DESCRIPTION OF A NEW SPECIES OF *EUZOPHORA* ZELLER ATTACKING MAGNOLIAS AND NOTE ON TWO RELATED SPECIES.  
(LEPIDOPTERA: PHYCITIDAE)

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The purpose of this paper is twofold: To provide a name for an undescribed species, the larvae of which feed in magnolias; and to correct a mix-up in the illustrations for *Euzophora nigricantella* Ragonot and *Pros-euzophora impletella* (Zeller) in Heinrich's American Phyctinae (1906).

According to the slides from which the illustrations noted above were drawn, the association of the figures assigned to numbers 1066 and 1067 is incorrect. The figure of 1066 is *impletella* and that of 1067 is *nigrican-tella*.

Although the larval stages of the species described herein have attracted attention as a pest of magnolias in Florida, Georgia, Louisiana, and North Carolina since 1957, only one adult is available, a female reared by Mr. Edward Brown. Since other species of the genus that occur in the same areas are commonly collected at light, it appears that the magnolia-feeding species may be non-phototropic; and with no assurance that males will become available in the near future, it seems desirable that a name be provided for the species without further delay. There will be no difficulty in association of the sexes when reared males are obtained.

*Euzophora magnolialis*, new species

**Fig. 1-5**

**Adult** (Fig. 2). Female, alar expanse 25 mm. Head, thorax, and abdomen brownish fuscous, with a tinge of purple. Labial palpus slender, upturned, third segment acuminate distally; first segment gray with a sprinkling of fuscous; second and third segments dark purplish brown. Forewing purplish brown, with grayish dusting predominate in over half of basal area, and also in area from outer margin inward almost to postmedial line. Terminal dots black. Transverse lines narrow, sinuate, sordid white; a small patch of similar color faintly indicated on discocellular vein. Antemedial line vertical from costa to below lower margin of cell, angled slightly inward from fold to vein 1b, and outward to hind margin. Postmedial line vertical from costa to vein 5, slightly inward to vein 2, outward to fold, and slightly inward to hind margin. Hindwing pale smoky fuscous with a rather fine dark line along terminal margin.

**Female genitalia** (Fig. 3). Ventral margin of ostium a narrow, weakly sclerotized band. Ductus bursae long, slender, membranous, non-pigmented, slightly crinkled but longitudinal ridges very weak. Signum well developed. Origin of ductus seminalis from near middle of bursa copulatrix.

**Type.** Female in U.S. National Museum. USNM Type No. 66789. Pembroke, Florida.
EXPLANATION OF ILLUSTRATIONS

Fig. 1. Euzophora ostricolorella Hulst, female adult. Fig. 2-5. Euzophora magnolialis, new species. 2. Female adult, type. 3. Female genitalia, ventral view. 4. Setal chart of pro- and mesothorax, abdominal segments 1 and 2, 3 to 6, and 9, lateral view. 5. Setal chart of acetabulum VIII on abdominal segments 9 and 10, ventral view. The figure of the genitalia and setal charts were prepared by Mr. A. D. Cushman, Scientific Illustrator, U.S. Department of Agriculture, and are not drawn to scale. Photographs of the adults are two times the natural size.
Food plant. Magnolia grandiflora.


In maculation and venation, the type of E. magnolialis resembles small specimens of E. ostricolorella Hulst (Fig. 1); but the forewing of magnolialis is narrower and has the transverse lines more sharply defined, the grayish patch on the discocellular weaker, and the grayish coloration in the basal area and the area adjacent to the outer margin more extensive.

The genitalia of magnolialis are somewhat like those of both ostricolorella and impletella, but the genitalia of ostricolorella are distinctly larger than those of magnolialis; the ductus bursae is much shorter (only about twice as long as wide); the bursa copulatrix is densely spinululate and elongate and elongate rather than ovoid in shape, with the anterior half strongly crinkled, forming conspicuous longitudinal ridges. The genitalia of magnolialis and impletella are about the same in size and shape; but in impletella, the ductus bursae is definitely constricted near the middle and the signum is only weakly developed.

There is no date of emergence associated with the reared type; but according to Kerr and Brogdon (1958), emergence probably begins late in February or some time in March.

Larva. Mature, length 28 mm. Head dark brown with a broad, dark, fuscous lateral band, extending from ocellar area to hind margin. Body slightly flattened, tapering gradually posteriorly. Body color white. Pinacula at bases of body setae pale amber, of moderate size, dorsal ones usually smaller or about the size of spiracles. Prothoracic and anal shield sordid white, pattern markings brown. Legs normal, eight pairs (three thoracic, four abdominal, and one anal).

Setal arrangement (Figs. 4, 5). Prothoracic shield (Fig. 4) with a conspicuous brownish-pigmented, reniformlike, depressed area directly caudad of seta I; prespinitracular shield bearing two setae. Group VI bisetose on prothorax, unisetose on meso and metathorax. A non-pigmented membranous area at base of seta IIa, surrounded by a sclerotized, pigmented, ringlike structure on mesothorax (Fig. 4); such area at base of seta III on eighth abdominal segment minute, if discernible. Pinaculum at base of seta III on abdominal segments 1-7 an incomplete disc, somewhat crescentlike in shape; non-pigmented membranous area, if discernible, very minute. Muscle attachment approximate to base of seta III, black. Seta IV and seta V on abdominal segments 1-7 on same pinaculum, under spiracle; seta V directly or almost directly above seta IV. Ninth abdominal segment (Fig. 4) with paired setae II farther apart than paired setae II on eighth abdominal segment, usually on same pinaculum, sclerotization and pigmentation of pinaculum weak; seta I approximate to seta III, their pinacula frequently contiguous; seta IV, V, and VI all present, IV and V on same pinaculum, VI on separate pinaculum and remote from IV. Seta IIIa distinctly above level of base of seta III on first and second abdominal segments. Distance between paired setae VIII on ninth abdominal segment one third or less than that separating paired setae VIII on anal segment (Fig. 5).

Crochets. Arranged in a complete ring on abdominal segments 3-6 and of irregular or triordinal length; ventral muscle attachment a conspicuous darkly pigmented pit. On anal segment, crochets in a transverse
mesoseries, of triordinal length; ventral muscle attachment weakly pigmented.

The larvae of *magnolialis* and *ostricolarella* have many characters in common; but in *magnolialis*, coloration of the reniformlike depressed area caudal of seta 1b on the prothorax is distinctly brownish; seta IIIa is above the level of the base of seta III on abdominal segments 1 and 2; and the distance between paired setae VIII on abdominal segment 9 is one-third that between paired setae VIII on the anal segment. In *ostricolarella*, the reniformlike depressed area is concolorous with or paler than the adjacent area of the prothoracic shield; seta IIIa is on a level with or lower than the base of seta III on abdominal segments 1 and 2; and the distance between paired setae VIII on the ninth abdominal segment is one-half that separating paired setae VIII on the anal segment.

**LITERATURE CITED**


**BOOK NOTE**

A BIOLOGY OF DRAGONFLIES. Philip S. Corbet. Quadrangle Books, Chicago, 1963. 247 p. 115 fig. 7 pl. $5.75.

This well-illustrated book summarizes what is known of the ecology, behavior, and physiology of the Odonata (including the damselflies as well as the Anisoptera). It has sections dealing with habitat selection, oviposition, dispersal, feeding behavior, and reproductive behavior; with the eggs, the larval stage, and the adult; with growth, metamorphosis, and emergence; and with evolutionary perspectives. Geographically the coverage is worldwide, and the literature review covers publications through August 1960. There is a 27-page bibliography and separate indexes to subjects, authors, and species.—TJW.