

A NEW SPECIES OF *ETHMIA* FROM THE FLORIDA KEYS (OECOPHORIDAE: ETHMIINAE)

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ABSTRACT. *Ethmia powelli* is described from Upper Matecumbe Key based on 123 specimens. It is related to *E. humilis* Powell and *E. julia* Powell, in the *confusella* species-group, by genitalic characters, and is distinguished from *E. farrella* Powell by the small wingspan and fewer forewing black spots.

Additional key words: *Ethmia powelli*, *E. farrella*.

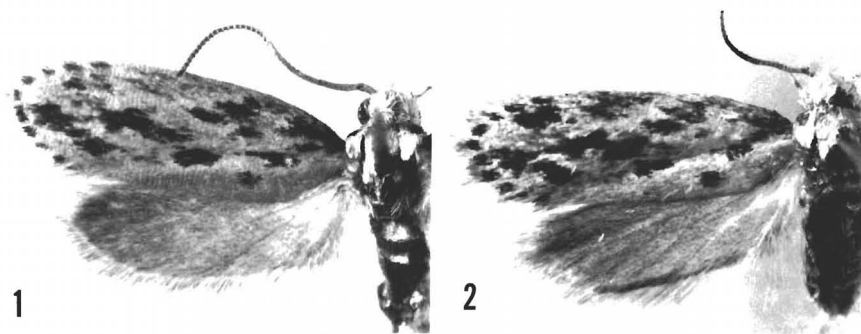
The genus *Ethmia* was monographed for the known New World fauna by Powell (1973). In Florida seven species are now recorded (Florida Lepidoptera Survey), mostly being Caribbean elements present in southern Florida. The new species was collected after the publication of Powell's (1973) monograph and is described here to make the name available for a revision of Kimball (1965). Description of the species has awaited collection of more specimens, but only recently has one additional individual been collected. Capuse (1981) reviewed the Cuban ethmiines but did not include the species described from Florida. Specimens are deposited with the Florida State Collection of Arthropods (FSCA) and my own collection (JBH), with paratypes distributed to the University of California, Berkeley (UCB), and the National Museum of Natural History, Washington, D.C. (USNM).

Ethmia powelli Heppner, new species (Figs. 1-4)

Forewing length 4.0-4.7 mm (N = 100) (male); 4.1-4.9 mm (N = 23) (female).

Male (Fig. 1). **Head.** Silvery gray-white with black central mark on vertex; labial palpus silvery gray-white with lateral black mark on each segment and black laterally near base. **Thorax.** Silvery white; legs white, with fore- and mid-tibiae and tarsi marked with black; hind legs white. **Forewing.** Ground color silvery white with numerous black spots (costal spots at base and $\frac{1}{8}$ from base; cubital area with elongated spots near base and at hindwing, with a small round spot near dorsal margin; a large elongate spot mid-wing and another along tornus); terminal black spots extending along costa on apical $\frac{1}{4}$; fringe silvery; venter silvery gray. **Hindwing.** Unicolorous pale gray with dark gray at margin; fringe gray; venter similar. **Abdomen.** Silvery white with darker gray dorsum. **Genitalia** (Fig. 3). Tegumen with slightly bulbous terminal points; vinculum rounded, without saccus; valva subquadrate with prolonged distal end having 3 large spines and 2 smaller truncated central spines, with a large curved hooklike process on dorsal margin near apex; anellus an elongated tube (troughlike), dorsally open; aedeagus similar to that of *E. humilis*, with bulbous phallobase; cornutus indistinct.

Female (Fig. 2). Similar to male; forewing terminal black spots slightly larger on average than in male. **Genitalia** (Fig. 4). Setose ovipositor; posterior apophyses $3\times$ length of anterior apophyses; sterigma composed of fused anterior apophyses extensions; ductus



FIGS. 1, 2. *Ethmia powelli* paratypes, Islamorada, Monroe Co., Florida. 1, Male, 2, Female.

bursae with sclerotized collar at ostium, then spiralled to ovate corpus bursae; signum a small sclerotized depression.

Type material. Holotype: male, 1 mi [1.6 km] SW Islamorada, Upper Matecumbe Key, 23-VI-1974, J. B. Heppner (slide JBH 1773) (FSCA). Paratypes: 99 males, 23 females, same data as holotype. Paratypes distributed to FSCA, UCB, USNM, and author's personal collection. Additional specimen: Key Largo, Monroe Co., 30-VIII-1986 (1 male), L. C. Dow (FSCA).

Hosts. Unknown. One species in the *confusella* species-group feeds on *Bourreria ovata* (Boraginaceae).

Remarks. Thus far, *Ethmia powelli* has been collected only twice in the Florida Keys. There are no records of it from any Neotropical locality; thus, the species may be native to Florida. Relations of *E. powelli* by some genital characters appear nearest to *E. humilis*

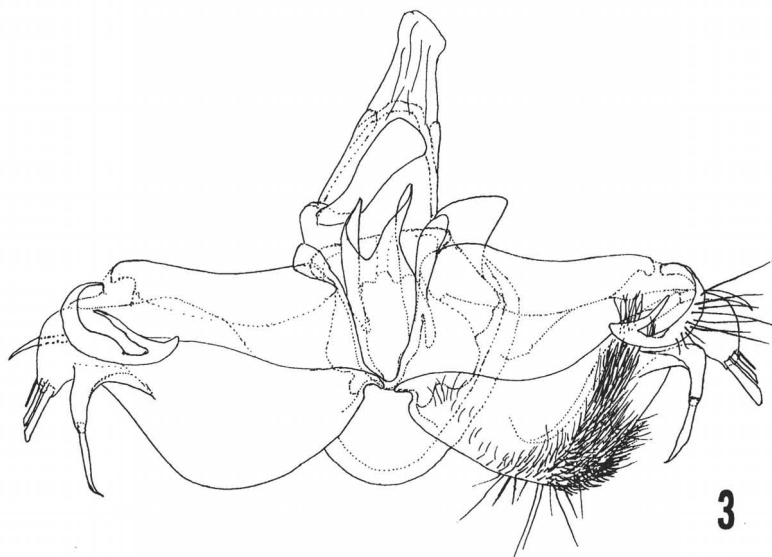


FIG. 3. *Ethmia powelli* male genitalia, aedeagus omitted (JBH 1773).



FIG. 4. *Ethmia powelli* female genitalia (JBH 1774).

Powell and *E. julia* Powell in the *confusella* species-group. This is a primarily tropical group with several species also occurring in S Florida (includes records of West Indian species recently found in the Florida Keys). Forewing maculation, however, is more similar to *E. farrella* Powell. In the key to species in Powell (1973), *E. powelli* keys to couplet 118, differing from *E. farrella* in having fewer black spots on the forewings, and in being significantly smaller, 4.0–4.9 mm versus 6.5–7.0 mm for *E. farrella*. The male genitalia are particularly diagnostic, having 5 spines on the distal end of the valva, and the central 3 of these being truncated; *E. humilis* has only 3 curved spines on the valva, likewise for *E. julia*. Female genitalia are not very similar to the other species; the sterigma is most similar only to the Central and South American *Ethmia catapeltica* Meyrick. The female ductus bursae in *E. humilis* is not coiled as in most *Ethmia* species and the sterigma is very different in *E. farrella*.

Ethmia powelli appears to be one of the smallest species in *Ethmia*. The species is named in honor of Professor J. A. Powell, University of California, Berkeley.

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