

*inquasita*, *necopina* and *nitela*. This appears to me a reasonable view when we consider the markings of the Noctuids as a whole.

It is a delicate question whether we should prefer the name given to the variety, when described on the same page as the species, merely because it stands first. I do not think it subserves the practical ends of science. For instance, I prefer the name *Orthosia ferrugineoides* for our common species, and record *bicolorago* as designating the aberration, although the latter stands first in Guenée. It is pushing priority beyond what the law intends. But if *nebris* and *bicolorago* were first described by another author and in another book, their priority for the species would be undoubted.

I was also much interested by Mr. Lyman's paper in the January number. In the Annals of the N. Y. Lyceum N. Hist., Vol. VIII., 1866, will be found a paper by Grote and Robinson, Lepidopterological Contributions, with three coloured plates, in which we originally drew attention to Abbot's figuring two species on Plate 78 of the Insects of Georgia. We then gave the following synonymy on page 374, *l. c.*:

(1) *Lophodonta georgica*.

*Phalena angulosa*, Ins. Ga., 78 [83], ♂, upper left-hand figure (1797).

*Notodonta georgica*, H.-S., Ex. Lep. 384, ♀ (1855).

(2) *Lophodonta angulosa*.

*Phalena angulosa*, Ins. Ga., 78 [83], ♀, lower right-hand figure (1797).

*Lophodonta angulosa*, Packard, P. E. S. P., 358 (1864).

It is not certain that the lower right-hand figure represents a female. We gave particulars which render it possible that this figure also represents the male sex. The name *angulosa* became restricted to this species by Herrich-Schæffer's description of *georgica*.

## CHANGES IN ENTOMOLOGICAL FAUNA OF NORTHERN ILLINOIS.

BY F. M. WEBSTER, WOOSTER, OHIO.

Among the ways I find that one can study the changes in the insect fauna of a locality as years go on is to occasionally go back to some such section where one has years ago been familiar with the insects to be found there and note the number of newcomers or, possibly, the passing of some of the old ones, though these last are by far the less numerous of the two.

Recently, while on a visit to my old home in De Kalb county, Northern Illinois, the insects of which I was pretty well acquainted with twenty years ago, but with which I have known little since that time, I was most unexpectedly met with complaints of the Buffalo Carpet beetle, *Anthrenus scrophularia*, unheard of there until within a few years, and which I never captured there myself.

Another newcomer was the Box Elder bug, *Leptocoris trivittata*, which I encountered in February, crawling and flying about my room, which had not been kept heated during the winter. This last was not so much of a surprise, as Dr. Forbes, whose monumental works on the insects of Illinois will stand as long as applied entomology itself, told me last fall that it had then nearly or quite crossed the State from west to east. But the thing did certainly look out of place to me where I found it.

Of the old-time injurious species, such as occurred there thirty or forty years ago, there is not one that does not occur there now, though not always in such numbers. The Chinch bug, *Blissus leucopterus*, that I remember back in the fifties, is not as destructive as of old, on account, I believe, of the fact that all uncultivated grounds are now generally pastured during summer, leaving no protection for the bugs during winter.

In most cases great diminution in numbers is most conspicuous among such species as fed on the natural vegetation, and as the land has been underdrained and brought into cultivation, these have disappeared with their food-plants. Thus, *Saperda mutica* and *Plectrodera scalator* have gone the way of the willows upon which they subsisted. *Acmaeodera pulchella*, formerly always common on the blossoms of *Rudbeckia hirta*, has become far less so, as the plant has succumbed to the cultivation or pasturing of the land where once they grew abundantly.

The busy, economic entomologist has far too little time to watch these things closely, but it would seem that there was here a field for such as are able to withdraw from the hurry and push of professional work, and quietly and carefully watch these comings and goings mid the insect world, for other States than Illinois offer equally desirable fields for such observations. Not only this, but we not infrequently hear complaints from those who follow some line of business and study insects only as a pastime, that they have no opportunity to collect outside their own narrow field, whereas, here is a phase of entomological study that is really suffering for just such labour as these circumscribed people can best give to it. The data obtained

in this manner are something more than mere gossip, as, if accurately observed and recorded where they are accessible to the busy man, these notes will sooner or later prove invaluable in the study of insect diffusion and disappearance.

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#### BOOK NOTICE.

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INSECTS INJURIOUS TO STAPLE CROPS.—By E. Dwight Sanderson, B. S. Agr., Entomologist, Delaware College Agricultural Experiment Station. New York: John Wiley & Sons. (Price \$1.50.)

This is a very satisfactory compilation of the information to be obtained from the publications of State Agricultural Experiment Stations and of the Division of Entomology at Washington, regarding a considerable number of insects of practical interest to farmers. The writer lays no claim to originality, but he has succeeded in preparing a useful book, full of information of a trustworthy character, arranged in a convenient manner, and sufficiently illustrated. Some of the photogravures, however, are by no means as clear as one would wish. The book is intended for the use of farmers, and aims at giving them a correct knowledge of the insects with which they may have to contend and the methods that have been found most serviceable for preventing or controlling their injuries. Whether the ordinary farmer can be induced to read and make use of a book of this kind is somewhat doubtful, but if he does it will surely repay him well for any effort he may put forth in doing so.

The work opens with a short account of some of the most startling losses caused by insects, which must give the reader a vivid idea of their importance. After a chapter on the structure and development of insects, there follows a very useful epitome of the methods of intelligent farming, which will be found effective in preventing insect injury. A chapter is devoted to beneficial insects, in order that the farmer may know friend from foe, and the greater part of the book to descriptions and life-histories, together with remedies, of insects affecting various grain crops, corn, clover, cotton, tobacco, hops, potatoes, and sugar beets. The work is completed by an account of the most useful insecticides and the formulæ for their preparation. On the whole, it is an excellent manual, and will be found a handy book for reference by all who are engaged in the practical work of fighting against insect foes.

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