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NEW RECORDS OF THE RARE CLEARWING MOTH,  
*ALCATHOE CAROLINENSIS* ENGELHARDT,  
(SESDIIDAE) IN FLORIDA

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The rare black, tailed, clearwing moth, *Alcathoe carolinensis* Engelhardt, is previously known from Florida only by a single specimen taken by Sharp & Eichlin (1979) in north-central Florida during an extensive four-year sex attractant trapping study (1975-78). This lone Florida specimen was a male taken in a sticky trap located in a peach orchard near Lowell in Marion Co. on October 6, 1977. Prior to Sharp's state record, *A. carolinensis* was known in the U.S. only from a single male specimen considered by Engelhardt (1946) to be a female and a doubtful record presumably taken by Beutenmüller in the Black Mountains of North Carolina. Engelhardt speculated incorrectly that the lone specimen was probably a mislabeled clearwing species from Mexico or Central America.

In the late summer and fall months of 1984, extensive sampling for sesiids using sex attractants was begun at numerous locals in west-central and southwestern Florida. This survey will continue for two years but has already produced three new Florida localities for *A. carolinensis*, thus confirming Sharp's lone published state record. The specimens are as follows: 1) 1 male taken at Chassahowitzka, Citrus Co. on Oct. 12, 1984; 2) 1 male taken 1 mi. W. of Homosassa Springs, Citrus Co. on Oct. 14, 1984; and 3) 1 male taken 1½ mi. SW of Crystal River, Citrus Co. on Oct. 19, 1984. The Chassahowitzka specimen was taken in a Pherocon R-1C sticky trap, but the other two were trapped alive in excellent condition, in home-made cylindrical live-traps originally designed for sugared-beer baiting for noctuid moths. All three specimens were attracted to commercially prepared strips containing capillary tubes (Pest Select, Inc.) which release *EZ*-3,13-octadecadien-1-ol acetate (usually abbreviated *EZ*-3,13 ODDA). Several other isomers & chemical combinations known to be sesiid attractants were also utilized, but they failed to attract *A. carolinensis*. These include: 1) *ZZ*-3,13-ODDA, 2) *EZ*-2,13-ODDA, 3) *EZ*-3,13-ODD alcohol, and 4) 50% *EZ*-3,13-ODDA plus 50% *ZZ*-3,13-ODDA. The identification of *A. carolinensis* was confirmed by T. D. Eichlin, Division of Plant Industry, Sacramento, California. The specimens are presently deposited in the U.S.F. Biological Collections.

It should be noted that the single specimen taken in 1977 (Sharp, et. al. 1978) responded to a trap baited with a mixture of 25% *ZZ*-3,13-ODDA plus 75% *EZ*-3,13-ODDA, and the date was within a week of the first specimen taken in 1984. It is possible that *A. carolinensis* in Florida, has a fairly narrow annual emergence window, because to date it has been recorded only in October, even though traps were baited with attractant more or less continuously throughout the fall months in suitable areas.

Ecologically it is significant that all three Citrus County specimens of *A. carolinensis* were trapped in nearly identical habitats consisting of dense hydric hammock type climax forest which borders the Chassahowitzka, Homosassa, and Crystal Rivers respectively. According to Engelhardt (1946), all species of *Alcathoe* are root and stem borers in the climbing vine *Clematis*. Three species of *Clematis* (*C. crispa* L., *C. virginiana* L., and *C. reticulata* Walt.) are found commonly in the hydric climax forest of the westcentral coast of Florida (Dr. Richard Wunderlin, U.S.F. Botanist, pers. comm.). Excavations of the roots & root crown of the *Clematis* species in this hammock forest should eventually yield the larvae of *A. carolinensis* in Florida it is predicted.

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