

Labrador, Hudson Bay and Alaska. The specimens described by Scudder in his "Revision of the Melanopli" came from the Esquimaux village of Ramah, on the coast of Labrador, lat. 57° N., while the Alaska specimens recorded by Caudell (Pap. Harriman Alaska Exp., Proc. Wash. Acad. Sci., vol. II, pp. 511-512, 1900) were taken at Kukak Bay, Alaska Peninsula.

I have a large series of this species from Nain (lat. $56^{\circ} 30''$) and Hopedale (lat. $55^{\circ} 24''$), Coast of Labrador, an examination of which convinced me that they are not specifically distinct from *M. extremus* Walk., a species also recorded from Labrador and Arctic America, which was placed by Scudder in a different section of the genus. On submitting this question to Mr. Hebard, I learned that he had already placed *M. extremus* as a race of *borealis* in his unpublished notes on this group, and Messrs. Morse and Blatchley are also of the opinion that the two forms are conspecific. This being the case, *M. borealis*, as a species, is by no means exclusively arctic, but ranges over nearly the whole of Canada and extends also into various parts of the northern United States. It is, however, a typically boreal form and probably reaches its highest development in the Hudsonian zone.

Melanoplus fasciatus is a species of similar range and has also been recorded from Nain, Labrador, so that it may be fairly included in the arctic fauna.

Several other species of Acrididae have been reported from "Arctic America" chiefly by F. Walker (Cat. Derm. Salt. Brit. Mus., III-IV, 1869-71), but in the absence of definite localities it is uncertain whether they were taken in the Arctic zone proper or the Hudsonian. These are *Acrydium granulatum* Kirby, *Chorthippus curtipennis* (Harr.), *Hippiscus apiculatus* (Harr.) and *Melanoplus femur-rubrum* (DeGeer). The type locality of *A. granulatum* is in lat. 65° , and it was taken by Adam White (Richardson, Arctic Search. Exp., II, p. 360, 1851) at Fort Simpson (lat. $61^{\circ} 30'$) and at the junction of the Mackenzie and Slave rivers, so that it cannot be certainly regarded as arctic on the basis of these records. The other records are indefinite and that of *M. femur-rubrum* almost certainly erroneous, the species referred to being probably *M. borealis*.

A few other Orthoptera may be mentioned as very possibly ranging into the arctic regions. *Melanoplus kennicottii* Scudd. and *M. atlantis* (Riley) were taken by Kennicott on the Yukon river, Alaska. The former has also been recorded from Saskatchewan, Alberta and Montana, while the latter is widely distributed over the greater part of North America, extending into Mexico.

Melanoplus bruneri Scudd. (*M. alaskanus* Scudd.) is also recorded from Alaska and is widely distributed in Canada in the Boreal region.

Acrydium bruneri Boliver (which is perhaps the true *A. granulatum* (Kirby), and *Melanoplus birittatus* Say are recorded from the Hudson bay region, while *Circotettix verruculatus* (Kirby) ranges far north, the type specimen having come from lat. 57° N.

All the species mentioned above are locusts or "short-horned grasshoppers" (Acrididae), but there is one species of "long-horned grasshopper" (Tettigoniidae), which has some claim to membership in the Arctic Fauna. This is *Idionotus sphagnum* (Walk.) (syn. *I. brevipennis* Caud., *Platydes fletcheri* Caud.), which was originally described from St. Martin's Falls, Hudson Bay. It was redescribed by Caudell (Proc. U.S. Nat. Mus., XXXII, p. 396, 1907) as *Idionotus brevipennis* from a single male, taken by Kennicott in "Arctic America" (Caudell, l.c.). This same specimen had already been mentioned but not described by Scudder (Can. Ent., XXVI, p. 182, 1894) in his characterization of the genus *Idionotus*, and is stated to have been "collected by Kennicott somewhere on his explorations in or going to Alaska." This species is now known also from northwestern Ontario, Manitoba and Alberta.

¹I am indebted to Mr. W. S. Blatchley for the synonymy of *Idionotus brevipennis* Caud. with *Deeticus sphagnum* Walk. I had long suspected this to be the case, as we have only one northern Deeticine, as far as known.