

THE ROCKY MOUNTAIN LOCUST AND ITS ALLIES IN CANADA.

BY SAMUEL H. SCUDDER.

The genus *Melanoplus*, to which the Rocky Mountain Locust belongs, forms part of a small group of genera first definitely separated a few years ago by Brunner von Wattenwyl under the name of *Pezotettix*, but which, for reasons given in a technical memoir now in press, I have preferred to call after the dominant genus just mentioned,—*Melanopli*.

In the last resort, the *Melanopli* are separated from their nearest allies only by such an apparently insignificant matter as the number of spines (in itself variable) found on the outer margin of the hind tibiae; these, save for individual exceptions, often on one side of the body only, are always at least nine in number and rarely exceed fourteen. In the known Canadian species they range from eight to thirteen, but ten or eleven is the almost invariable number.

The *Melanopli* are an almost exclusively American group comprising more than thirty genera of which only one, *Podisma*, occurs in the old world. They are primarily divided into two sections, dependent on the shape of the subgenital plate of the males, a division

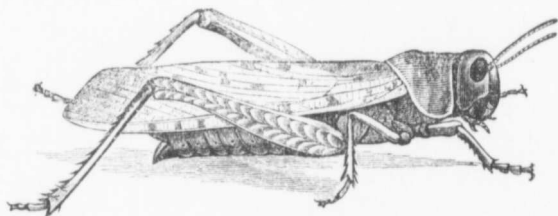


Fig. 32. Locust (magnified.)

which broadly but not exactly separates the tropical or subtropical genera from those of the temperate regions, and leaves an almost equal number of genera in each section. Of the tropical section, as it may be called, but a single genus is known in Canada, *Hypochlora*; its single species *H. alba* (Dodge) is reported by Brunner as occurring in Manitoba, and this is altogether probable as it ranges along the border in the United States from Minnesota to Montana, but extends south only to Kansas and Colorado. It is a slender, hoary green, long-legged insect with abbreviated tegmina, and is partial to the white sage, *Artemisia ludoviciana*.

Of the temperate section, only three of the genera are actually known to inhabit Canada, though, as we shall see, there is little doubt that others will be found there. One of these is *Podisma*, formerly known as *Pezotettix**, a genus remarkable among the *Melanopli* for its longitudinal range, which is around the globe north of Lat. 35° N.; for its penchant for high altitudes, many of the species occurring only above or at the forest line on high mountains; and for the wide separation of its sternal lobes, though this alone will not separate it from all *Melanopli*. Moreover its organs of flight are never completely developed and may often be altogether wanting, as may then also, though in none of our American species, the tympanum found on the sides of the first abdominal segment; as this tympanum is regarded as an auditory apparatus, and as the power of producing sound is gone with the loss of the tegmina (against which the femora are scraped,) the absence of the tympanum in some apterous European species would seem to indicate that they had departed the more widely from the original type, and had therefore a longer history behind them.

* See *Psyche*, vii, 195.

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