First record of Ephysteris subdiminutella (Stainton, 1867) (Lepidoptera: Gelechiidae: Gnorimoschemini) from Mexico

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Ephysteris (Ochrodia) subdiminutella (Stainton 1867) is a highly variable gelechiid moth that is undoubtedly a species complex with a vast distribution in the Palaearctic, Afrotropical, Australasian, and Indo-Malayan regions (Povolný 2002). The species was originally assigned to the genus Gelechia by Stainton (1867); it was described from three specimens collected from “Jaffa and the plains of Jordan,” modern day Israel. Subsequently, many similar looking species were described from different regions by various entomologists, often based on small differences in wing coloration. Povolný (1966) described the subgenus Ochrodia under Ephysteris to accommodate E. subdiminutella and its allies, stating that it “... is one of the taxonomically most confused species of the whole tribe Gnorimoschemini ...” and “...this kind of variability is probably due to the polytypy or even the possible polymorphy of this species and by its extraordinary distribution in the Old World.” Unable to resolve their difficult taxonomy, Povolný synonymized numerous existing names with E. subdiminutella, with the caveat that the species maybe a complex (Povolný 1966, 2002). Preliminary modern studies of Afrotropical and European E. subdiminutella support that this is a species complex comprising several species (Huemer and Karsholt 2010).

Larva of E. subdiminutella have been recorded on various species of Zygophyllum, including Z. conjunctum, Z. comcutatum, Z. guyotii, and Z. album, but also on Balanites aegyptiaca (Zygophyllaceae), as well as Zizyphus (Rhamnaceae) (Rebel 1912; Karsholt & Sattler 1998; Povolný 2002). In Australia it has been reared from the seed capsules of Tribulus terrestris (Zygophyllaceae) (Povolný 1977). The larva initially mines a short gallery and later causes a large reticulate blotch-mine with or without frass inside the mine. The initial leaf mine may be abandoned at a later stage, and frequently several leaves are spun together and mined. Pupation takes place outside the leaf mine (Povolný 2002).

Among the many names synonymized under E. subdiminutella (see Povolný 2002 for a complete list) is Gelechia jamaicensis Walsingham 1897, described from Kingston, Jamaica. Povolný, who proposed the synonymy after examining Walsingham’s types at the Natural History Museum (formerly the British Museum of Natural History), London, England, concluded that the presence of this species in Jamaica must be “secondary” and that it was introduced (Povolný 1966, 2002). For a long time, Jamaica was the only New World record for E. subdiminutella. Recently several specimens have been reported from Plaza Sur and Santiago in the Galapagos Islands, Ecuador (Landry & Roque-Albelo 2010), constituting a second locality for this moth in the Western Hemisphere.

As part of ongoing studies on North American Gnorimoschemini, I