# OECOPHORIDAE FROM WEST TEXAS

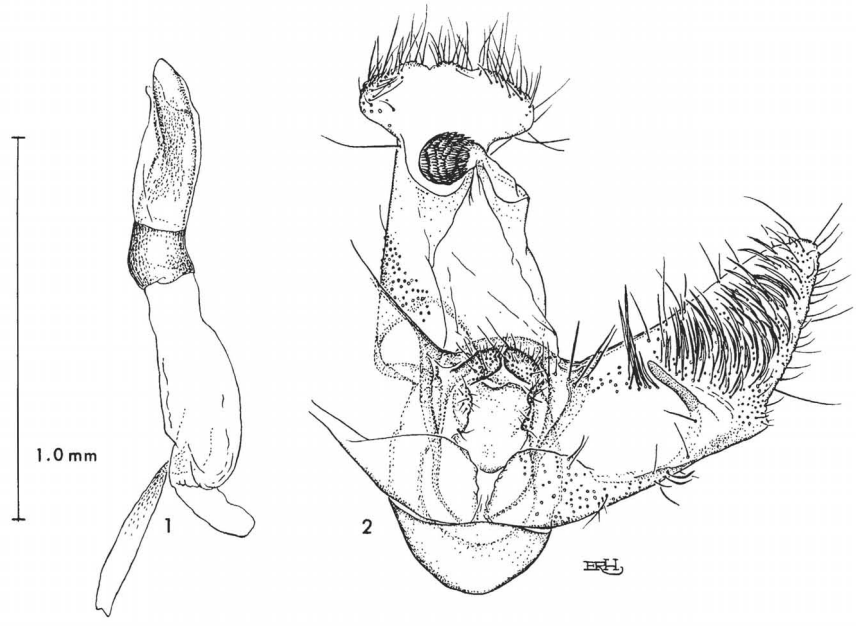
RONALD W. HODGES
Systematic Entomology Laboratory, Agricultural Research Service, USDA,
c/o U.S. National Museum, Washington, D.C. 20560

André and May Elise Blanchard, Doug Ferguson, and I collected moths in the Guadalupe Mountains, Sierra Diablo, and Chisos Mountains and at Shafter in western Texas during late May and early June 1973. Collecting for microlepidoptera was excellent, and gelechioids were particularly abundant. Because I had recently revised the Oecophoridae for the *Moths of America North of Mexico*, I was interested in all Oecophoridae to learn more about geographic distribution of species and faunal composition for this region. During this period six species were collected: two were anticipated, two were new species, and two represented major range extensions from the East. Data and comments on these species follow.

## **Agonopterix hesphoea** Hodges, **new species**

Figs. 1–2, 6

*Agonopterix hesphoea* is a small yellowish-gray and brown moth with upper surface as illustrated (Fig. 6). Head: tongue pale yellowish white; base of maxillary palpus dark brown, apex yellowish white; individual scales on frons dark gray basally, pale gray apically, dark gray to nearly black scales in front of eye; vertex and occiput yellowish orange, scales tipped with pale gray; a row of dark gray scales tipped with pale gray behind eye; labial palpus with inner surface of first segment yellowish white, outer surface mainly yellowish white with black scales near anterior margin, second segment mottled pale yellowish gray and dark gray, all scales tipped with pale gray, anterior surface mainly dark gray, scales with pale gray apices, inner surface pale yellowish white basally becoming mottled with dark gray on anterior margin to apex, third segment slightly darker than second segment with a poorly defined annulus at base and an intense one at apex; antenna ½ to ⅗ length of forewing, shaft somewhat stout and greasy dark gray brown, scape dark gray, pecten contrastingly pale yellowish gray. Thorax pale orange brown, scales tipped with pale gray, apex of mesothorax dark gray to black. Forewing: scales mottled orange brown, yellowish gray, pale gray and dark gray, most scales tipped with pale gray; a pair of offset black spots at ⅔ length of cell and a few white scales at end of cell; ventral surface mainly dark gray, costal margin barred with alternating zones of dark gray and pale yellowish gray; base of fringe pale yellowish gray to orange gray, rest of fringe darker gray but scales tipped with pale gray. Hindwing: shining gray with some yellowish or orange reflections; a tuft of scales from base of anal veins; base of fringe pale yellowish gray and contrasting with gray scales on wing, a row of medium gray tipped scales at base of fringe followed by a longer row of paler gray scales; ventral surface mainly medium to dark gray, anterior part mottled with some pale gray scales, margin of wing from apex toward tornus with dark gray scales. Foreleg: mottled dark gray and pale yellowish gray, individual scales tipped with pale gray, apex of coxa and base of femur pale, extreme apices of tarsal segments pale yellowish gray. Midleg: much as for foreleg but with more pale yellowish gray scales; tibia with strong medial and apical




Figs. 1, 2. Male genitalia of *Agonopterix hesphoea*: 1, aedeagus; 2, posteroventral view of genitalia with aedeagus removed.

scale tufts, tibial spurs dark gray basally becoming pale yellowish gray distally; tarsus with apices of segments yellowish to orange gray, ventral surface orange gray to orange brown. Hindleg: paler than midleg; tibia with series of long slender scales on dorsal surface. Wing length 8.7 mm. Male genitalia: as illustrated (Figs. 1, 2): valva almost truncated on saccular margin, sacculus sclerotized to apex, process on inner surface extending to ¾ width of valva; gnathos short, broadly ellipsoidal; uncus-socii with three parts indistinguishable. Female: no specimens available.

The immature stages are unknown.

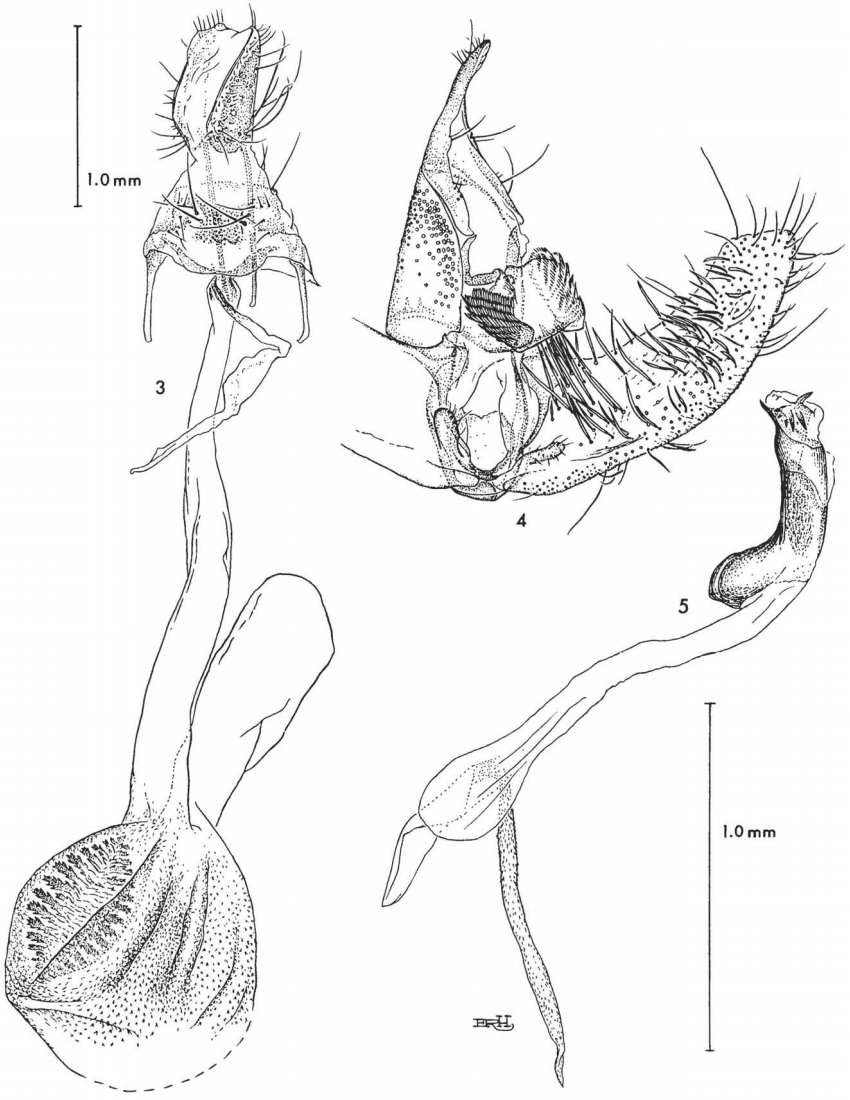
**Holotype**: ♂. Texas, Culberson Co., Sierra Diablo 20 mi. NNW Van Horn, 6000 ft.; 27 May 1973; R. W. Hodges; USNM genital slide 4653. USNM type number 73061.

*Agonopterix hesphoea* is superficially much like *A. psoraliella* (Wlsm.). *Agonopterix hesphoea* has the base of the fringe pale yellowish gray and contrasting with the medium gray hindwing, whereas in *psoraliella* the base of the fringe is gray and slightly darker than the hindwing. The free process on the inner surface of the valva is half the width of the valva in *hesphoea*, longer than the width of the valva in *psoraliella*: the gnathos is short and broadly ellipsoidal in *hesphoea*, long, slender and with an acute apex in *psoraliella*.

*Psilocorsis quercicella* Clemens

Proc. Acad. Nat. Sci. Philadelphia, 212, 1860.

Chisos Mountains, Panther Pass, 6000 ft. elevation, 2 June 1973, 1 ♂, 1 ♀.



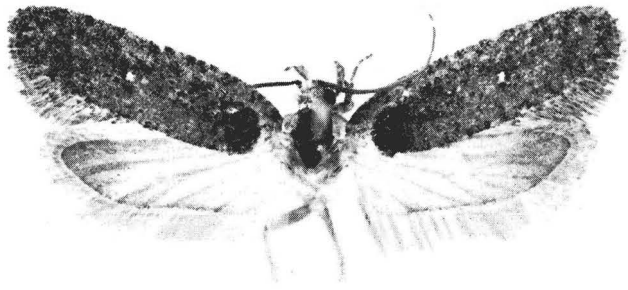

Figs. 3–5. Genitalia of *Psilocorsis fatula*: 3, ventral view of female; 4, postero-ventral view of male with aedeagus removed; 5, aedeagus.

These are the westernmost records for *quercicella* which had previously been known from eastern Texas and northwest Arkansas to the East Coast (Hodges, 1974).

## **Psilocorsis fatula** Hodges, **new species**

Figs. 3–5, 7

*Psilocorsis fatula* is a pale yellowish brown moth with upper surface as illustrated (Fig. 7). Head: tongue and maxillary palpus pale yellowish white; ventral margin



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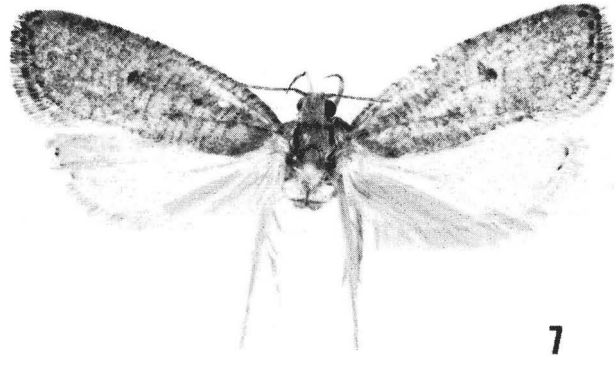

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Figs. 6, 7. Upper surfaces: 6, *Agonopterix hesphoea*, holotype ♂; 7, *Psilocorsis fatula*, holotype ♀.

of frons naked, rest pale yellowish gray; vertex and occiput pale yellowish brown, darker than frons; labial palpus mainly yellowish gray, anterior surface of second and third segments with a black line bordered on each side by a row of yellowish white scales, third segment with a second and third row of black scales on lateral and mesal surfaces; scape of antenna mainly pale yellowish brown, anterior margin with a yellowish white line bordered dorsally and ventrally by black scales, shaft with continuation of color pattern of scape to half or ⅗ length of antenna and with a third row of black scales on posterior surface, antenna yellowish gray distally. Thorax: dorsal surface of pro- and mesothorax slightly darker than vertex and occiput. Forewing: shining yellowish brown with numerous, transverse brown flecks best developed on costal margin; six black spots on outer margin from apex to tornus; a series of black scales at end of cell; fringe on outer margin with basal row of shining dark gray scales followed by row of paler shining gray scales. Hindwing: shining pale yellowish white, becoming slightly more yellow at apex, a few dark gray to black scales on outer margin at apex and posterad of apex, ventral surface mainly pale yellowish brown with numerous dark gray scales on cell, area posterad of fold paler than rest of wing. Foreleg: coxa yellowish white; femur darker yellowish white to yellowish brown, apex yellowish white; tibia mainly

yellowish brown, scales on epiphysis yellowish white; tarsus yellowish brown with some gray scales on fourth and fifth segments. Mid- and hindlegs: much as for foreleg but slightly paler, stout setae on tarsi brown, fourth and fifth tarsal segments darker than preceding tarsal segments. Abdomen: dorsal surface shining pale yellowish white, paler laterally; ventral surface darker than dorsal surface. Wing length 8–9 mm. Male genitalia: as illustrated (Figs. 4, 5): valva with costal and saccular margins somewhat parallel basally, distal margin nearly straight; lobes of juxta half basal width of valva; aedeagus with four stout cornuti, angulate at basal ⅖; an eversible tuft of scales from first and second abdominal sterna. Female: as illustrated (Fig. 3): ostium bursae near anterior margin of eighth abdominal sternum, preceded by narrow sclerotized band; extreme base of ductus bursae heavily sclerotized; ductus seminalis arising from slightly bulbous base of ductus bursae; basal ⅖ of ductus bursae lightly sclerotized, distal ⅗ more heavily sclerotized, ductus bursae approximately twice length of corpus bursae; walls of corpus bursae heavily spiculose, accessory pouch arising from base of corpus bursae; signum elliptical with pointed ends, 15–18 branches on each side; eighth sternum with pair of strong, sublateral setae; eighth tergum with row of long setae on posterior margin; papillae anales heavily sclerotized but membranous just before heavily sclerotized ventral margin.

The immature stages are unknown.

**Holotype**: ♀. Texas, Culberson Co., Guadalupe Mountains, Smith Canyon, 5750 ft.; 22 May 1973; R. W. Hodges; USNM genital slide 4650. USNM type number 73060. **Paratypes**: 8 ♂♂, 1 ♀. Same data as for holotype (4 ♂♂). Texas, Culberson Co., Guadalupe Mountains, Cherry Canyon, 5096 ft.; 22 May 1973; R. W. Hodges (1 ♂). Texas, Brewster Co., Chisos Mountains, Panther Pass, 6000 ft.; 2 June 1973; R. W. Hodges (1 ♂). Texas, Guadalupe Mountains, Smith Canyon; 22 May 1973; A & ME Blanchard (1 ♂). Texas, Guadalupe Mountains, Frijoles; 24 May 1973; A & ME Blanchard (1 ♀). New Mexico, Las Vegas Hot Springs; on leaf of oak; July 11; Cockerell (1 ♂).

In the short type series variation is limited to wing length, hue of the forewing, and overlay of brown transverse marks.

*Psilocorsis fatula* is typical of the genus and can be separated from the other species by the combination of indistinct transverse marks on the forewing and pale yellowish-gray to yellowish-white hindwing. The male and female genitalia ally *fatula* with *arguta* Hodges, but *arguta* has darker forewing color with intense transverse flecks and medium gray hindwings.

I have seen additional specimens of *fatula* from Ruidoso Canyon and Las Vegas Hot Springs, New Mexico.

*Durrantia piperatella* (Zeller)

Verh. k.-k. zool.-bot. Ges. Wien, 23: 239, 1873.

Chisos Mountains, Green Gulch, 5500 ft. elevation, Panther Pass, 6000 ft., 2, 6 June 1973, 5 ♂♂. *Durrantia piperatella* is known from northwest Arkansas to the Davis Mountains in western Texas (Hodges, 1974).

*Inga concolorella* (Beutenmüller)

Ent. Americana, 4: 30, 1888.

Shafter, 4000 ft., 31 May 1973, 1 ♂. I (1974) recorded *concolorella* from Las Cruces, New Mexico to the West Coast. This is a state record for the species but an anticipated one.

*Carolana ascriptella* (Busck)

Can. Ent., 40: 194, 1908.

Sierra Diablo, 6000 ft., 29 May 1973, 2 ♂♂. These two specimens are a state record for *ascriptella* but more importantly represent a western extension into the mountains. Earlier (Hodges, 1974) *ascriptella* had been recorded from New Hampshire and Washington, D.C. to northwest Arkansas.

## ACKNOWLEDGMENTS

I express thanks to the following: the personnel of Big Bend National Park, Guadalupe National Park, and the Texas Park and Wildlife Department, particularly of the Sierra Diablo Wildlife Management Area; Mr. Blanchard, who showed me many excellent collecting sites and allowed me to sort through his light trap catches for small moths; the Photographic Services Unit of the Smithsonian Institution, that made the photographs of the moths; and my wife, Elaine R. Hodges, who made the line drawings.

## LITERATURE CITED

HODGES, R. W. *in* DOMINICK, R. B. *et al.*, 1974. The Moths of America north of Mexico, Fasc. 6.2, Gelechioidea: Oecophoridae. x + 142 p.

## TWO NEW IOWA RECORDS

During field work for a larger project on the butterflies of Iowa, two species were collected whose occurrence in the state has not heretofore been reported. Population samples repeated over two and three year intervals indicate established residency in contrast to casuals and temporary resident status.

*Glaucopsyche lygdamus couperi* Grote was first taken on Hayden Prairie, Howard Co., Iowa, 28 May 1972 in considerable numbers. Populations were subsequently noted and samples collected in western Iowa on Cayler Prairie, Dickinson Co., 6 June 1973 and 5–12 June 1974. The species was also found at Fort Defiance State Park, Emmet Co., 6 June 1973.

Breeding populations of *Coenonympha inornata benjamini* McD. were located in Gitchie Manitou State Park, Lyon Co., Iowa, 12–13 June 1973 and again on 12 June 1974. All of the Iowa localities above are in the northern tier of counties.

Both of these species have been reported in restricted localities in more northern states including South Dakota, Minnesota and Wisconsin. In addition, *lygdamus* occurs in Illinois, Missouri, Kansas and Nebraska, so that Iowa records are not unexpected. It is assumed that the association of both species with prairie remnants in the Iowa localities mentioned, helps account for the paucity of records. Native prairie refugia have dwindled to less than 600 widely scattered acres within the state; the Hayden and Cayler Prairie sites represent two of the three largest remaining tracts. In my opinion the two butterfly species have been overlooked by collectors rather than the sites recently colonized by the insect.

JOHN C. DOWNEY, *Department of Biology, University of Northern Iowa, Cedar Falls, Iowa 50613.*