

# The Canadian Entomologist.

VOL. XLIX.

LONDON, MARCH, 1917

No. 3

## POPULAR AND PRACTICAL ENTOMOLOGY.

### PRECIPITATION IN RELATION TO INSECT PREVALENCE AND DISTRIBUTION.

BY NORMAN CRIDDLE, DOMINION ENTOMOLOGICAL LABORATORY, TREESBANK, MANITOBA.

In this paper an attempt is made to draw attention to a few instances of how humidity, chiefly in the form of rain or snow, has been and is instrumental in either aiding or curtailing the spread of insects over the country, particularly in the Prairie Provinces.

There are very few insects, if any, that can live through all their stages without the aid of moisture. Most of them, indeed, are very much dependent upon it, especially in their larval stages. Numerous examples could be given, and a suitable one is provided in the various races of Tiger Beetles (*Cicindela*). We find these beetles from haunts in close proximity to water, to habitations on plains of drifting sand, apparently far removed from it; yet an examination a few inches below the surface, in the latter place, will show that the sand, if not equally moist, is at least sufficiently so for the wants of the beetle larvæ, which are easily able to burrow down to it. There are occasions, however, when the insects' prairie haunts become very dry; at such times there is reason to believe that some of the larvæ perish while the remainder retire to the bottom of their burrows and remain inactive until such time as rain once more moistens the soil.

While most insects require water in some form or other, there are certain kinds which seem to thrive best when it is least prevalent, and are only found in the driest situation. In this class we have most of our locust pests, and the celebrated Rocky Mountain Locust (*Melanoplus spretis*) supplies a good example. This locust, as is well known, has caused enormous losses in years gone by and has invaded our territory on more than one occasion. There is somewhat of a mystery surrounding this insect at the present time