

**EXTRALIMITAL RECORDS OF THE SAGE PLUME MOTH,
ANSTENOPTILIA MARMARODACTYLA
 (LEPIDOPTERA: PTEROPHORIDAE)**

BY

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The sage plume moth, *Anstenoptilia marmarodactyla* (Dyar, [1903]) is typically a western species, common in California, New Mexico, and Arizona, but extending north to Canada, south into Mexico, and east into Texas. It is an immigrant species in Hawaii (Perkins 1913, Zimmerman 1958) and there are a few records from Central and South America (Gielis 2006). We recently identified three specimens from Connecticut and a single specimen from north Florida. While we believe this species most likely transported via shipments of ornamental sage plants, the latter Florida record is of special interest as there is potential for the species, if not already established, to become naturalized to the area.

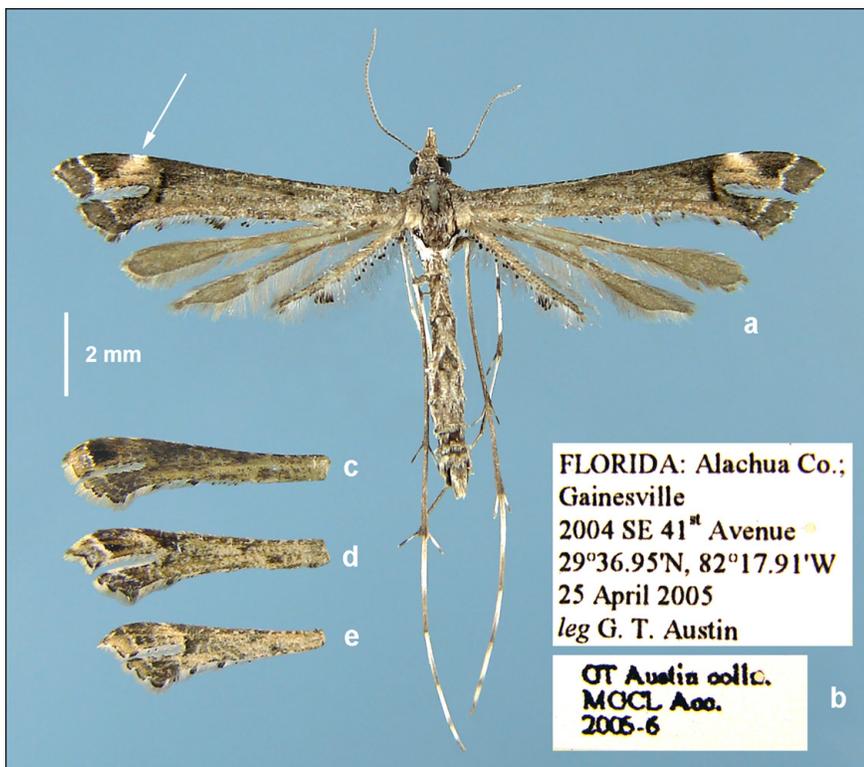


Fig. 1. *Anstenoptilia marmarodactyla* and similar species from Florida: a) Florida specimen of *A. marmarodactyla*; b) labels accompanying Florida specimen; c) forewing of *Stenoptilodes brevipennis*; d) *S. taprobanes*; e) *Lantanophaga pusillidactyla*. Figures a, c, d, e at same scale as line inset.

described and illustrated by Lange (1942, 1950) and larval chaetotaxy and pupal morphology further detailed by Matthews (2006). The favored host plant in California is *S. spathacea* with at least three generations per year (Lange 1942). Damage to plants is significant as the shoots and flowers are impacted, but no control measures have been established.

The Florida specimen was discovered within a series of similarly marked plume moths collected by the late George T. Austin, as part of a survey of North Central Florida moths from his backyard in southeast Gainesville, collecting two nights each week from 2005-2009 (Austin 2010). The specimen (Fig. 1a, b), a female, was collected 25 April 2005 at a time when it was likely he would have been adding nectar plants to his yard (A. Warren and J. Miller, pers. comm.). Three other species occur in North Central Florida, which, although smaller, have similar forewing markings and clusters of dark fringe scales along the anal margin of the forewing and the third lobe of the hindwing. These include *Stenoptilodes brevipennis* (Zeller, 1874) (Fig. 1c), *S. taprobanes* (Felder & Rogenhoffer, 1875) (Fig. 1d), and

Larvae feed externally on terminal shoots and flowerbuds of several species of sage, *Salvia* spp. and other mints of the family Lamiaceae. These include *Salvia spathacea*, *S. dorrii*, and *S. mellifera*, as well as certain species of *Agastache*, *Lepechinia*, *Mentha*, *Mondardella*, *Pycnanthemum*, and *Trichostema*. A complete list of recorded hosts is given by Matthews and Lott (2005). Of the known host species, *Mentha spicata* (spearmint) occurs in Florida as well as the reported hosts in Hawaii, *Lantana camara* (Verbenaceae) and *Ageratum conyzoides* (Asteraceae) (USDA Plants database, USDA 2011). Other genera, such as *Salvia* and *Trichostema*, are represented by native species in Florida, which, while not recorded host species for *A. marmarodactyla*, represent potential hosts. In addition to the myriad of non-native *Salvia*, other mints cultivated for ornamental use and nectar sources in butterfly gardens could also be possible larval hosts in Florida and elsewhere. The life history in California has been

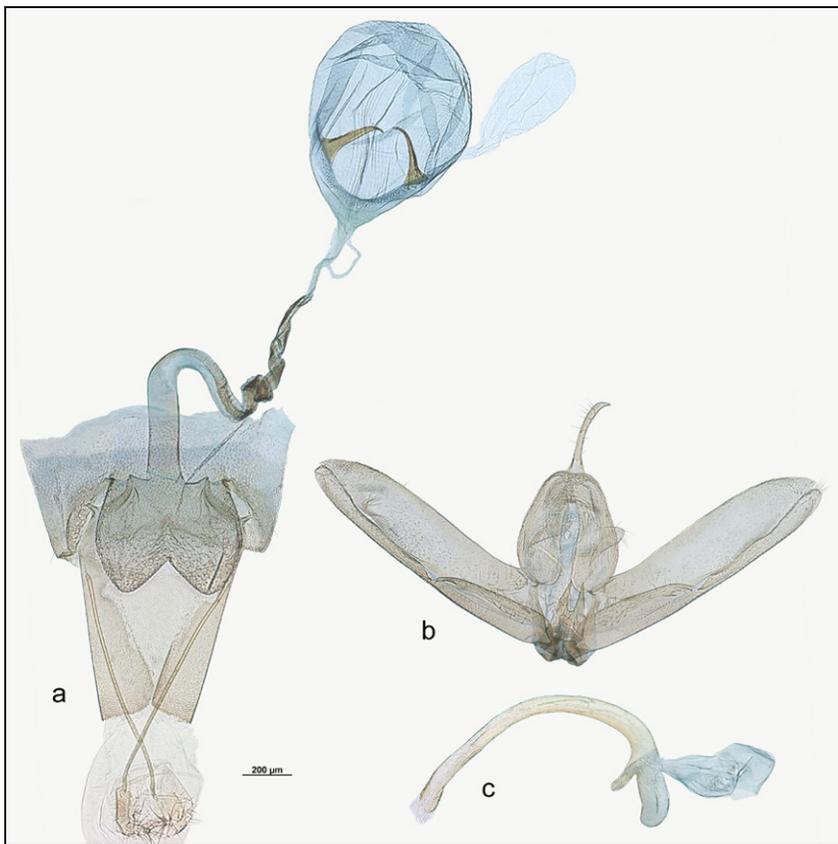


Fig. 2. *Anstenoptilia marmarodactyla* genitalia: a) female from Florida, slide DM 1622; b) male, San Diego Co., California, 23 March 1985, R. H. Leuschner, slide DM 1623; c) aedeagus, same individual. Both specimens MGCL – McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History.

Lantanophaga pusillidactyla (Walker, 1864) (Fig. 1e). Adults of *A. marmarodactyla* can be distinguished from the aforementioned three species by the distinct pale beige mark on the anterior lobe of the forewing which extends transversely across the lobe and is nearly white at the costa (see arrow, Fig. 1a). As this feature may be obscured in rubbed or worn specimens, we include images of the male and female genitalia of *A. marmarodactyla* (Fig. 2a-c) as an identification aid. Comparative drawings of the genitalia of similar species are also available in Lange (1950), Matthews (1989), and Gielis (2006).

The Connecticut specimens were all collected in a single 1998 season by Dr. David Wagner of the University of Connecticut in the yard of his home in Mansfield. He and his wife Sylvia have several gardens with numerous annual and perennial nursery plantings. In summary form, the label data for the three specimens are as follows: — CT, Tolland Co., Mansfield, 22 H. Run. Male, 8-VIII-1998; male, 18-VIII-1998; female, 10-IX-1998. D. L. Wagner MV It. Deposited in Wagner collection.

Previous extralimital records include one pinned specimen from Ohio with data courtesy of the Ohio Lepidoptera Survey database as follows: — OH, Hancock County, Cass Township, NE $\frac{1}{4}$ Section. male, 24-VI-1998. Michael J. Gilligan. Genitalia in vial with pinned specimen. Deposited in M. J. Gilligan collection.

In the United States, this species is now presently recorded from the following states: Arizona, California, Colorado, Connecticut, Florida, Hawaii, New Mexico, Nevada, Ohio, Texas, and Utah. We encourage collectors and photographers, as well as nursery growers of *Salvia* and other mints, to report further state records for this species. The addition of this species to the Florida fauna brings the current total known species to 43 (Matthews, unpublished data), adding to the 32 species reported by Matthews et al. (1990).

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