

facies they are quite clearly *ruginodis*. A fine series of large dark workers were sent to the writer by Mr. L. Christie from Loch Droma, E. Ross-shire. Dark colour and stronger sculpturing appear to be normal variations among all the *Myrmica* species found in the Highlands.

*Myrmica sulcinodis* Nylander, 1846

In Europe this ant is generally restricted to mountain areas but is found in Britain on the lowland heaths of S. England as well as in the Scottish Highlands, where it has been taken up to a height of 600 m. The species is not known from Ireland and there are only two old doubtful records from Wales. It is abundant on well drained gritty moorland both in the Highlands and in similar areas of England from Northumberland to Staffordshire. It has been taken on Dartmoor recently by Dr. M. V. Brian (*personal communication*) and is not uncommon in parts of the New Forest and Dorset heathland as well as in Surrey. In these southern areas nests are often sited in boggy ground and damp tussocks, whereas in N. Britain the species is markedly xerophilous and only found in open ground in well drained areas.

British examples normally show a marked colour contrast between the dark head and gaster and the red thorax. Some Scottish examples would qualify for the dark form described as *nigripes* by Ruzscky (1896). Some examples from the French Alps are by contrast much paler than typical British specimens. This distinctive species is very coarsely sculptured. British examples have strong converging spines but in some continental series the spines diverge (Bibikoff collection: Switzerland). Males are readily differentiated from those of *ruginodis* by a more abruptly curved scape and striate frontal area. On the Continent some *scabrinodis* variations with no lobar extension at the bend of the scape are superficially similar, and it is probable that *sulcinodis* var. *sulcinodo-scabrinodis* Forel may refer to such examples. *M. scabrinodis*, however, can always be distinguished by the slight sinuation of the scape at the bend, which in *sulcinodis* is always curved in one plane only.

This is a slow moving but aggressive species preying on other ants and insects and capable of stinging fiercely. Colonies are typically monogynous.

*Myrmica scabrinodis* Nylander, 1846

This species has almost as wide a range as *ruginodis* in the British Isles and has been taken in almost every county of England, Wales and Ireland and in Scotland from Caithness southwards. It has not been taken higher than about 300 m. in the Scottish Highlands or in Ireland (O'Rourke, 1950) but occurs in a wide diversity of habitat, flourishing in dry sandy areas as well as in woodland and even in boggy ground. Colonies normally arise from single queens but in older nests up to five may be present. In central and south England this species is frequently associated with the ant *Lasius flavus* Fab., occupying a part of the latter's mound nest and preying on the *flavus* workers. In N. Britain it is a component of the loose association of four species including *M. ruginodis macrogyna*, *Leptothorax acervorum* Fab. and *Formica lemmani* Bond. studied by Brian and Brian (1951) in W. Scotland which is characteristic for the whole of moorland Britain.

There are considerable variations in sculpture and petiole shape which have led various authors to describe a medley of varieties, subspecies and related