

## A redescription of *Philodromus albidus* Kulczynski, 1911 (Araneae, Philodromidae)

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### Summary

*Philodromus* sp. near *rufus* (Dondale, 1972) is shown to be *P. albidus* Kulczynski, 1911, which is redescribed. *Philodromus clarkii* Blackwall, 1850, *P. rubidus* Simon, 1870 and *P. pellax* Herman, 1879 are all considered *nomina dubia*. The differences between *P. albidus* and *P. rufus* Walckenaer, 1826 are described, and the distribution of the two species in Europe is briefly discussed.

### Introduction

In 1972 C. D. Dondale published results of breeding experiments between two North American subspecies of *Philodromus rufus* Walckenaer, 1826 and European representatives of the species. One of the results of the study was the discovery of two different, non-interfertile and morphologically distinct species among the European populations of *P. rufus*.

After the stabilisation of the name *P. rufus* Walckenaer by the designation of a neotype, one species was still left to be identified. In the present study, results are provided of renewed attempts to clarify the identity of the second species, which has been referred to as "*Philodromus* sp. near *rufus*" (*sensu* Dondale, 1972).

### Results

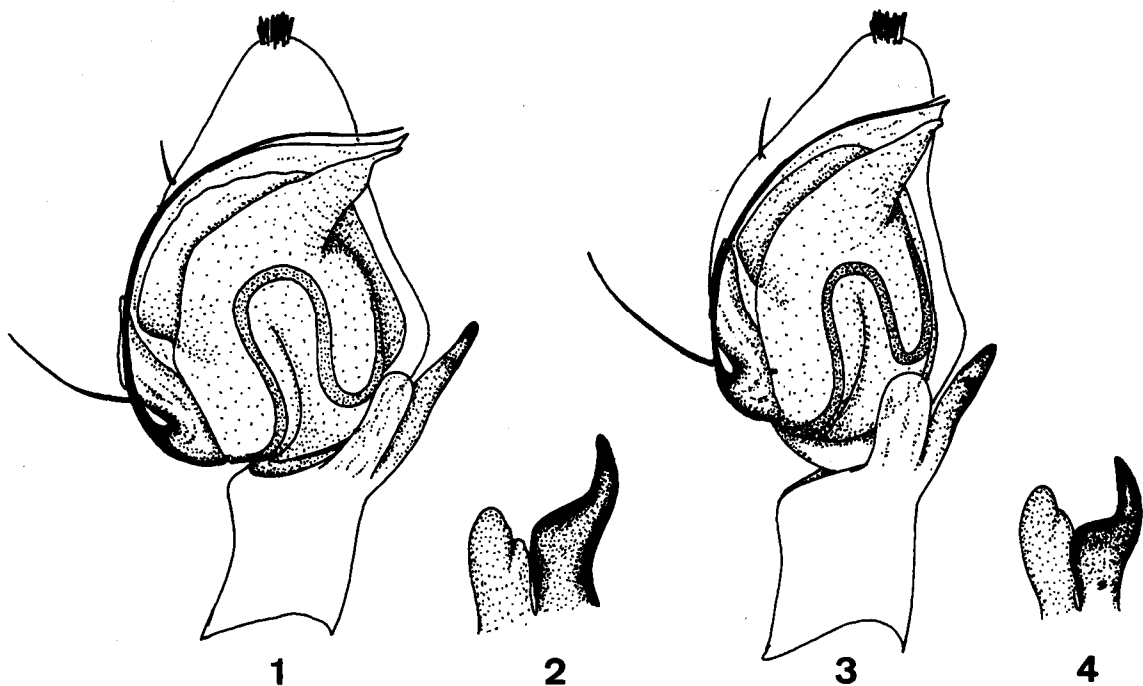
As pointed out by Dondale (1972), the name of *Philodromus* sp. near *rufus* depends on the identity of *P. clarkii* Blackwall, 1850 and on that of *P. pellax* Herman, 1879 (Dondale, 1972). It further depends on the identity of *P. rubidus* Simon, 1870 and *P. albidus* Kulczynski, 1911, two species for which the original descriptions state that they are very close to *P. rufus*.

With regard to *P. clarkii* and *P. pellax*, the type specimen of neither species is to be found for study. In the case of *P. clarkii*, the type specimen has certainly been destroyed (Pickard-Cambridge, 1899; Dondale, 1972). The type specimen of *P. pellax* seems to have been lost (S. Mahunka, pers. comm.). Furthermore, it is not possible to decide on the identity of *P. sp.* near *rufus* judging from the original descriptions of *P. clarkii* and *P. pellax*. Further comments on these two species are given by Dondale (1972).

*P. rubidus* was described on a single male specimen from Ronda, Spain (Simon, 1870). The species was diagnosed by its anterior eyes being equal in size and its colour generally being darker than *P. rufus* (Simon, 1875: 288), both characteristics with, in this case, no diagnostic value. Later, Simon (1932: 854) provides the following comments on the species: "espèce très voisine de *P. rufus* sauf par l'épigyne très différent".

The holotype male of *P. rubidus* (Muséum National d'Histoire Naturelle, Paris, B. 1560, T. 656, examined) is in a very bad condition, with its palps missing. The female specimens which were considered to represent the female of the species are certainly not conspecific with the male holotype and can therefore not be taken into account.

For these reasons, it is impossible to make a judgement on the identity of *P. rubidus* as the bad condition



Figs. 1-4: Male left palps. 1 *Philodromus rufus*, palp, ventral view; 2 *P. rufus*, retrolateral apophysis, lateral view; 3 *P. albidus*, palp, ventral view; 4 *P. albidus*, retrolateral apophysis, lateral view.

of the holotype and the loss of its sexual organs make any identification impossible.

The names *Philodromus clarkii* Blackwall, 1850, *Philodromus rubidus* Simon, 1870 and *Philodromus pallax* Herman, 1879 are hereby declared *nomina dubia*, as in none of these cases is a reliable identification possible, owing to the brevity of their original descriptions and the loss or bad condition of their type material.

Finally, the type specimens of *P. albidus* Kulczynski, 1911 were examined (1 female, 4 juv., syntypes, Inst. Zool. P.A.N., Warszawa 46:51 U). The specimens clearly are conspecific with *Philodromus* sp. near *rufus*, so the name *P. albidus* must be considered to be the correct valid name for the species. A redescription of the species follows.

### *Philodromus albidus* Kulczynski, 1911 (Figs. 3-6)

#### Description

Carapace orange-brown, with central parts more orange. Legs orange with brown mottlings. Abdomen yellow-orange with pale chevron pattern on dorsum. The entire body of the spider may be covered with brown mottlings to a greater or lesser extent.

**Male:** Measurements (8 specimens, in mm): Total length 3.16-3.80, cephalothorax length 1.40-1.60, width 1.44-1.64. Femur II length 2.24-2.84. Male palpal tibia with an inconspicuous sheet-like ventral apophysis and a retrolateral apophysis consisting of a subquadrangular basal part prolonged into a dorsal tooth (Fig. 4). Tegulum longer than wide, with the embolus arising probasally (Fig. 3).

**Female:** Measurements (6 specimens, in mm): Total length 4.04-5.48, cephalothorax length 1.70-1.75, width 1.68-1.74. Femur II length 2.36-2.68. The female epigyne is externally indistinguishable from that of *P. rufus*. The spermathecal organ is curled over (Figs. 5, 6).

#### Diagnosis

Males of *P. albidus* are distinguished from those of *P. rufus* by (1) the width of the tegulum and the length of the embolus (cf. Figs. 1 and 3), and (2) the set and shape of the retrolateral tibial apophysis (cf. Figs. 2 and 4).

Females of *P. albidus* are distinguished by the form of the spermathecal organ which is elongated and projects laterally in *P. rufus* (Fig. 7) and is curled over in *P. albidus* (Figs. 5, 6).

*P. albidus* was originally diagnosed by its anterior eyes being equal in size and by the disposition of the eyes in the median ocular trapezium (Kulczynski, 1911). The diagnostic value of these characters cannot be confirmed.

#### Distribution

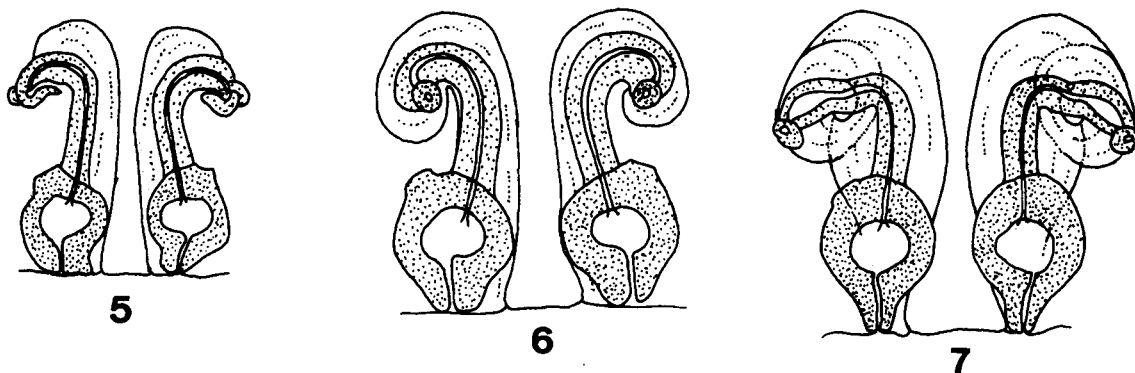
A re-examination of all specimens of *P. rufus* (*s. lat.*) in several Belgian collections has revealed that *P. albidus* is much more common than *P. rufus*, though both species are rare. Specimens of *P. albidus* have been captured all over Belgium, whereas only two *P. rufus* have been found. A similar situation may occur in Great Britain, as the relevant figures of male palps in Locket & Millidge (1951) and Roberts (1985) undoubtedly depict *P. albidus*. The occurrence of this species in Great Britain is confirmed based on material from Thorndon Park, South Essex (coll. P. R. Harvey). Dondale (1972) states that Pickard-Cambridge (1895) described and figured a male of the real *P. rufus* from Britain, so both species probably occur there. Dondale (1972) also found *P. albidus* in material from France and the Swiss Jura. *P. albidus* has also been found in Portugal (type material). Only Tullgren (1944) among recent authors provides figures of real *P. rufus* (male and female).

It is clear that a more intensive re-examination of specimens is needed in order to delimit the distribution areas of both *P. rufus* and *P. albidus*.

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Figs. 5-7: Vulvae. 5 *Philodromus albidus*; 6 Ditto, another specimen; 7 *P. rufus*.

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### References

- DONDALE, C. D. 1972: Laboratory breeding between European and North American populations of the spider *Philodromus rufus* Walckenaer (Araneida: Thomisidae). *Bull.Br.arachnol. Soc.* **2**(4): 49-52.
- KULCZYNSKI, L. 1911: Fragmenta arachnologica IX. XVII. Araneae nonnullae Europaeae. *Bull.int.Acad.Sci.Lett.Cracoviae (Sci.math.nat.)* **1911**: 55-75.
- LOCKET, G. H. & MILLIDGE, A. F. 1951: *British Spiders* **1**: 1-310. Ray Society, London.
- PICKARD-CAMBRIDGE, O. 1895: On new and rare British spiders. *Proc.Dorset nat.Hist.antiq.Fld Club* **16**: 92-128.
- PICKARD-CAMBRIDGE, O. 1899: Notes on British spiders observed in 1898. *Proc.Dorset nat.Hist.antiq.Fld Club* **20**: 1-22.
- ROBERTS, M. J. 1985: *The Spiders of Great Britain and Ireland* **1**: 1-229. Harley Books, Colchester.
- SIMON, E. 1870: Aranéides nouveaux ou peu connus du midi de l'Europe. *Mém.Soc.r.Sci.Liège* (2) **3**: 271-358.
- SIMON, E. 1875: *Les Arachnides de France* **2**: 1-350. Librairie Encyclopédique de Roret, Paris.
- SIMON, E. 1932: *Les Arachnides de France* **6**(4): 773-978. Encyclopédie Roret, Paris.
- TULLGREN, A. 1944: Fam. 1-4. Salticidae, Thomisidae, Philodromidae och Eusparassidae. *Svensk Spindelfauna* **3**: 1-138. Entomologiska Föreningen, Stockholm.
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