

## Three Ant Species New to Norway

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Holgersen (1944) listed the ants of Norway and discussed the distribution of the species recorded to that time in detail. His paper appeared at a time when the nomenclature of the *Formica fusca* and *F. rufa* species groups was in some confusion but after examining all specimens and records available to him, Holgersen definitely excluded *F. cinerea* Mayr and *F. picea* Nyl. from the Norwegian list. A third species related to *F. exsecta* Nyl., *F. forsslundi* Lohmander, had not then been recognised

and has not hitherto been recorded from Norway although widespread in Sweden and Finland.

It is a pleasure to record that I found examples of these three species in the neighbourhood of Elverum in Hedmark on June 7, 1963. *Formica cinerea* Mayr occurred in strength nesting in coarse sand along the railway line to the west of the station and also in sandy banks in the heath nearby. One mixed *F. sanguinea* Latr. *F. cinerea* nest was also seen. Elverum is nearly as far north as the northernmost European locality for *F. cinerea* near Mora in Sweden. Apart from this locality and another in Västermanas, the species is only recorded from the three counties of the southern tip of Sweden, where however it is locally very abundant. Elsewhere in Scandinavia, it occurs along the coastal sands of Jutland in Denmark and locally in south east Finland. Other species found at Elverum did not suggest a southern fauna since apart from *Lasius fuliginosus* Latr., which is rather local in south Scandinavia, they included *Formica lugubris* Zett., *F. aquilonia* Yarrow and *Myrmica sulcinodis* Nyl. instead of *F. rufa* L., *F. nigricans* Em. and *M. schencki* Em. as might have been expected.

Holgersen considered it very probable that *Formica picea* Nyl., now known as *F. transcaucasica* Nas. (Yarrow, 1954) would be found in Norway and it seemed obvious to me that a visit to a suitable area of lowland forest bog would soon reveal its presence. Unfortunately, such bogs are small and few in Norway by contrast with their abundance in Sweden and Finland and more or less confined to the south east of the country. They are also declining rather rapidly through extensive drainage operations carried out in the interests of good forest management. At Elverum about 2 km. west of the railway station, a suitable small area of bog was visited and here *F. transcaucasica* was found in typical sphagnum nests. *F. sanguinea* appeared to be invading the area as two mixed *F. sanguinea*, *F. transcaucasica* nests were found. Also *F. fusca* L. and species of *Myrmica* were well established in tussocks in the drying bog.

Two nests of *Formica forsslundi* Lohm. were also found at this site. They consisted of small hillocks of fine leaf litter sloped towards the south and backing on to stunted pine; the nests were small but appeared to be flourishing. Proceeding southward by train, similar stretches of forest bog were noticed, in particular between Magnor and the Swedish border. This area would repay further inspection as it is quite probable that a third bog species, *F. uralensis* Ruzsky would be found there. Possibly a suitable area of bog could be protected from drainage so as to conserve these species for Norway.

Holgersen noted that although *Lasius alienus* Foerst was recorded by E. Strand in 1912, no Norwegian specimens were to be found in museum collections. Two of Strand's localities were Elverum, where the sandy heath would be a likely terrain, and Kornsjö in the extreme south east of the country. I took examples of what I supposed to be *L. alienus* from isolated small nests in both places but subsequent examination showed them to be depauperate, undersized specimens of *L. niger* with reduced appendage hairs. Other species at Kornsjö included *Camponotus ligniperdus* Latr., *F. lugubris* Zett., *Tetramorium caespitum* L., *Leptothorax tuberum* Fab. and *L. muscorum* Nyl., the latter a new record for Östfold.

The Norwegian species of the *F. rufa* group have not been fully worked out since Holgersen's paper appeared long before Yarrow's 1955 revision. I have given several records in previous notes (Collingwood, 1958, 1961) and together with more recent observations bring the subject up to date here.

*F. polyctena* Foerst. This species was not recognised by Yarrow (1955) but is now generally accepted and has been adequately recharacterised by Betrem (1960). The Norwegian localities include Hauerseter, Akershus (Collingwood, 1958); Hvaler, Östfold (as var. 'nuda' in Holgersen, 1944); Kongsvinger, Hedmark, where I took a series in June 1963. I have also a good series from Hirtshals in Jutland, Denmark and add Båstad, Halland and Västerås, Västermanas to previous Swedish records which included Uppland, Skåne, Småland and Södermannland (Collingwood, 1961). Dr. J. G. Betrem in correspondence has suggested that all previous records for this species in Finland should probably refer to *F. aquilonia* which in south Finland as in south Norway can be very hard to distinguish from *F. polyctena*. I have re-examined my single specimen from near Helsinki and agree that it is almost certainly *F. aquilonia* since although body hairs are almost completely lacking, the minute eye hairs are longer and more numerous and the sculpture denser than in *F. polyctena* from the Netherlands.

*F. rufa* L. Holgersen (1944) gave no certain records since he evidently included *F. aquilonia* with this species. However, he gave localities for Hedmark, Akershus and Rogaland. I have confirmed his specimens from Akershus and with additions to my 1958 records complete the list here. Hedmark: Kongsvinger, Lillehammer. Östfold: Halden. Akershus: Hauerseter, Blindern, Bøa. Hordaland: Bergen, Voss. Sogn og Fjordane: Oevre Årdal.

*F. aquilonia*, *F. lugubris*. There is no need to give localities for these two species which abound in Norway and are probably to be found in every county from north to south. *F. aquilonia* was abundant at Narvik for example in 1958 and equally so at Fagernes, Gjøvik and Elverum much further south where I also have specimens from Halden in Östfold and two localities in Akershus. Similarly *F. lugubris* abounds from Karasjok in Finmark to Kornsjö and Halden in Östfold. Both species ascend to the tree line in central Norway.

*F. nigricans* Em. Holgersen (1944) gave no certain record for this and Forsslund (1957) omits it from the Norwegian list. So far as I know my examples from Hauerseter in Akershus and Svinsund in Östfold in 1958 remain the only confirmed records to date.

*F. truncorum* Fab. Holgersen (1944) recorded this from Rogaland and from Hordaland where I also have it from Voss. It is doubtful whether there are other authentic records apart from Akershus and Östfold where I took it in 1958. It appears to be relatively less common in Norway than it is in Sweden where I have repeatedly found it from Lapland to the extreme south. The form referred to as 'truncicola-pratensis' by Holgersen is probably *F. lugubris*.

*F. cordieri* Bond. This is not so far known from Norway, Finland, The Netherlands, N. Germany or the Baltic States, although not uncommon in south Sweden and known locally in Denmark.

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