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LITERATURE CITED


AN ANOMALOUS FORELEG IN A MALE OF DODONIDIA HELMSII (SATYRIDAE)

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Individuals with one structure or another abnormally developed are well known in many organisms. A few of these aberrations are genetic, such as the “aristopedia” mutant of Drosophila melanogaster (Meigen) in which the antenna is modified into an imperfect leg-like structure through the action of a single gene. Other abnormalities are not genetic, or at least the trait is not transmitted to the offspring, if any; these aberrations are “birth defects” resulting in teratological specimens.

Teratology frequently has been noted in the Lepidoptera, with most examples involving extra wings, deformed wings, or aberrant venation. Most frequently the latter involves the atypical placement of one or more veins, the anastomosis of ordinarily separate veins, or the bifurcation of usually undivided veins as shown by Warren (1936). I encountered several such minor aberrant wing venations in the examination of hundreds of Satyridae for a higher classification study, so such anomalies are not rare. Aberrant genitalic structures, such as those reported for a female of Pellicia dimidiata Herrich-Schäffer by Monroe and Miller (1967), are less frequently encountered, probably because relatively few specimens are dissected.

The reduced forelegs of both sexes of the Nymphaloidea are of great importance in the classification of these butterflies, and occasionally one will encounter some bizarre configurations of these structures. One very unusual foreleg was noted in the only male I had of the New Zealand satyrid Dodonidia helmsii Butler, a butterfly which closely resembles no other species but which logically should be allied to the New Zealand
Fig. 1. Normal (left) and aberrant (right) forelegs of ♂ *Dodonidia helmsii* Butler; New Zealand; Carnegie Museum collection. Note particularly the hole completely through the leg at the junction of the tibia and tarsus.

and Australian *Xenica*-series of the Hypocystini (Miller, 1968). Nevertheless, if any satyrid should be aberrant, *helmsii* is the prime candidate. The femur is normally developed in this leg, as is the proximal part of the tibia. The distal half of the tibia and the entire tarsus are both greatly distended and apparently joined by an immovable “suture,” rather than a freely movable articulation as is normal in insects. At the junction between the tibia and the tarsus there is a hole passing entirely through the leg from side to side. Aberrant as the butterfly is, the configuration of this leg was too anomalous to be accepted without verification by the examination of other legs, and the opposite leg on the same specimen was normally developed and typical of the condition seen in most hypocystines. Perhaps if the foreleg had been somewhat aberrant, but not so extensively so, I would have accepted its validity. The two forelegs of *helmsii* are figured in Fig. 1.

I cannot guess what caused the aberrant leg in this specimen. Perhaps it was a tumorous growth, perhaps it was the result of an injury or perhaps it was caused by something entirely different. The moral of this case is undoubtedly that one should not take a single specimen which is highly aberrant and totally unexpected too seriously. Systematists generally have learned this lesson with wing structure and pattern anomalies, and to a lesser degree with genitalic aberrations, but the legs, palpi, etc., have been considered “conservative” characters, and as such immune from variation. This conclusion is at least suspicious and probably completely misleading.

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