

Contribution to the Fennoscandian distribution of *Chionea* Dalman, 1816 (Diptera, Limoniidae), with notes on the ecology

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Updated information is given on the distribution of *Chionea araneoides* Dalman, 1816 and *C. crassipes* Boheman, 1846 in Norway. While *C. araneoides* is very common in southern Norway, there are only two records in northern Norway. *C. crassipes* has been taken numerously and in several localities in Finnmark, but in southern Norway, only a few individuals have been found in three alpine sites. These may represent relict populations. *C. lutescens* Lundström, 1907 is reported new to Sweden. Three samples of *C. crassipes* from Oulanka national park in Finland confirm the few earlier records from this country. Information is given on phenology, temperature and weather conditions, as well as some ecological aspects for *C. araneoides* in southern Norway, based on long term data.

Key-words: *Chionea*, Limoniidae, Diptera, distribution, Norway, Sweden, Finland, ecology, winter, snow

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Introduction

The wingless, “spider-like” *Chionea*-species (Diptera, Limoniidae) are winter active and can be seen walking on the snow surface (Fig. 1) at temperatures down to about -6°C (e.g. Svensson 1966, Hågvar 1971). However, there has long been confusion both about their taxonomy and their distribution in Fennoscandia. Svensson (1966) wrote that three species had been reported from Sweden: *C. crassipes* Boheman, 1846 (he referred to Dalman as author), *C. araneoides* Dalman, 1816, and *C. minuta* Tahvonen, 1932. However, he assumed that the two latest probably were synonyms. Later, Svensson (1969) concluded that *C. araneoides* was a good species, and that both

C. minuta and *C. brevisrostris* Tahvonen, 1932 were synonyms. An extensive material sampled in northern Sweden and Finland contained three species: *C. araneoides*, *C. crassipes*, and *C. lutescens* Lundström, 1907 (Mendl et al. 1977). While *C. araneoides* occurred in both countries, *C. crassipes* was found only in the Swedish material and *C. lutescens* only in the Finnish. Later, Krzeminski (1982) presented a generalized map of Europe, where all the three last mentioned species were indicated by symbols to occur both in Norway, Sweden and Finland. This is, however, not correct for *C. lutescens*. Recently, Oosterbroek & Reusch (2008) presented a review of the European species of the genus *Chionea*. They concluded as follows: *C. araneoides* occurs widespread in all