acquires a firmer cona curved or slanting the number of from

us femur-rubrum in ularity and without

by rasping the hind other the edges of the

Tettiginæ. To the thorax) extends only mber of our species. covers are aborted, ast, the extremity of

ession of species from om the sunny slopes hese are the Grousebody being broadest d, the head is very ers are merely little eccies are all small, nsformations during it state.

of locust may often scata, Harr. There in, the wing-covers next the body, with ont margin; length t wholly green and occurs in the same occurs in the same species, the perfect state ates that they "are stables and flowers,

pellucida, a small our ash-brown, face other on the side s, wings colourless, male a little less. eet.

s, prominent among e. Many of these eing able to change colored, reminding

gs yellow at base

s of Tragocephala.

Ind darker shades,

Vings pale greenish

na is our largest

ash-brown colour,

in, which is pale

Edipoda phænicoptera is light brown, spotted with dark brown on the wing-covers, wings coral red with a dusky border. This is a vernal species, flying with a loud, snapping noise as soon as the snow is off the ground.



Our most abundant and troublesome species in the older Provinces is the common red-legged locust, *Caloptenus femur-rubrum*, (Fig. 20), which, during some years, multiplies to such an extent as to seriously injure the hay and other crops.

The Entomologist to the Department of Agriculture in his report for 1885 quotes Mr. J. Scriver, M.P., as fol-

lows:—"Grasshoppers were numerous and very destructive in certain localities. In the month of August our pastures were swarming with them, and they afterwards attacked the oats also. They did much injury by biting off the separate flowers just as they came out of the sheath, sometimes destroying the whole panicle. Their ravages were most severe in the townships of Hemmingford and Havelock, and particularly in the parish of Lacolle, where one farmer had to cut down his oats and use them for fodder. The species referred to was the common red-legged locust, Caloptenus femur-rubrum."

During 1885 locusts were very numerous all through the country, and several milkmen told me that they had seriously injured their pastures. At Lachine I observed that in many places the shrubs and young trees growing by the fences were almost stripped of leaves by them, presenting a ragged appearance. The species that I found up in the shrubs were the red-legged locust, Caloptenus femur-rubrum, and the yellow striped locust, Caloptenus femoratus. The latter is a large, clumsy-looking species, easily recognized by having two yellow stripes running from the head to the end of the wing-covers. It is a common species and very troublesome in gardens.

The destructive Rocky Mountain locust, Caloptenus spretus, Uhler, (Fig. 21), is almost identical with our commonest red-legged species, but has longer wings, and in the male the

end of the abdomen is turned up like the prow of a ship. For a full account of this species, the reader is referred to the Rev. C. J. S. Bethune's valuable paper in the Society's Reports for 1874-75. By the middle of October nearly all our locusts have disappeared, but a few specimens of *Caloptenus* and *Stenobothrus* linger until the autumnal frosts put an end to their existence.



The ravages of our common locusts might be greatly lessened by beating them with bundles of brush, and thus driving them into hollows or against fences. When thus congregated, they could be killed by beating them with shovels or by gathering into sacks and boiling down for hogs. The best time for this work would be the end of June and beginning of July, as at this time our most injurious kinds have not acquired wings, moreover, they are now mostly in the pastures and can be destroyed without injuring the standing crops. Dr. Harris states that in the south of France "the locusts are taken by means of a piece of stout cloth, carried by four persons, two of whom draw it rapidly along, so that the edge may sweep over the surface of the soil, and the two others hold up the cloth behind at an angle of forty-five degrees. This contrivance seems to operate somewhat like a horse-rake, in gathering the insects into windrows or heaps, from which they are speedily transferred to large sacks."

## FAMILY 4.—PHASMIDÆ, (WALKING-STICKS OR SPECTRES).

This family is represented in Canada by only one species, the well-known Walkingstick insect, Diapheromera femoratum, Say.

This curious creature is entirely wingless, and looks very like a small twig. It lives almost altogether on trees, on the leaves of which it feeds, being found most frequently on oak and basswood. According to Packard, the egg-sac is flattened, elliptical, with a lid in front which can be pushed open by the embryo when about to hatch, and is deposited in the autumn. With us it is seldom numerous, but some few years ago it