



First record of *Utetheisa pulchella* (Linnaeus, 1758) (Lepidoptera: Erebidae: Arctiinae) in Brazilian Amazon: implications for conservation

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Abstract: The crimson speckled moth, *Utetheisa pulchella* (Linnaeus, 1758), is recorded in Brazilian Amazon for the first time. A moth (male) was collected with light trap in a multiple cropping area, in Mojuí dos Campos municipality, Pará State, Brazil. This record expands the area of occurrence and distribution of this rare species in the Neotropical Region. In addition, the occurrence of *U. pulchella* in the Amazon was unexpected, since this species is generally associated with open ecosystems and drier climates.

Key words: Geographic distribution, Noctuoidea, Arctiini, Callimorphina, Tiger-moths, Neotropics.

INTRODUCTION

The genus *Utetheisa* was described by Hübner in [1819] and its distribution is worldwide. Currently there are sixty-one described species (Savelle 2015), and among these, six have known distribution in Neotropical region: *Utetheisa ornatrrix* (Linnaeus, 1758), *U. galapagensis* (Wallengren, 1860), *U. perryi* Hayes, 1975, *U. devriesi* Hayes, 1975, *U. connerorum* Roque-Albelo & Landry, 2009 and *U. henrii* Roque-Albelo & Landry, 2009 (Vincent and Laguerre 2014).

Utetheisa pulchella (Linnaeus, 1758) is considered a cosmopolitan and migrant species. It has a wide geographical distribution in tropical regions of the Old World (Aistleitner and Černý

2013), being present in the Palearctic, Afrotropical, Malgaxe, Oriental, Australian and Neotropical (Antilles) regions (Vieira 2012). In Brazil, Carvalho and Carvalho (1939) record *U. pulchella* in Pernambuco State; Travassos (1946) adds records of specimens from the municipalities of Campina Grande, Paraíba State; Natal, Rio Grande do Norte State and Senhor do Bonfim, Bahia State. Becker and Miller (2002) report in Planaltina City, Federal District and Ferro and Diniz (2010) also record this species in Jaíba, Minas Gerais State (Table I).

The caterpillars of *U. pulchella* are polyphagous and defoliators, feeding on several native and cultivated host plants belonging to the botanical families: Boraginaceae, Solanaceae, Fabaceae, Plantaginaceae and Liliaceae (Vieira 2012). In Brazil Carvalho and Carvalho (1939) reports caterpillars in “mata-pasto” *Senna uniflora* (Mill.) H.S.Irwin & Barneby (Fabaceae). Authors

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TABLE I
Geographical coordinates of known distribution of *Utetheisa pulchella* (Linnaeus, 1758) in Brazil.

State	Locality	Latitude †	Longitude†
Rio Grande do Norte	Natal	5°49'42.97" S	35°11'18.72" W
Paraíba	Campina Grande	7°15'10.82" S	35°54'54.20" W
Pernambuco		8°52'8.09" S	36°56'53.03" W
Bahia	Senhor do Bonfim	10°30'39.61" S	40°9'53.43" W
Bahia	Correntina	13°28'43" S	46°09'19" W
Minas Gerais	Jaíba	15°20'36.59" S	43°40'35.20" W
Distrito Federal	Planaltina	15°36'58.18" S	47°39'8.62" W

† Geographical coordinates approximated by Google Earth.

(e.g. Vieira 2012) describes that *U. pulchella* caterpillars as polyphagous at individual level (sensu Bernarys and Singer 2002), eating foremost preferential hosts and after eating them completely, migrate to the other less palatable plants where they end their development.

The literature points out that *U. pulchella* usually is associated with open and dried habitats (e.g. Vieira 2012, Pino Pérez and Pino Pérez 2017). In this sense, all previous Brazilian records of this species were made in semiarid or savanna’s areas (Carvalho and Carvalho 1939, Travassos 1946, Becker and Miller 2002, Ferro and Diniz 2010).

MATERIALS AND METHODS

We recorded one moth (male) of *U. pulchella* (Figure 1), on December 24, 2016, using Pensilvania light traps, in a multiple cropping area, at municipality of Mojuí dos Campos, State of Pará, Brazil (02°41'44.15" S, 054°34'14.34" W) (Figure 2). In this area, corn was first cultivated and followed by soybean, the specimen was captured during soybean cultivation.

The voucher specimen was deposited in the lepidopterological collection of Laboratório de Estudos de Lepidópteros Neotropicais (LELN) of Programa de Ciências Naturais (PCNAT, UFOPA). Catches were made with permission from SISBIO - ICMBio, under “Licença Permanente para Coleta de Material Zoológico 18132-3” to JAT

and “Autorização para atividades com finalidade científica 48218-2” to AS.

The identification was made based on the morphological characters description and images presented in Travassos (1946), Becker and Miller (2002) and Vieira (2012). In general, appearance *U. pulchella* can be confused with the dotted form of *U. ornatrix* but can be easily separated by dots on the dorsum of the thorax: *U. pulchella* has only three dots whereas *U. ornatrix* has three pairs of dots (Becker and Miller 2002).

MATERIAL EXAMINED

Brazil, Pará: Mojuí dos Campos, 02°41'44.15" S, 054°34'14.34" W, 24-XII-2016, Coradini, M. (1 male). Specimen was deposited in the lepidopterological collection of Laboratório de Estudos de Lepidópteros Neotropicais (voucher number LELN 05.345) of Universidade Federal do Oeste do Pará.

DISCUSSION

Although it has been reported for the neotropical region (Guana Island - British Virgin Islands) (Becker and Miller 2002) and even for Brazil (Travassos 1946), this species is not included in the most recent catalog on Neotropical Arctiinae (Vincent and Laguerre 2014). This new record increases the number of species of Arctiinae occurring in Pará State to 536 and, 821 for

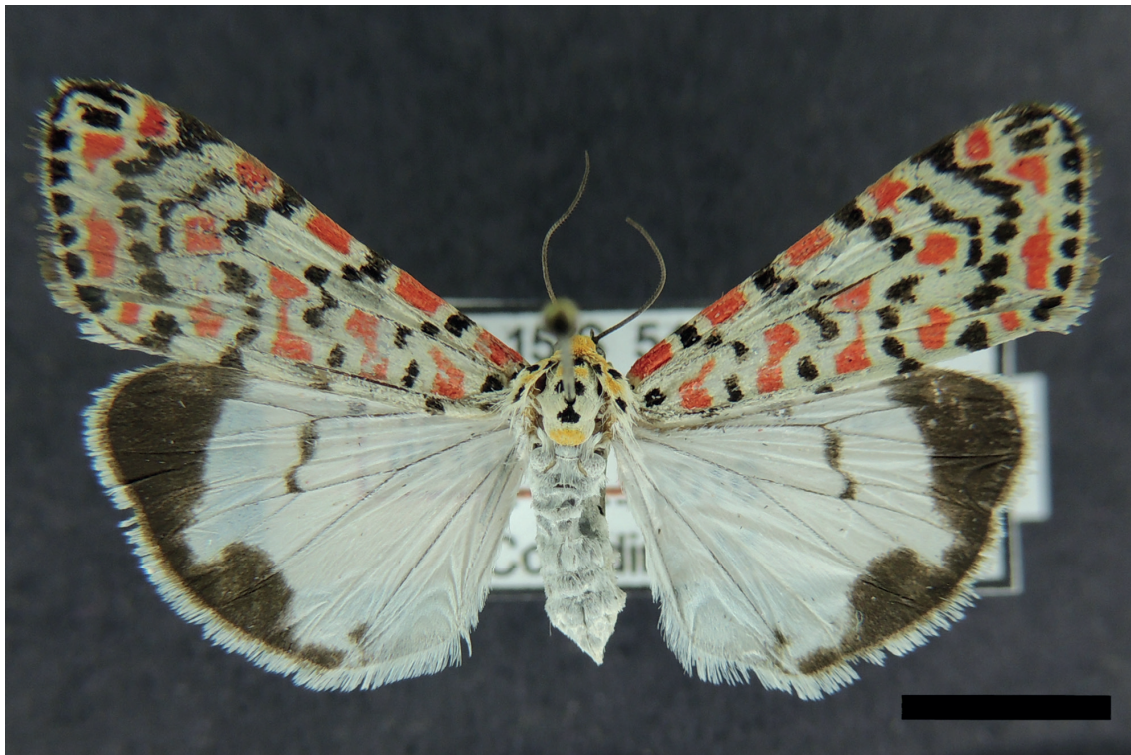


Figure 1 - *Utetheisa pulchella* (Linnaeus, 1758), dorsal view, male. Scale bar = 1 cm.

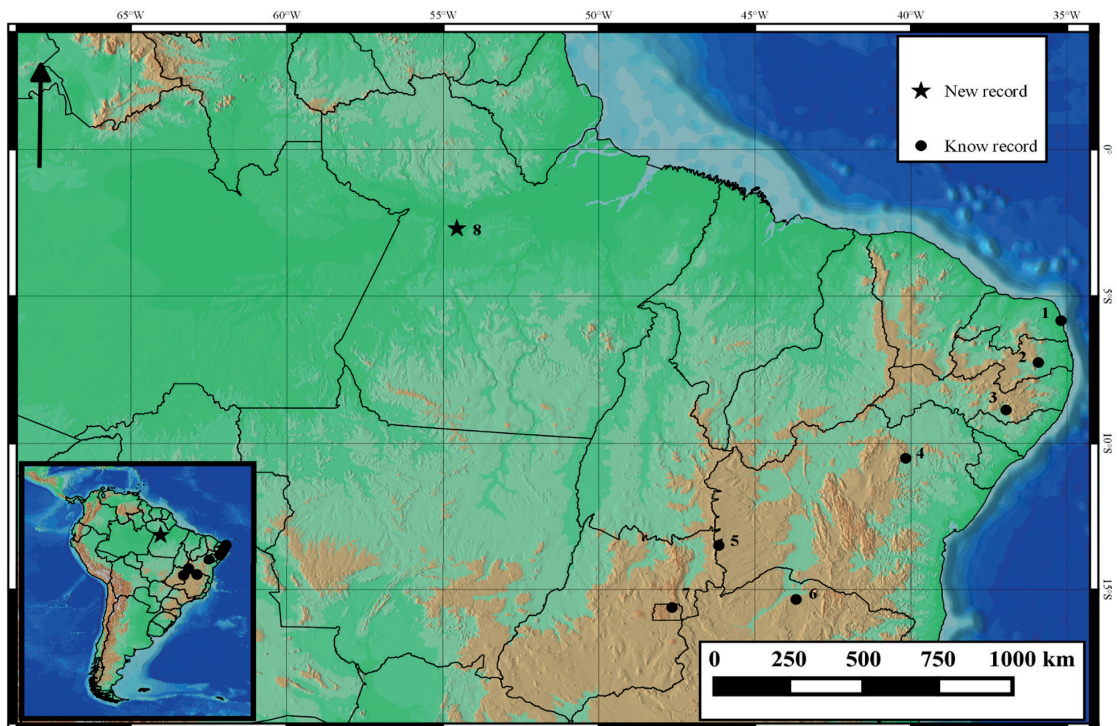


Figure 2 - Known geographic distribution of *Utetheisa pulchella* (Linnaeus, 1758) in Brazil: 1) Natal (RN), 2) Campina Grande (PB), 3) (PE), 4) Senhor do Bonfim (BA), 5) Correntina (BA), 6) Jaíba (MG), 7) Planaltina (DF), and 8) Mojú dos Campos (PA), new record.

Brazilian Amazon (Teston 2017). Considering that the preferred habitats of this species are open and relatively dry spaces (Carvalho and Carvalho 1939, Travassos 1946, Becker and Miller 2002, Ferro and Diniz 2010, Vieira 2012), we attribute the presence of this species in the Amazon biome to the recent agricultural occupation. This occupation, besides providing open areas, reduces relative humidity and provides preferential host plants, both cultivated and weeds.

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AUTHOR CONTRIBUTIONS

José A. Teston and Alexandre Specht - Substantial contribution in the concept and design of the study; Janaína da C. Campelo and Alessandra M.C. Lopes - contribution to data collection.

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