A NEW SPECIES OF CHORANTHUS FROM HISPANIOLA
(LEPIDOPTERA: HESPERIIDAE)

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ABSTRACT.— Choranthus maria is described from a single female reared from a larva found feeding on the leaves of a young Sabal palm. The type locality is a tropical hardwood forest near Sosúa, on the northern coast of the Dominican Republic, Hispaniola. The closest relatives of C. maria are C. schwartzi and perhaps C. melissa which are also endemic to Hispaniola. These other species differ from C. maria in color pattern, morphology of the female genitalia, biogeographical distribution, and probably larval hostplants.

KEY WORDS: Achylodes, Anastrus, Asbolis, Bahamas, Choranthus maria new sp., Cuba, Cymaenes, Dominican Republic, Ephyriades, Euphyes, Haiti, Nyctlius, Palmae, Panoquina, Perichares, Phocides, Polygonus, Proteides, Puerto Rico, Pyrgus, Pyrrhocalles, Sabal, Urbanus, Virgin Islands, Wallengrenia, West Indies.

The genus Choranthus is a biogeographically intriguing group of hesperine skipper butterflies found in the West Indies. Three species have been previously described from Hispaniola, yet two others occur on nearby Puerto Rico. In addition, Jamaica, Cuba, and the Bahamas each have one endemic species (Gali, 1983). Choranthus vitellius Fabricius from Puerto Rico and the Virgin Islands is most closely related to Choranthus haitensis Skinner from Hispaniola. Similarly, Choranthus radians Lucas from Cuba and Choranthus richmondi Miller from Andros and the Exuma Islands, Bahamas, are close relatives (Riley, 1975). As far as is known, these species feed on grasses in the larval stages. Choranthus borinconus Watson from Puerto Rico and Choranthus lillae Bell from Jamaica form a different species group (Miller, 1965), and the larvae of the former feed on palms (Riley, 1975).

The most common species on Hispaniola, Choranthus haitensis Skinner, occurs throughout the island from sea level to at least 1129m elevation (Schwartz, 1989). Two recently described Hispaniolan species have much more restricted distributions. Choranthus melissa Gali has been found only between 732—1281m elevation in southern Hispaniola in the Sierra de Baoruco, Massif de la Selle, and Sierra Martín García. Similarly, Choranthus schwartzi Gali occurs between 488-1007m along the eastern edge of the Cordillera Central (Schwartz, 1989).

In late November 1988, Thomas C. Emmel and I collected butterflies in Puerto Plata and La Vega Provinces, Dominican Republic. During this trip, I found some hesperid larvae on palms in a tropical hardwood forest near Sosúa on the northern coast. One of these larvae eventually pupated, and an adult representing a new species of Choranthus emerged. Colors noted in the description are from color charts in Maerz and Paul (1930).

Choranthus maria Minno, new sp.

Diagnosis.— Choranthus maria most closely resembles C. schwartzi in color pattern (Figure 1), but the former has more black, especially on the forewings. The female holotype of C. maria has a distinctive black streak from the base of the upper forewing, through the cell, to the outer black border. The shape of the female genitalia is also very similar to that of C. schwartzi, but the lamella antevaginalis appears to be a bit broader in C. maria (compare illustrations in Figure 2 with those in Miller, 1965 and Gali, 1983).

Description.— Males: not known.

Females.— (Fig. 1, dorsal, top left; ventral, bottom left). Head, thorax and abdomen covered with yellow and black scales which blend to an olivaceous color when viewed without a lens. Eyes black. A tuft of long, black "eyelash" scales at the base of each antenna. Antennal shaft yellow, intersegmental areas ringed with black. Club mostly black, nudum 47 (see discussion under Remarks below). Apiculus equally black and yellow, about one-third the length of the club. Proximal segments of palpi covered with shaggy, light-yellow and black scales. Terminal segment with appressed black, light-yellow, and golden-yellow scales.

Forewing: Upper side of the forewings golden-yellow (plate 10, color L-8) and black. Veins outlined with black. Outer black border broad, with an inward point between CU1-2A. A black streak extends parallel to the costal margin from the middle of the base of the wing through the cell to the outer black border. This streak contains two small golden spots before the distal end of the cell, and a small diffuse golden spot between M1-M2 at the junction with the outer black border. Fringe black at the apex, gradually shading to gold at the tornus. Forewings 11.5mm long.

Underside of the forewings golden-yellow (plate 11, color L-9) along...
with fine folds.

**Holotype ♀.—** DOMINICAN REPUBLIC.— Puerto Plata Prov.: 1.5Km E. Sosúa, 23 Nov 1988, M. C. Minno & T. C. Emmel (reared ex. larva on Sabal). The holotype will be deposited in the Allyn Museum of Entomology (Sarasota), Florida Museum of Natural History.

**Paratypes.**— No other adult specimens are known.

**Etymology.**— *Choranthus maria* is named in honor of my wife, Maria.

**REMARKS.**— Miller (1965) revised *Choranthus* and recognized two subgroups. The *lilliae* group was characterized as having the apiculus half as long as the club, nudum of 13 segments, uncus short, and forewing length greater than 17mm. Members of the *radians* group, on the other hand, have an apiculus only one-third as long as the club, nudum of 12 segments, a longer uncus, and are smaller in size. The short apiculus and small size of *C. maria* would place it in the *radians* group. The apiculus of the holotype of *C. maria*, however, appears to be aberrant. Two of the seven apicular segments are partially fused. In addition, as other...
species in the radians group have an apiculus composed of eight segments, one segment must be lost altogether. Other specimens of C. maria are expected to have an eight-segmented apiculus.

Choranthus maria is a species of low elevation. I collected larvae within 15m of the ocean. Choranthus haitiensis also occurs in coastal areas of Hispaniola and was abundant at the edges of the forest at the Sosúa locality. Choranthus melissa and C. schwartzi are montane species confined to specific regions of the island (Schwartz, 1989) allopatric to C. maria.

The larvae of C. maria were found on the leaves of young Sabal palms, 1-1.5m tall. The shelters are formed by tying the edges of the tips of individual leaf segments together. Other palm-feeding skippers such as Pyrrhocalles antiqua Herrich-Schäffer and Asbolis capucinus Lucas construct shelters in the same way.

Scott Zona, who has completed a monographic study of Sabal, examined my slides of a young and a mature specimen of the food plant and identified the host as probably Sabal causiarum (Cook) Beccari. S. causiarum occurs at low elevation (100 m) and has mostly spherical fruit 7.1-10.8mm in diameter and 7.5 -10.4mm high. Another less abundant species, Sabal domingensis Beccari, is found between 150-1000m in La Vega, Santiago and Espaillat Provinces. This endemic palm has larger (11.5-14.1mm diameter), pyriform fruit.

The species of Sabal eaten by C. maria (probably S. causiarum) was abundant and widespread in low elevations (<100m) of Puerto Plata Province, Dominican Republic. I did not observe any Sabal species in La Vega Province or at higher elevations of Puerto Plata Province. C. haitiensis is a grass-feeder (Riley 1975) and I found larvae of this skipper on Panicum maximum, both at the Sosúa locality and near Jarabacoa. The host plants of C. melissa and C. schwartzi are unknown, but are most likely to be grasses. The only other Choranthus known to feed on palms is C. borinconus (Watson) from Puerto Rico (Riley, 1975), which, like C. maria, occurs at low elevations (Miller, 1965).

The habitat in which the larvae of C. maria were found is a narrow strip of tropical hardwood forest located approximately 1.5 km east of Sosúa. The forest is about 30m wide and seems to extend for several kilometers along the coast. A dirt road and extensive pastureland form a sharply-delineated southern boundary. The western portion of the forest is being encroached upon by urban development. The vegetation at the type locality is growing in shallow soil covering a limerock base, similar to that found in the upper Florida Keys. The formation would be called dry seasonal forest under Beard's classification (Beard, 1944, 1955).

The larvae of C. maria were found in partially cleared areas of the tropical hardwood forest, where most of the understory vegetation had been removed, and where large broadleaf trees provided partial shade. Under these conditions young Sabal palms were locally abundant.

Adults of C. maria must be highly secretive. Two collectors failed to find any adults at the Sosúa locality after two days of collecting, although the larvae were rather abundant. Other hesperiids found at this locality were: Phocides pigmaion bicolora Boddart, Proteides mercurius sanchesii Bell & Comstock, Polygonus leo ishmael Evans, Urbanus proteus domingo Scudder, Anastrus sempiternus dilloni Bell & Comstock, Achlyodes thraso sagra Evans, Ephyriades zephoodes Hübner, Pyrgus oileus Linnaeus, Pyrrhocalles antiqua Herrich-Schäffer, Perichaeres philetes Gmelin, Cymaenes tripunctus Herrich-Schäffer, Wallengrenia druryi Latreille, Choranthus haitiensis Skinner, Euphyes singularis Herrich-Schäffer, Panoquina sylvicola woodruffi Watson, Panoquina ocola Edwards, and Nycetius nycetius Latreille.

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