

Directors—Division No. 1, Mr. Arthur Gibson, Dept. of Entomology, Central Experimental Farm, Ottawa; Division No. 2, Mr. C. E. Grant, Orillia; Division No. 3, Mr. A. Cosens, Parkdale Collegiate Institute, Toronto; Division No. 4, Mr. C. W. Nash, East Toronto; Division No. 5, Mr. F. J. A. Morris, Trinity College School, Port Hope; Division No. 6, Mr. R. S. Hamilton, Collegiate Institute, Galt; Division No. 7, Mr. R. C. Treherne, Grimsby.

Delegate to the Royal Society—Prof. J. M. Swaine, Macdonald College, P. Q.

Auditors—Professors S. B. McCready and J. W. Crow, O. A. College, Guelph. C. J. S. B.

ON PROFESSOR SMITH'S TREATMENT OF THE FORMS OF GRAPHIPHORA (TÆNIOCAMPA) ALLIED TO HIBISCI, GUENEE.

BY HARRISON G. DYAR, WASHINGTON, D. C.

Prof. John B. Smith's article on certain species of *Tæniocampa* (recte *Graphiphora* Hubn.) should not pass unnoticed. We may be mistaken, but it appears as if it were written because Mr. Dod had ventured to have an opinion on the subject, and this was intended to overwhelm him with a quantity of new names and figures of genitalia. If so, Prof. Smith has overreached himself and landed in the synonymy. We have taken the pains to prepare slides of the genitalia of all the principal forms of the *Graphiphoras* under *hibisci* and *pacifica* in the collection of the National Museum, and are in a position to state that Prof. Smith's figures 1, 2 and 3 represent one form only, his figures 5, 6 and 7 another, while figure 4 represents a doubtful third, and figure 8 a good fourth. In short, the apparent differences in the figures represent variation, differences in position, and the accidents of drawing. If Prof. Smith had put the real differences into words in tabular form, this would have been evident, even if perhaps not suitable to his purpose. The *hibisci* type has the harpes broad, the clasper evenly curved like a sickle; the *quinquefasciata* type has the harpes narrowed, the clasper crumpled or sharply bent. *Nubilata* is a derivative of the *quinquefasciata* form, and I tentatively leave it separate. *Pacifica* is abundantly distinct.

The differences of method between Mr. Dod and Prof. Smith make an interesting comparison. Mr. Dod depends upon the markings and coloration of the insects, Prof. Smith upon the structure of the genitalia. Prof. Smith's method sounds the more reliable, yet Mr. Dod is the one who is right in his conclusions. Mr. Dod makes one species with varieties,

December, 1910

where Prof. Smith makes seven species. The discrepancy is due to an erroneous assumption by Prof. Smith, that any slight difference in the genitalia indicates a different species. This is not so. I do not belittle the importance of the male genitalia in the Noctuidæ. They are important. But the structures are very flexible from an evolutionary point of view, and slight modifications in them are not necessarily indicative of specific separation, but of racial separation only, especially if correlated with geographic distribution. Thus, the *hibisci* form extends into Colorado and the Northern Rockies, as far at least as Rossland, B. C., whence I have it. Here it becomes the form *latirena* Dod. The genitalia are unchanged. But on the west coast the race *quinquefasciata* prevails, with a slight modification in the genitalia. This race has crossed into the Western Rockies, producing the form *nubilata*, which constitutes an incipient species.

It is necessary to notice two nomenclatorial errors of Prof. Smith. First, he gives *instabilis* Fitch (1856) precedence over *hibisci* Guenée (1852), which is wrong. It does not matter whether *hibisci* is an aberrational form or the usual one for establishing the name. Only the dates of publication count. Second, there is no such species as *instabilis* Fitch. Fitch used Schiffermüller's name in error for the American representative. Misidentifications cannot be made the basis of any new name.

This synonymy will stand as follows. It is as given by Mr. Dod, with Prof. Smith's new synonyms added.

GRAPHIPHORA HIBISCI Guen.

confluens Morr.

var. *LATIRENA* Dod.

brucei Smith.

malora Smith.

var. *QUINQUEFASCIATA* Smith.

inflata Smith.

inherita Smith.

proba Smith.

? *G. NUBILATA* Smith.

G. PACIFICA Harv.

NOTES ON LIFE-HISTORY OF ANISOTA SKINNERI, BIED.

BY WILLIAM BARNES, M. D., AND J. MCDUNNOUGH, PH. D.

In the original description of this species (Ent. News, XIX, 77) a very brief account of the larval stages is given, but as far as we know no

December, 1910