Taxonomic note on four poorly known Arizona *Eupithecia* Curtis (Lepidoptera: Geometridae: Eupitheciini)

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Abstract

Adults and male and female genitalia of *Eupithecia biedermanata* and *E. classicata* are illustrated. The original descriptions and McDunnough's subsequent generic revision did not provide complete information on these species because of the paucity of material available for study. Based upon their respective genitalic characters and otherwise similar morphologies, *E. miamata* is proposed to be a junior synonym of *biedermanata*, and *penumbrata* a junior synonym of *classicata.*

Key words: Arizona, *biedermanata*, *classicata*, *Eupithecia*, Eupitheciini, Geometridae, *gilvipennata*, *miamata*, *penumbrata*, taxonomy

Introduction

Four species of *Eupithecia* described from Arizona, *biedermanata* C. & S., *miamata* Cassino, *classicata* Pearsall, and *penumbrata* (Pearsall), are poorly known and sparsely represented in museum collections. All of the holotypes are in poor condition; those of *biedermanata* and *miamata* are in the Museum of Comparative Zoology, Harvard University, and those of *classicata* and *penumbrata* are in the American Museum of Natural History. To my knowledge, *E. biedermanata* has not been illustrated in the literature. McDunnough (1949) illustrated an adult male and partial male genitalia of *E. classicata*, the adult female holotype and partial male genitalia of *E. penumbrata*, and a topotypical male incorrectly identified as *miamata*, with genitalic drawings of both sexes. This paper provides illustrations in one place of the adults and genitalia of these taxa. In terms of current convention, the original descriptions of these four taxa are somewhat incomplete. They were summarized and emended by McDunnough (1949). Based upon my study, I am placing *miamata*