

purchase to all who are seeking for it throughout the length and breadth of our Dominion.

I have the honor to be,

yours very sincerely,

WM. SAUNDERS.

## ON THE LENGTH OF LIFE OF BUTTERFLIES.

[Read before the Ent. Sub-Section of the Am. Ass'n at Cincinnati, 19 Aug., 1881.]

BY W. H. EDWARDS, COALBURGH, W. VA.

Not long since I received a letter from a correspondent in Europe, asking what my experience was in regard to the life of butterflies, and this led to much thinking of the matter and reference to my note books, in which for more than fifteen years I have put down everything that has come under my observation relating to butterflies. The current opinion has been that the life of such butterflies as did not hibernate was short, and that in case of hibernators their existence ended soon after copulation in the ♂, and after laying their eggs in the ♀. Dr. Boisduval says, Spec. Gen., 1, p. 28: "The existence of lepidoptera in the perfect state is generally of brief duration; the male perishes some days after copulation and the female after having finished her laying of eggs." Kirby and Spence, Introd., London, 1856, p. 41, say of the perfect insect: "Its almost sole object is now the multiplication of its kind, from which it is diverted by no other propensity; and this important duty being performed, the end of its existence has been answered, and it expires."

I believe that this is a correct statement for a general one. On the other hand, Mr. S. H. Scudder, in various publications, has spoken of butterflies of the summer generations as living for months—2 to 3 months at least.

With regard to the hibernating species, I believe it is the last brood only which hibernates, so that the individuals begin their existence about the month of September. They lay eggs in the spring as soon as the food plant is ready to receive them, and shortly die. Therefore their existence would be limited to 8 or 9 months at the outside. Per contra, Mr. Scudder asserts that *Danaus Archippus* lives from a year to 15 or 16 months.