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## THE PRINCIPLE WHICH UNDERLIES THE CHANGES IN THE NEURATION.

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In developing a general view of the changes in the neururation of the lepidopterous wing, the mass of detail in any one paper may obscure, for the reader, the statement of the assumed plan of progression. This seems to be, briefly, a simplification of the longitudinal systems of veining, and attained through a process of reduction. Where this progress would interfere with the serviceableness of the organ, the dormant tracheæ in the tegument may, in special cases, develop accessory veins, such as the humeral spurs of the Lachneids, the cross branches and extra veins in Tineides, and, as I have suggested, the so-called precostal spur (at one time vein I. of Comstock) on the hind wings of the diurnals. The cubital and discal cross-veins may be, however, survivals of a former system of cross-veins, since we apprehend them in various stages of retrogression. But they may be also what I call sub-secondary: produced at one time to be abandoned at another. Still, this latter is a rather violent theory. It is better to adopt the view that there is a general simplification going on controlled by mechanical causes and subsidiary to the habit and changes in habit of the organism, and which includes these two cross-veins.

In this general movement the participating longitudinal veins are as follows :

*The branches of the radius.*

These, on primaries, are still oftenest of the primitive number, five; on secondaries Comstock shows that the first radial branch survives some-