

When you know months beforehand what plant you will require, it is best to transplant them to your own grounds, and so have them at hand fresh and growing. By such means I have successfully handled, both for eggs and for larvæ, such species as *Colias eurydice* and *Lycæna sonorensis*, both of which species it would seemingly have been impossible to manage otherwise.

Breeding is the touchstone which tests all species of butterflies, and by it must they all stand or fall. The larva is as much the individual life as is the imago, and we cannot thoroughly know a species unless we have seen its earlier as well as its later stages. Therefore anything which simplifies the management of the early stages is of interest to the biologist.

CORRESPONDENCE.

PROF. J. B. SMITH'S LIST OF LEPIDOPTERA.

Dear Sir: Prof. French in the January number criticises in some points Prof. Smith's catalogue of the Catocalæ in the New List of Lepidoptera. As I was primarily responsible for the list of the Catocalæ, will you and Prof. French kindly allow me an explanation? 1st. Prof. French says "var. *Virens* is not a variety of *Cordelia*, Hy. Edw., but of *Amasia*; and *Cordelia* is not the one figured by Dr. Strecker, pl. 9, f. 12." But *cordelia*, Hy. Edw., is a synonym of *amasia*, Ab. & Sm., and Dr. Strecker's figure is not *amasia*, Ab. & Sm. The error comes from the fact that Abbott & Smith figured two species as ♂ and ♀ of *amasia*, the description being of the upper one only. The insect represented by the lower figure of Abbott & Smith was distributed by Mr. Grote, and figured by Dr. Strecker as *amasia*. Of course the name attaches to the figure described, as afterwards Guenee located it, calling the lower figure *connubialis*. The lower insect I afterwards described as *sancta*, regarding Guenee's name as without authority, as the description was from a picture. Whether I was right or not I will not here say, but the insect distributed by Mr. Grote, and figured by Dr. Strecker as *amasia*, is either *connubialis*, Gn., or *sancta*, Hulst; while the *amasia* of Abbott & Smith is the *cordelia* of Hy. Edwards, as Mr. Edwards afterwards acknowledged to me. *Virens* was put as a variety of *amasia*, Ab. & Sm., because Prof. French thus located it, and I supposed he meant *amasia*, Ab. & Sm. 2nd. Prof. French says "there is no good reason for separating the two forms of *retecta*." I am not sure what he

means by the "two forms of *retecta*;" but if he means *retecta*, Grt., and *luctuosa*, Hulst, then, in view of what he says after, *luctuosa* becomes a variety of *retecta*, Grt. 3rd. Prof. French says "*Flebilis* is not a variety of *retecta*," etc. "Dr. Strecker's figure, pl. 9, f. 4, is not *flebilis*, but a small form of *Desperata*," etc. Dr. Strecker does not call figure 4 *flebilis*, but a variety of it. It is, however, except in the black dashes, as near as can be the exact counterpart of pl. 9, fig. 3, which is *flebilis*, taken from Mr. Grote's type. Also these two, save in the black dashes, are the counterparts of pl. 9, fig. 2, which is *retecta*, and which is from Mr. Grote's type. Having seen the types of both *retecta* and *flebilis* I can bear witness that the figures are very excellent. Mr. Grote had among his types of *retecta* one or more specimens of *luctuosa*, Hulst, but his description is of the form figured by Dr. Strecker. 4th. I am glad to learn more of *Ululume*, Streck. I have seen the type, have one of the specimens from which the description was made, and so know the insect. At the time of publishing my synopsis in the Brooklyn Bulletin, Vol. VII., 1884, pp. 13-56, I regarded it as a variety of *lacrymosa*, as did also Dr. Strecker. Let me add that very few of all the so-called varieties of the *U. Catocalæ* are varieties in the scientific sense. They are simply colour variations, and the continuance of their names is, in the majority of cases, only a convenience, and without scientific authority.

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SECTION F OF THE A. A. A. S.

Dear Sir: In the January (1892) number of the Botanical Gazette, Dr. B. D. Halsted, Secretary of Section F of the Association, suggests the formation of a Botanical Section, to be separated from Section F. This is a matter in which entomologists have some interest, and concerning which it might be well to have an expression of opinion. All who have attended recent meetings of the American Association must have noticed what a remarkable development of interest there has been in both botany and entomology, and how crowded were the programmes, not only of Section F, but of the Clubs. At the Washington meeting the writer was on the Sectional Committee, which passed on the papers offered, and even after excluding all of doubtful value or interest, it left so many that a proper presentation was out of the question. A most interesting series of papers on parasitism in insects was read at breakneck speed, and not a word of discussion was allowed. I myself had three papers, for which I had prepared charts in illustration, and which

presented the results of original work. I barely had time to hurry through the abstracts, and could not even explain my charts. The botanists occupied fully one-third of the time of Section F, and had a large programme for the Club besides. The entomologists had many papers before the Club which were well worthy of presentation to Section F. Botany is quite sharply separable, has a sufficient number of members to present a full programme as a section, and would leave Section F for zoology in general with more time for the proper discussion of papers. As matters now stand, papers are grouped—botanists desert Section F when entomological papers are read, and entomologists usually do as much when botanists hold forth. In the orderly evolution of the Association botany is entitled to a separate section, and entomologists should aid the botanists in securing the necessary action at the next meeting.

JOHN B. SMITH, New Brunswick, N. J.

NOTES.

ADDITIONAL NOTE ON AMBLYOPONE PALLIPES, HALD.

On page 138, Vol. XXIII., is mentioned the finding, in rotten logs, of colonies of this species. The fate of the specimens taken on 30th April may be related. Unfortunately the individuals then taken were not counted, but they consisted of workers and larvæ, the latter being more numerous. The box was examined on 1st June and it was found that many of the larvæ had formed cocoons, and that the remainder were feasting on a green caterpillar, which had been dragged down into the nursery. The larvæ were thickly scattered over it, evidently sucking the juices from it, and it was much shrunken. On 21st June another examination was made and a census taken of the inhabitants, which numbered 27 adults (all workers), 23 pupæ (in cocoons) and 48 larvæ. There were also a number of empty cocoons. On 5th July the numbers were reduced to 23 workers, 11 cocoons and 15 larvæ, and, what was a surprise to me, about 30 eggs, cylindrical in shape, with rounded ends and about twice as long as wide. On 13th July there were 23 workers, 7 cocoons, 13 larvæ and about 15 eggs. When I left home shortly after this the box was placed outdoors, and during my absence the insects all died or wandered off. I was disappointed in not obtaining specimens of the ♀ and ♂, and regret that the colony was not housed so that continuous observations could have been made of the inmates and the doings.

W. HAGUE HARRINGTON, Ottawa.

Mailed March 9th.