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THE LEPIDOPTEROUS FAUNÆ OF EUROPE AND NORTH AMERICA.

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The study of representative species of butterflies and moths shows us that very different grades of resemblance exist between allied forms inhabiting Europe and North America. I have shown that the modification shows itself sometimes mainly in the larval state; again the perfect insects depart more or less strongly. I have also ventured to decide that these representative species are entitled to specific rank in our nomenclature. They fulfil the condition of species, since they do not intergrade, and they can be distinguished quite surely by competent specialists. The study of these representative species leads to the question of their relation, and we have seen that they may be regarded as survivals of a former northern, circumpolar fauna, which was broken up and driven southwards by the Ice Period of geologists. I have originally tried to show, in Silliman's Journal, that we have in our Lepidopterous fauna different elements. The representative species belong to this ancient circumpolar fauna. And here belong in part the identical species like *Vanessa antiopa* or *atlanta*. The identical species have remained unaltered, but certain species have been introduced by commerce, as the White Cabbage Butterfly and perhaps the Currant Borer, *Sesia tipuliformis*. The certain separation of these two sources of North American species belonging to the circumpolar element requires historical data which will hardly be forthcoming. The second element is that which comes to us from the south, a return wave of the migration southwards, which set in on the advent of the Glacial Age. This southern element is divisible into such forms as have already firm foothold, and such as the physical phenomena of the Gulf Stream, the prevailing air currents during the summer, land as wind-visitors upon our shores. *Erebus*, *Aletia*, *Euthisanotia*, among the moths, are more or less