A NEW SPECIES OF ACROLEPIOPSIS AND THE DESCRIPTION OF THE FEMALE OF A. CALIFORNICA (ACROLEPIIDAE)

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ABSTRACT. The family Acrolepiidae, of the superfamily Yponomeutoidea, includes three genera: *Digitivalva* Gaedike, *Acrolepiopsis* Gaedike, and *Acrolepia* Curtis. *Acrolepiopsis liliivora*, new species, from California and Oregon, is described herein; the male and female genitalia are illustrated. Adults have been reared from the bulbs of *Lilium washingtonianum*. The female of *A. californica*, previously unknown, also is described, and the genitalia are illustrated. The larvae are reported to feed on *Disporum hookeri*.

Additional key words: Acrolepiopsis liliivora, genitalia (male and female), Lilium washingtonianum, Disporum hookeri.

Acrolepiidae is a family in the superfamily Yponomeutoidea. It is represented in all zoogeographical regions and includes 84 described species in three genera: *Digitivalva* Gaedike (40 species), *Acrolepiopsis* Gaedike (35 species), and *Acrolepia* Curtis (9 species). In the Nearctic and Neotropical regions there are 15 described species, three in *Digitivalva*, ten in *Acrolepiopsis*, and two in *Acrolepia* (Gaedike 1984a, 1984b). Undoubtedly, more detailed study of each zoogeographical region will increase the number of known species.

The known life histories indicate that acrolepiid larvae are leafskeletonizers or miners of leaves, fruit, or bulbs of Asteraceae (*Digitivalva*), Dioscoriaceae and Liliaceae (*Acrolepiopsis*), and Solanaceae (*Acrolepia*). While examining acrolepiid from the western United States, I discovered a new species of *Acrolepiopsis* and the previously undescribed female of *A. californica*. These are described below.

Acrolepiopsis liliivora Gaedike, new species

Wingspan 15–16 mm. Head dark brown, except vertex light brown; labial palpi dark brown. Thorax dark brown. Forewing dark brown, with white triangular spot, sometimes overlaid with dark scales, extending obliquely forward from margin of dorsum at ½ distance from base, with minute white dot on dorsum at base of cilia, and with individual light scales scattered throughout the dark area; cilia beneath apex pale distally. Males somewhat lighter brown than females. Male genitalia (Fig. 1): saccus elongate, narrow, apically rounded; valva with

FIGS. 1-4. Genitalia of Acrolepiopsis liliivora Gaedike, new species. 1, Male genitalia; 2, Female genitalia (sterigma); 3, Female genitalia (signa); 4, Female genitalia (signa).



base broad, narrowest medially and expanded apically, costal margin concave; aedeagus more than 2.5 times valva length, broad basally, tapering to apex, with minute sclerotizations in vesica. Female genitalia (Figs. 2–4): Eighth segment with a pair of relatively narrow, somewhat clublike structures bearing setae on the broadly rounded base; ostium with rectangular sclerotization, the lower half more strongly sclerotized; ductus bursae strongly sclerotized over most of its length; corpus bursae with two long signa; signa slightly bent with dentate inner surface, the appearance variable depending upon the preparation.

Type locality: California: Auto Rest. (I have been unable to determine the exact location.)

Types: Holotype male: Auto Rest, Cal.[ifornia] 18. 8. [19]18, on *Lilium washingtonianum*, Coll. David Griffiths (genital slide R. Gaedike No. 2421). Paratypes: 1 male, 3 females, same data as holotype; 1 female Oregon, Santiam Natl. For., reared from bulb of *Lilium washingtonianum*, emerged 9. X. 1931. The holotype and three paratypes are deposited in the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C.; two paratypes are deposited in the Deutsches Entomologisches Institut (DEI) Eberswalde.

Biology: Larva in bulb of *Lilium washingtonianum* (Liliaceae), pupa in a net-like cocoon.

Remarks: All specimens are in poor condition. One female lacks forewings; another lacks a hindwing. The new species is closely related to *A. californica*. It differs in the coloration of the cilia below the apex, in having somewhat broader valvae and longer signa than *californica*.

Acrolepiopsis californica Gaedike, 1984

Entomol. Abh. Staatl. Mus. Tierk. Dresden 47(1983)10:183-184, Fig. 20.

In material sent to me by J. Powell there were four specimens of this species, two of which were females. Because the female was previously unknown, I describe the female genitalia below.

Female genitalia (Fig. 5): The pair of ventrolateral clublike structures bearing setae on the broadly rounded base, tapering to a point; ostium with a somewhat cup-shaped sclerotization, the lower half more strongly sclerotized; ductus bursae strongly sclerotized; signa short, with dentate inner surface.

Material examined: Two males, two females, as follow: One male: Calif.: El Dorado Co., Blodgett Forest, 13 mi E Georgetown, 4000– 4500', 27/28.V.1978, leg. J. Powell. One male: Calif.: Siskyou Co., McCloud River at Ash Creek Rgr. Sta., 9.VI.1974, leg. J. Powell. One female: Calif.: Myers Flat, Humboldt Co., 14.VIII.1963, leg. J. Powell. One female: Calif.: Big Creek Reserve (UCNLWR), Monterey Co., 26./



FIG. 5. Female genitalia of Acrolepiopsis californica.

28.V.1987, leg. J. Powell. These specimens are the first records of this species since its description.

Biology: J. Powell (*in litt.*) gives some remarks on the biology of this species: "... In late April [1990] I made additional collections of the larvae of *Acrolepiopsis* at Big Creek on *Disporum hookeri* and succeeded in rearing a few adults. This confirms the hostplant for the species represented by one specimen that I sent you from 1987. The larvae sometimes start to eating the inflorescence but sometimes do not; later they skeletonize the leaves, feeding on either upper or lower surfaces."

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