

The first records in Norway of *Myrmica specioides* Bondroit, 1918 and *Formica cunicularia* Latreille, 1798 (Hymenoptera, Formicidae)

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Myrmica specioides Bondroit, 1918 and *Formica cunicularia* Latreille, 1798 are recorded in Norway for the first time. Both species were found in 2008 at Jeløya, Østfold County in South-Eastern Norway. A total of 54 outdoor-living ant species are now known to occur in Norway.

Key words: Hymenoptera, Formicidae, *Myrmica specioides*, *Formica cunicularia*, Norway.

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Introduction

A total of 52 ant species have hitherto been recorded in Norway (Collingwood 1979, Kvamme 1982, 1999, Kvamme & Lønnve 2008). The number was considered to be 53 species until 2006 when the status of *Myrmica microrubra* Seifert, 1993 was changed from species level to a microgyne form of *Myrmica rubra* (Linnaeus, 1758) (Steiner et al. 2006). Including the two species presented here the total number of outdoor living ant species recorded from Norway is at the present 54. The real number is probably closer to 70 species compared to the number of species recorded in Sweden (Douwes 1995).

The records

Samples of both species were collected by the authors 28 May 2008 on Jeløya, Moss municipality (EIS 19), Østfold County. The UTM coordinates are in agreement with the WGS84 system.

One colony of *Myrmica specioides* Bondroit,

1918 was found close to the beach at Reierbukta (UTM32 N6588400E592000). The habitat was a sun-exposed, warm, sandy beach-meadow with rather low and partly sparse vegetation (Figure 1). As usual only the entrance hole was visible.

Formica cunicularia Latreille, 1798 was found only 200–300 meters from the *M. specioides* locality, but closer to Alby. One colony was close to an old stone wall (Figure 2), while the other colony was found on grassland nearby, at the edge of a grain field. The two records was done close to UTM32 N6588400E591500.

Discussion and conclusions

M. specioides is a true European species, distributed from Portugal to the Black Sea and from the northern part of the Balkan Peninsula to SW Britain, Denmark and SW Sweden. The nearest record to Norway is in Blekinge district in southern Sweden (Douwes 1995). In general it is a rare species in Sweden and the first record was made in 1979 (Douwes 1983). In addition to



Figure 1. The meadow where *Myrmica specioides* Bondroit, 1918 was recorded at Moss, Jeløya: Reierbukta (EIS 19), Østfold County (Photo: T. Kvamme).

the records mentioned in Collingwood (1979), it is also locally common on coastal sands in NW Zealand in Denmark (leg. Collingwood, unpublished data).

M. specioides is considered to be a thermophilic species (Seifert 2007) and the most xerophilous of the Central European *Myrmica* species (Czechowski et al. 2002). It prefers sun exposed habitats with rather sparse vegetation. Habitat preferences and necessary climatic conditions may explain its scattered and local distribution in Scandinavia.

F. cunicularia Latreille, 1798 has a wide distribution from southern Sweden and England to South Europe, Crimea mountains, Caucasus and Asia Minor (Czechowski et al. 2002). In southern Sweden *F. cunicularia* occurs locally (Douwes 1995). It was recorded from Samsø

Island by Bisgaard and there is a good series from this record in the Copenhagen University Museum. *F. cunicularia* is a thermophilic species, which prefers rather lush grassland (Seifert 2007). Many habitat types can however be inhabited by *F. cunicularia* (Collingwood 1979, Czechowski et al. 2002). In Britain the species has frequently been recorded close to stone walls similar to the situation shown on Figure 2. Distribution in Norway is considered to be limited and confined to the south due to climatic conditions demanded by the species. Other aspects of the distribution and occurrence of *F. cunicularia* are difficult to evaluate due to lack of data. Unsolved taxonomical questions in *F. cunicularia* like great variation in colour, chaetotaxy and different behaviour in local populations throughout its range make it difficult to define the species. The sibling species, *Formica lusatica* Seifert, 1997 has been recorded from southern Finland (Czechowski & Radchenko



Figure 2. The stone walls at Moss, Jeløya: Alby (EIS 19) Østfold County where *Formica cunicularia* Latreille, 1798 was recorded (Photo: T. Kvamme).

2006) and emphasizes the need to study this species group.

Both *M. specioides* and *F. cunicularia* are considered to have very limited distribution in Norway and are probably rare and overlooked. The management and use of the area where the localities are situated is regulated by the environmental authorities as a landscape protection area. However, the area is very popular for recreational use which could influence vegetation and consequently insect life. The lack of data on the species and the definition of red list categories as presented in the 2006 Norwegian Red List (Kålås et al. 2006) indicate that both species should be listed under the category Data Deficient (DD) until more data are available.

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