

First description of the worker caste of *Lasius viehmeyeri* Emery (Hymenoptera: Formicidae)

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Up till now the worker caste of *Lasius viehmeyeri* was unknown. In the Stärcke Collection present in the Nationaal Natuurhistorisch Museum at Leiden, a worker of *L. viehmeyeri* was discovered under *Lasius umbratus* var. *affinis* Schenck. This specimen from Dalmatia is described and figured.

Introduction

Lasius umbratus var. *viehmeyeri* Emery, 1922 (Formicidae: Formicinae) has been redescribed by Seifert in 1990 as *Lasius viehmeyeri*. This redescription was based on the lectotype, a queen from Erymanthos, Greece collected at an altitude of 800-1000 m, August 1901 in wood ("Holtz"). The lectotype is deposited in the Museo Civico di Storia Naturale at Genua. In 1937 Stärcke has given a detailed description of a queen and a male of *Lasius viehmeyeri* var. *dalmatica* nov. from the Dinaric Alps, collected by H.J. MacGillavry at Knin (E of Zadar, Croatia; 44°04'N 16°20'E). On account of this description, Seifert (1990) stated that Stärcke's queen is indeed a *Lasius viehmeyeri*. The male (in the collection of the Nationaal Natuurhistorisch Museum at Leiden) has been labelled holotype of *L. viehmeyeri dalmatica* Stärcke, 1937, by Seifert in 1993. The queen is missing in this collection. Up to now the worker remained undescribed. However, Stärcke (1937) included *L. viehmeyeri* in his key to the workers. He used one character: the high, and a little emarginated scale. This is most likely after a drawing and the description of this scale by Emery (1922). Emery assigned this worker, collected by G. Cecconi on Cyprus, to *L. viehmeyeri*. However, the drawings and the description of this worker could be from several other species of the subgenus *Chthonolasius*.

In the Stärcke Collection, which is part of the collection of the Nationaal Natuurhistorisch Museum at Leiden, I discovered a worker of *L. viehmeyeri* which was labelled *Lasius umbratus* var. *affinis* Schenck, "Erber" and "Dalm.". Josef Erber (1924-1882) was a Viennese collector and merchant of insects. "Dalm" is the abbreviation for Dalmatia (= Croatia). It originates from the same area as the queen and male, described by Stärcke. No date of collection is given, but it should be before 1882 in view of the year of Erbers death.

Comparative description

Similar to the queen redescribed by Seifert (1990), the worker cannot be confused with any other European species. The combination of the relative large size, the relative scarce pubescence, the extremely flattened scape and hind tibia, the strongly elongated

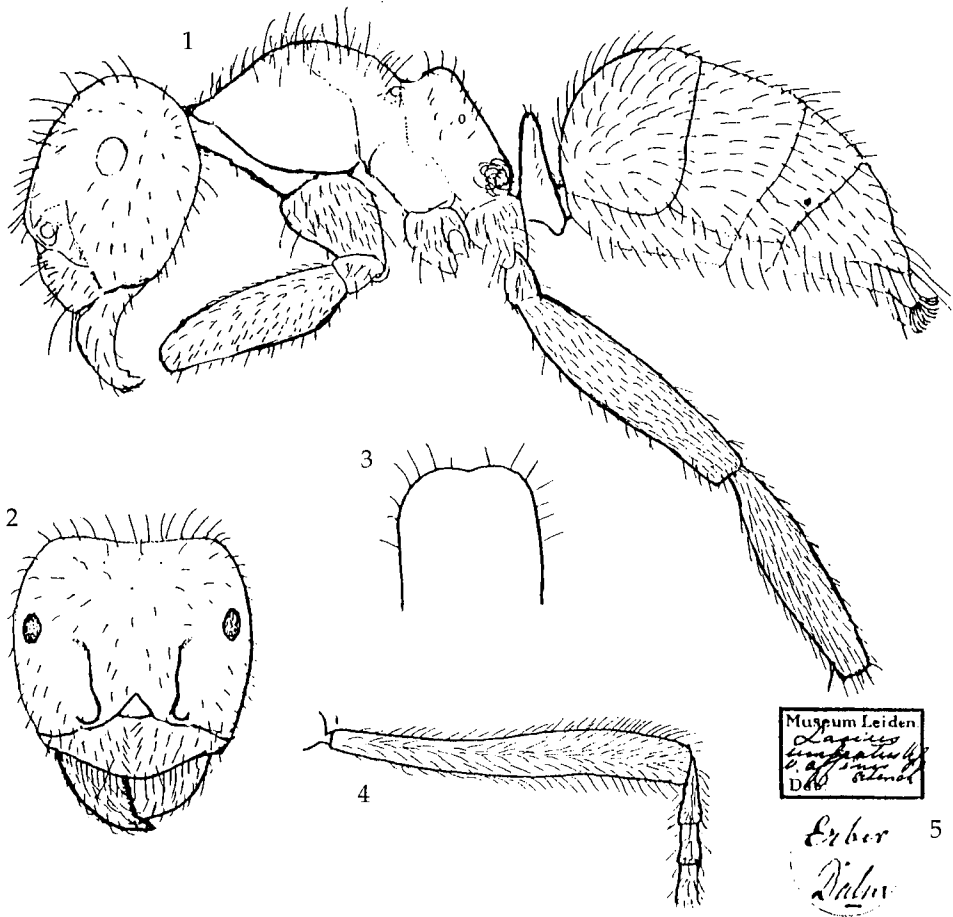


Fig. 1-5, *Lasius viehmeyeri* Emery, worker. 1, habitus, lateral aspect; 2, head, frontal aspect; 3, scale, posterior aspect; 4, scape and basal funicular segments of antenna; 5, labels.

second funicular segment, and the relative long pilosity are unique in the subgenus *Chthonolasius*.

The pubescence is relatively short and relatively sparse. The closest relatives are the Iberian species *L. rabaudi* Bondroit, 1917, and *L. jensi* Seifert, 1982, because of the flattened scape and hind tibia. The scape of *L. viehmeyeri* is flatter, the maximum diameter of the scape at midpoint divided by the minimum diameter of scape at midpoint is 2.42, against 1.60 ($n = 34$) for *L. rabaudi* and 1.77 ($n = 59$) for *L. jensi* (Seifert, 1988). In lateral view the scale is relative thick and slightly swollen. The petiolar scale (fig. 3) is completely different from the scale of *L. jensi*; in posterior view it has straight sides, as the queen. The dorsal face of the scape of *L. jensi* has decumbent pubescence and many (but sometimes with only a few) subdecumbent to erect setae. This worker of *L. viehmeyeri* has many suberect and erect setae (fig. 1).

The average distance between the setae on the dorsum of the first tergite is 35 μm .

L. rabaudi is the only species with a larger distance. The average distance in front of the anterior ocellus is 29 μm , in *L. rabaudi* it is 13 μm . The number of erect setae of the hind tibia in profile could not be determined, because of the glue, but it is more than 20. The length of the longest seta on the dorsal face of the first gastral tergite is 143 μm . The maximum width of the head is 1270 μm , which is much wider than for all other species in the subgenus *Chthonolasius*. The largest workers were up to now *L. affinis*. The ratio of the maximum length of the head divided by the maximum width of the head is 0.95. The length of the scape divided by the maximum length of the head is 0.91. The ratio of the median line length of the second funicular segment divided by its maximum width is 1.6 (fig. 4).

Note.— It is obvious that the worker of *L. viehmeyeri* described by Emery belongs to another species than *L. viehmeyeri*, because the scape and the hind tibia are glabrous.

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