

full, tending to be marked by continuous bands. The eyes are naked ; antennæ generally simple ; body usually untufted ; abdomen smooth and tapering ; the dorsal surface rarely crested ; the tibiæ not unfrequently armed. Packard says that the epicranium is longer than in the *Noctuinae*. The basis of this sub-family is comparative form. No single structural feature holds the genera together, and Lederer does not recognize its existence. Nevertheless the moths and larvæ seem to me more or less readily distinguishable, and that we may retain the sub-family term. Dr. Packard says (l. c.) that these two sub-families "agree in the main with the *Trifidæ* and *Quadrifidæ* of Guenée, though the use which he makes of the venation seems to us to lead to artificial distinctions. The very constant venation of this family does not admit of any variation in the grouping of these veins and their branches, and hence they offer characters of secondary importance." With this statement my experience fully agrees. I do not think that the venation alone should decide family position. There are already too many exceptions known to the system of Herrick-Schæffer, which is, in some cases, considered the test of family character by Lederer. I regard this paper of Dr. Packard's as of fundamental value in the study of the *Noctuidæ* ; the author, however, excluded the Deltoids, which, I think, from all their characters are *Noctuidæ*. It is not at all clear also, whether Dr. Packard considers the *Thyatirinae* as a distinct sub-family group. Probably not, and that they are merely a tribal division of the *Noctuinae*. To this view I should not seriously object, although I do not venture to decide upon it. The unequal characters by which we separate the *Thyatirinae* and *Brephinae* from the rest of the *Noctuidæ* are an objection to Lederer's classification. In the present series of papers the object is mainly to compare the fauna and the full discussion of this and similar points, must be left to a future occasion. Primarily this sub-family falls into two groups :—First, the tribe *Catocalini*, in which the secondaries, though often gaily coloured, are covered by and subordinated to the primaries. The European genera belong chiefly to this tribe. Secondly, the *Pheocymini* (*Pheocyma*, *Homoptera*, *Erebus*, etc.) in which the secondaries are partially exposed and marked like the forewings, decidedly geometriform moths. The larva thus first becomes geometriform as we recede from the higher *Noctuidæ*, and then the perfect insect follows suit.