

offers it to Prof. Kellicott for examination and study. The pupæ in this genus afford excellent specific characters.

Prof. Riley says Mr. Koebele last fall found in N. H. a larva boring in birch, which he thought was a Cossid. This died, or at least has not emerged, and as far as he recollects agreed very well with Dr. Kellicott's description. However, some examination had been made, and some discussion had been had with the result that it was doubtful whether the larva was Cossid, or whether it was not that of a *Zeuzera* or an *Aegeria*. He simply suggests this as a possibility as the larva seems to agree very well with Dr. Kellicott's account.

Dr. Kellicott says he is very sure it is not an *Aegeria* but a *Cossus*. He further mentions that he has found *querciperda* at Buffalo, in dry red oak. At first he thought them small specimens of *C. robinie*.

Prof. Lintner hopes that Dr. Kellicott will continue his experiments and observations on this interesting group.

Prof. Riley then gave some

NOTES ON THE PRINCIPAL INJURIOUS INSECTS OF THE YEAR.

We are aware that almost every year is characterized by some unusual prevalence of destructive insects, not previously observed in any such numbers. Examples were last year *Pulvinaria innumerabilis* and *Agrotis fennica*. A glance at the entomological events of the present season shows a comparative scarcity of such phenomena so far as noxious species are concerned and I can recall but few characteristic of the year. One worthy of mention is *Agrotis messoria* found at Goshen, N. Y., destructive to the onion. This had previously been known as destructive to vegetation, but principally to fruit trees by cutting out the buds in early spring; hence the habit noticed this summer has been exceptional. Another species, belonging to the Coleoptera, *Anthonomus musculus*, attracted considerable attention in the strawberry fields, on Staten Island, N. Y. This habit of the species is not new, because I had noticed it in Missouri many years ago, but its abundance and destructiveness were phenomenal. As is usual, where a great abundance of a form is collected, the species was found to have two names, and there is some doubt as to what the destructive species really is.

Another Lepidopterous insect, *Eurycreon rantalis*, a Pyralid, is worthy of mention as a conspicuously injurious insect in the South-Western States. It is astonishing what an amount of injury this insect has done, and the agricultural papers have been full of accounts of this "web worm", as this insect has popularly dubbed. This larva I first found in 1867, in Western States, and in Kansas in 1873, common on

Amaranthe. The present year it was destructive not only to the vegetables but many other plants. All through Texas, Indian Territory, Kansas and Arkansas, and also Iowa and Nebraska, the insect was most destructive. The larva, though of the usual Pyralid form, is still well distinguished by its pale green color and large piliferous spots.

During the present year *Cicada septendecim* has appeared in many portions of our country and I have been able to collect a large number of valuable notes that will enable us to better fix the limit of distribution and the extent of both the *septendecim* and *tredecim* broods.

In Central N. Y. the Hessian fly has done a great deal of damage. For some years past it has not attracted much attention there, and it has been the opinion of some even well known Entomologists that it had left its old haunts and migrated to the west. As a matter of fact however wheat culture has changed its center, and the only reason there have been no complaints in the East, is that there was little or no grain for them to attack; and this year the sudden increase in numbers has again called attention to the fact that the insect has not yet left its old haunts. So much injury has been done that many farmers abandoned the crop and did not harvest it.

On the Pacific Coast, locusts have been unusually abundant, and have done great damage. Hitherto the injury had mostly be done by *Camnula pellucida*, but this year the species has been *Melanoplus devastator*. I regret to say that Mr. L. Bruner, an agent sent to visit Montana, reports a great increase of the *Acridida* throughout that region and great fears are entertained of the future; but the prospects are not necessarily gloomy, for the weather has of late been unfavorable to their development, and unless there is a great change of conditions they will not be unduly abundant.

Melanoplus spretus is still most abundant, but native species are also very plentiful, and *Camnula pellucida* was found, indicating that all these species can become very destructive in the west. Many other species were locally abundant or destructive, but these can be considered characteristic of the year.

Dr. Kellicott mentioned that in Buffalo *Podosesia syringæ* has been destructive to the ash trees. Prof. Osborn and Mr. Hy. Edwards had stated in "Papilio" that the young shoots or branches were attacked, but in Buffalo it lives under the bark of the old trees. He has observed a number of the trees, has seen the pupa cases projecting and has watched 20 or more from a single tree in a single day. Often 100 or more were in a single tree.

A gentleman from Goshen, said he knew something about one of the insects mentioned by Prof. Riley. A friend of his had three acres of

onions, and all had been eaten up, so the land had to be plowed and put into potatoes. The larvæ never came out in the day, but in the evening they came out in vast numbers and all hands turned out to capture them. A man and wife had between 9 and 12 P.M., collected 8 quarts of larva. In regard to the Hessian fly, that is so abundant in that part of the State that wheat culture is simply abandoned.

Prof. Underwood says the maple ægerian has been common in Syracuse this year and many trees were literally full of larva.

Prof. Osborn says in reference to *Sesia syringæ* that in 1—1½ inch ash twigs he has found them most abundant—those from larger trees contained mostly parasites. *Calopterus femur-rubrum* has been abundant and attracted considerable attention—in fact some papers proclaimed the arrival of *M. spretus*. They have done considerable damage to oat fields, eating off the heads, and in pasture lands, where the damage is less evident.

In motion of Prof. Cook the meeting adjourned to meet again at the call of the President.

(To be continued.)

Notes and News.

Dr. Goding writes us as follows: I have another piece of good news to report. Tennessee—the most progressive of all the Southern States has made another advance and appointed a State Entomologist. Prof. E. W. Doran, Principal of the London (Tenn.) Academy is the appointee and will at once enter upon his duties.

Though not very well known to the entomological world, yet Prof. Doran has been a quiet, earnest student of the habits of insects for several years, and no doubt a bright future is before him.

Little entomological work has been done in Tennessee, and, with a rich soil and fine magnolia groves about him we may well expect some fine fruit following Prof. Doran's labors*.

Prof. Doran is unknown to us, and we await with interest the result of his work. It is always a pleasure to us to learn of a new worker, and in this case there is added the gratification that another State has recognized the importance of having an Entomologist. It might, perhaps, have been better, had a more experienced man been appointed, but we are willing to give our new friend a fair show.

* Occasionally, in a narrative of travels an interesting observation on insect habits is made, and is very apt to be overlooked. Mr. E. A. Schwarz has handed us the following notes from "Die Thierwelt im Holländischen Guiana" von Aug. Kappler. * *Ausland* 1885. P. 617. No. 31. Speaking of *Bradypus cuculliga* (Faulkner), an animal of the size of a cat, covered with a fur of dense hair-like wool; and belonging to the *Edentata*, he says "In this thick fur there lives as a parasite, a Tineid,

* Animal Life in Dutch Guiana, by Aug. Kappler.

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