

But with the Catalogues of Edwards and Strecker before me, and after viewing the varying conflict between Messrs. Strecker and Grote, I would like to ask "What constitutes a species?" There is certainly a wide difference of opinion among authors upon the subject, and if we are properly, and with profit, to read their articles and study their books, we ought to know the basis upon which they work. I am aware there is, properly speaking, in nature, no such thing as a species defined by precise limits. It is impossible to tell where variety leaves off and species begins, and where one species ceases to be one, and becomes two. But when a person becomes (by the fact that he gives a "Check List" or a "Catalogue" to the public) a professed systematist, we, "the public," have some right to the ideas of truth upon which their work is based. Apart from right, however, I am sure information on this subject will be of general interest and profit. May I therefore ask our friends to "rise and explain?"

Very truly yours,

GEO. D. HULST, Brooklyn, N. Y.

DEAR SIR,—

The paper by Mr. Robert M. Grey in your January number is of great interest. In it Mr. Grey takes the ground that the four Eastern so-called "species" of *Limenitis* are plastic forms of an original species modified by the environment and with essentially differing ranges in latitude and vertical height. The intermediary individuals which bear out this statement, and Mr. Grey's experience in collecting the different forms, are important witnesses to the truth of his discovery. I wish to point out the fact that, in experiments in breeding these different forms, we may not expect to rear all four from one brood of larvæ, as a proof of Mr. Grey's correctness. These forms of *Limenitis* stand evidently in an intermediate position between varieties and species. We may expect, indeed, more or less reversion to be made clear by breeding experiments with them. But we may suppose that these forms, either from climatic or other influences, are partially crystallized. This seems to be inferable from their greater distinctness, more intense than in the cases selected from European butterflies by Weismann and shown in *Papilio Ajax* by Edwards. Experiments will doubtless allow us to arrive at some conclusion respecting the oldest of the forms, which may prove to be *arthemis*.

A. R. GROTE, Buffalo, N. Y.