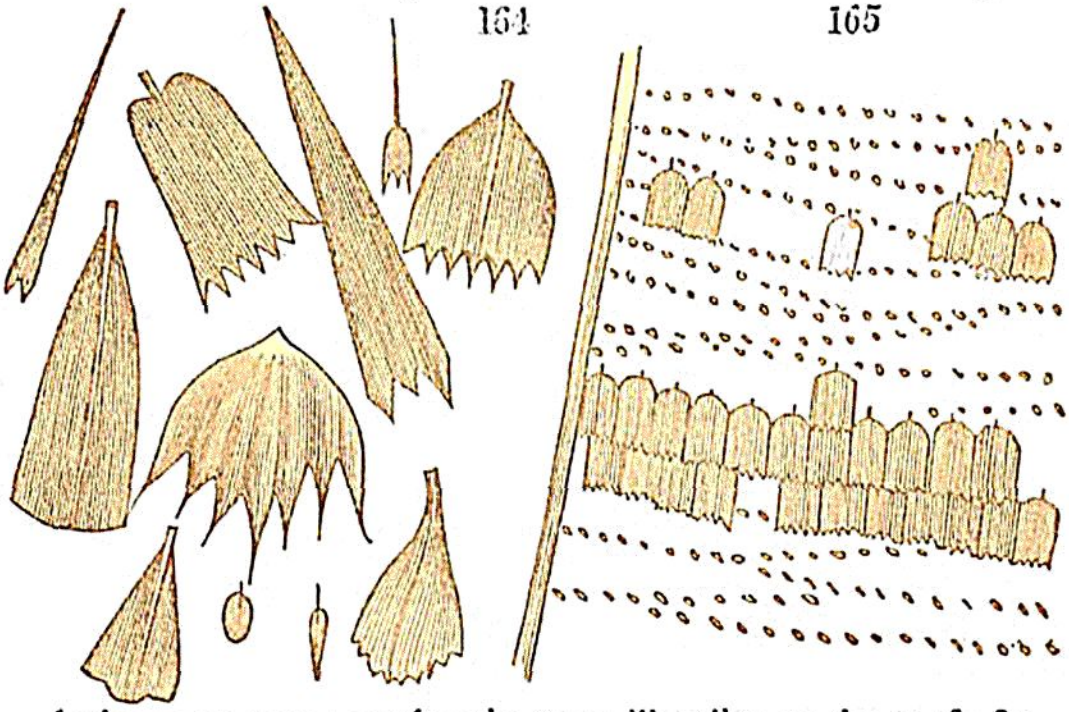
Fig. 164 exhibits some of the more usual shapes as they appear when viewed with high magnifying powers.

Each scale is inserted into the membrane of the wing by a short pedicle, or root, and overlaps the adjoining scales; and the whole are disposed in rows with more or less regu-

164 165



larity; one row covering the next, like tiles on the roof of a house.* This imbricated arrangement, together with the marks that are left on the membrane of the wing where the scales have been rubbed off, are shown in Fig. 165, which is a faithful delineation of the appearance of the wing of the *Hesperia Sloanus*, seen through a powerful microscope. The membrane of the wing itself, when stripped of its scales, is as perfectly transparent as that of the bee, and is, in like manner, supported by diverging nervures. Many butterflies exhibit in some parts of the wing, smooth pearly spots, called by entomologists, *ocelli*, or *eyes*, which arise from those parts being naturally destitute of scales. The number of these scales necessary to cover the surface of the wings must, from their minuteness, be exceedingly great. The moth of the silk worm (*Bombyx mori*, Fig. 148,)

* The scales on the abdominal rings of the *Lepisma* are of two kinds; one set being arranged in rows, as usual, and the others, which are of a different shape, being inserted between and over the former, so as to fasten each firmly in its place.