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Reclassification of the *pallidus*-, *insignis*- and *spelaeorum*-groups of *Lepthyphantes* MENGE, 1866 (sensu lato) (Arachnida: Araneae: Linyphiidae: Micronetinae)

With 7 figures

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Abstract. Based on the so-called *pallidus*-group of the genus *Lepthyphantes* MENGE, 1866 (sensu lato), a new genus *Palliduphantes* gen. n. (type species: *Linyphia pallida* O. PICKARD-CAMBRIDGE, 1871) is created. Also the *insignis*- and *spelaeorum*-groups and some other small species-groups are incorporated. The new genus includes 48 species which are divided into eight species-groups. Further, the following new synonym and new combination have been established: *Lepthyphantes mcheidzeae* MIKHAILOV, 1998 = *Tenuiphantes contortus* (TANASEVITCH, 1986) syn. n., *Lepthyphantes ignavus* SIMON, 1884 = *Mughiphantes ignavus* (SIMON, 1884) comb. n.

Key words. Araneae, Linyphiidae, Micronetinae, *Lepthyphantes*, *pallidus*-group, *insignis*-group, *spelaeorum*-group, reclassification.

Introduction

This paper continues our reclassification of subfamily Micronetinae and the genus *Lepthyphantes* MENGE, 1866 in particular (SAARISTO & TANASEVITCH, 1993, 1996, 1999, 2000) and is devoted to the study of the *pallidus*-group (WIEHLE, 1956; DELTSHEV, 1980; DEELEMEN-REINHOLD, 1985) as well as *spelaeorum*-, *insignis*-, *liguricus*-, and *ericaeus*-groups (BRIGNOLI, 1979; DEELEMEN-REINHOLD, 1985; SAARISTO & TANASEVITCH, 1993).

The history of the different species-groups within *Lepthyphantes* was given in broad lines in our introductory paper for the revision of this genus (SAARISTO & TANASEVITCH, 1993). In this context it is pertinent to state that the origin of the *pallidus*-group dates back to SIMON's 5th group (SIMON, 1929) based on *Lepthyphantes culicinus* SIMON, 1884. The group consisted of some 50 species of which a considerable number have been already placed by us in various new genera (SAARISTO & TANASEVITCH, 1996, 1999, 2000). The characters he (SIMON, 1929) used to define this group were spination of the legs and the structure of the secondary genital organs. In their hand-book for the British spiders LOCKET & MILLIDGE (1953) used leg spination and color pattern of the abdomen for defining the species groups in *Lepthyphantes* and like SIMON (1929) they did not give names to their species-group but likewise used numbers for them. WIEHLE (1956) was the first author to use the expression *pallidus*-group despite the fact that SIMON (1929) had based his corresponding

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group on *L. culicinus*. Since then this species-group name has been commonly used by several authors (WANLESS, 1973; DELTSHEV, 1980; DEELEMEN-REINHOLD, 1985; SAARISTO & TANASEVITCH, 1993, etc.).

In addition to the *pallidus*-group certain authors have created a few other species-groups, viz. *spelaeorum*-group (BRIGNOLI, 1979), *liguricus*-group (BRIGNOLI, 1979), *ericaeus*-group (DEELEMEN-REINHOLD, 1985), and complex *insignis* (SAARISTO & TANASEVITCH, 1993) which are also included in the new genus described below.

Abbreviations

The following abbreviations are used in the text and figures: BC – bursa copulatrix, DPS – distal part of scapus, E – embolus, EG – entrance groove, L – lamella characteristic, MPS – median part of scapus, PH – pit hook, PMP – posterior median plate, PPS – proximal part of scapus, PS – proscapus, R – radix, RS – reversion site of entrance groove, ST – stretcher, SWE – side wall of epigyne, TA – terminal apophysis, TH – thumb, Tm I – position of the metatarsal trichobothrium, X – inner bulge of proscapus, Z – inner elevation of proscapus.

Description of a new genus

Genus *Palliduphantes* SAARISTO & TANASEVITCH gen. n.

Type species: *Linyphia pallida* O. PICKARD-CAMBRIDGE, 1871

Etymology: Generic name is derived from the specific epithet of its type species and the generic name *Lepthyphantes*.

Species included: *Palliduphantes alutacius* (SIMON, 1884), *P. angustiformis* (SIMON, 1884), *P. arenicola* (DENIS, 1964), *P. atlassahariensis* (BOSMANS, 1991), *P. berlandi* (PAGE, 1931), *P. bolivari* (PAGE, 1931), *P. brignolii* (KRATOCHVIL, 1978), *P. byzantinus* (PAGE, 1931), *P. cadiziensis* (WUNDERLICH, 1980), *P. carusoi* (BRIGNOLI, 1978), *P. cebennicus* (SIMON, 1929), *P. ceretanus* (DENIS, 1962), *P. cernuus* (SIMON, 1884), *P. conradini* (BRIGNOLI, 1971), *P. culicinus* (SIMON, 1884), *P. dentatidens* SIMON, 1929, *P. epaminondae* (BRIGNOLI, 1979), *P. ericaeus* (BLACKWALL, 1853), *P. fagicola* (SIMON, 1929), *P. florentinus* (di CAPPORIACCO, 1947), *P. insignis* (O. PICKARD-CAMBRIDGE, 1913), *P. intirmus* (TANASEVITCH, 1987), *P. istrianus* (KULCZYŃSKI, 1914), *P. khobarum* (CHARITONOV, 1947), *P. labilis* (SIMON, 1913), *P. liguricus* (SIMON, 1929), *P. longiscapus* (WUNDERLICH, 1987), *P. longisetus* (SIMON, 1884), *P. lorifer* (SIMON, 1907), *P. malickyi* (WUNDERLICH, 1980), *P. margaritae* (DENIS, 1934), *P. melitensis* (BOSMANS, 1993), *P. milleri* (STAREGA, 1972), *P. minimus* (DEELEMEN-REINHOLD, 1985), *P. montanus* (KULCZYŃSKI, 1898), *P. oredonensis* (DENIS, 1950), *P. pallidus* (O. PICKARD-CAMBRIDGE, 1871), *P. palmensis* (WUNDERLICH, 1992), *P. pillichi* (KULCZYŃSKI, 1915), *P. rubens* WUNDERLICH, 1987, *P. salffii* (DRESCO, 1949), *P. sanctivincenti* (SIMON, 1872), *P. schmitzi* (KULCZYŃSKI, 1899), *P. slivnensis* (DRENSKY, 1931), *P. spelaeorum* (KULCZYŃSKI, 1914), *P. stygius* (SIMON, 1884), *P. tenerifensis* (WUNDERLICH, 1992), and *P. trnovensis* (DRENSKY, 1931). All comb. n. ex *Lepthyphantes*.

List of synonyms: The following species have been placed by earlier authors as junior synonyms of certain species here listed under *Palliduphantes*.

Lepthyphantes charlottae WUNDERLICH, 1969 = *Lepthyphantes montanus* KULCZYŃSKI, 1898 (THALER, 1973: 299);

Lepthyphantes gueorguievi DELTSHEV, 1980 = *Lepthyphantes spelaeorum* KULCZYŃSKI, 1914 (DEELEMEN-REINHOLD, 1985: 39);

- Lepthyphantes kahmanni* WUNDERLICH, 1980 = *Lepthyphantes labilis* SIMON, 1913 (BOSMANS, 1985: 148);
- Lepthyphantes korculensis* MILLER, 1978 = *Lepthyphantes istrianus* KULCZYŃSKI, 1914 (DEELEMANN-REINHOLD, 1985: 42);
- Lepthyphantes mitis* SIMON, 1913 = *Lepthyphantes stygius* SIMON, 1884 (SIMON, 1929: 736);
- Lepthyphantes monodon* SIMON, 1884 = *Lepthyphantes sanctivincenti* (SIMON, 1872) (SIMON, 1929: 739);
- Lepthyphantes papalis* SIMON, 1929 = *Lepthyphantes insignis* (O. PICKARD-CAMBRIDGE, 1913) (WUNDERLICH, 1973: 423);
- Lepthyphantes rabeleri* SCHENKEL, 1929 = *Lepthyphantes ericaeus* (BLACKWALL, 1853) (SCHENKEL, 1932: 412);
- Lepthyphantes serratistylus* ROEWER, 1931 = *Lepthyphantes istrianus* KULCZYŃSKI, 1914 (POLENEC & THALER, 1980: 106);
- Lepthyphantes strandi* KOLOSVARY, 1934 = *Lepthyphantes istrianus* KULCZYŃSKI, 1914 (WUNDERLICH, 1973: 423);
- Lepthyphantes subterraneus* MILLER & KRATOCHVIL, 1948 = *Lepthyphantes insignis* (O. PICKARD-CAMBRIDGE, 1913) (WUNDERLICH, 1973: 423);
- Lepthyphantes thrucididis* BRIGNOLI, 1979 = *Lepthyphantes byzantinus* FAGE, 1931 (BRIGNOLI, 1983: 688);
- Lepthyphantes trimaculatus* DENIS, 1937 = *Lepthyphantes labilis* SIMON, 1913 (BOSMANS, 1985: 148);
- Lepthyphantes troglodytes* (L. KOCH, 1872) = *Lepthyphantes pallidus* (O. PICKARD-CAMBRIDGE, 1871) (WIEHLE, 1956: 221);
- Lepthyphantes tuberculifer* DENIS, 1947 = *Lepthyphantes labilis* SIMON, 1913 (BOSMANS, 1985: 148);
- Lepthyphantes vignai* BRIGNOLI, 1971 = *Lepthyphantes spelaeorum* KULCZYŃSKI, 1914 (MILLER, 1978: 59).

Diagnosis: The genus is characterized by the following synapomorphies of the secondary genital organs. (1) Paracymbium (fig. 3A-I) large, tub-like, appreciably transformed from its basic pattern within Micronetinae (SAARISTO & TANASEVITCH, 1996). Anterior and apical pockets more or less contiguous with each other while posterior pocket is well separated from them but connected by a shallow rim with the common lateral wall of the anterior and apical pockets which is variously modified often taking a shape of two sharp pointed tooth or bearing a twisted finger-like extension in addition to the sharp pointed tooth or being itself reduced into a finger-like extension. (2) Main body of lamella characteristic (fig. 5A-H) long and narrow, S-shaped. Its apex truncate or more or less deeply bi- or trifurcate. At its middle stands one or two anteriorly directed sharp pointed braches of variable length. (3) Side walls of the epigyne drawn into transversal, plate-like extensions between which lies a long and narrow scape; apical part of the proscapus repeatedly dilated. In dorsal view the epigyne has a very characteristic appearance (fig. 1B and C); in form it is more or less elongated triangular and in its middle line there is three, usually more or less roundish elements in a row; starting from the posterior end they are: apical part of the proscapus, stretcher, and posterior median plate.

Description: Often cavernicolous, medium sized micronetids (total length 1.3–2.5, seldom up to 2.95 mm), pale colored, cephalothorax and appendages pale yellow to pale orange, abdomen of one color, pale yellow to pale greenish grey, very seldom with a dorsal indistinct pattern of pale transverse stripes. Legs with only few spines (= macrosetae); general pattern of leg spines as follows: Ti I: 2-1-1-0, II: 2-0(1)-1-0, III: 2-0-0(1)-0, IV: 2-0-0-0; Mt I-III(IV): 1-0-0-0. Tm I: 0.16–0.26, no trichobothrium on Tm IV.

Male palp: Tibia usually conspicuously swollen; one long, dorsal macroseta both on patella and tibia. Paracymbial pockets (fig. 3A-I) appreciably transformed from the basic pattern (SAARISTO & TANASEVITCH, 1996); posterior pocket always clearly separated from the others and its lateral wall (outer side) has been transformed to a tooth-like extension while the anterior and apical pockets usually are more or less fused together having a common lateral wall which has been modified in various ways. Thus it may bear a prominent sharp pointed tooth and a twisted finger-

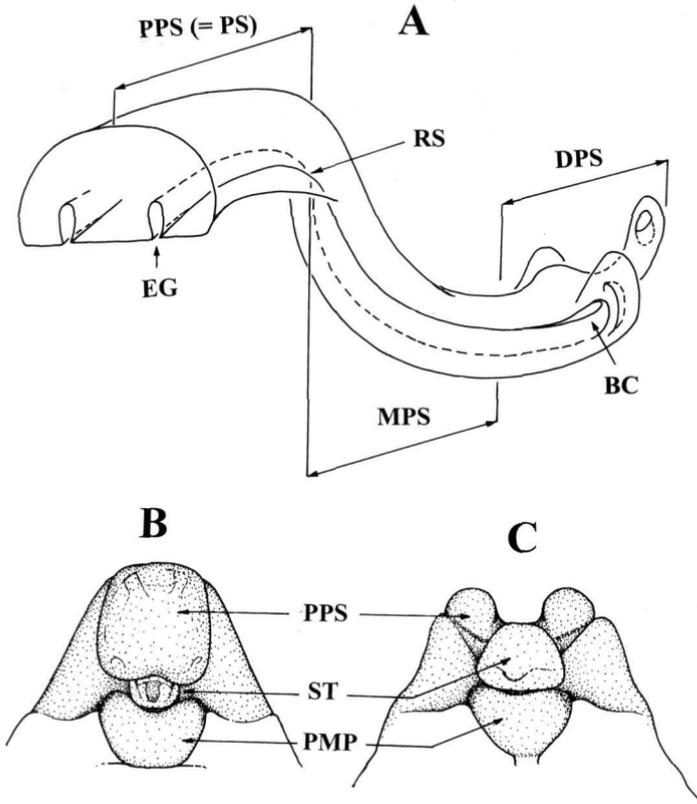


Fig. 1: Generalized scapus of Micronetinae laterally (A) and epigyne of *P. insignis* (O. PICKARD-CAMBRIDGE) (B) and *P. montanus* (KULCZYŃSKI) (C) dorsally.

like extension (fig. 3I) or a couple of sharp pointed tooth (fig. 3D and E) or it itself is reduced into a spike- or finger-like extension (fig. 3A), etc. Pit hook relatively long, curved, and blunt or sharp pointed bending on the shape of the stretcher pit. Radix oblong, at its mesal end thick, blunt tipped ventral extension; Fickert's gland present. Lamella characteristic long and narrow, S-shaped; at its middle strongly bent to point in dorsal direction; at bending point one or two anteriorly directed sharp pointed branches of variable length, apex of main trunk of lamella characteristic truncate, dentate, or more or less deeply bi- or trifurcate. Terminal apophysis bipartite; one of the free ends frequently prominently serrate. Embolus weakly sclerotized, of the same type as found e.g. in *Bolyphantes* C.L. KOCH, 1837, *Poecilonea* KULCZYŃSKI, 1894, and *Mughiphantes* SAARISTO & TANASEVITCH, 1999 (SAARISTO & TANASEVITCH, 1999, 2000); trunk-like main body of embolus relatively long and free for its entire length from terminal apophysis (figs 4A-I, 5A-H).

Epigyne: Outstretched, relatively narrow and considerably protruding backwards over epigastric sulcus. Lateral sides of epigynal cavity transformed into lamellar, anteriorly pointing plates between which lies a long and narrow scape. The general structure of the scape has transformed considerably from its basic pattern within Micronetinae (SAARISTO & TANASEVITCH, 1996). In some species its original S-like appearance is still perceptible like also rudimentary lateral lobes with very small pockets (fig. 2A). In this form the scape is also somewhat movable. However, there is a tendency to a reduction of the middle as well as apical part of the scape whereat the

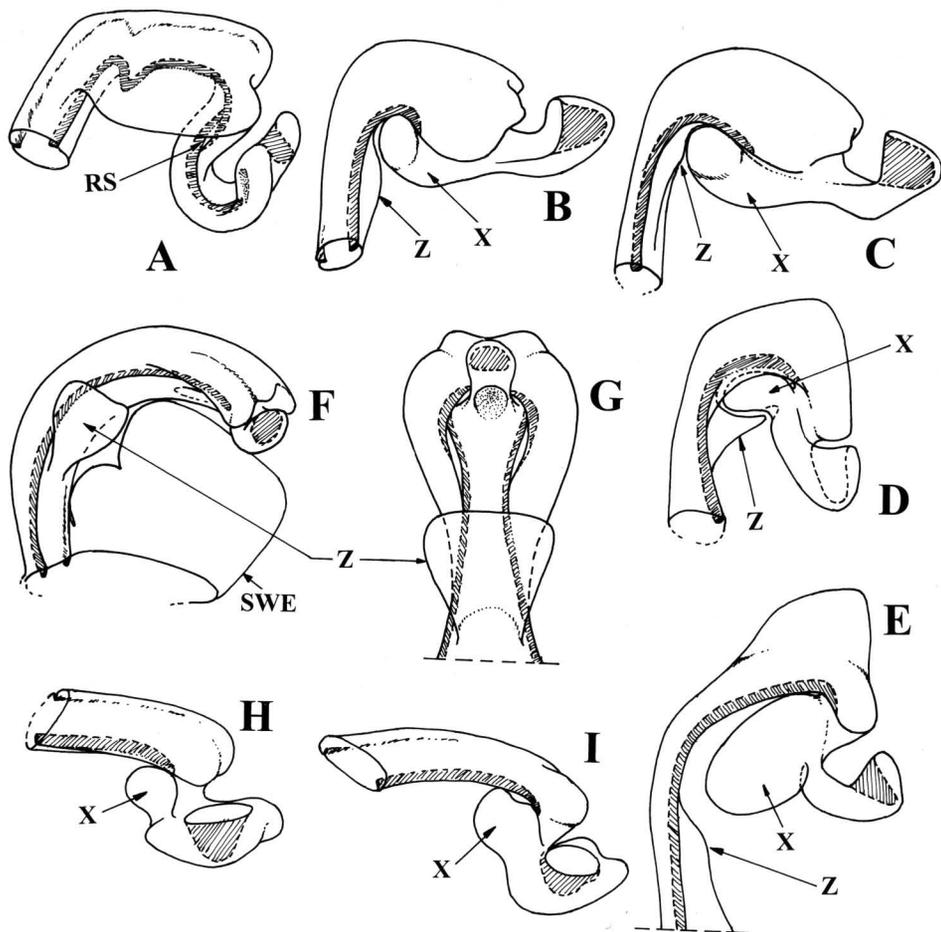


Fig. 2: Scapus of *Palliduphantes* spp. (lateral view, schematically): A - *P. insignis* (O. PICKARD-CAMBRIDGE) (Germany); B, C - *P. intirmus* (TANASEVITCH) (Caucasus, North Osetiya); D - *P. spelaeorum* (KULCZYŃSKI) (Bulgaria); E - *P. istrianus* (KULCZYŃSKI) (Italy); F, G - *P. stygius* (SIMON) (Spain); H, I - *P. pallidus* (O. PICKARD-CAMBRIDGE) (Aland, Finland).

main body of the scape is formed by the proscapus and at the same time its movability diminishes or in other words, the scape is turned more or less rigid. In most cases the lateral lobes have totally disappeared while the stretcher has been variously modified. The apex of the proscapus is frequently considerably swollen and usually there is a median notch which may sometimes be quite deep. On the inside of the apex of the proscapus there is a large proximally pointing bulge (X) (fig. 3B-E, H and I) and behind it a more or less prominent median elevation (Z) (fig. 3B-E). In some species the inner bulge has been lost while the inner elevation has been transformed into a plate like structure (fig. 3F and G) reminding the wing-like extensions found in corresponding place in *Tenuiphantes* (SAARISTO & TANASEVITCH, 1996). However, most probably these two structures are not homologous. In dorsal view the epigyne has a very characteristic appearance (Fig. 1B and C); in form it is elongated triangular and in its middle line there is three more or less roundish elements in a row; starting from the posterior end they are: apical part of the proscapus, stretcher, and posterior median plate.

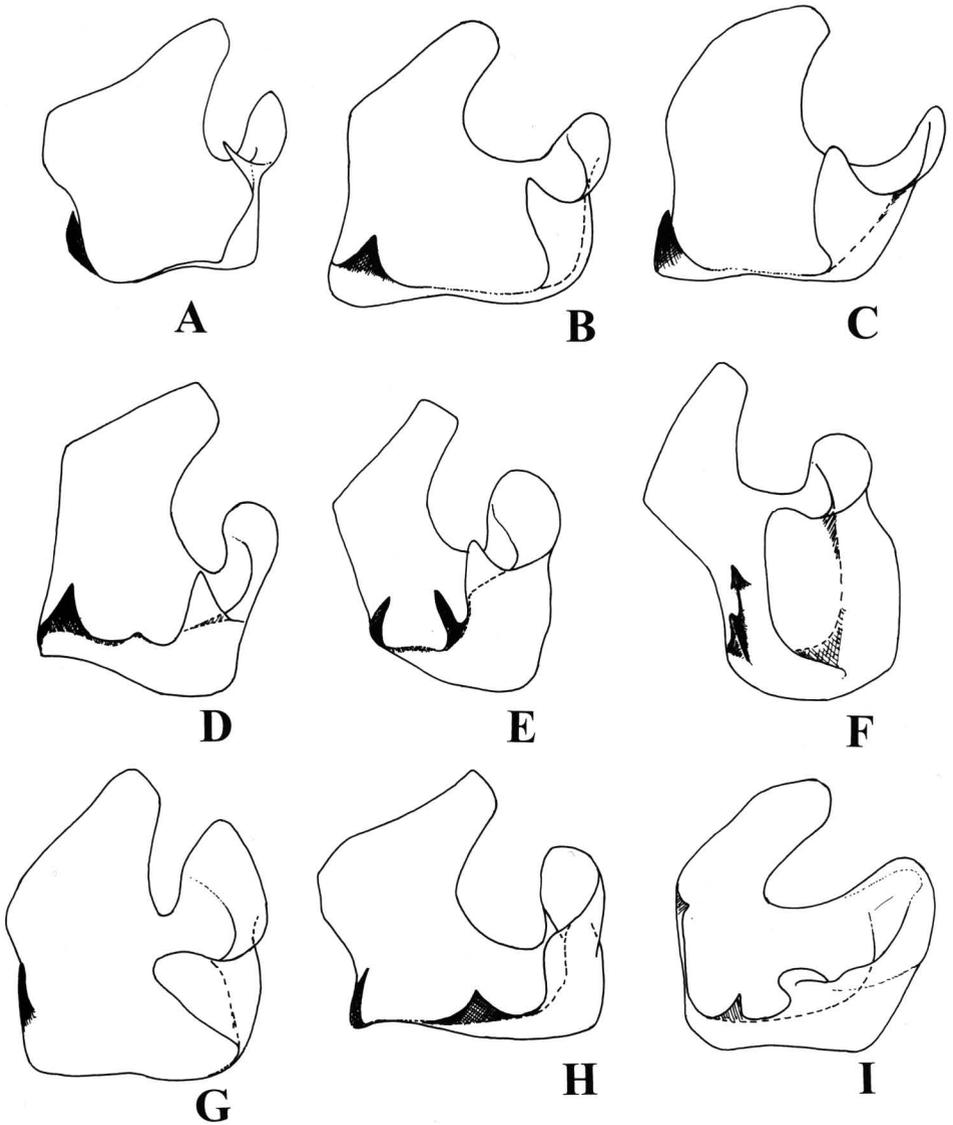


Fig. 3: Paracymbium of *Palliduphantes* spp.: A - *P. insignis* (O. PICKARD-CAMBRIDGE) (Germany); B - *P. schmitzi* (KULCZYŃSKI) (Madeira); C - *P. stygius* (SIMON) (Spain); D - *P. trnovensis* (DRENSKY) (Bulgaria); E - *P. khobarum* (CHARITONOV) (Caucasus, North Osetiya); F - *P. bolivari* (FAGE) (Spain); G - *P. montanus* (KULCZYŃSKI) (Germany); H - *P. tenerifensis* (WUNDERLICH) (Gran Canaria); I - *P. pallidus* (O. PICKARD-CAMBRIDGE) (Aland, Finland).

Discussion: Unfortunately in our earlier paper (SAARISTO & TANASEVITCH, 1996) we, in connection with our schematic presentation of the microneid epigyne, inadvertently missed to discuss about the course of the entrance grooves in the scape. Thus, it is necessary to notice here that in the proscapus the entrance grooves run with their bottoms in a downward position in relation to the natural position of the epigyne but in the median and distal parts of the scape the case is just the reverse. This reversion occurs at the border of the proscapus and the median part of the scapus (fig. 1A). In most of the *Palliduphantes* species there is no revolving of the entrance

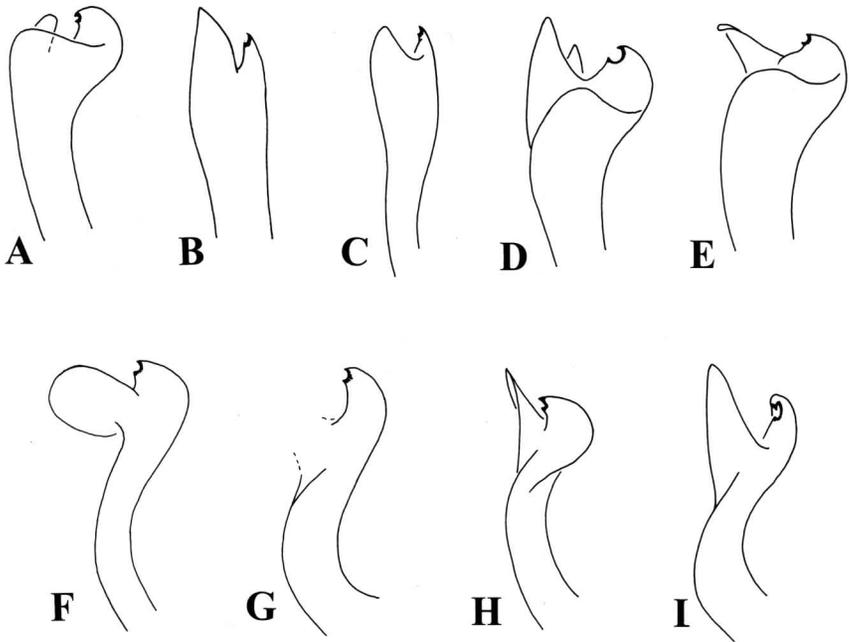


Fig. 4: Embolus of *Palliduphantes* spp.: A – *P. pallidus* (O. PICKARD-CAMBRIDGE) (Aland, Finland); B – *P. insignis* (O. PICKARD-CAMBRIDGE) (Germany); C – *P. culicinus* (SIMON); D – *P. intirmus* (TANASEVITCH) (Caucasus, North Osetiya); E – *P. khobarum* (CHARITONOV) (Caucasus, North Osetiya); F – *P. schmitzi* (KULCZYŃSKI) (Madeira); G – *P. tenerifensis* (WUNDERLICH) (Gran Canaria); H – *P. bolivari* (FAGE) (Spain); I – *P. stygius* (SIMON) (Spain).

grooves in the scape and its is supposed that in these cases the middle part of the scape is more or less totally reduced.

Species-groups

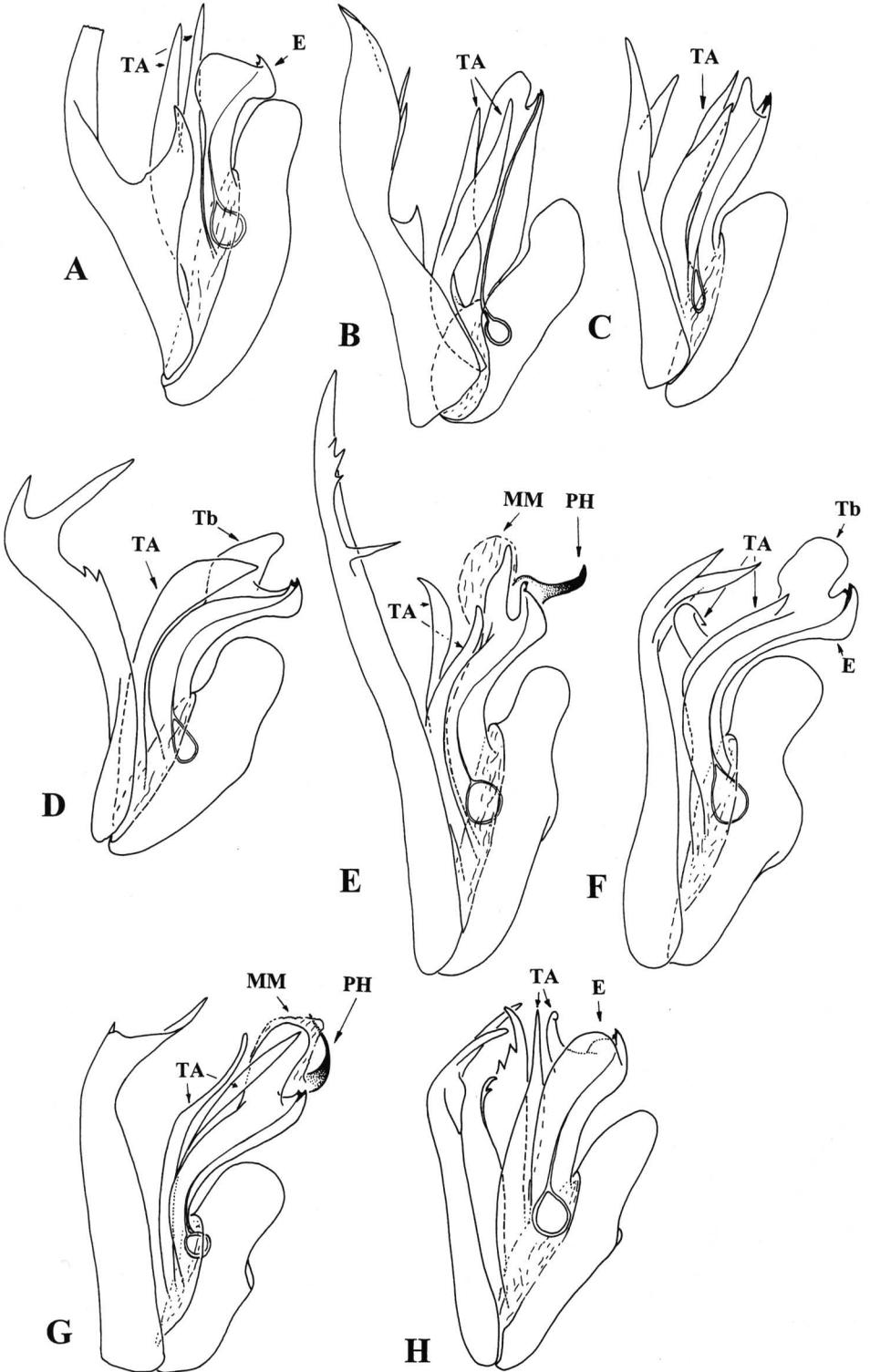
The following species-groups have been established according to the morphology of the secondary genital organs. Some difficulties have been experienced when establishing these groups as several characters have somewhat mosaic-like distribution between the different groups.

1. The *insignis*-group based on *P. insignis* and including *arenicola*, *byzantinus*, *carusoi*, *culicinus*, *ericaeus*, *labilis*, *malickyi*, *melitensis*, *minimus*, *pillichi*, *salfii*, and *slivnensis*.

Lateral edge of the paracymbium has a prominent posterior tooth and a small spine- or finger-like anterior extension (fig. 3A). Apical part of the lamella characteristica curved, more or less evenly dentate or unevenly bi- or trifurcate (fig. 5B and C). Scape more or less S-like with a revolving entrance grooves (fig. 2A). Bursae copulatrix situated in rudimentary lateral lobes.

2. The *spelaeorum*-group based on *P. spelaeorum* and including *brignoli*, *cernuus*, *epaminondae*, *intirmus*, *istrianus*, *khobarum*, *liguricus*, *lorifer*, *margaritae*, *oredonensis*, *trnovensis*, and probably *berlandi* and *condradini*.

Lateral edge of the paracymbium has three tooth-like extensions (fig. 3D and E). Apical part of the lamella characteristica (fig. 5H) divided into two more or less even branches; in some cases the middle branch is as prominent as the apical ones (e.g. *P. trnovensis*). Posterior part of termi-



nal apophysis characteristically dented (fig. 5H). Middle part of the scape much reduced; on its inner side a proximally pointing bulge (X) and behind it a more or less prominent median elevation (Z) (fig. 3B–E).

3. The *stygius*-group based on *P. stygius* and including *longiscapus* and *schmitzi*.

The group is characterized by the peculiar, lamellar outgrowth on the interior of the proscapus about at its middle (fig. 3F and G). The edges of this outgrowth can be seen on both sides of the proscapus when the epigyne is view ventrally. The paracymbium is much like that of the *insignis*-group but the anterior extension is much larger (fig. 3B and C).

4. The *rubens*-group based on *P. rubens* and including: *cadiziensis*, *dentatidens*, *sanctivincenti*, *tenerifensis*.

The epigyne of this group reminds somewhat that of the previous one but there is no outgrowth on the ventral side of the proscapus. Lateral edge of the paracymbium has a very prominent posterior tooth while the large lamellar anterior part reach upto the tip of the paracymbium being divided into two regions; of them the apical one is evenly curving and the proximal one sharp pointed, triangular (fig. 3H).

5. The *bolivari*-group based on *P. bolivari* and including only that species.

The paracymbium is exceptionally directed laterally standing almost at right angle towards the cymbium; it has a small posterior tooth and the lamellar anterior part bears a sharp pointed tooth and a twisted finger-like extension (fig. 3F). Apex of the lamella characteristic truncate, finely dentate and the middle branch is strong but short. Scape much reduced, straight and relatively short bearing at its apex a basally pointing bulge and the large stretcher with a wide pit.

6. The *pallidus*-group based on *P. pallidus* and including additionally only *alutacius*.

Lateral edge of the paracymbium has a small posterior tooth and the lamellar anterior part bears a sharp pointed tooth and a twisted finger-like extension (fig. 3I). Apex of the lamella characteristic truncate, finely dentate and the middle branch is strong but short (fig. 5A). Scape much reduced, straight and relatively short bearing at its apex a basally pointing bulge and the large stretcher with a wide pit (fig. 2H and I).

7. The *angustiformis*-group based on *angustiformis* and including additionally only *longisetus*.

The epigyne of this group much resembles that of the *pallidus* group but the basal part of the epigyne has become much prolonged. In accordance with this prolongation the lamella characteristic is very long extending well over the tip of the cymbium.

8. The *montanus*-group based on *P. montanus* and including additionally only *milleri*.

The paracymbium is much like that of the *stygius*-group but shorter (fig. 3G). Apical part of the lamella characteristic deeply bifurcate while the middle branch is long, heavily built and its apex points dorsally. Basal part of the scape short and broad and its apex is deeply notched (fig. 1C).

Species incertae sedis: Although the following species apparently belongs to *Palliduphantes* gen. n. it has not been possible to assign them to any particular species group as we have not had any relevant material of them: *atlassahariensis*, *cebennicus*, *ceretanus*, *fagicola*, *florentinus*, *palmensis*.

◀ Fig. 5: Embolic division of *Palliduphantes* spp.: A – *P. pallidus* (O. PICKARD-CAMBRIDGE) (Åland, Finland); B – *P. insignis* (O. PICKARD-CAMBRIDGE) (Germany); C – *P. culicinus* (SIMON); D – *P. tenerifensis* (WUNDERLICH) (Gran Canaria); E – *P. schmitzi* (KULCZYŃSKI) (Madeira); F – *P. stygius* (SIMON) (Spain); G – *P. bolivari* (FAGE) (Spain); H – *P. khobarum* (CHARITONOV) (Caucasus, North Osetiya).

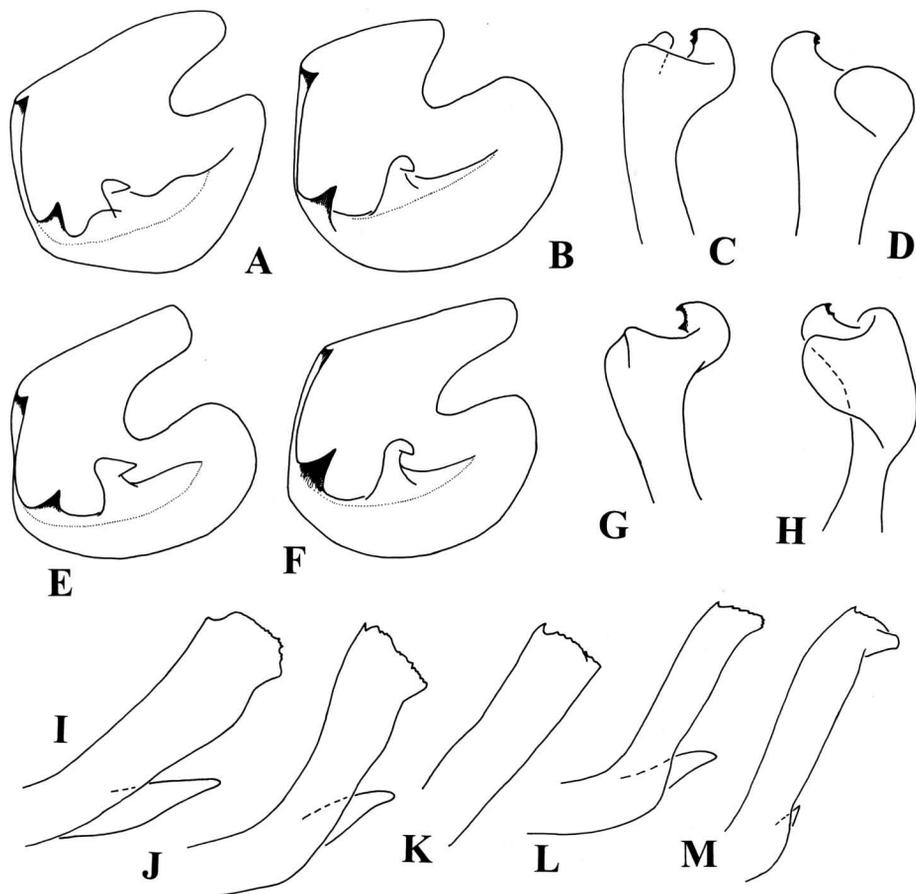


Fig. 6: Paracymbium (A, B, E, F), embolus (C, D, G, H) and lamella characteristic (I–M) of *P. pallidus* (O. PICKARD-CAMBRIDGE) (A, B, C, D, I, J, K), and *P. alutacius* (SIMON) (G, I, L, M): A, I – France (cave); B, K – Somero, Finland; C, D, J – Åland, Finland; E, G, H, L – Moscow, Russia; F, M – Novosibirsk, Russia.

Problems at species level

Although the species level taxonomy is out of the scope of this paper, it is necessary to comment the issue in short also in this context. It is well known that the troglobiont and troglophile species present serious problems as to their taxonomic status at species level. It is often very difficult to assess if the morphological differences of the secondary genital organs between populations of different caves represent species level differences or if the character in question may vary within the species. This problem has been in some extend deal with by DEELEMEN-REINHOLD (1985) in her paper treating the *pallidus*-group. Also DELTSHEV (1980) and HÄNGGI (1999) have mentioned about the difficulties in determining the different species of *insignis*-group.

As an example of this kind of problem we will shortly discuss about the *pallidus-alutacius*-problem which has been earlier dealt with also by MILLER & OBRETEL (1975). These two taxa seem to be very closely related sister-species which usually live in moss, grass, stone beds etc. but at least *pallidus* is frequently found also in caves. The most useful characters to distinguish the

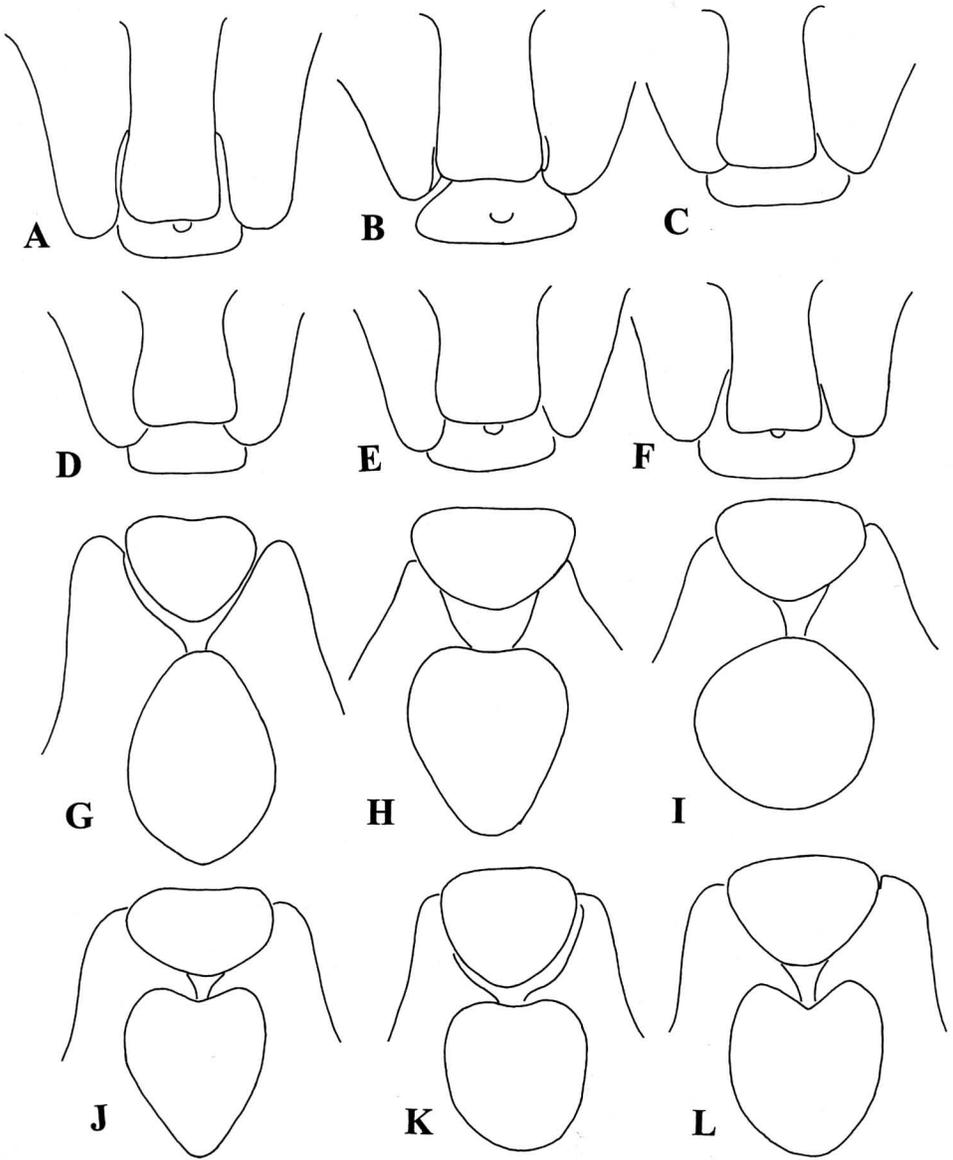


Fig. 7: Epigynes of *P. pallidus* (O. PICKARD-CAMBRIDGE) (A, B, C, G, H, I), and *P. alutacius* (SIMON) (D, E, F, J, K, L): A, G - France (cave); B, C, H, I - Somero, Finland; D, J - Moscow, Russia; E, F, K, L - Novosibirsk, Russia.

males of these two is the shape or rather the width of the lamella characteristica while the females are separated by the length/width ratio of the proscapus. We have, however, found that in some *pallidus* samples there may exist specimen(s) that exhibit the characters of *alutacius* and vice versa. In average the proscapus of *P. alutacius* is shorter than that of *P. pallidus*; length/width ratio of the proscapus or LPI of the former is usually about 1.2 (figs 7D-E) and that of the latter 1.5 (figs 7A-C). However, in the sample of *P. alutacius* from Novosibirsk there is a female with LPI = 1.47 or other words its epigyne is indistinguishable from that of *P. pallidus* (fig. 7F).

On the other hand, in a *P. pallidus* sample collected from a cave in France the female had an exceptionally long proscapus with LPI = 1.86 (fig. 7A). Also the shape of the lamella characteristic of the accompanying male (fig. 6I) is different from that of an ordinary *P. pallidus* (figs 6J–K). It seems also that while the shape of the posterior median plate within Micronetinae usually is a very good character to separate close relatives in the case of *pallidus/alutacius* it is very variable (figs 7G–L). At the present, it seems that the best means to identify these two species is the width of lamella characteristic which in *pallidus* (figs 6K–L) is greater than in *alutacius* (figs 6L–M).

Nomenclatorial notes

1. *Lepthyphantes mcheidzeae* MIKHAILOV, 1998 = *Tenuiphantes contortus* (TANASEVITCH, 1986), **syn. n.**

MCHUIDZE (1997) described *Lepthyphantes* (sic!) *lagodechiensis* n. sp. from a single female from Caucasus (MCHUIDZE, 1997). Somewhat later MIKHAILOV (1998) considered it as a homonym of *Lepthyphantes lagodekhsensis* TANASEVITCH, 1990 and proposed a new name *Lepthyphantes mcheidzeae* MIKHAILOV, 1998 for *L. lagodechiensis* MCHUIDZE, 1997. The type of MCHUIDZE's species is unavailable, but according to his figure of epigyne (MCHUIDZE, 1997: fig. 709) *L. lagodechiensis* seems to be conspecific with *Tenuiphantes contortus* (TANASEVITCH, 1986) described as *Lepthyphantes* from the same region.

2. *Lepthyphantes ignavus* SIMON, 1884 = *Mughiphantes ignavus* (SIMON, 1884), **comb. n.**

According to the original figure of the epigyne (SIMON, 1884: fig. 54) this species belongs to *Mughiphantes* SAARISTO & TANASEVITCH, 1999.

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