

## Formica Gagatoides Ruzs.

### in Norway.

By

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Of the subgenus *Serviformica* For., genus *Formica* L., three species have been known as belonging to the Norwegian fauna, namely the common *F. fusca* L. (with one variety, var. *lemanii* Bondr.), *F. rufibarbis* F., and *F. picea* Nyl., and quite recently (Holgersen 1942, see bibliography) a fourth species, *F. gagatoides* Ruzsky, has been introduced into the Norwegian list.

As this last species seems to be very incompletely known by myrmecologists, at least outside Soviet-Russia, I am going to deal with its characteristics and connection with the closely related species, and give an account of its discovery in Norway and distribution in this country, as it is known at present.

As it will be remembered, there has been a good deal of confusion about what may be called the *picea-gagates*-question, and usually the true *Formica picea* Nyl. has been called *gagates* Latr.

A very thorough discussion on these two species has been given by BÖNNER (1914).

*F. picea* was originally described from Finland by NYLANDER (1846), whilst *gagates* was unknown from Fenno-Scandia until ADLERZ (1886) reported its capture on Öland (Sweden) and Dovre (central Norway). On p. 307 he says that LINDMAN found *gagates* at Kongsvoll, Dovre, at a height of 2900 ft. In 1914 Adlerz gave information on *F. picea* in Sweden, and in the same year Bönner published his work (see above) on the species, which he had found near Copenhagen. In this paper (p. 75) Bönner suggests that Adlerz' *gagates* from Dovre must be *picea* Nyl., and in a following publication (1915) he says (p. 75) that Adlerz in a letter to him has stated this suggestion.

Several authors emphasize *gagates* Latr. as a south-western species, in northern and north-eastern Europe replaced by *picea* Nyl. For instance KARAWAIEW (1926 p. 197) says that *F. gagates* Latr. has a southern and western distribution, occurring in southern France, Italy, southern Germany, the Balkans, the Crimea