

A tree once attacked never seems to recover, and the only way to check the ravages of the insect is to cut down those trees affected.

In Montana the cattle feed out all the year round on the "bunch" grass, which is of inestimable value to that country. A curious fact to be noticed is that wherever timothy and blue grass is introduced it seems to kill out the bunch grass, so that the advance of civilization may in fact entirely alter the economy of the country.

The grasses do not seem troubled as yet with any pests.

The Colorado potato bug is merely known in certain localities.

The fruit trees are troubled only by flies and ants, so that the territory is nearly free from noxious pests.

Prof. Henshaw said the expedition was one of great interest.

A curious feature was the late hours at which insects appeared to feed, many of them after sundown.

Papilio machaon was found in great numbers.

Carabidæ were found in dry places, whereas in the East they usually preferred moist situations.

The genus *Callopteryx* was also found. This was especially noticeable as it had never been known to occur west of the Rocky Mountains.

After this a considerable time was spent in informal discussion and examination of interesting specimens brought by members from various parts of the continent, and the meeting then adjourned.

THE GRAPE BERRY MOTH—*Lobesia botrana*.

BY THE EDITOR.

This insect is an imported species and has long been injurious to grape culture in the South of Europe. The exact period of its introduction to America is not known, and it is only within the past few years that attention has been called to its ravages. When abundant it is very destructive, in some instances it is said to have destroyed nearly fifty per cent. of the crop.

During the past season it has been very abundant in the neighborhood of London, there being very few vines the fruit of which has not been more or less injured. The young larvæ have usually been first observed

early in July, when the infested grapes show a discolored spot where the worm has entered. [See fig. 21, *c*.] When the grape is opened and the

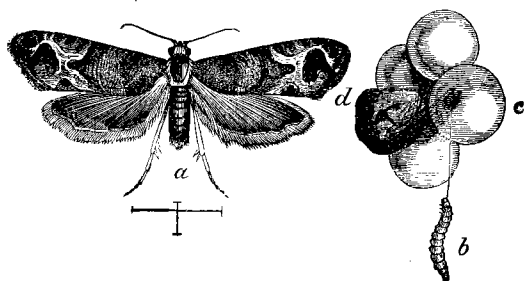


FIG. 21.

contents carefully examined there will usually be found in the pulp a small larva rather long and thin, and of a whitish green color. Besides feeding on the pulp it sometimes eats portions of the seeds, and if the contents of a single berry are not sufficient, two, three, or more are drawn together as shown in the figure and fastened with a patch of silk mixed with castings, when the larva travels from one to the other, eating into them and devouring their juicy contents. At this period its length is about an eighth of an inch or more; the head is black and the next segment has a blackish shield covering most of its upper portion; the body is dull whitish or yellowish green. As it approaches maturity it becomes darker in colour and when about one third of an inch long is full grown, see *b*, figure 21. The body is then dull green with a reddish tinge and a few short hairs, head yellowish green, shield on next segment dark brown, feet blackish, pro-legs green.

When the larva is full grown it is said to form its cocoon on the leaves of the vine, cutting out for this purpose an oval flap, which is turned back on the leaf forming a snug enclosure which it lines with silk; frequently it contents itself with rolling over a piece of the edge of the leaf, and within such retreats the change to a chrysalis takes place. The chrysalis is about one fifth of an inch long and of a yellowish or yellowish brown color, from which the moth finally escapes.

The perfect insect which is shown magnified, *a*, figure 21, measures when its wings are spread nearly four-tenths of an inch across. The fore wings are of a pale, dull, bluish shade with a slight metallic lustre, becoming lighter on the interior and posterior portions and ornamented with dark brown bands and spots. The hind wings are dull brown, deeper in color towards the margin, body greenish brown. It is said that there are two broods of this insect during the year. We have never

seen them at any other time than in the autumn when the grapes are approaching maturity.

REMEDIES.—As it is possible that most of the late brood pass the winter in the chrysalis state attached to the leaves, if these were gathered and burned a large number of the insects would perish. The infested grapes might also be gathered and destroyed. This insect is attacked by a small parasite which doubtless does its part towards keeping the enemy in subjection.

CORRESPONDENCE.

DEAR SIR: Please insert the following correction of line 12, page 156, August number: For "only these little claws rather than the usual tubercles," read "only three little claws instead of the usual circlet of tentacles."

V. T. CHAMBERS.

DEAR SIR: In preparing my article on *Homoptera lunata* in recent number of the CANADIAN ENTOMOLOGIST I overlooked the article by Prof. J. A. Lintner in his 4th Entomological contributions, where he gives good reasons for thinking *lunata* and *edusa*, and perhaps *Saundersii* but sexes of one species. I had seen his article but at the time of writing it did not occur to me.

G. H. FRENCH, Carbondale, Ill.

DEAR SIR: Mr. A. R. Grote, p. 128, July, states in favor of his opinion that Staudinger's Catalogue did not hesitate to introduce for *Pap. Podalirius* the name *P. Simon*. But Dr. Staudinger has in the same volume, Errata, p. 422, corrected this statement: "*Podalirius* nomen est *vetustius*."

H. A. HAGEN, Cambridge, Mass.

NOTES AND CAPTURES.

PAPILIO CRESPHONTES, Cram.—I saw on the street very recently a magnificent specimen of this beautiful butterfly; it was flying slowly and could easily have been captured with a net. E. B. REED, London.