NEW CHARACTERS TO DIFFERENTIATE THE ANT GENERA *LASIUS* F. AND *FORMICA* L. (HYMENOPTERA: FORMICIDAE)

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Introduction and history

Ants of the genera *Formica* and *Lasius* are among the most dominant and abundant in the Holarctic region, and form a large and important fraction of the fauna. Strangely for such important insects, the characters currently used to differentiate the two genera are vague and often misleading, resulting in difficulty in identification and indeed in misidentification at generic level.

Mayr (1861) published the first dichotomous key to the worker caste of *Formica* and *Lasius*. To separate the two he used the relative size of the funicular segments, the form of development of the ocelli and the shape and degree of distinctiveness of the frontal triangle. Forel (1874) added to these characters the shape of the frontal carinae, the variable numbers of maxillary palp segments, the relative position of the petiole scale, the shape of the alitrunk, the length of the legs and shape of the proventriculus.

Emery (1925) introduced the shape of the propodeal spiracles as a differentiating character, and dismissed all the other, earlier-mentioned characters. Later authors used one or more of these characters but failed to add better discriminating features. For instance Stitz (1939) used the shape of the propodeal spiracles, but also the frontal triangle and the relative length of the funicular segments. Bernard (1968) used alitrunk shape and coloration only. Boven (1976) reverted to the definition of the frontal triangle and the ocelli in his couplets. Kutter (1977) used the shape of the propodeum and again the relative length of the funicular segments, the definition of the frontal triangle and the ocelli. Only coloration, shine and pubescence were used by Collingwood (1978). The latest published keys reverted to the form and position of the propodeal spiracles as the best character (Bolton & Collingwood, 1975; Collingwood, 1979) and additionally the definition of the ocelli (Agosti & Collingwood, 1987).

All this inconsistency in use of the older key characters indicates that they were either not entirely trustworthy, or were indistinct or difficult to discern, rendering discrimination of the two genera difficult.

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