

NOTES ON CERTAIN VARIATIONS OF SAMIA CECROPIA.

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The deceptive effect of the variable border on the apparent shape of the primary wings in *Samia cecropia* appears to have escaped general notice; indeed, in contrasting this species with *S. promethea*, the latter is universally mentioned as having the primaries much broader in proportion to the length. This is perhaps true of the average *cecropia*, but in numerous individuals I have found primaries even broader in proportion than in *S. promethea* ♀, and narrower than in *promethea* ♂, both by traced outlines and shadow projections, in several instances those with a wide light border appearing extremely narrow but proving to be even broader than the average.

This effect also extends to the so-called sexual difference in the wings, the margin usually being broader and lighter and the apical patch more brilliant in the males.

A careful comparison of a considerable number of specimens shows that no reliance can be placed on the breadth as a sexual character, and that even the antennæ (especially of those fed on *Negundo fraxifolium*) sometimes approach so nearly as to be barely distinguishable.

There are strongly marked variations in the apical patch outside of the W line, generally indicated by a purplish reflection, but sometimes brighter; occasionally above, and more frequently below, being a dull red or a brilliant crimson; more rarely over-running the line inwardly; the four black spots immediately inside of the zigzag line are often reduced to two, those nearest the apex being obsolete.

The discal spots vary greatly in color; normally dull red with a white centre, they are sometimes entirely red with no trace of white; in others they will be found almost white with merely a shade of red or pale brown about the margin, and at the sharp end, where color is always present, their shape varies from that of a pear to a long, curved (crescent-shaped) line or a short straight mark, rarely so small as to be almost obsolete.

Usually at the base of the primaries is a dull red spot, surrounded by a black and white line, and at the base of secondaries a prominent white patch extending along the upper margin; in the first either black or white may be wanting, while the latter, so far as regards the base of the wing, is