

In general the species encountered produce small colony populations, the largest being those of *Formica neorufibarbis*. The relative abundance near the tree-line of this ant and of *Leptothorax muscorum* indicates that they are probably the best fitted to achieve colony developments in the adjacent areas of the treeless tundra. Old records under such names as *Myrmica rubra* and *Formica rubra* should pertain to them when checked *in situ*. They also reach and invade the alpine tundra (Brown 1955; Gregg 1972; Francoeur, 1973). Such an adaptation to tundra habitats should also be found in the European *Leptothorax acervorum* because of its known biological and ecological characteristics. In Europe, it replaces *L. muscorum* in higher elevations on mountains (Bernard, 1968).

Frequent forest and shrub fires associated with tree-line dynamics in northern Québec should be considered as an important factor affecting the distribution, the abundance and genetic trends of these ant populations, which live in close association with the ground surface. Since the amount of radiant heat available at that level may be considered as a basic limiting factor (Brown, 1973), a correlation should be expected between the limits of ant ranges and the occurrence of permafrost. For example I could not find any ant in *palsa* bogs and in a spruce stand on frozen soil.

Though its scope still remains limited the present analysis of newly available and older reliable data produce a

more accurate picture of the ant fauna associated with the eastern part of the nearctic tree-line ecotone. The basic core of this insect community should also characterize the western counterpart. However, when fully known, some additional features either from taxonomic or ecological aspects will likely come to light because of peculiarities encountered in the Alaska and Yukon situation. These regions played an important role in the formation of refugia during the last glaciation period. Differences in the Pleistocene and post-Pleistocene history of the northeastern and northwestern lands of North America were recently up-dated by Matthews (1979). These differences have, no doubt, influenced the actual distribution of ants.

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