Worker Diagnosis

A member of the *purpureus* complex with the head and mesosoma reddish brown to black and similar in colour; head often with strong blue iridescence. Dark individuals with strong blue iridescence are immediately recognisable (all other dark species in the *I. purpureus* group are reddish brown and have purple and/or green iridescence, when present). Individuals that are lighter in colour (either naturally or through fading after collection) are similar to *I. greensladei* and *I. purpureus*. Separation from *I. greensladei* is generally possible because of the darker reddish brown body colour and stronger blue iridescence, especially in living or freshly collected material, and from populations that are sympatric with *I. greensladei*. Allopatric populations of *I. lividus* show a wider range of colour than populations that are sympatric with *I. greensladei* and some individuals are indistinguishable on the basis of the morphological characters examined during this study. *Iridomyrmex lividus* can be separated from *I. purpureus* by having the head, pronotum and mesothorax similar in colour, rather than having the head and pronotum lighter in colour than with the mesothorax. Additionally, the erect mesosomal setae are generally pale in *I. lividus*, while they are generally dark in *I. purpureus*. It should be noted, however, that some faded material may be nearly impossible to place with confidence.

Description

Iridescence between compound eyes and on lateral region of head (between compound eye and insertion of mandible) varying from strong blue to reddish purple to nearly absent. Pigment colour of mesosoma very dark reddish brown to black; head same colour as mesosoma; coxae and legs dark reddish brown to black, tarsi lighter; petiole similar in colour to mesosoma; lateral region of second gastral tergite shiny and with blue/green to slightly purple iridescence. Head pilosity (in full face view) abundant on occipital margin, and with 2–6 pale setae near mandibular insertion. Ocelli absent. Ventrolateral pronotum with scattered erect setae. Mesosomal setae with dark pigment, but often translucent and appearing pale when viewed against a lightly coloured background. Pilosity on first gastral tergite moderately abundant. Anterodorsal region of propodeum flat to weakly arched.

Measurements

Holotype. CI 0·92; EL 0·36; EW 0·23; HL 1·97; HW 1·81; ML 0·93; PnL 1·04; PpL 1·00; REL 0·20; SI 0·95; SL 1·72.

Worker ($n = 30$). CI 0·87–0·99; EL 0·31–0·38; EW 0·19–0·23; HL 1·75–2·15; HW 1·58–2·12; ML 0·77–1·02; PnL 0·92–1·19; PpL 0·82–1·11; REL 0·17–0·22; SI 0·85–1·01; SL 1·51–1·84.

Comments

Iridomyrmex lividus is easily recognised in the field and from recently collected material by its dark colour with strong blue iridescence. Some older, faded material, however, can be difficult to separate from *I. greensladei* (see Diagnosis above and under *I. greensladei*). Ecologically, these species differ in that *I. lividus* nests consist of a single entrance hole with at most a small cleared area immediately around the entrance and without gravel or small pebbles, while *I. greensladei* nests are typically large multi-entrance mounds covered with gravel (although smaller nests with less-distinct mounds also occur). The morphological similarity between these species is also reflected in other systems. It has been shown that neither of the allozymes esterase (Halliday 1979) nor amylase (Halliday 1981) differ in allele frequency between these two species. Additionally, both species are broadly sympatric (Figs 11, 12) and have been shown to be ecologically similar (Greenslade 1987). Despite these similarities, these two species show differences in competitive abilities with each other and with other species of the *I. purpureus* group (Greenslade 1987), and are morphologically distinguishable given appropriate material.

Etymology

The specific name, derived from Latin, describes the bluish body iridescence.