

They are named the *halteres*, or poisers, from their supposed use in balancing the body, or adjusting with exactness the centre of gravity when the insect is flying. Whatever may be their real utility, they may still be regarded as rudiments of a second pair of wings; and they afford, therefore, when thus viewed, a striking instance of the operation of the tendency which prevails universally in the animal kingdom, and modifies the structure of each individual part so as to preserve its conformity to one general type.

The innumerable tribes of butterflies, sphinxes, and moths, are all comprehended in the order *Lepidoptera*, and are distinguished by having wings covered with minute plumes or scales. These scales are attached so slightly to the membrane of the wing as to come off when touched with the fingers, to which they adhere like fine dust. When examined with the microscope, their construction and arrangement appear to be exceedingly beautiful, being marked with parallel and equidistant striæ, often crossed by still finer lines, the distinct visibility of which, in many kinds of scales, as those of *Pontia brassica*, or cabbage butterfly, and the *Morpho Menelaus* of America, constitutes a good criterion of the excellence of the instrument. The beautiful colours which these scales possess may perhaps generally be owing to the presence of some colouring material; but the more delicate hues are probably the result of the optical effect of the striæ on the surface; and in some cases they result from the thinness of the transparent plate of which they consist; for I have observed in several detached scales that the colours they exhibit by transmitted light are the complementary colours to those which they display when seen by reflected light.

The forms of these scales are exceedingly diversified, not only in different species, but also in different parts of the wings and body of the same insect; for the surface of the body, generally, as well as the limbs, and even in some species the antennæ are more or less covered with these scales.*

*In the posthumous work of Lyonet, which has lately appeared, nearly the whole of six quarto plates are crowded with the delineations of the different forms of the scales found in the *Bombyx Cossus*.