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PEORIA INSULARIS, A NEW SPECIES OF PEORIINI (LEPIDOPTERA: PYRALIDAE: PHYCITINAE) FROM MISSISSIPPI AND LOUISIANA

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Abstract.—***Peoria insularis*** is described from four male specimens as a new species of pyralid moth from Mississippi and Louisiana. It is distinguished as the only North American species of *Peoria* with both a transverse posterior forewing band and prominent white markings on the forewing veins. Photographs of the adult moth and genitalia are included. Range extensions are given for two *Peoria* species. *Peoria floridella* Shaffer, previously known only from the east coast of Florida is recorded from coastal dunes of North Carolina and Alabama, and *P. punctata* Shaffer, described from a single locality in Texas is now recorded from additional localities there and from Louisiana.

Key Words: *Peoria floridella, Peoria punctata*

A perusal of an excellent series of specimens of Peoriini from the Mississippi Entomological Museum, Mississippi State University, turned up four specimens of a new species of *Peoria* as well as some noteworthy range extensions for *P. floridella* Shaffer 1968 and *P. punctata* Shaffer 1976.

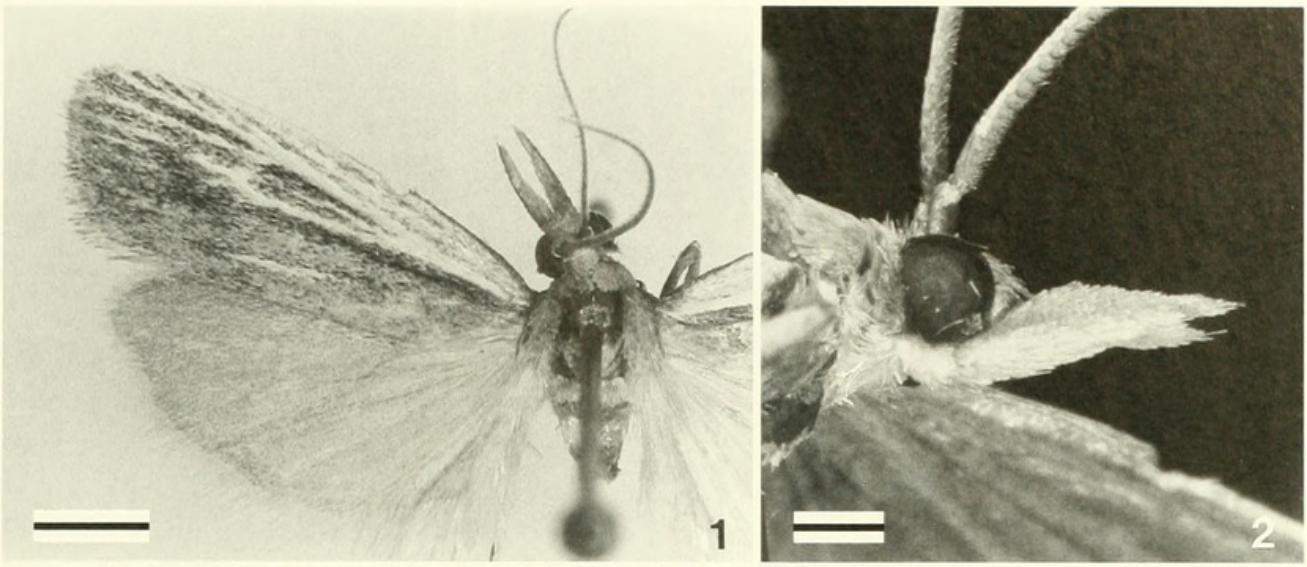
MATERIALS AND METHODS

Four genitalia slides and one right forewing slide (the right hind wing was missing from the specimen) were prepared from the four specimens. All were mounted in Euparal. Moths and slides were examined using a Wild M5 stereo microscope; slides were also examined at high power with a Nikon L-Ke microscope. Genitalia photographs were taken with an Olympus Vanox AHBT3 microscope. Color names follow the ISCC-NBS Color-Name Charts (Kelly 1965) except for small structures where only general designations could be given. Moths and color samples were viewed together using the Wild microscope and a fluorescent ring light. The holotype is deposited in the National Museum of Natural History, Smithsonian Institution, and the three paratypes are in the collection of the Mississippi Entomological Museum.

Peoria insularis Shaffer, new species

(Figs. 1–5)

Diagnosis.—Among North American species of *Peoria* the presence of a transverse posterior forewing band is possessed only by *P. insularis, P. longipalpella* (Ragonot), and *P. punctata. P. longipalpella* is devoid of the white markings on the forewing veins exhibited by *P. insularis* and in varying degree by several other *Peoria* species. These white vein markings are rather indistinct in *P. punctata,* a species which is unique within *Peoria* in that its uncus arms are of very unequal length, the dorsal arm only about one third as long as the ventral one (see Shaffer, 1976, Fig. 10). The dark central island on the forewing cell (Fig. 1)



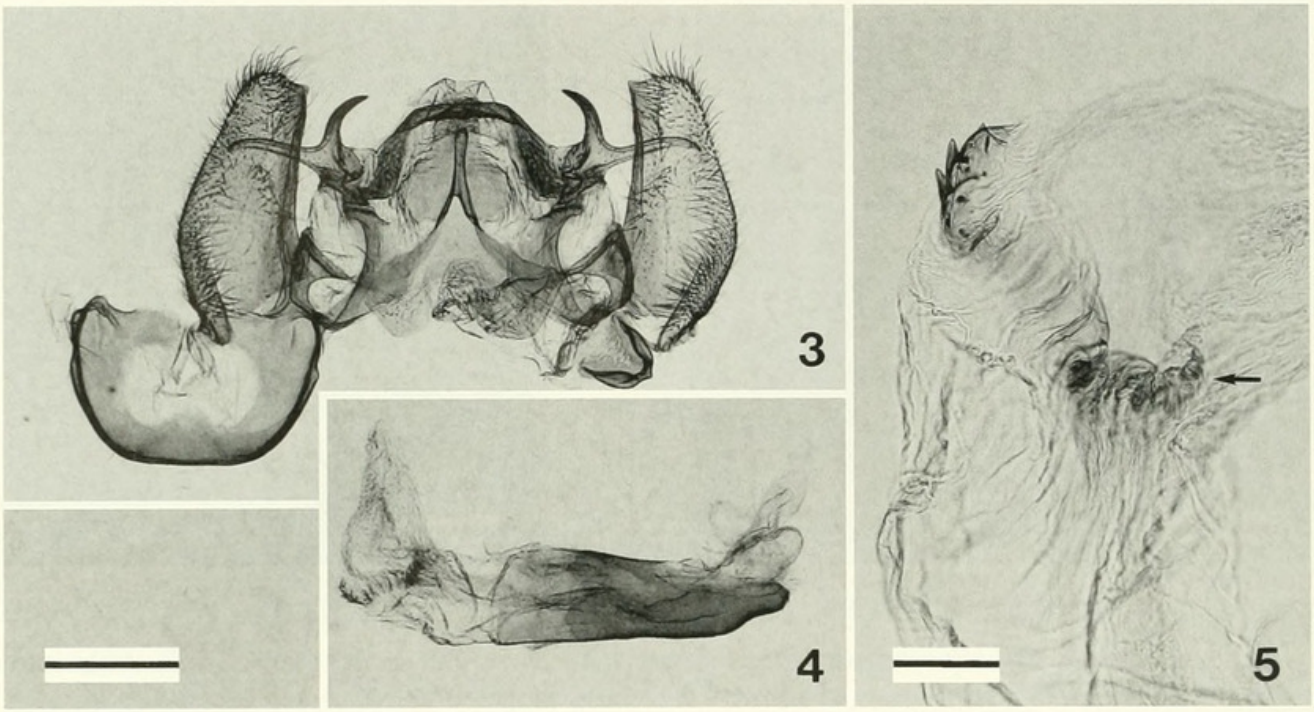
Figs. 1–2. *Peoria insularis*, holotype. 1, Adult showing left wings. 2, Head, right side. Scale bar = 2 mm (1), 1 mm (2).

is unique to *P. insularis*, though it may be difficult to discern in worn specimens.

The genitalia provide no unique apomorphies or combination of characters distinguishing this species. Indeed, most *Peoria* genitalia are rather uniform with the long, slender, digitate medial process of the gnathos being shared with eight other species and the single well developed cornutus with nine other species.

Description.—Male: *Head:* Frons conical, brown dorsally, lighter laterally. Labial palpus (Fig. 2) porrect, 4× as long as eye diameter; basal segment white, second brown on dorsal half, light brown at base and on ventral half, third brown. Maxillary palpus cylindrical, not quite extending to tip of frons. Antenna shaft subserrate, scaling light brown. Ocellus normal, black with clear center. *Forewing* (Fig. 1): Length 8.5–10.0 mm ($\bar{x}$ = 9.25; n = 4). R_2 well stalked with R_{3+5}, from just before upper outer angle; M_1 from the angle; M_{2+3} stalked about half its length, from lower outer angle of cell, well separate from CuA_1. Costa dark brown basally along wing margin, elsewhere white; subcosta and radius broadly white, with narrow bands of yellowish pink between costa and subcosta and between subcosta and radius. Cell broadly outlined with white (on anterior margin, posterior margin, and closing vein) leaving island of brownish gray in center of cell. Subcosta and radial and medial veins beyond cell more narrowly marked by white. Cubital veins beyond cell indistinctly marked with white. Ground rather uniformly brownish gray posterior to cell and CuA_1. 1A+2A indistinctly marked with white. *Hind wing:* M_{2+3} fused, stalked with CuA_1 about half length of latter, from lower outer angle of cell; CuA_2 from very near the angle. *Genitalia* (Figs. 3–5): Medial process of uncus a well sclerotized somewhat narrow band of uniform width, laterally bearing numerous, minute, irregular, rounded protuberances; lateral arms of equal or nearly equal length. Gnathos with long, narrow, digitate median process; lateral arms broad, quite flat. Juxta scoop-like, devoid of setae. Vinculum broadly rounded, somewhat flattened along anterior margin. Valve with costa terminating in small tooth. Aedeagus somewhat irregular; vesica with a small patch of minute triangular teeth; 2 cornuti (Fig. 5), one cornutus distinct, rounded and bearing 3 or 4 somewhat slender teeth, well sclerotized only on side bearing teeth, second cornutus (Fig. 5, arrow) indistinct, variably developed, lacking teeth.

Holotype.—♂: Mississippi, Franklin Co.,



Figs. 3–5. *Peoria insularis*, male genitalia, holotype. 3, Genitalia, aedeagus removed. 4, Aedeagus. 5, Vesica, enlarged and rotated 90° clockwise. Scale bar = 0.5 mm (3, 4), 0.1 mm (5).

Porter Creek, T5N, R4E, Sec. 8 NW, 29 June 1992, T. Schiefer & R. Fontenot; ♂ genitalia on slide 2720 J. C. Shaffer. With the permission of Richard Brown, the holotype is deposited in the National Museum of Natural History, Smithsonian Institution, Washington, DC.

Paratypes.—♂, Mississippi, Grenada Co., T22N, R3E, Sec. 31 NW, 7–13 Aug. 1991, R. L. Brown, ♂ genitalia on slide 2732, wing and antenna on slide 2756, J. C. Shaffer; ♂, Louisiana, Bossier Parish, Barksdale A.F.B., 32°30′42″N, 93°32′42″W, 26 June 1996, D. M. Pollock, Blacklight in shortleaf pine forest, ♂ genitalia on slide 2731 J. C. Shaffer; ♂, Barksdale A.F.B., 32°31′13″N, 93°35′46″W, 24 August 1996, D. M. Pollock, Blacklight in calcareous prairie, ♂ genitalia on slide 2730 J. C. Shaffer. All deposited in the Mississippi Entomological Museum, Mississippi State University.

Etymology.—The specific epithet is derived from the Latin *insula* (island) in reference to the isolated dark patch in the forewing cell.

Discussion.—Table 1 (Shaffer 1968, p. 12) compares 12 sets of characters for known North American species of *Peoria*. For *P. insularis* the symbols o, x, x, o, x, x, x, p, x, ss, a, 1 may be added to columns 1 through 12 respectively for that table, updated copies of which are available from the author. *Peoria insularis* brings the total of described North American species of *Peoria* to 16, 13 of which were covered in Shaffer (1968). *Peoria punctata* Shaffer (1976), and *P. padreella* A. Blanchard (1980) were described more recently. In addition, there are 4 known Neotropical *Peoria* species, bringing the grand total of *Peoria* to 20. The genus is limited to the Western Hemisphere.

Range Extensions for *Peoria floridella* and *Peoria punctata*

In the Mississippi State material there are ten specimens of *P. floridella*, a species previously known only from the east coast of Florida, ranging from Summer Haven (St. Johns Co.) south to Vero Beach (Indian River Co.). These ten specimens consist of two males from Ft. Macon State Park in North Carolina (Carteret Co.) and eight

specimens (2 ♂, 6 ♀) from Bon Secour National Wildlife Refuge (Baldwin Co.) Alabama. The North Carolina locality is on a barrier island (Bogue Bank), the Alabama locality on a coastal peninsula. J.B. Sullivan (personal communication) reports the species as common in the coastal dunes of North Carolina, but apparently absent from similar inland habitats.

Three male specimens of *P. punctata* from the same collection are of interest because the species was previously known from only two specimens, the male holotype from Conroe, Texas (Montgomery Co., collected 13 May 1970), and a second male collected by the author at the Welder Wildlife Refuge near Sinton, Texas (San Patricio Co., 22 May 1977; record not previously published). Of the three Mississippi State specimens, two are also from Texas (13.5 miles east of Seguin, Guadalupe Co.; both 8 May 1993), and the other from Louisiana (6 miles east southeast of Buhler, Calcasieu Par.; 14 June 1993).

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