

ON GRAPHIPHORA AND NEW N. AM. NOCTUIDÆ.

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As our acquaintance with the numerous forms of this group increases the arbitrary division of the individuals into species and the species into genera becomes a matter of increasing difficulty. At the same time this does not absolve us from a careful study of the organism in all its parts, and a correction of former groupings becomes as obligatory as the publication of the original observation. The limits of the genera *Mamestra* and *Graphiphora* are not always easy to establish from the imago, widely though they are usually separated. Both are distinguishable by the hairy eyes from all naked-eyed Noctuæ, and by the unarmed tibiæ from all genera (e. g. *Agrotis*) which have one pair or more spinose. But *Mamestra* is tufted more or less obviously on thorax and dorsum of abdomen, and *Graphiphora* (= *Taeniocampa* of authors) is without these tufts. Specimens received from California, and not in very good condition, have been referred by me to *Mamestra* and *Dianthoecia*, which, from fresh material received from Dr. J. S. Bailey, I now refer to *Graphiphora*. These are :

*Graphiphora puerilis.**Mamestra puerilis* Grote, Bull. B. S. N. S., II., p. 9.*Graphiphora rufula.**Dianthoecia rufula* Grote, Bull. B. S. N. S., II., p. 64 (May, 1874).

The genus *Dianthoecia* is established for *Mamestras* with exserted ovipositors. I have elsewhere expressed the idea that such a division is untenable, because species very similar in general appearance are separated by it. And in *Graphiphora* we have species with the ovipositor exserted (*oviduca*) and not (*incerta*). So far as I can see, the relative position of the ovipositor may vary in one species. The type of *rufula* has it exserted. Fresh females show no evidence of it. There is a variation in the color of *rufula* from reddish to gray, which is interesting. The variety at first sight looks like a different species, but I have a specimen which seems to me intermediary in shade, and we have a wide range of color in *incerta*. Among the species which I now range among the *Graphiphoræ* is