

Pardosa maisa sp. n. (Araneae, Lycosidae)
from northern Europe

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Summary

Pardosa maisa sp. n. was collected from a bog habitat in central Finland. The species is similar to *P. nigriceps* (Thorell), from which it is distinguished by the absence of dark lateral bands on the carapace, by a relatively shorter median apophysis in the male palp, and by a trapezoidal and simpler median septum in the female epigyne. The female carapace, abdomen and epigyne, and the male carapace, abdomen and epigyne, and the male palp are illustrated.

Introduction

The northern and central European fauna of the lycosid genus *Pardosa* C. L. Koch is relatively well known (e.g. Dahl & Dahl, 1927; Palmgren, 1939, 1977; Holm, 1947; Locket & Millidge, 1951; Wiebes, 1959; Tongiorgi, 1966a, b; Holm & Kronstedt, 1970). The taxonomic problems largely concern the classification of earlier described taxa and new lycosid species are nowadays rarely found in the zoogeographical region.

Although the spider fauna of boreal bog habitats is relatively poorly known, their lycosid fauna can be regarded as well known because of extensive pitfall trapping. Therefore it was surprising to receive for identification an odd species of *Pardosa*, found among the material from an ecological bog project carried out in the Department of Zoology, University of Oulu. Because the species has only one close and well-known relative, it is described without any wider discussion or revision.

The written description is intentionally restricted to a minimum. Of the illustrated parts only a few additional remarks are given. We use the term median apophysis (e.g. Locket & Millidge, 1951; Barnes, 1959; Vogel, 1964, 1970) instead of tegular apophysis (e.g. Holm, 1947; Tongiorgi, 1966a; Holm & Kronstedt, 1970; Kronstedt, 1975; Zjuzin, 1979). The term anterior pocket (e.g. Tongiorgi, 1966a; Zjuzin, 1979) is used instead of hood (e.g.

Vogel, 1964, 1970), and transverse pocket (e.g. Holm, 1947; Holm & Kronstedt, 1970; Kronstedt, 1975).

Pardosa maisa sp. n.

Material and types

Holotype ♂: Finland, province of Oulu (Ostrobothnia media), Pulkkila, Mellassalmi, Mellassalmenneva (65°15'N, 25°45'E). Pitfall traps from 24-31 May 1980, Marja-Liisa Jarva leg., in Zoological Museum, University of Turku.

Paratypes: Locality as above, 2 ♂ 1 ♀ in pitfall traps from 1-7 June 1980, 1 ♀ from 28 June-5 July 1980, and 1 ♀ from 27 July-2 August 1980, Marja-Liisa Jarva leg. One paratype ♀ in Zoological Museum,

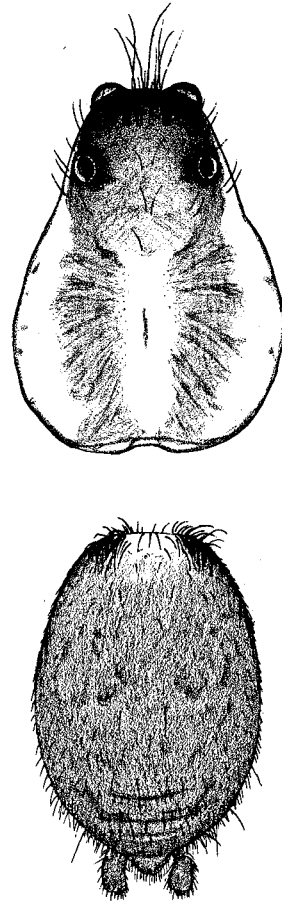


Fig. 1: *Pardosa maisa* sp. n. Female carapace and abdomen, dorsal view.

University of Turku, 1♂ 1♀ paratype in Naturhistoriska Riksmuseet, Stockholm (Sweden), and 1♂ 1♀ paratype in Zoological Museum, University of Oulu, Finland.

Female

Length: Carapace 3.1-3.3 mm, abdomen 3.2-3.6 mm, tibia I 1.7-2.0 mm.

Carapace (Fig. 1): Extreme lateral margins narrowly darkened; pale lateral bands yellow with an orange tinge, extending to cover clypeus and spaces between anterior eyes, with or without indistinct small brownish lateral patches enclosed on thoracic part; cephalic part dorsally dark brown (reddish), ocular area black; submedian bands brown with indistinct darker transverse striae; median band on cephalic part orange-brown, on thoracic part yellowish white.

Chelicerae: Yellowish, with or without two basolateral darkened stripes. **Maxillae:** Yellowish. **Labium:** Dark brown. **Sternum:** Dark brown, medially slightly paler. **Palps and legs:** Pale reddish brown, femora of the latter with indistinct darker dorsal patches.

Abdomen (Fig. 1): Reddish brown, but suffused dorsally with darker colour, and with irregular darker patches which are most distinct posterolaterally and posteroventrally on two sublateral bands; anterior spinnerets blackish, others reddish brown.

Epigyne (Fig. 2): The assymmetric anterior part variable in details and margins of septum variably darkened, from practically colourless to black.

Male

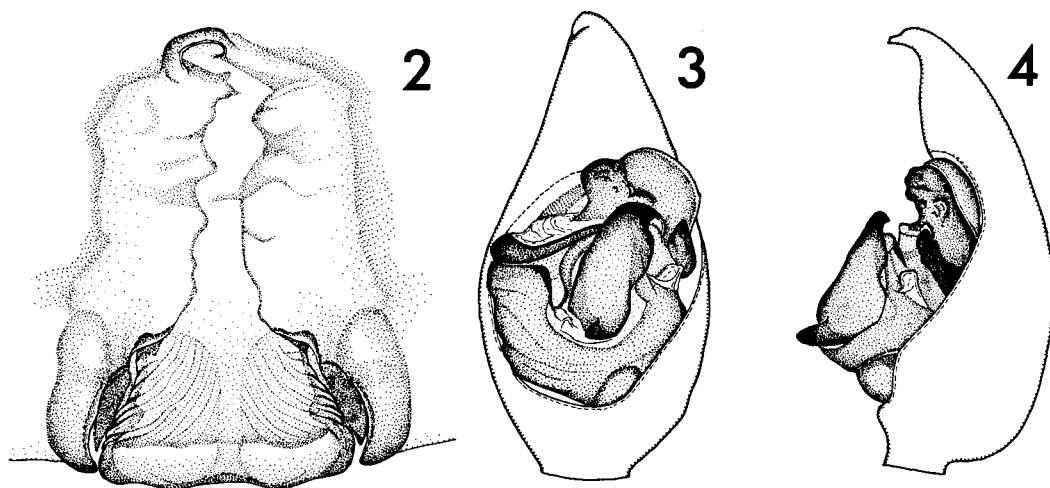
Length: Carapace 2.8-3.0 mm, abdomen 2.5-2.8mm, tibia I 1.7 mm.

Similar to female except for the usual sexual dimorphism, having the pattern of *carapace* more indistinct and *legs* paler yellowish and practically uncoloured.

Palp (Figs. 3-4): Trochanter and basal part of femur brown, rest of femur, tibia, and basal half of patella yellow, apical half of patella brown, cymbium blackish brown; patella and cymbium with very conspicuous black, dense pile.

Ecology and habitat

The species was captured by pitfall trapping in the transition zone between a pine peat bog and a swamp. The habitat lies in the large area of "aapa-bogs"; these are generally open and extensive north boreal bogs with alternating very wet and drier stripes, with acidophilous *Sphagnum* mosses, sedges, and rarely with scattered dwarf trees, usually pines. The seasonal occurrence of adult specimens seems to represent the usual pattern of most northern *Pardosa* species.



Figs. 2-4: *Pardosa maisa* sp. n. 2 Epigyne, ventral view; 3 Left male palp, ventral view; 4 Left male palp, lateral view.

Discussion

Pardosa maisa sp. n. is similar to *P. nigriceps* (Thorell) from which it can be distinguished by the following characters: (1) In *P. maisa* the light lateral bands of the carapace extend to the margin, in *P. nigriceps* the marginal area is broadly brown (see e.g. Tongiorgi, 1966a). (2) In the male palp the shape of the median apophysis conspicuously distinguishes the two species: in *P. maisa* the apophysis is short, in ventral aspect evenly broad, and with an abruptly curved transverse claw-like apex, in *P. nigriceps* it is long, steadily narrowing to a long, gently curved apical prong (see e.g. Holm, 1947; Locket & Millidge, 1951; Tongiorgi, 1966a). The median apophysis of *P. maisa* has a superficial resemblance to that of *P. sordidata* (Thorell) (see Tongiorgi, 1966a). (3) The median septum of the epigyne in *P. maisa* is trapezoidal, narrowing towards the base. The transverse rim on its posterior margin has no anteriomedian bulge, and the anterior pocket is narrow, not more than a third of the width of the septum; in *P. nigriceps* the septum is more rectangular or with rounded lateral margins; its apical rim is variously anteriomedially bulged, and the anterior pocket is wide, more than one third of the apical width of the septum (see e.g. Tongiorgi, 1966a). (4) There is also a slight difference in the embolus between the two species. In *P. maisa* it is slightly larger and in ventral view less sigmoid than in *P. nigriceps*, and, owing to the broader median apophysis, its tip is not exposed in the ventral view of the palp in *P. maisa* while it is clearly visible in *P. nigriceps* (cf. Tongiorgi, 1966a; Holm, 1947).

The detailed structural similarity between *P. maisa* and *P. nigriceps* undoubtedly shows them to be close relatives, and *P. maisa* can be suggested as a boreal sister species of the more southern *P. nigriceps* (see Palmgren, 1939; Holm, 1947), apparently being allopatric in occurrence. In Finland *P. nigriceps* is found as a heath species (see also Holm, 1947) in the southern and southwestern coastal region only (Palmgren, 1939), about 500 km south of the type population of *P. maisa*. Because the aapa-bog habitat, from which the species was discovered, is widespread in boreal Europe, the species probably has a wide distribution, especially in eastern Europe. The small number of individuals in the pitfall traps may be the result of possible field

layer habits similar to those of *P. nigriceps* (see Locket & Millidge, 1951).

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