

**NOTES ON CASTNIINAE (LEPIDOPTERA: CASTNIIDAE)
OF MARGARITA ISLAND, VENEZUELA**

JORGE M. GONZÁLEZ, JOSÉ M. AYALA¹, AND JOSÉ L. ALNAÚDEZ²

Texas A & M University, Department of Entomology, Entomology Research
Laboratory, College Station, Texas 77842-2475, USA
jmgonzalez@tamu.edu

¹1872 West Lagoon Rd., Pleasanton, California 94566, USA.

²Colección de Mariposas “Harold Skinner”, Pampatar, Margarita,
Estado Nueva Esparta, Venezuela

Abstract. *Athis axaqua* and *Castnia invaria volitans* are two new records of Castniinae (Lepidoptera) for Margarita Island, Nueva Esparta State, Venezuela. Only a few species of these large, Neotropical butterfly moths are present on Caribbean Islands. We reviewed specimens deposited in public and private collections, not only in Venezuela but worldwide, but found few Castniinae. It will not be surprising if other species of Castniinae are eventually found in Margarita, because host plants, such as bananas, pineapples and coconut palms, are now common throughout the island.

Key words: *Athis axaqua*, *Castnia invaria volitans*, Castniinae, Lepidoptera, Margarita Island, new records, Nueva Esparta, Venezuela.

**NOTAS SOBRE LAS CASTNIINAE (LEPIDOPTERA:
CASTNIIDAE) DE LA ISLA DE MARGARITA,
VENEZUELA**

Resumen. *Athis axaqua* y *Castnia invaria volitans* son dos nuevos registros de Castniinae (Lepidoptera) para la isla de Margarita, estado Nueva Esparta, Venezuela. Pocas especies de estas polillas diurnas Neotropicales se encuentran en islas Caribeñas. Se revisaron ejemplares depositados en colecciones públicas y privadas, no solo en Venezuela sino en otras latitudes, encontrando pocos Castniinae. No sería sorprendente si otras especies de Castniinae se encuentran en Margarita, debido a que plantas huésped tales como cambur, piña y palma del coco, son comunes en varias partes de la isla.

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Palabras clave: *Athis axaqua*, *Castnia ivaria volitans*, Castniinae, Isla de Margarita, Lepidoptera, Nueva Esparta, nuevos registros, Venezuela.

INTRODUCTION

Giant butterfly moths (Castniinae) are Neotropical species (González 1999, González and Cock 2004, Miller 1986, 1995, Salazar 1999) mostly found from Mexico to Argentina and Chile. Only a few species have been recorded from Caribbean Islands (Miller 1986, González and Cock 2004). *Ircila hecate* (Herrich-Schaffer) and *Athis pinchoni* Pierre are endemic to Hispaniola and Martinique, respectively (González and Cock 2004, Miller 1986, Pierre and Pierre-Baltus 2003). Only a single castniid (*Feschaeria amycus*) is known for Tobago, but Trinidad contains a larger castniid fauna (11 species), as similar and varied as some mainland countries (González and Cock 2004).

Castniinae are normally uncommon in insect collections worldwide, but a few institutional and private collectors have paid attention to gathering these moths. However, the most commonly found species are those of economic importance (González and Fernández-Yépez 1993, González 2003, González and Salazar 2003, Miller 1986, Lamas 1993). We present new records of Castniinae for Margarita Island, Venezuela.

DESCRIPTION OF STUDY AREA

Three islands form the State of Nueva Esparta, in northeastern Venezuela. Margarita Island is located 38 km north of the nearest point of continental South America, and except for Trinidad, is the largest island off the Venezuelan coast with $\sim 934 \text{ km}^2$. The smaller islands of Coche and Cubagua are located between Margarita and the Araya Peninsula on the mainland, in Sucre State. This peninsula and the above mentioned islands are part of the Cubagua formation (Head *et al.* 2006), e.g. they all share the same origin and emerged above sea level during the Pleistocene (Jam and Méndez-Arocha 1962, Yépez Tamayo 1963). Margarita consists of two peninsulas connected by a narrow isthmus (La Restinga), which is basically a barrier reef surrounded by mangroves. The westernmost peninsula (Macanao) is drier and has an east-west

mountain range where the highest peak (Macanao Peak) reaches 760 m. On the easternmost peninsula (Paraguachoa), there is a north-south mountain range, where tropical forests can be found, and the highest peak (Cerro Copey) reaches 910 m (Fajardo *et al.* 2005, Muñoz *et al.* 1989, Rivas *et al.* 2005, Yépez Tamayo 1963). Few animal species found in Nueva Esparta can be considered endemic, and most fauna of Margarita Island is derived from continental South America (Clark 1902, 1905, Linares 1998, Rivas *et al.* 2005).

METHODS

This study is based on examination of specimens deposited in public and private collections, not only in Venezuela but worldwide. However, only material from collections having Margarita Island specimens of Castniinae is mentioned. Collection acronyms are as follows: CUIC, Cornell University Insect Collection, Ithaca, New York, USA; MHNLS, Museo de Historia Natural La Salle, Insect Collection (at MIZA: Museo del Instituto de Zoología Agrícola “Francisco Fernández Yépez”), Maracay, Venezuela; CMHS, Colección de Mariposas “Harold Skinner”, Pampatar, Margarita, Nueva Esparta, Venezuela; CJMA, Colección El Mundo de los Artrópodos, Pampatar, Margarita, Nueva Esparta, Venezuela; and CRM, Colección Renato Mattei, Puerto Ayacucho, Amazonas, Venezuela.

SPECIES COMMENTS

***Athis axaqua* González and Fernández Yépez, 1992 (Fig. 1)**

This species is commonly found from northern central Venezuela to southwest Venezuela, and may even extend to southeast Colombia (González 2004). The Bromeliaceae genera *Billbergia* and *Tillandsia* are known hosts of *A. axaqua* (González 2004, González and Fernández-Yépez 1992). *Billbergia* spp. are not known from Margarita, but about ten *Tillandsia* spp., as well as many other bromeliads, have been collected there (Holst 1994), and any could be a host for this castniid. The only known specimen of *Athis axaqua* from Margarita was collected by the second author at a construction site.



Figure 1: *Athis axaqua* González and Fernández Yépez. Dorsal view of male (La Mira, Margarita, Nueva Esparta State, Venezuela).

Material examined: 1 ♂, La Mira, Nueva Esparta, VII-1989, Coll. J.M. Ayala. (CRM).

***Castnia invaria volitans* Lamas, 1995 (Fig. 2)**

This subspecies is found only in northern South America in the Orinoco basin, and north of the Amazon, from the Guianas to Venezuela and eastern Colombia. There has been some confusion with known subspecies and Venezuelan specimens have been named “*Castnia icarus*”, “*Castnia penelope*” and/or “*Castnia invaria penelope*” (Bastidas[sic] and Zavala 1995, González and Fernández-Yépez 1993, González 2003, Osuna 2000). The nominate subspecies (*C. invaria invaria* Walker) is only found in southeast Brazil, while *C. invaria penelope* Schaufuss seems widespread in Brazil, south of the Amazon (González and Stünning 2007). *Castnia i. volitans* is a common and somewhat important pest of pineapples [*Ananas comosus* (L.) Marr., Bromeliaceae], this is also true for the crop in Margarita



Figure 2: *Castnia invaria volitans* Lamas. Dorsal view of male (Cimarrón, Margarita, Nueva Esparta State, Venezuela).

Island (González 2003, González and Fernández Yépez 1993, Muñoz *et al.* 1989). The presence of this large bufferfly moth on the island could be related to importation of pineapples and pineapple seed from the mainland (Sucre State), where the moth is common and considered a pest (Anduze 1938, Araque 1961, Lichy 1943). Several specimens were seen by the second author flying at noon in areas covered by “Caracuey” plants (*Bromelia humilis* Jacq, Bromeliaceae). A few females were also seen walking backward, and finally to lay eggs in the central area of the plants.

Material examined: 1 ♂, Cimarrón, Isla de Margarita, estado Nueva Esparta, 27-V-1995, Coll. J. M. Ayala (CMHS); 3 ♂♂, Cimarrón, Isla de Margarita, estado Nueva Esparta, 5-VII-1995, Coll. J. M. Ayala (CJMA); 1 ♀, Cimarrón, Isla de Margarita, estado Nueva Esparta, VII-1995, Ex-larva en Caracuey (CJMA); 1 ♂, Margarita Island, Venezuela. 20-II-1917, C.U. Lot 259. Coll. ? (CUIC); 1 ♂, La

Sabana de Guacuco, Nueva Esparta, 21-VII-1953, Expedición La Salle (MHNLS/MIZA).

We found few Castniids from Margarita Island in the many insect collections, including “El mundo de los Artrópodos” and “Colección de Mariposas Harold Skinner”, both located in Margarita, Nueva Esparta (González 2005). However, other species may eventually be found on the island, where small patches of cultivated bananas (*Musa* spp., Musaceae) are scattered throughout. Thus, it will not be surprising if *Telchin licus* Drury, a known Sugarcane pest (*Saccharum officinarum* L., Poaceae) that also attacks Musaceae and is common in nearby Sucre State, could eventually occur on Margarita Island (Anduze 1938, Lichy 1943, González 2003). *Eupalamides guyanensis* (Houlbert) is another species that could well extend its distribution to Margarita, due to the many coconut (*Cocos nucifera* L., Arecaceae) and other palms dispersed throughout the island. The species is also common on the mainland, and known as a pest (Bastida *et al.* 1976, González 1999, González and Cock 2004).

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