

OBSERVATIONS ON THE BIOLOGY AND DISTRIBUTION
OF SEVERAL SPECIES OF BUPRESTIDAE (COLEOPTERA)
OF NORTH AMERICA

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ABSTRACT

New biological and/or geographical distributional data are given for 18 species of Buprestidae of the following genera: *Acmaeodera*, *Acmaeoderopsis*, *Agriilus*, *Polycesta*, and *Trichinorhipis*.

During the past few years, several interesting observations and collections have been made by the author and accompanying collectors. In addition, collections of several colleagues have been made available for inclusion. Many of these observations represent previously unrecorded adult host records (see Westcott *et al.* 1979), while some may be only incidental adult "resting" records. This information is presented in hope that it may prove important should the entire spectrum of adult activity be considered in some future study.

My name will be abbreviated CLB in the text; unless otherwise noted, all specimens are in my collection [CLBC]. Abbreviations of collections [brackets] are as published in Arnett and Samuelson (1969). Collections not in that work are: R. H. Hasegawa [RHHC] and R. K. Velten [RKVC].

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Acmaeodera bivulnera Horn. In 1979 and 1980, five specimens were collected during the heat of the day from the upper portion of twigs of *Beloperone californica* Benth. CALIFORNIA: Riverside Co., 4 mi S Palm Desert, Hwy. 74, 7-VII-79, CLB and M. Pearson; same locality, 19/26-VII-80, CLB and K. Bear. Even though its suspected host, *Cercidium floridum* Benth. and another recorded associate, *Hymenoclea salsola* T. & G. (Nelson 1959) are common throughout the area, no specimens were collected from their foliage.

Acmaeodera convicta Fall. Although the distribution of this species was recently mentioned (Westcott *et al.* 1979), there are no host records. In Arizona, it was collected flying about or feeding upon the flowers of *Allionia incarnata* (Standl.) and *Boerhaavia coccinea* Mill. from mid-morning to mid-afternoon. These plants are common in low places or along washes on alluvial slopes of several isolated mountain ranges in southeastern Arizona. ARIZONA: Pima Co., Baboquivari Mts., Kitt Peak Rd. (Hwy. 386), 3,400', 1-IX-78, CLB, on *B. coccinea*; Santa Rita Mts., Florida Wash, NW of Madera Canyon, 2-IX-78

and 1-IX-79, CLB, on *B. coccinea*; 3.5-4.5 mi SE Continental, 6-IX-79, G. C. Walters, on *B. coccinea* [GCWC]; Florida Wash, 30-VIII-80, CLB and K. Bear, on *B. coccinea* and *A. incarnata*.

Acmaeodera coquilletti Fall. This chaparral species is previously recorded as collected from *Quercus dumosa* Nutt. New host records are CALIFORNIA: Riverside Co., Santa Rosa Mts., Pinyon Flats, 4,000', 14-VI-54, G. H. Nelson, on *Eriogonum fasciculatum* Benth.; San Bernardino Co., San Bernardino Mts., 3 mi S Camp Angelus, 5,000', 28-VI-58, G. H. Nelson, on *Ceanothus crassifolius* Torr.; Cajon Pass, 29-V-62, G. H. Nelson, on *Quercus wislizenii* A. DC. all [GHNC]; Santa Barbara Co., San Rafael Mts., Sunset Valley, 26-VI-76, CLB, flying to flowers of *Lotus scoparius* (Nutt. in T. & G.).

Acmaeodera daggetti Fall. Collected with *A. convicta*, *A. parkeri*, and *A. scalaris* flying to or feeding on flowers of *Allionia incarnata* and *Boerhaavia coccinea*.

Acmaeodera davidsoni Barr. Barr (1972) records the type material as collected from species of *Acacia* and *Mimosa*. It was beaten from *Prosopis* sp., NEW MEXICO: Hildago Co., Peloncillo Mts., Franite Gap, 14-VII-80, R. H. Hasegawa.

Acmaeodera fisheri Cazier. This common Colorado Desert species has few recorded plant associations. New adult host records are CALIFORNIA: Imperial Co., 12 mi E Holtville, frontage road along Interstate 8, 5-VII-78, CLB and R. H. Hasegawa, sweeping *Eriogonum deserticola* Wats. at night; same locality, 26-VI-81, CLB, flying about or resting on stems of *E. deserticola*; 1 mi W Winterhaven, 16-VI-80, CLB and K. Bear, feeding on flowers of arrowweed, *Pluchea sericea* (Nutt.) Cov. *P. sericea* commonly grows in close association with *Atriplex lentiformis* (Torr.) Wats., a recently recorded larval host of this beetle (Westcott *et al.* 1979).

Acmaeodera hepburni LeConte. This common chaparral species has been recorded from Santa Cruz Island (Nelson 1962). It is not surprising that it should be found on another of the Channel Islands. CALIFORNIA: Los Angeles Co., Santa Catalina Island Isthmus, Fourth of July Cove, 21/22-III-80, A. V. Evans, C. D. Nagano, and L. Herbrandson.

Acmaeodera holsteni White. At the time of its description, this species was recorded from the flowers of *Adenostoma fasciculatum* H. & A. New records are CALIFORNIA: San Bernardino Co., San Bernardino Mts., 3 mi S Camp Angelus, 28-V-60, flying about *Arctostaphylos* sp.; San Diego Co., Oak Grove, 24-VI-62, on *Quercus dumosa*; Riverside Co., San Jacinto Mts., Hwy. 74, above Hemet, 4,000', on *Eriogonum fasciculatum*, all G. H. Nelson, [GHNC]; Santa Barbara Co., San Rafael Mts., Sunset Valley, 26-VI-76, CLB and L. H. Shaw, swept from or flying about the flowers of *Lotus scoparius*.

Acmaeodera labyrinthica Fall. This common species was collected, and will be discussed below, with *A. verityi*. CALIFORNIA: Riverside Co., White-water Canyon, 19/25-IV-76, CLB, on flowers of *Chaenactis fremontii* Gray.

Acmaeodera parkeri Cazier. This common Sonoran Desert species was collected on the flowers of *Haplopappus* sp., ARIZONA: Cochise Co., Skeleton Canyon, 31-VIII-74, F. T. Hovore [FTHC]; and flying to or feeding on the flowers of *Boerhaavia coccinea*, Pima Co., Santa Catalina Mts., Sabino Canyon, 27-VIII-76, CLB and 29-VIII-80, CLB and K. Bear; Florida Wash, 30-VIII-80, CLB and K. Bear.

Acmaeodera prorsa Fall. This common chaparral species can be added to the list of Channel Island fauna. CALIFORNIA: Santa Barbara Co., Santa Cruz Island, Canada del Puerto, 9-V-68, D. S. Horning, Jr. and R. O. Schuster [UCDC].

Acmaeodera verityi Westcott. This species, though often commonly collected, has a fairly restricted distribution. "Adults are most commonly taken resting on stems of *Ephedra californica* Wats., which most likely is the larval host plant" and are recorded from flowers of *Viguiera deltoidea* Gray and other yellow-flowered Compositae and foliage of *Dalea californica* Wats. (Westcott 1971). The following information seems noteworthy: CALIFORNIA: Riverside Co., Snow Creek, 27-IV-69, F. T. Hovore, on flowers of *Chaenactis* sp. [FTHC]; Whitewater Canyon, 19/25-IV-76, CLB, on flowers of *Chaenactis fremontii*. *A. verityi* and *A. labyrinthica* were collected in large series in Whitewater Canyon, where the annual composite *C. fremontii* quite often grows in close proximity to *E. californica*, frequently growing up through the foliage. *A. verityi* was never found on flowers growing more than a few feet from *E. californica*, while *A. labyrinthica* was most often collected on flowers growing more or less in the open and some distance from any *E. californica*.

Acmaeoderopsis guttifera (LeConte). The following information represents a potential larval host. CALIFORNIA: Santa Barbara Co., Sunset Valley, 27-VI-77, CLB, beaten from dead twigs of *Arctostaphylos* sp.

Agrius fisherellus Obenberger. The varied habits of this species were recently discussed by Nelson (1980). A specimen was swept from *Hymenoclea salsola* T. & G., CALIFORNIA: Riverside Co., 4 mi S Palm Desert, Hwy. 74, 2,000', 4-VII-77, CLB and V. L. Hauser.

Agrius lacustris LeConte. SOUTH DAKOTA: Custer Co., Fairburn agate beds, 15 mi E Fairburn, 10-VI-78, LeDoux & Pennell. (New state record). This species has been recorded from species of *Croton* and *Quercus* (Fisher 1928). Additional adult host records are TEXAS: San Patricio Co., Welder Wildlife Refuge, 12-V-77, and Kenedy Co., 10 mi S Sarita, 15-V-80, F. T. Hovore, swept from *Solanum* sp. [FTHC]; CALIFORNIA: Imperial Co., Algodones Dunes, 4.7 mi W Glamis, Hwy. 78, 22-IX-79, CLB and R. H. Hasegawa [CLBC & RHHC]; and 7 mi W Glamis, 7-IX-80, CLB [RKVC], swept from *Croton wigginsii* Wheeler.

Polycesta deserticola Barr. This common species has been recorded using several varied desert trees and shrubs as its larval hosts. Another host can be added to the list, as a specimen was found dead in the rearing can filled with *Salix* sp. wood collected at ARIZONA: Yuma Co., vic. Morelos Dam. II-81, CLB and M. Pearson; specimen emerged VIII-81. (New larval host.)

Trichinorhipis knulli Barr. One male of this rare beetle was beaten from dead branches of *Prosopis glandulosa* var. *torreyana* (L. Benson) M. C. Johnst., CALIFORNIA: Imperial Co., 1 mi SW Frink Springs, 7-IX-80, CLB. This is only the third adult to be collected in the field, most having been reared from the only recorded larval host, *Simmondsia chinensis* (Link) C. K. Schneid. (Nelson *et al.* 1981). At the time of this collection and on subsequent trips to the area, *S. chinensis* was not found. This indicates a potential second host for this beetle.

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