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cimeter. With few exceptions, grasshoppers are solitary insects, nor are they often sufficiently numerous to be injurious or attract attention. At the head of the family systematists place a group of wingless forms represented in Canada by two species—one restricted to the North-west, the other apparently common in Ontario and Quebec. The latter is the spotted, wingless grasshopper of Harris, *Ceuthophilus maculatus*. This curious insect lives in small communities under stones in damp woods and beneath the loose bark of dead trees. It is rather strongly built, with stout hind thighs; its general colour is brown, thickly mottled with spots of a lighter colour; the back is arched, and the creature has a smooth, shiny appearance as if varnished. It is entirely wingless, ovipositor rather long and nearly straight. It appears to be somewhat carnivorous, as I have taken it in cans baited with meat. The western insect is *Udeopsylla nigra*, Scud. It resembles in form the preceding species, but is heavier and stouter; the ovipositor is rather short, and thick at the base. Colour, shining black.

The next group contains the typical insects of the family, the green grasshoppers or katydids. Most of these possess ample wings and can fly well. Some species live on trees and shrubs, while others inhabit meadows and pastures. They are pretty and harmless creatures, not being numerous enough to be injurious; and owing to their retiring habits and the similarity of their colour to the leaves and grasses amidst which they live, are but seldom noticed even in the localities where they are most abundant.

"The shrilling of these insects is produced by friction of the large veins situated nearly on the inner margin of a talc-like plate at the base of the wing-covers. When the insect shrills, the wing-covers are raised and the bases shuffled together."—Riley. The shrilling of some of the southern species is quite powerful, and where the insects are very abundant the noise is sometimes unpleasantly loud; but in these northern regions the notes of our grasshopper are weak, nor are the insects sufficiently numerous to attract much attention.

Our green grasshoppers may be divided into two groups, one containing the species that live on trees and shrubs, (the true Katydids) the other those species that live on the ground or in tufts of rank herbage (the meadow grasshoppers.)

Our commonest arboreal species is the narrow-winged Katydid, *Phaneroptera curvicauda*, De Geer. It may often be observed resting on shrubs and young trees during the latter part of summer, occasionally taking a short flight from tree to tree. It may be recognized by its narrow and straight wing-covers, and by the male having a cylindrical style curving from below upwards, and resting in the forks of a furcate appendage which projects from the end of the abdomen. The ovipositor of the female is rather short and curved abruptly upwards, the extremity being toothed on both sides. The female deposits her eggs in the edges of leaves, as discovered by Miss Murtfeldt. Prof. Riley describes the note of this species as a soft *zeep, zeep*, sometimes uttered singly, but generally thrice in succession.

While passing through its earlier stages this species wears a more varied dress than the simple green of the adult insect. In the *larvæ* the colours are purplish-black and white, arranged in minute squares on the head and body, the antennæ and legs being marked with rings of the same colours. The *pupa* is green, varied with purple on the sides, and adorned with a double row of crimson spots on the dorsal surface. The mature insect is wholly green. It may be found during August and September.

The Oblong-winged Katydid, *Phylloptera (Amblyconypha) oblongifolia*, De Geer, is green like the preceding species, but may be distinguished from it by its larger size, and by the oval form of its wing-covers. It appears to be rare in Canada. I have not seen any account of the earlier stages of this insect, but in the latter end of June, 1885, I found two larvæ which, I think, probably belonged to this species, as they were entirely pale green; and on August 1st, 1885, I found two pupæ, also green (*curvicauda* is marked with purple and white when immature), and I know of no other arboreal species in eastern Canada.

The Broad-winged Katydid, *Platyphyllum concavum*, Harr, may be distinguished from our other species "by the greater length and convexity of the wing-covers, which