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# Notes on some poorly known Pierine butterflies from the Henri Pittier National Park, Aragua, Venezuela (Lepidoptera: Pieridae)

F. Romero M. & J. M. González

## Abstract

Notes on seasonal occurrence, diurnal activity, flower visitation and oviposition of three poorly known pierine butterflies, *Cunizza hirlanda minturna*, *Hesperocharis crocea idiotica* and *Melete lycimnia harti* from Venezuela are presented.

KEY WORDS: Lepidoptera, Pieridae, *Cunizza hirlanda minturna*, *Hesperocharis crocea idiotica*, *Melete lycimnia harti*, Venezuela.

## Notas sobre algunos pieridos del Parque Nacional Henri Pittier, Aragua, Venezuela (Lepidoptera: Pieridae)

## Resumen

Se presentan notas sobre ocurrencia estacional, flores visitadas y la ovoposición de tres piéridos, *Cunizza hirlanda minturna*, *Hesperocharis crocea idiotica* y *Melete lycimnia harti*, en Venezuela.

PALABRAS CLAVE: *Cunizza hirlanda minturna*, *Hesperocharis crocea idiotica*, *Melete lycimnia harti*, Venezuela.

## Introduction

Pieridae is a large family of butterflies that is frequently observed in the Venezuelan Coastal Range and several of its members have been reported in large migrations along various sites in Northern Venezuela (BEEBE, 1949, 1950; BOX, 1930; CLARK, 1903, 1905; GONZÁLEZ, 2005; GONZÁLEZ *et al.*, 2005; OSUNA, 2000; SANDOVAL *et al.*, 2008). Some sub-species of this family, like *Cunizza hirlanda minturna* Fruhstorfer, 1910, *Hesperocharis crocea idiotica* (Butler, 1896) and *Melete lycimnia harti* (Butler, 1896) can be found in the Northern Central region of the country (ÁLVAREZ-SIERRA & ÁLVAREZ-CORRAL, 1984; GONZÁLEZ *et al.*, 2005; MASTERS, 1967; RAYMOND, 1982; SANDOVAL *et al.*, 2008) but little is known about their natural history.

As a contribution to the knowledge of these taxa, our recorded notes on the natural history of the above mentioned ssp. from the Choroní area, at the Henri Pittier National Park, Aragua, Venezuela, are reported herein.

## Distribution

*Cunizza hirlanda* (Stoll, 1790) appears to be distributed mainly in South America, while *Hesperocharis crocea* Bates, 1866 and *Melete lycimnia* (Cramer, 1777) have a wider distribution that includes Central America and even Mexico (D'ABRERA, 1981; FRUHSTORFER, 1910; LAMAS, 2004; RÖBER, 1924).

According to various butterfly collectors, what appears to be at least three subspecies of *C. hirlanda* are supposedly found in Venezuela, mostly in deciduous forests, from 100 to 600 meters above sea level. One of these subspecies, *Cunizza hirlanda minturna* was originally described from material apparently collected in Mérida, in the Andes region of Venezuela, according to a label attached to the type. However, lepidopterists commonly report it from the Venezuelan states of Aragua, Carabobo, Miranda, and Vargas. RAYMOND (1982) shows a specimen later identified as the above ssp. (plate 14, figure 4) which is slightly different than the type. Unfortunately, since not much is known about how variable the ssp. is in Northern Venezuela, it is premature to consider it as something different (GONZÁLEZ *et al.*, 2005).

*Hesperocharis crocea idiotica* was described (as *Heliochroma idiotica*) from material in the collection of Herbert Druce but no collecting locality was mentioned by the author (BUTLER, 1896a). Years later, MASTERS (1968) “rediscovered” this taxon (as *Hesperocharis longstaffi*) from material collected in La Guayra (Vargas State), in eastern Caracas at the southern slope of El Ávila Mountain (Miranda State), and also in Turén (Portuguesa State). The first two localities are adjacent to the Coastal Range while the third one is located in west-central Venezuela. This ssp. has been cited and illustrated (Plate 16, fig. 10) from material collected in/or around Caracas (RAYMOND, 1982).

*Melete lycimnia harti* was described (as *Daptonura* [sic] *harti*) from material collected in Trinidad (BUTLER, 1896b). However, this ssp. is quite common in Northern Venezuela (ÁLVAREZ-SIERRA & ÁLVAREZ-CORRAL, 1984; GONZÁLEZ *et al.*, 2005; MASTERS, 1968; RAYMOND, 1982). Both sexes were also illustrated (Plate 25, figures 9 and 10) by RAYMOND (1982) from specimens he collected.

These three subspecies occur sympatrically in Los Cerritos, a small farming community located at 200 meters above sea level, along the road from Maracay to Choroni in the Henri Pittier National Park, Aragua State, in the Northern-Central region of Venezuela, on the northern slope of the Coastal range (ROMERO *et al.*, 2005). The area could be ecologically defined as agricultural lands mixed with deciduous forest on the northern slopes which support an annual Relative Humidity of around 83% and variable temperatures between 24 to 26° C (FERNÁNDEZ-BADILLO, 1997, 2000).

### Flying and Adult Feeding Behavior

Many of the specimens of *C. hirlanda minturna* we know from the Venezuelan Coastal Range have been collected during April-May, which corresponds to the beginning of the rainy season for the region. This ssp. is seldom found during other months of the year.

Most flight activity of *C. hirlanda minturna* takes place during daylight hours from 9:00 to 15:00 on sunny and warm days. They normally fly close to canopy levels at mid-high altitude and could easily be confused with the sympatric *Melete lycimnia harti* with similar habits and appearance. Late in the afternoon, *C. h. minturna* move to the forest undergrowth. There, they rest hanging from the tips of dry branches, rarely from leaves, and resemble dry and “yellowish” leaves. They return every day to the same resting places.

*Cunizza hirlanda minturna* populations tend to be quite localized and individuals are highly territorial. Males sometimes can be spotted feeding on salts and minerals from forest puddles. Both sexes are attracted to orange-reddish flowers of *Lantana camara* L. (Verbenaceae), *Hibiscus* spp. (Malvaceae), *Delonix regia* (Boyer ex. Hook.) Raf. and *Caesalpinia pulcherrima* (L.) Sw. (Fabaceae).

*Hesperocharis crocea idiotica* is very uncommon, and it is considered a “rare catch”. It also flies on sunny days, but mainly from 9:00 to 11:00. However, it is difficult to observe this butterfly in the forest because it commonly flies at high altitudes. We have seen some individuals hovering around the orange-reddish flowers of *Caesalpinia pulcherrima* (L.) Sw. (Fabaceae).

*Melete lycimnia harti* is a very common butterfly which visits flowers of various colors from creamy white to yellow and red high on trees or climbing plants. It flies on sunny and warm days from 9:00 to 15:00 or 15:30 on especially sunny afternoons. However, by 16:00 they will all be found at the places where they spend the night. Here, they rest on top of leaves of some trees and bushes, especially

leaves that are closer to the ground. ÁLVAREZ-SIERRA & ÁLVAREZ-CORRAL (1984) mention that individuals of this ssp. fly on sunny days around flowering bushes but they do not give details of plants visited. We have observed adults of *M. l. harti* feeding at flowers of *Euphorbia* sp. (Euphorbiaceae) and *Mikania* sp. (Compositae) in Los Cerritos.

### Oviposition and host plants?

Various species of *Hesperocharis*, a genus closely related to *Cunizza*, are known to feed on Loranthaceae (BECCALONI *et al.*, 2008; DE VRIES, 1986, 1987). The same can be said for *M. lycimnia harti* whose larvae have been previously reported feeding on Loranthaceae in Venezuela (ÁLVAREZ-SIERRA & ÁLVAREZ-CORRAL, 1984), most specifically on *Struthanthus dichotrianthus* Eichler (BECCALONI *et al.*, 2008).

On December 27, 2004, a female of *C. hirlanda minturna* was observed depositing eggs on an unidentified species of *Phthirusa* (Loranthaceae) a genus related and similar to *Struthanthus* (RIZZINI, 1982; KUIJT, 2001). The plant was parasitizing top branches of a *Citrus sinensis* (L.) Osbeck (Rutaceae) tree in Los Cerritos. Ten eggs were laid in rapid succession at the young tips of the mistletoe, one egg per tip. After laying one egg on a bud, the female rapidly flew up and away to immediately return and laid another egg on a closer but different bud, without landing on the plant and barely touching it.

*Hesperocharis crocea idiotica* has also been observed at different times (May 1976, August 1992, 1996 and 2003, according to Romero's family unpublished notes) laying eggs on *Phthirusa stelis* (L.) Kuijt, a widespread Loranthaceae in Northern South America (KUIJT, 2001) which is abundant in Los Cerritos. This butterfly has an egg-laying pattern somehow similar to *C. h. minturna*. However, after laying an egg on a bud *H. c. idiotica* also flies up and away from the plant but in "slow motion" to return and land on a nearby bud on which it will lay another egg.

*Melete lycimnia harti* appears to also lay eggs on *P. stelis* and has been occasionally observed flying high and around this parasitic plant on top of some of the highest trees, not only in Los Cerritos, but also at the Safari Carabobo housing complex in the neighboring Carabobo State, also in the Northern Central region of Venezuela. However, we have not been able to clearly distinguish the egg-laying pattern of this ssp.

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