but with sides slightly convex (Figure 2).

Poison claw: With a clear basal tooth (Figure 1).

Trunk: Pore areas diamond shaped, indistinct at their lateral angles (Figure 12). (In *G. insculptus* they are more spindle shaped). These pore areas seem to disappear at about the 17th trunk segment without dividing. Carpophagus structure present, fossa occupies about nine tenths of the breadth of the sternite when fully developed.

Last trunk segment: Coxal pores 8-10 along the edge of the metasternite (Figure 4). The latter has a much more rounded lateral-posterior borders than in *G. insculptus* (Figure 12) and unlike the latter species, there is no isolated pore towards the apex of the coxa.

Last legs: With distinct terminal claws

GEOGRAPHICAL DISTRIBUTION

This is a widespread European species but rare in Denmark (H. Enghoff, *pers. comm.*). Berg (1995) has 8 records from The Netherlands compared with 34 for *G. insculptus*. Meidell (1972) reports it from 50 localities in Norway, Palmen (1949) from more than a hundred in Eastern Fennoscandia and Kaczmarek (1980) lists it from 13 of the 23 biogeographical areas of Poland from which she has records. In Scandinavia, *G. insculptus* appears to be synanthropic (Enghoff, 1971, Meidell, 1969)

The single British record is from Unst, Shetland Islands (Barber, 1986). Its apparent parthenogenetic habit in Scandinavia would be expected to make for a ready spread into suitable habitats and the Shetlands were for a considerable period of their history under Norwegian rule.

ACKNOWLEDGEMENTS

Our thanks to Dr B. Meidell for providing us with the Norwegian specimens of this species.

TABLE 1.

COMPARISON OF *GEOPHILUS PROXIMUS* AND *GEOPHILUS INSCULPTUS*

	<i>G. insculptus</i>	<i>G. proximus</i>
Clypeus:	Absent.	Distinct.
Labrum mid piece:	7-9 well formed teeth.	Single tooth described, our specimens show 3 or 4.
Labrum fimbriae:	About 10 long fimbriae.	Fimbriae shorter & with distinct shape.
First maxillae:	No palps (lappets).	Coxal & femoral palps.
Second maxillae:	Small peg with hair like tubercle on apex.	Distinct, large claw.
Sternal pore areas:	Spindle shaped.	Triangular.
Metasternite of last trunk segment:	Rather straight edges laterally & posteriorly.	More distinctly rounded shape.
Coxal pores of last Legs:	Isolated pore towards apex of coxa.	No such isolated pore on coxa.
Occurrence:	Widespread British Species.	Single northern record.

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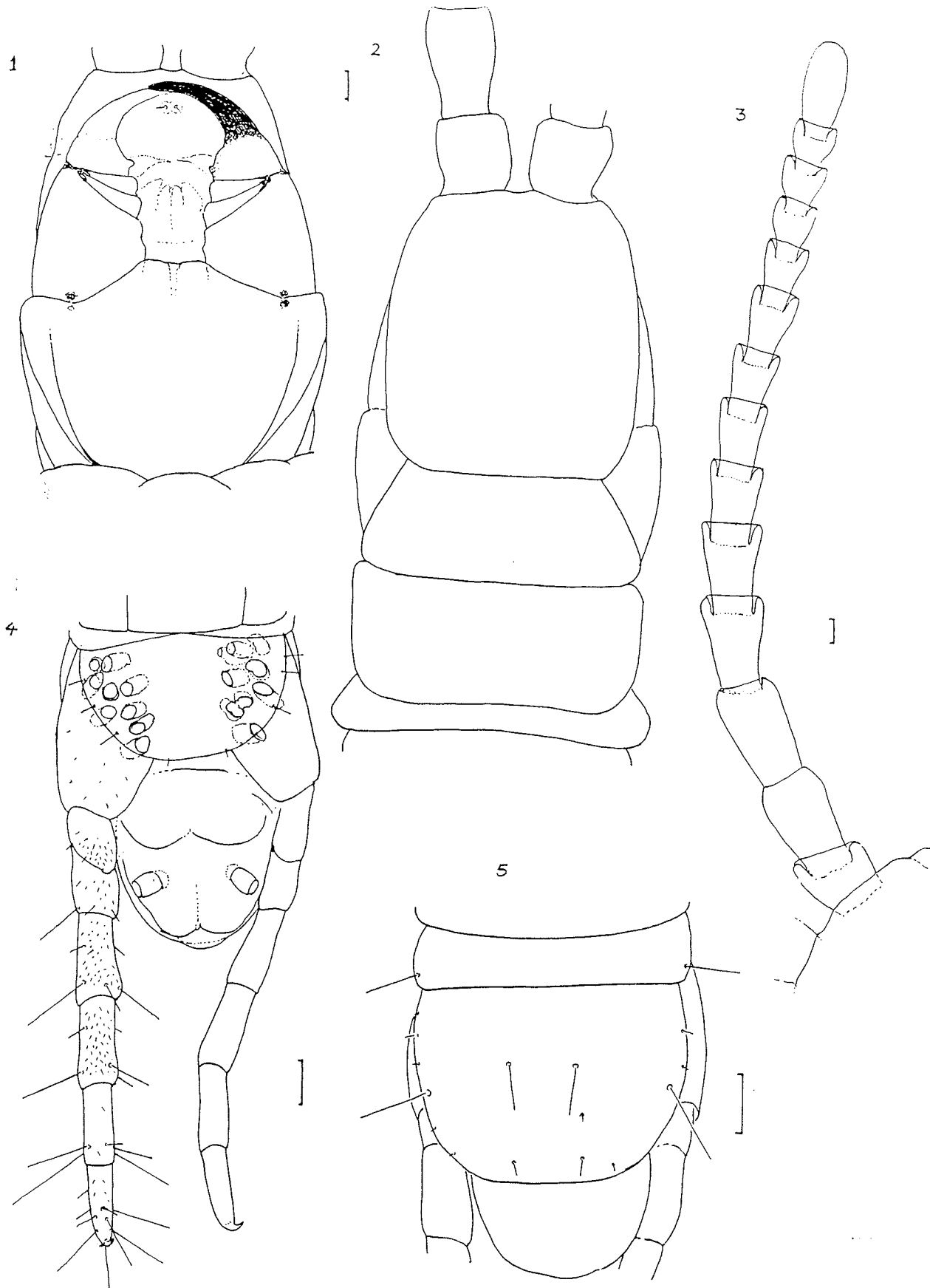
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Figures 1-5 *Geophilus proximus* 1) Head from below. 2) Head capsule from above. 3) Antenna. 4) Last leg pair, female. 5) Metatergite. Scale bars = 0.1mm

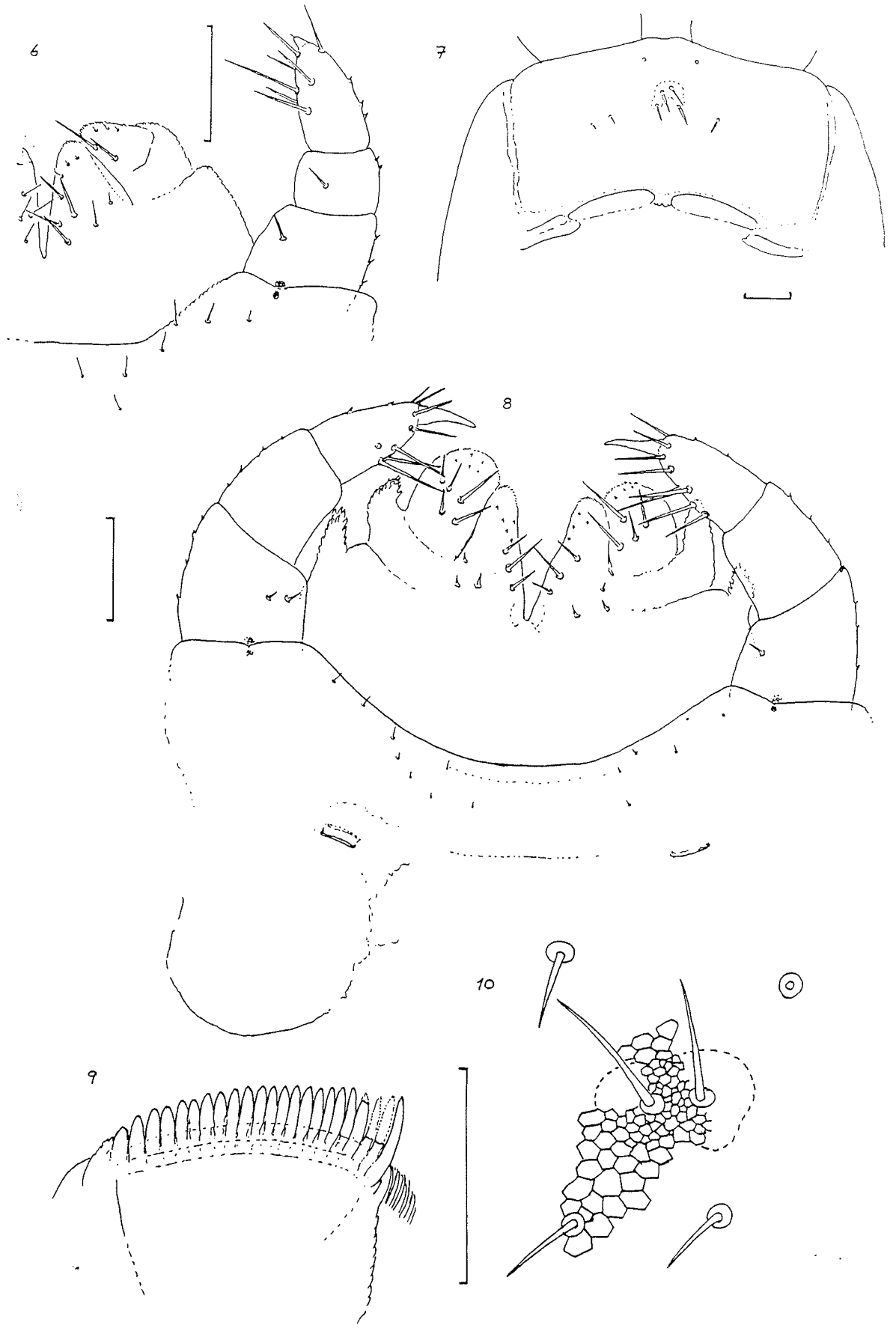
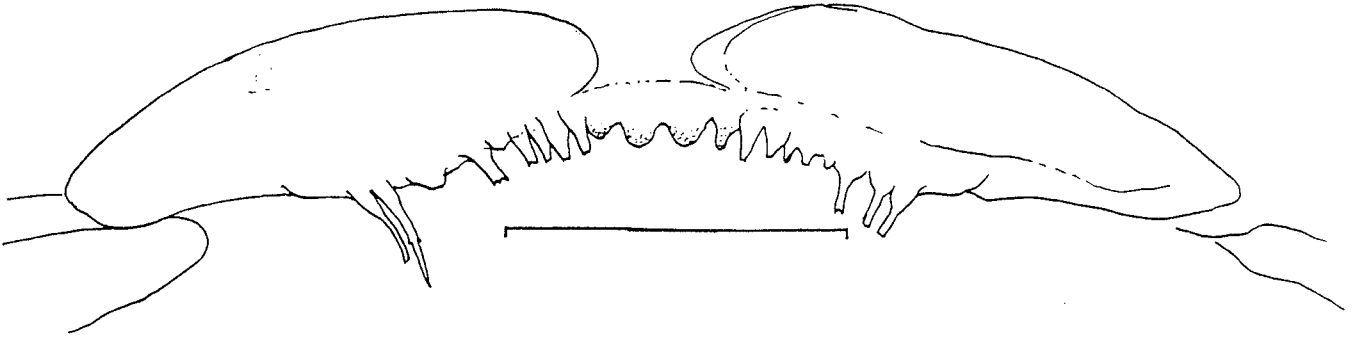
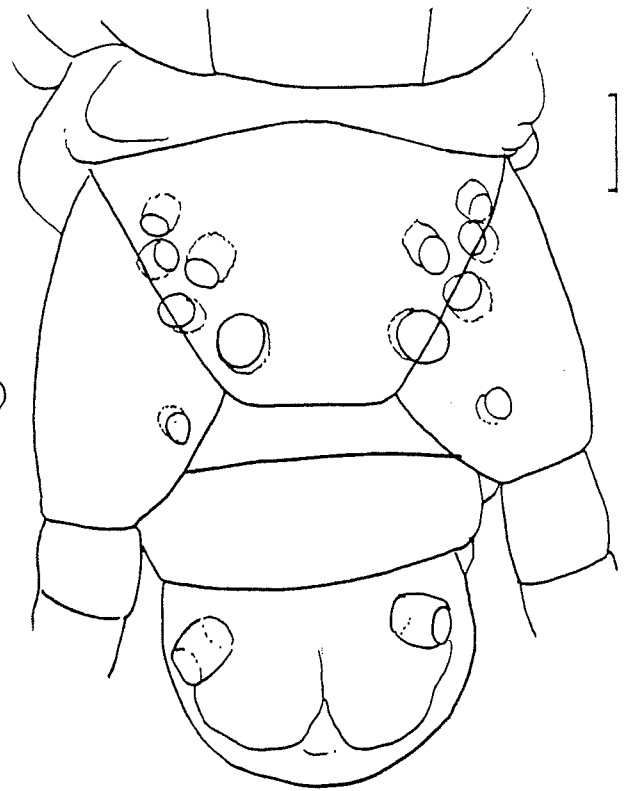


Figure 6 *Geophilus insculptus* 1st & 2nd Maxillae, note lack of lappets and the unusual peg like claws. Figures 7-10 *Geophilus proximus* 7) Clypeus, Clypeal area. 8) 1st & 2nd Maxillae, note lappets and the claws. 9) Mandible. 10) Clypeus, (clypeal area variable). Scale bars = 0.1mm

11



12



13

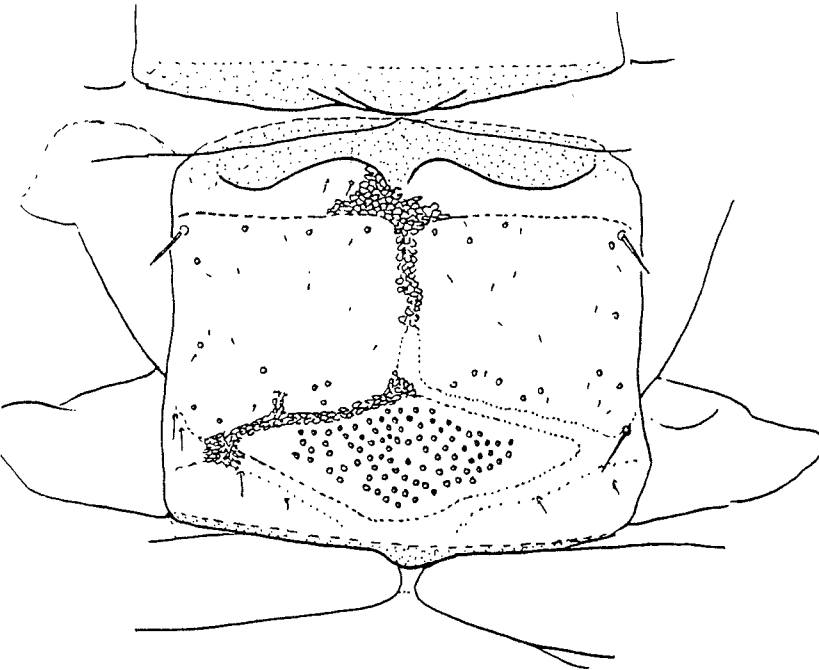


Figure 11 *Geophilus proximus* Labrum. The fimbriae are broken off in all three specimens that I examined. Figure 12 *Geophilus insculptus* Last leg pair, female, note the shape of the metatergite and the two isolated coxal pores. Scale bars all 0.1mm.