

these localities there is enough intergrading in color to show the affinity of the different forms.

NOTE.—Varieties 4, 5 and 9 are in the cabinet of Mr. W. G. Wright, of San Bernardino, Cal. I think 4 and 5 were obtained by him from Mr. James Behrens, of San Francisco, and probably both were from Northern California.

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## THE NOCTUIDÆ OF NORTH AMERICA AND EUROPE COMPARED.

(*Fourth Paper.*)

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### Tribe *Arzamini*.

The pale or yellow coloured species of *Gortyna*, the caterpillars being internal feeders, pupating, however, in the ground, prepare us for the *Nonagriini*. We have, however, in North America, a peculiar tribe which I have called *Arzamini*, and which I here interpolate. The caterpillar was first discovered by Prof. Comstock, in Florida Lakes, in the leaf-stalks of the pond lily. This was the larva of *A. vulnifica* var. *melanopyga*, and subsequently in the lake at Ithaca, the larva of the typical *vulnifica* was observed by the same distinguished entomologist. The larva is furnished with nine pairs of spiracles, and passes freely on the water from one leaf to another. Subsequently, the larva of *Sphida obliquata* was described by Prof. Kellicott. The moths of this tribe are related to the Nonagrians, but differ by the bluntly terminating abdomen of the female, recalling certain *Lachneinæ* in appearance. There are two genera: *Arzama*, with three distinct species (of which I owed specimens of *A. diffusa* to my excellent friend Mr. Moffat) in which the front is smooth, and *Sphida*, with the single species *obliquata*, in which the front is tuberculate. This appears not to be a variable or sexual character in the moths, as it may be in certain *Scarabeidæ*, but is in Lederer's opinion, with which I agree, of generic value. If we are not so to consider the tibial armature, or the conformation of the clypeus in the *Noctuidæ*, there remain few characters which we may use as generic. I am disposed to consider, then, *Copimamestra*, which differs from *Mamestra* by the tibial