

***Vespula rufosignata* Eck, a synonym of *Vespula vulgaris* (Linnaeus) (Hymenoptera: Vespidae, Vespinae)**

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Abstract: The type series of *Vespula rufosignata* Eck is rediscovered; the taxon is a synonym of *V. vulgaris* (Linnaeus), **syn. n.**

Key words: Hymenoptera, Vespidae, Vespinae, *Vespula*, taxonomy.

***Vespula rufosignata* Eck, sinónimo de *Vespula vulgaris* (Linnaeus) (Hymenoptera: Vespidae, Vespinae)**

Resumen: Se ha redescubierto la serie tipo de *Vespula rufosignata* Eck; el taxon es sinónimo de *V. vulgaris* (Linnaeus), **syn. n.**

Palabras clave: Hymenoptera, Vespidae, Vespinae, *Vespula*, taxonomía.

Vespula rufosignata Eck, 1998 was described from three localities in Kashmir, based on a series of 17 specimens including queens and workers. The type depository was not stated, and the whereabouts of the holotype has remained unknown. During a recent visit to the Natural History Museum in London, Paul Williams produced the holotype and 12 paratypes, which he had collected.

The type series consists of a holotype queen from Gulmarg, 2900 m, 29.vii.1986 (P. H. Williams), two other queens labeled as paratypes from Gulmarg, 1986 without further detail, one worker paratype from Gulmarg, 13.viii.1980, five worker paratypes from Gulmarg, viii.1985, one worker paratype from Gulmarg, 16.viii.1986, one worker paratype from Gulmarg, 14.ix.1986, one worker paratype from Daksum [Eck gave this as Daksun], 2100 m, 26.viii.1986, and one worker paratype from Pahalgam, 2100 m, 20.viii.1980. In addition, there is one queen from Gulmarg, 1986 without further detail, and one worker from Gulmarg, viii.1985, not labeled as paratypes. Eck (1998: 301) listed just the five worker paratypes from Gulmarg, viii.1985, and so these unlabeled specimens are indeed not part of the type series. The series had been determined as *V. vulgaris* (Linnaeus, 1758) by Dr. Williams, and all the paratypes are so labeled; the locality records were published in Williams (1983, 1988).

The type depository may now be specified as the Natural History Museum. What may be said about the status of the taxon? *Vespula rufosignata* was separated from *V. vulgaris* by extensive reddish-brown coloration, and the width of the gena. Regarding coloration, Eck (1998: 299) stated: "Rotbraune Zeichnungselemente auf Clypeus, Thorax, Coxae und Trochantern... sind absolut ungewöhnlich für *V. vulgaris*." In fact the coloration in the type series is not consistent, and falls within the range shown by *V. vulgaris* across the Palearctic. Thus the queens have the legs extensively marked with reddish, especially the femora, but the workers do not, and do not differ from workers from China and Turkey that I have seen. The metasomal markings are rather dull yellow, not reddish, and do not differ from specimens from many other localities. The anchor-shaped mark on the clypeus is reddish brown in the queens but is blacker in most of the workers.

The type series differs from most *V. vulgaris* in the collections of the Natural History Museum and American Museum of Natural History in having the yellow band on the tempora and gena complete, not interrupted by black. However, uninterrupted bands are seen particularly in Asian *V. vulgaris*, and a continuous band with only a central notch is seen throughout the range of *V. vulgaris*. Some of the type series have the ocular and frons markings approaching each other closely, which is not common in *V. vulgaris*,

but other specimens in the series do not, as is usual in *V. vulgaris*. Some of the workers have the anchor-shaped bar on the clypeus reduced to spots, but this is also seen in *V. vulgaris* specimens from other localities.

Regarding the width of the gena, Eck (1998: 299) stated "Die Breite der äußeren Orbita ist eines der wenigen metrischen Merkmale in dieser Artengruppe, die deutlich von Art zu Art differieren." However the graph in her figure 3 showed variation within *V. flaviceps* (Smith, 1870) in this character, and complete overlap among several other species. Eck (1998) admitted that the variation within *V. flaviceps* could be taken as counterevidence to her claim that the character is significant, but argued that it instead called into question the status of *V. flaviceps* as one species. In fact, the difference shown in the drawing in her figure 1 between *V. vulgaris* and *V. rufosignata* is not at all convincing, and *V. vulgaris* is in any case also variable in the width of its gena. I do not think a difference exists.

Eck (1998: 299) also stated: "Das Ocellendreieck ist gleichseitig und weniger spitz als bei *V. vulgaris*." Her figure 1 does not support such a claim, and she later admitted (Eck, 1998: 300): "Da diese Unterschiede diffizil und schwer darzustellen sind und die individuelle Variabilität groß und noch nicht völlig bekannt ist, eignen sich die Merkmale der Ocellenregion nicht für eine Differentialdiagnose."

In conclusion, *V. rufosignata* is not consistently different from *V. vulgaris* in any of its supposed diagnostic features. It is therefore synonymized with *V. vulgaris* here, **syn. n.**

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