

*Formica lugubris* Zett. ♀♀ ♂♂ ♀♀ Kamchatka — Petropol, Elizovo.

*Formica fusca japonica* Motsch. 1 ♂ 2 ♀♀ Vladivostok; Yeterofu; Petropol.

*Formica lemani* Bondroit. 5 ♀♀ Kuril — Kunashiri, Chiripoi.

Dr. Malaise collected a good series of all castes of *F. lugubris* and as already mentioned (Collingwood, 1961) the specimens had been placed in the Stockholm Museum variously as *F. rufa* and *F. pratensis* more or less according to the colour markings of the ♀ thorax. All, however, are typical *F. lugubris*. Nothing is yet known about this species in Russia or Siberia. There are, however, certain records for eastern Europe and Karelia (Holl-döbler, 1961) and there is little doubt that it will be found to occur more or less continuously throughout the northern coniferous forest zone of north Russia and Siberia as well.

The general appearance of the *F. fusca japonica* specimens is more matt and opaque than in true *F. fusca*. The male is otherwise indistinguishable and has the petiole scale simple as in *F. fusca* and not fringed with long hairs as in most other species in this group. Kuznetsov (1929) only recorded *F. japonica* from Vladivostok but Eidmann (1941) lists both *F. fusca* and *F. japonica* from West China. It is probable that the two should be regarded as independent species rather than as subspecies but further study of this group in Asia is required.

The *F. lemani* examples have the sculpture, more or less shining integument and coarse thoracic bristles as in European specimens. The body colour is unevenly reddish brown instead of evenly dark, and there are patches of sparse pubescence. This variation together with the immense area from the Kuril Islands to Europe from which *F. lemani* has not yet been recorded makes the identification of this form uncertain. However, by analogy with *F. lugubris* which shares very much the same distribution as *F. lemani* in Europe, the eastward extension of the latter through north Russia and Siberia would by no means be unlikely.

*Lasius niger* L. 3 ♀♀ Vladivostok — Suchan, Sedanka.

*Lasius sitkaensis* Pergandei. 1 ♀ Kuril — Kunashiri.

*Lasius (Chthonolasius) mixtus* Nyl. 1 ♀ Vladivostok — Suchan.

The *L. niger* ♀♀ are unusually pubescent compared with European examples and one of them has rather reduced appendage pilosity. The single example of *L. sitkaensis* has the mandibles rather worn but the reduced offset basal tooth, rather flattened clypeal outlined, pale reddish brown colour and scattered appendage pilosity all conform to the north American *L. sitkaensis* and not to *L. niger*. *L. sitkaensis* has the most northwesterly range of the American *Lasius* and occurs in west Alaska to latitude 58°. It is considered by Wilson (1955) to be the most primitive of the *L. niger* species group, nesting mainly in rotting logs or under stones in shaded forest. This is a new record for the palaearctic fauna but it would be desirable to examine much more material from this area of north-east Asia. Confirmed records of *L. niger* exist for Japan, China, Formosa and Kamchatka and it seems probable that *L. sitkaensis* has a quite restricted distribution, perhaps confined to the Kuril Islands.

The *L. mixtus* ♀ almost entirely lacks standing hairs on the body, those on the gaster are extremely short and confined to the anterior face of the