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A review of the Palaearctic Poeciloneta Kulczyński

(Aranei, Linyphiidae)

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Abstract

The Holarctic genus *Poeciloneta* Kulczyński, 1894 comprises no fewer than five species, of which four are Palaearctic: *P. variegata* Blackwall, 1841; *P. pallida* Kulczyński, 1908; *P. vakkhanka* spec. nov., *P. petrophila* spec. nov., and one is Nearctic: *P. theridiformis* (Emerton, 1911) (comb. nov. ex *Lepthyphantes* Menge, 1866). Both *P. canionis* Chamberlin & Ivie, 1943 and *P. bellona* Chamberlin & Ivie, 1943 are ejected from *Poeciloneta* s. auct. All the Palaearctic species have been (re)described and illustrated, including the first description of the male sex of *P. pallida*. The full generic rank of *Poeciloneta* is argued as being too overrated; perhaps it should rather be regarded as a subgenus or a species-group sub *Lepthyphantes*.

The genus *Poeciloneta* was first erected by Kulczyński for *Neriene variegata* Blackwall, 1841 (s. Chyzer & Kulczyński, 1894). Later, Strand (1907) erroneously regarded *N. variegata* as a junior synonym of *Linyphia globosa* Wider, 1834, but Simon (1929) corrected the mistake, having shown that *L. globosa* was actually a junior synonym of *L. pusilla* Sundevall, 1829, which had nothing to do with *N. variegata*, and thereby revalidated the latter as the type species of *Poeciloneta* (for further details see Bonnet, 1958: 3739–3740). However, in spite of Simon's (1929) correction, *L. globosa* is still erroneously referred to as the generotype of *Poeciloneta* (s. Wiehle, 1956, Locket & Millidge, 1953, Palmgren, 1975, etc.).

As a monotypical genus, *Poeciloneta* did not remain long since its erection: Kulczyński (1908) described a second species, *P. pallida*, this time by females from Siberia. Later, Chamberlin & Ivie (1943) added further two *Poeciloneta*, *P. canionis* and *P. bellona*, both from Utah, U.S.A., and both based upon ♀♀. However, judging from the original descriptions and illustrations, neither of the above two Nearctic forms is acutally referable to *Poeciloneta*, whereas the North American *Lepthyphantes theridiformis*, originally described by Emerton (1911) within the genus *Bathyphantes*, is surely a good *Poeciloneta* quite closely related to *P. variegata*. In other words, three valid *Poeciloneta* have hitherto been described, two from the Palaearctic (*P. variegata* and *P. pallida*) and one from the Nearctic (*P. theridiformis*, comb. nov.).

The present contribution is devoted to a review of the Palaearctic *Poeciloneta*, with two new East Siberian species involved: *P. vakkhanka* spec. nov. and *P. petrophila* spec. nov.

Type and non-type materials have been shared between the collections of the Zoological Museum of the Moscow State University (ZMMU) and Zoologische Staatssammlung, München (ZSM).

The following abbreviations have been accepted in the text and figures: Fe – femur, Ti – tibia, Mt – metatarsus, Tm – position of metatarsal trichobothrium, E – embolus, L – lamella characteristica. The chaetotaxy is given in the following formula: Ti I: 2-1-0-0. This stands for: tibia I has two dorsal, one pro-, neither retrolateral nor ventral spine. All measurements are given hereinafter in mm. The scale is 0.1 mm.

Type species: *Neriene variegata* Blackwall, 1841

Remarks: The genus is very close to *Lepthyphantes* Menge, 1866, its genital structure being practically identical and the supposed-to-be generic hiatus lying in the chaetotaxy. *Poeciloneta* is characterized: 1) by the unarmed metatarsi, 2) by each metatarsus carrying a distal trichobothrium (TmI – 0.69 ÷ 0.97), and 3) by the absence of lateral spines on the tibiae. Out of those three items, only the 1st seems to have no exceptions; indeed, among the *Lepthyphantes* species there is not a single one lacking armament of the metatarsi. As regards the remaining two items, both of them overlap with *Lepthyphantes*. Thus, *P. vakkhanka* spec. nov. has a prolateral spine on Ti I, while among the known *Lepthyphantes* there are certain forms possessing greater values of Tm, e. g. in *L. obscurus* (Blackwall, 1841) TmI>80, as well as carrying a trichobothrium on Mt IV, e. g. in *L. azumiensis* Oi, 1980.

Doubtless, *Lepthyphantes* and *Poeciloneta* are rather two close lineages within a nicely delimited, monophyletic group, a situation similar to that in, e. g., *Agyneta – Meioneta, Mecynargus – Rhaebothorax,* etc. Perhaps *Lepthyphantes* and *Poeciloneta* are better to be regarded as belonging in one genus; in other words, the latter may be incorporated in the former as an independent subgenus or, which seems to be even better for retention of the intrageneric integrity, as a species-group.

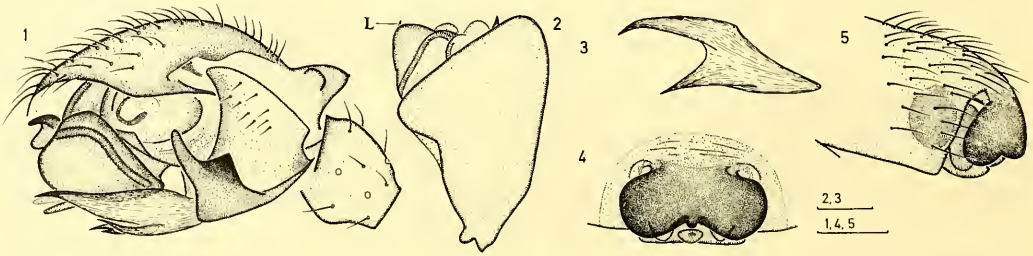
Composition and distribution: *Poeciloneta* comprises no fewer than five closely related species, of which four are Palaearctic: *P. variegata* (Blackwall, 1841), *P. pallida* Kulczyński, 1908, *P. vakkhanka* spec. nov., and *P. petrophila* spec. nov., and one Nearctic: *P. theridiformis* (Emerton, 1911).

Poeciloneta variegata (Blackwall, 1841)
Figs 1–5

New records: 2♂, 2♀ (ZMMU), 2♂, 2♀ (ZSM), USSR, Komi ASSR, Vorkuta Area, near Sivomaskinsky, forest tundra, Picea and Betula nana, in moss, 6. VII. 1982; leg. A. Tanasevitch. – 2♂, 3♀ (ZMMU), Krasnoyarsk Prov., Yenisei River, Mirnoye (62°20′ N. L.), in stack of fire-logging, VIII. 1978; leg. K. Eskov. – 2♀, (ZMMU), Magadan Area, upper reaches of Kolyma River, near Sibit-Tyellakh, summer 1985; leg. Y. Marusik.

Short description: Total length (both sexes) 1.90–2.80. Carapace brown, with a dark, polygonal, median spot, radial stripes and a darker margin. Legs pale brown; femora, tibiae and metatarsi with a dark, broad, midlength ring each. Chaetotaxy: FeI: 0-1-0-0; TiI-IV: 2-0-0-0; MtI-IV: 0-0-0-0. All metatarsi with a trichobothrium. TmI – 0.69–0.86. Abdomen dorsally pale, with a characteristic dark pattern consisting of a cross-shaped spot on anterior half and two longitudinal rows of spots on posterior half. Genitalia of both sexes as in Figs 1–5.

Distribution: A trans-Palaearctic forest-dwelling species known from Britain up to the Okhotsk Sea coast, northward reaching to the subzone of southern tundra, southward up to the mountain systems of the Caucasus and Tien-Shang.



Figs 1–5. *Poeciloneta variegata* (Blackwall, 1841): ♂, ♀ from Komi ASSR. – 1, 2) left palp (lateral and dorsal views, respectively); 3) lamella characteristica; 4, 5) epigyne (ventral and lateral views, respectively).

Poeciloneta pallida Kulczyński, 1908
Figs 6–10

1908 *Poeciloneta pallida*. – Kulczyński, Mém. Acad. Sci. St.-Pétersb. 18(17): 42, Figs (♀).
1970 *Poeciloneta pallida*. – Holm, Ent. scand. 1: 197, Fig. (♀).

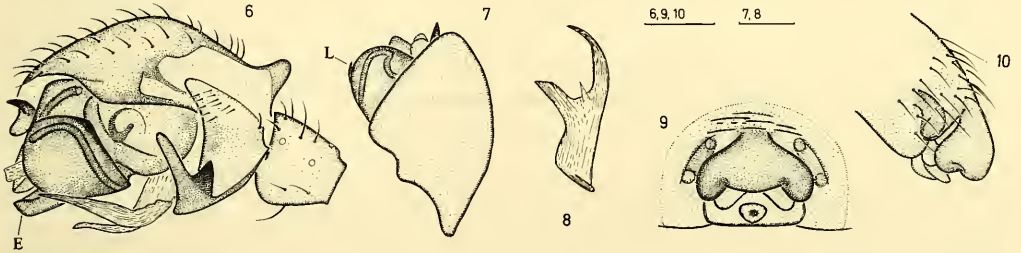
Remarks: This species was originally described for ♀♀ from Yakutia (Kulczyński, 1908) and subsequently recorded from various other localities in Siberia (s. Holm, 1970; Eskov, 1985). The first description has been given below of the male sex of *P. pallida*.

Material: 2♂ (ZSM), USSR, Magadan Area, upper reaches of Kolyma River, Bolshoi Annachag Mt. Ridge, near Sibit-Tyellakh, lichen and Carex association, 30.VIII.1985; leg. Y. Marusik. – 2♀ (ZSM), same locality, under stones on slope, 14.VII.1985; leg. Y. Marusik. – New record: 3♀ (ZMMU), Yakut Autonomous Region, Laptev Sea coast, near Tiksi, under stones on slope, 19.VIII.1985; leg. V. Bulavintsev & N. Vekhoff.

Description: ♂. Total length 1.80. Carapace: 0.85 long, 0.75 wide, pale yellow, with a vague, pale grey, median spot and darker margin. Chelicerae 0.50 long. Legs pale yellow, very thin and long, tibia I D/L ratio = 0.053. Chaetotaxy: FeI: 1-0-0-1; TiI–IV: 2-0-0-0; MtI–IV: 0-0-0-0. All metatarsi with a trichobothrium. TmI – 0.93. Leg I – 5.13 long (1.45 + 0.25 + 1.45 + 1.30 + 0.68), IV – 4.91 long (1.38 + 0.25 + 1.30 + 1.30 + 0.68). Palp Figs 6–8): Cymbium proximally with a rounded tubercle. Distal part of paracymbium with a large, pointed, dark outgrowth. Embolus almost black. Lamella characteristica deeply emarginate. Abdomen: 1.05 long, 0.75 wide, almost white, dorsally with a vague, pale grey pattern consisting of spots and oblique stripes.

♀. Body size, coloration and chaetotaxy as in male. TmI – 0.87 – 0.89. Epigyne as in Figs 9–10.

Distribution: A Siberian species chiefly occurring in the North: Kharaulakh Mts. (Kulczyński, 1908), Tiksi (both in Yakutia), Plateau Putorana, Taimyr Autonomous Region (Eskov, 1985), Nunyamo, Chukotka Peninsula (Holm, 1970), southern extreme of Cherskogo Mt. Ridge, Magadan Area (Eskov, 1985).



Figs 6–10. *Poeciloneta pallida* Kulczyński, 1908: ♂, ♀ from Kolyma. – 6, 7) left palp (lateral and dorsal views, respectively); 8) lamella characteristica; 9, 10) epigyne (ventral and lateral views, respectively).

Poeciloneta vakkhanka spec. nov.
Figs 11–15

Holotype: 1♂ (ZMMU), USSR, Magadan Area, Kolyma Upland, upper reaches of Kolyma Rever, Detrin River, 56 km upstream off mouth, Vakkhanka stream, Populus and Chosenia thicket, 16.VII.1983; leg. Y. Marusik.
Paratype: 1♀ (ZMMU), Magadan Area, Northern Cisokhotia, Tauy River Basin, middle flow of Cholomdja River, 15.–20.VII.1985; leg. N. Dokuchaev.

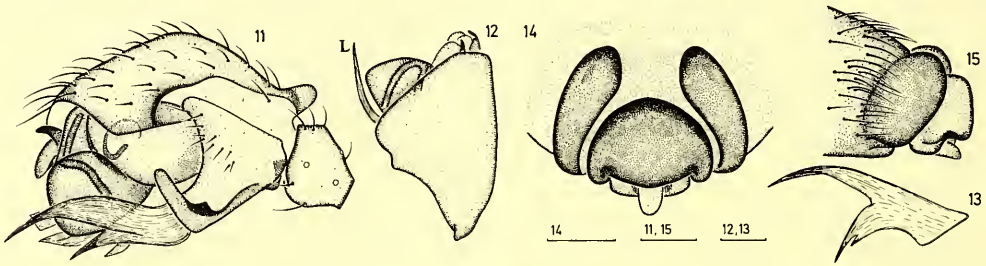
Description: ♂. Total length 2.13. Carapace: 1.00 long, 0.95 wide, brown, with a wide, dark, median stripe and a wide dark margin. Chelicerae 0.45 long. Legs pale brown, apices of joints darkened; metatarsi, tarsi and femora with a dark midlength ring each. Chaetotaxy: FeI: 0-1-0-0; TiI–IV:

2-0-0-0; MtI–IV: 0-0-0-0. All metatarsi with a trichobothrium. TmI – 0.84. Leg I – 4.79 long (1.25 + 0.28 + 1.30 + 1.28 + 0.68), IV – 4.56 long (1.25 + 0.25 + 1.13 + 1.25 + 0.68). Palp (Figs 11–13): Cymbium proximally with a rounded outgrowth. Lamella characteristica deeply emarginate. Abdomen: 1.25 long, 0.75 wide, dorsally pale, with a wide, dark, median stripe disrupting at posterior half into transverse bands.

♀. Total length 3.25. Carapace: 1.25 long, 1.05 wide, pale greyish-brown, with a dark, polygonal, median spot and a wide dark margin. Chelicerae 0.75 long. Leg I – ?, IV – 6.40 long (1.85 + 0.35 + 1.65 + 1.75 + 0.80). Abdomen: 2.25 long, 1.75 wide, dorsally pale, with a vague grey pattern consisting of spots and transverse bands. Epigyne as in Figs 14–15.

Diagnosis: The new species differs well from the other congeners by the dark coloration, certain details of the structure of the male palp, as well as extremely "swollen" lateral walls of the female epigyne.

Distribution: Known only from East Siberia: Kolyma Upland and Cisokhotia.



Figs 11–15. *Poeciloneta vakkhanka* spec. nov.: ♂, ♀ paratypes. – 11, 12) left palp (lateral and dorsal views, respectively); 13) lamella characteristica; 14, 15) epigyne (ventral and lateral views, respectively).

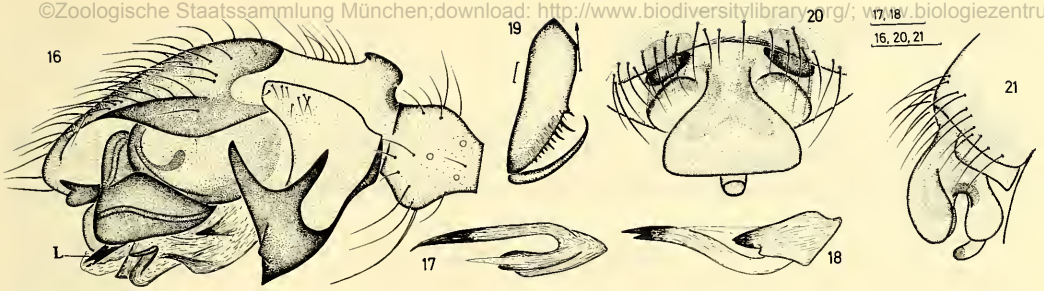
Poeciloneta petrophila spec. nov.
Figs 16–21

Holotype: 1♂ (ZMMU), USSR, Magadan Area, upper reaches of Kolyma River, Bolshoi Annachag Mt. Ridge, near Sibit-Tyellakh, under stones on slope in Betula forest, 16.IX.1986; leg. Y. Marusik.

Paratypes: 1♂, 4♀ (ZMMU), 1♂, 2♀ (ZSM), same locality, together with holotype, 16.IX.1986; leg. Y. Marusik. 1♂, 2♀ (ZMMU), Magadan Area, near Magadan, Snezhnaya Dolina, under stones on slope, 13.IX.1986; leg. Y. Marusik.

Description: ♂. Total length 2.00. Carapace: 0.90 long, 0.75 wide, pale yellow, with a vague, grey, median stripe. Chelicerae large (0.60 long), slightly concave at outer margin and set well apart; anterior margin with five strong teeth. Legs pale yellow. Chaetotaxy: FeI: 0-1-0-0; TiI: 2-1-0-0, II–IV: 2-0-0-0; MtI–IV: 0-0-0-0. All metatarsi with a trichobothrium. TmI – 0.93. Leg I – 6.41 long (1.70 + 0.30 + 1.75 + 1.83 + 0.83), IV – 5.65 long (1.60 + 0.25 + 1.45 + 1.65 + 0.70). Palp (Figs 16–18): Proximal outgrowth of cymbium unciform. Distal part of paracymbium with a long, dark, pointed process. Lamella characteristica complex. Abdomen: 1.05 long, 0.75 wide, pale, dorsally with pale grey, wavy, transverse bands. Abdomen densely pubescent.

♀. Total length 2.25. Carapace: 1.00 long, 0.75 wide. Chelicerae as in Fig. 19, large (0.70 long), anterior margin with six strong teeth. Leg I – 6.25 long (1.70 + 0.30 + 1.70 + 1.75 + 0.80), IV – 5.70 long (1.70 + 0.25 + 1.45 + 1.60 + 0.70). TmI – 0.97. Abdomen: 1.35 long, 0.80 wide. Epigyne as in Figs 20–21. Body coloration, chaetotaxy as in male.



Figs 16–21. *Poeciloneta petrophila* spec. nov.: ♂, ♀ paratypes. – 16) left palp; 17, 18) lamella characteristica; 19) female chelicere; 20, 21) epigyne (ventral and lateral views, respectively).

Diagnosis: The new species differs well from the other congeners chiefly by the presence of a prolateral spine on tibia I, large chelicerae (particularly in ♀♀), and of a long process on the distal part of the paracymbium, as well as by the shape of both lamella characteristica and epigyne.

Distribution: Known only from East Siberia: southern extreme of Cherskogo Mt. Ridge and northern Cisokhotia.

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