First record of *Vanessa braziliensis* (Moore) (Lepidoptera: Nymphalidae) in Chile

Primer registro de *Vanessa braziliensis* (Moore) (Lepidoptera: Nymphalidae) en Chile

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Vanessa Fabricius, 1807 is a cosmopolitan butterfly genus, with twenty one species described, ten of which are represented in the Neotropical Region (Lamas 2004, Wahlberg & Rubinoff 2011). Two of these are currently known from Chile: *Vanessa carye* (Hübner, 1806) and *Vanessa terpsichore* Philippi, 1859 (Herrera *et al.* 1958, Field 1971).

Vanessa carye is a highly vagile butterfly (Wahlberg & Rubinoff 2011) whose geographic distribution includes many countries of South America and some oceanic islands: Easter Island, Juan Fernández Archipelago, and Tuamotu Archipelago (Field 1971). It is one of the more widely distributed butterflies in Chile, where may be found from the sea level to the highlands of the Andes (Herrera *et al.* 1958, Peña & Ugarte 1996). Furthermore, due to its capacity for breeding on weedy and ornamental Malvaceae, it is one of the more frequently observed species in human-modified landscapes, and it is also one of the more familiar butterflies to non-entomologists in this country (Herrera 1987). By contrast, the geographic distribution of *V. terpsichore* is restricted to central-south Chile and southern Argentina (Herrera *et al.* 1958, Field 1971, Peña & Ugarte 1996).

In January 2012, many *Vanessa* butterflies were observed flying around a group of *Baccharis alnifolia* (Asteraceae) shrubs, at about 3,300 m on the western slopes of the northern Chilean Andes, around Socoroma village, Parinacota Province (Fig. 2). Most of these butterflies were males and females of *V. carye*; however, one male of *Vanessa braziliensis* (Moore, 1883) was detected and caught. Subsequently, in January 2013, three females (Fig. 1a, 1b) of this species were collected in a location about five kilometers southwest of the collection site of the previous year. These butterflies were visiting small plants of *Gnaphalium* sp. (Asteraceae), where larvae were detected. The plants and the larvae were collected and brought to the laboratory into plastic vials, in order to rear them and confirm the host plant relationship. Fresh plant substrate

was added periodically until last instar larvae completed feeding, with subsequent pupation and adult emergence.

Previous records of *V. braziliensis* are known from many other places in South America including the countries bordering Chile: Argentina, Peru and Bolivia (Field 1971). This is the first report of this butterfly from Chile. The absence of previous records from this territory is a curious fact, because many other butterflies have been successfully collected and studied here during the last century (e.g.: Herrera *et al.* 1958; Benyamini 1995, MacNeill 2002).

The host plant relationship here mentioned between Asteraceae and *V. braziliensis* agrees with previous records in the literature (Field 1971). Interestingly, the rearing records here documented demonstrate the adequacy of this geographic area for sustaining a local breeding population, dismissing the possibility of just some vagrant adult specimens. Moreover, this discovery raises the question about the origin of the north Chilean populations of *V. braziliensis*.

Some species of *Vanessa* are known for migratory behavior. At least two of these, *i.e.*: *Vanessa atalanta* (Linnaeus, 1758) and *Vanessa cardui* (Linnaeus, 1758), are powerful fliers and are able to move hundreds of kilometers (Stefanescu 1999, 2001). Migrations could be associated with sporadic range expansions, in which case northern Chile would be a fluctuating southern limit for the geographic distribution of *V. braziliensis*. Alternatively, this may be a permanent resident butterfly, but with too low population levels for easy detection; thus its discovery has been possible only after continuous field work.

Despite the small number of butterfly species expected in the arid landscapes of northern Chile, the discovery here reported together with other recent additions (e.g.: MacNeill 2002, Vargas & Lamas 2011) suggest that some other butterflies may be waiting to be detected and studied.

FIGURE 1. Female adult of *Vanessa braziliensis*; a) in dorsal view; b) in ventral view.

FIGURA 1. Hembra adulta de *Vanessa braziliensis*; a) en vista dorsal; b) en vista ventral.

Vouchers will be deposited in the Museo Nacional de Historia Natural de Santiago (MNNC), Santiago, Chile.

Material examined. CHILE, Parinacota. One male, Socoroma, Parinacota, Chile, January 2012, H.A. Vargas coll.; 1 male, 2 females (near) Socoroma, Parinacota, Chile, January 2013, H.A. Vargas coll.; 2 males, 2 females (near) Socoroma, Parinacota, Chile, February 2013, H.A. Vargas coll., reared from larva on *Gnaphalium* sp., January 2013 (Fig. 2).

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FIGURE 2. Geographic position of the first record of *Vanessa braziliensis* in Socoroma, Parinacota, Chile.

FIGURE 2. Primer registro para Chile de *Vanessa braziliensis* en Socoroma, Parinacota.

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