

type of a North American moth descended from a pre-Glacial North American ancestor. I have taken *Datana* as an example of a North American moth which has become so modified from its original source as a member of the ancient circumpolar fauna, the first element in our present North American fauna, as to be now classed as North American. In the same group I take *Apatelodes* as an example of a North American moth which has become so modified from its original source as a member of the tropical, or South American fauna, as to be now classed as North American. The *Ceratocampinæ*, the genus *Hyperchiria*, I regard as ultimately of Southern origin. The genus *Catocala* belongs to the first element in our fauna; it is a development from a former circumpolar fauna.

But not to go further for the moment in this direction, let us compare the American and European butterflies and moths in a more general way, so as to arrive at some conclusion with regard to the departure from a common type in the members of the circumpolar fauna. The first thing which strikes us is the comparatively greater tendency to variation, to splitting into species which characterizes the North American butterflies and moths. Take the genus *Colias*, which belongs to the first element in our fauna; how it wanders into distinct forms, sometimes still connected, again no longer now members of the same reproductive cycle. Without Mr. W. H. Edwards's observations on the larva, we should be quite at sea.

But now, compare our protean *Colias* species with the two set European forms! What is true of *Colias* is true in other genera. Take the genus *Datana* among the moths; this is an American out-growth of the European *Phalera*. Now in Europe there are two closely allied forms of *Phalera*, *bucephala* and *bucephaloides*, but they are to be at once picked out by a slight but constant difference. In America we have six or seven species of *Datana*, and, if we take out *Angusii* and *perspicua*, as being distinguishable by general colour, all very near and difficult to distinguish as moths. In the genus *Clisiocampa*, the same phenomena are repeated. See how variable the underwings are and how much difference of opinion exists among writers! I am of opinion that *Catocala residua* is a good species, but Mr. Hulst is not with me here. At the best we can say, that Mr. Hulst, in regard to other species and varieties (e. g. *præclara*, *herodias*, *gisela*), has corrected himself and adopted my views, and that he will also probably come in time to agree with me in regard to *Alabama*,