

***EUREMA ALBULA* (PIERIDAE) AND *ANTHANASSA ARGENTEA* (NYMPHALIDAE): NEW RECORDS FOR THE UNITED STATES (LEPIDOPTERA: PAPILIONOIDEA)**

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ABSTRACT.— Two butterflies, *Eurema albula* (Cramer) and *Anthanassa argentea* (Godman & Salvin), new to the United States, were collected in the lower Rio Grande Valley, Texas, in November 1993.

KEY WORDS: Antigua, Argentina, Compositae, Costa Rica, distribution, El Salvador, Guatemala, hostplants, Leguminosae, Mexico, Nearctic, Nicaragua, Panama, *Phyciodes*, Phycioidini, St. Vincent, Texas, Tobago, Trinidad, West Indies.

The lower Rio Grande Valley of Texas is well known as one of the regions in southwestern United States where some tropical Lepidoptera reach their northernmost dispersal. Over the years, Lepidoptera from Mexico new to the United States are regularly discovered in this region. Some occurred as single recorded strays, while some were able to establish temporary residency with dynamic extirpation and reestablishment (Neck, 1976). Climatic conditions, presence of acceptable larval foodplants, nectar sources and habitats play important roles in the dispersal of these tropical species (Kendall and McGuire, 1984). We observed lush vegetation growth and abundant nectar sources during our 12-14 November 1993 field trip, and found more species of strays and temporary migrants than we had ever experienced before. Two species of butterflies, new to the United States, were collected and are reported here.

***Eurema albula* (Cramer, 1775)**

A female (Fig. 1) was collected by the junior author at about 1000 hours, 13 Nov 1993, near the Rio Grande River in Roma Los-Saenz, Starr County, Texas (98° 59' 53"W, 26° 23' 39"N). The butterfly was flying slowly in a non-erratic straight line, about 0.5m above the ground.

E. albula is widely distributed from Mexico, south to Argentina and east to Antigua and St. Vincent in the West Indies (Riley, 1975), Trinidad and Tobago (Barcant, 1970) where it was reported to use *Cassia* (Leguminosae) as larval foodplant. Several species of *Cassia* occur in the lower Rio Grande Valley, of which *C. alata* L., *C. corymbosa* Lamarck, *C. bicapsularis* L. and *C. laevigata* Wildenow are cultivated as ornamental shrubs (Correll and Johnston, 1979). Along the river bank in the vicinity of Roma Los-Saenz, there are indeed *Cassia* shrubs. Therefore, the specimen collected could possibly come from a recently established population or this female could have laid eggs prior to its capture, and established a breeding population under favorable

conditions. At the time of capture, the identity of this species was not recognized. Therefore, we did not search the area for any other adults or *Cassia* foodplants for immatures.

***Anthanassa argentea* (Godman & Salvin, 1882)**

A very worn male (Fig. 2) was collected by the senior author at about 1230 hours, 14 Nov 1993 along a dirt road 1.6km southeast of Penitas, Hidalgo County, Texas (98° 26' 28"W, 26° 13' 39"N). It was nectaring on *Eupatorium odoratum* L. (Compositae), an excellent fall butterfly attractant. Other Phycioidini that were at the *Eupatorium* blossoms in the surrounding area were *A. texana texana*, *Phyciodes vesta*, *P. phaon* and *P. tharos*. However, the wing coloration and markings of *A. argentea* are so distinctly different that it could not be confused with the above and was readily recognized as being new to the U.S. Further search in the surrounding area did not turn up another adult. In the Allyn Museum collection, there are *A. argentea* specimens from Gomez Farias, Tamaulipas, Mexico, which is about 370km south of the lower Rio Grande Valley, certainly a distance that migratory strays are capable of travelling. From the condition of the Penitas specimen, it was likely a migratory stray.

A. argentea is found in Mexico, El Salvador, Guatemala and Nicaragua where it is sympatric with *A. atronia* Bates. It resembles *A. atronia* and was previously treated by Hall (1929) as one of its forms. Higgins (1981) revised its status to a species rank based on constant differences in wing maculation between the two. *A. argentea* can be differentiated from *A. atronia* by the dorsal chestnut-brown discal area, whereas *A. atronia* is more uniformly dark brown and the markings are usually obscured if present. *A. atronia* is also more widely distributed, found in Panama and Costa Rica in addition to where *A. argentea* flies.

The identification of this specimen was verified by J. D. Weintraub, who compared the dorsal and ventral photographs with the lectotypes of *A. argentea* and *A. atronia* in the Natural



Fig. 1. *Eurema albula* ♀: a) dorsal view; b) ventral view.

Fig. 2. *Anthanassa argentea* ♂: a) dorsal view; b) ventral view. Scale markers for both figures are 10mm long.

History Museum, London. The senior author later also examined these lectotypes, as well as specimens of both species from the Allyn Museum and the University of California, Berkeley collections. They include *A. atronia* from the states of Hidalgo, Vera Cruz and Chiapas in Mexico, Juan Vinas and Navarro in Costa Rica, Antigua and Palin in Guatemala, and Santa Tecla in El Salvador; and, *A. argentea* from Nuevo Leon and Tamaulipas in Mexico, Nueva Guinea in Nicaragua, San Isidro, San Ramon and Majaditas in El Salvador.

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