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Synonymy and distribution data of Trypanidius Blanchard, 1846 (Coleoptera: Cerambycidae: Lamiinae: Acanthocinini) in Cuba

Sergio Devesa
36988 Pontevedra, Spain, sergio.devesa@gmail.com

Alejandro Barro
Universidad de La Habana, abarro@fbio.uh.cu

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Sergio Devesa
La Iglesia, 4
36988 San Vicente de O Grove
Pontevedra, España

Alejandro Barro
Departamento de Biología Animal y Humana, Facultad de Biología,
Universidad de La Habana, Cuba

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Sergio Devesa and Alejandro Barro
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Sergio Devesa
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sergio.devesa@gmail.com

Alejandro Barro
Departamento de Biología Animal y Humana, Facultad de Biología,
Universidad de La Habana, CUBA
abarro@fbio.uh.cu

Abstract. *Trypanidius nocturnus* Fisher, 1942 (Coleoptera: Cerambycidae: Lamiinae: Acanthocinini) is synonymized with *Trypanidius insularis* Fisher, 1925. Dorsal habitus photographs of the holotypes and paratypes, as well as male and females of specimens collected in Cuba, Puerto Rico and Hispaniola, are provided. Additionally, collecting data and a distributional map of Cuba are offered.

Key words. West Indies, longhorn woodboring beetles, systematics.

Resumen. *Trypanidius nocturnus* Fisher, 1942 (Coleoptera: Cerambycidae: Lamiinae: Acanthocinini) es sinonimizado con *Trypanidius insularis* Fisher, 1925. Se muestran fotos en vista dorsal de los holotipos y paratipos así como de ejemplares macho y hembra recolectados en Cuba, Puerto Rico y La Española. Adicionalmente, se muestran los datos de colecta y mapa de distribución de los ejemplares colectados en Cuba.

Palabras clave. Antillas, cerambícidos, sistemática.

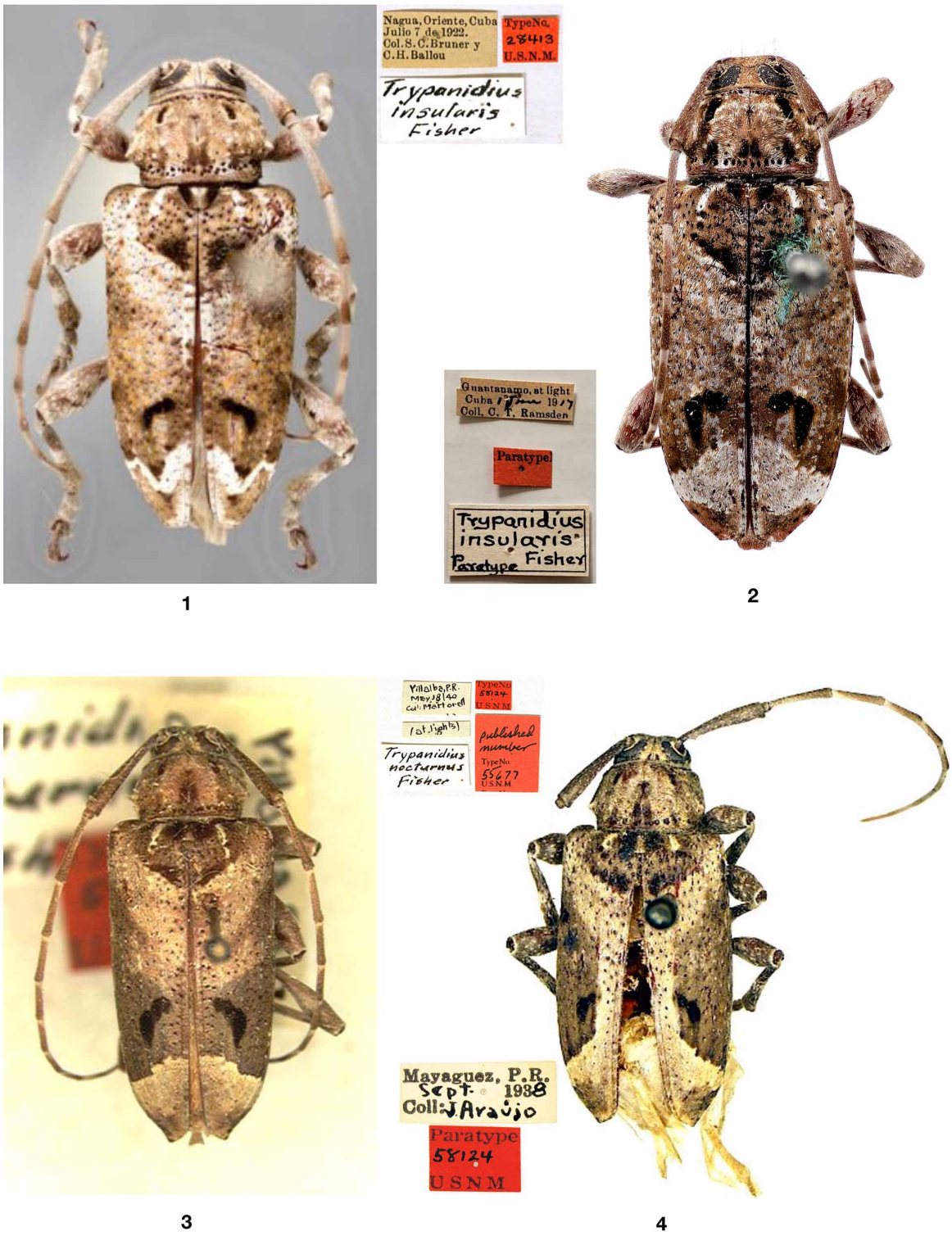
Introduction

The genus *Trypanidius* Blanchard, 1846 includes 15 species and is widely distributed in the Neotropical region from Central to South America. Three species were described from the Caribbean islands: *T. insularis* Fisher, 1925 from Cuba; *T. nocturnus* Fisher, 1942 from Cuba and Puerto Rico; *T. spilmani spilmani* Villiers, 1980 from Dominica, Martinique and Saint Lucia and *T. spilmani liamaigae* Chalumeau, 1983 from Saint Kitts (Villiers 1980; Chalumeau 1983; Monné 2018).

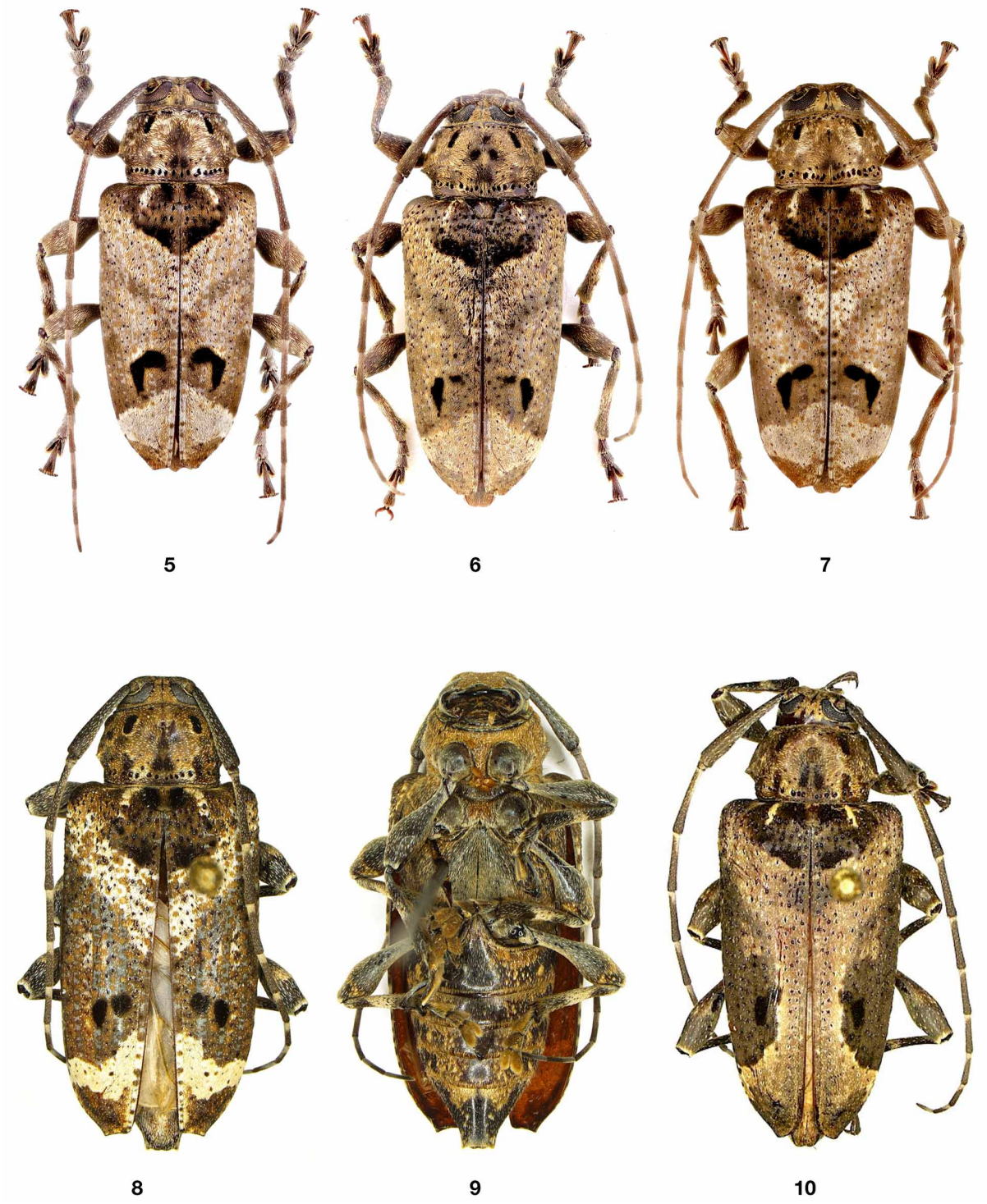
Fisher (1925: 8) described *T. insularis* based on two specimens: one male (Holotype, collected in Nagua, Oriente, Cuba on July 7, 1922 by S. C. Bruner and C. H. Ballou and deposited in the USNM, No. 28413) (Fig. 1) and one female (Paratype, collected in Guantánamo, Cuba on June 1, 1917 at light by C. T. Ramsden and deposited in the AMNH) (Fig. 2). In his description, Fisher said: "The paratype differs from the type in having the antennae slightly shorter, pubescence above more yellowish brown, black spots on pronotum more distinct, brown pubescence on antennae predominating, black spot on elytra behind middle more sinuate, and the zigzag fascia near apex more confluent and forming a large triangular spot, pubescence beneath sparser and more brownish, with a few white spots toward the sides, and the last abdominal segment longer, narrower at apex, and the dorsal surface only feebly emarginate." (Fig. 1-2). After its description, no additional information was published for the species.

Fisher (1942: 38) described *T. nocturnus* from a single female specimen, collected in Villalba, Puerto Rico, May 18, 1940 by L. F. Martorell, and deposited in the USNM, No. 55677 (Fig. 3). In his description, Fisher wrote: "This species is allied to *Trypanidius insularis* Fisher described from Cuba, but differs from that species in being more reddish brown and in having a large triangular, yellowish-white pubescent spot covering the apical fourth of each elytron replacing the transverse, white zigzag fascia on the elytron of *insularis*."

Surprisingly, the same author again described *T. nocturnus* (Fisher 1947: 39) based on two female specimens: the holotype, collected in Villalba, Puerto Rico, May 18, 1940 by L. F. Martorell and deposited in the USNM, No. 55677 and the paratype, collected in Mayaguez, Puerto Rico, September 1938 by J.



Figures 1–4. *Trypanidius* spp. **1)** *T. insularis* Fisher, 1925, habitus holotype dorsal view (Photo: USNM). **2)** *T. insularis*, habitus paratype dorsal view (Photo: AMNH). **3)** *T. nocturnus* Fisher, 1942, habitus holotype dorsal view (Photo: USNM). **4)** *T. nocturnus* Fisher, 1942, habitus paratype dorsal view (Photo: S. Lingafelter).



Figures 5–10. *Trypanidius insularis* Fisher, 1925: variation in the size and shape of the black and yellowish-white fascia in elytral apical third. **5)** Specimen from Cuba, male. **6–7)** Specimens from Cuba, females. **8–9)** Specimen from the Dominican Republic, female. **8)** Dorsal view (Photo: S. Lingafelter). **9)** Ventral view (Photo: S. Lingafelter). **10)** Specimen from Puerto Rico, female (Photo: S. Lingafelter).

Araujo (Fig. 4). Both specimens are deposited in the USNM, No. 58124; this means that the holotype specimen has two holotype numbers: USNM No. 58124 and USNM No. 55677. Fisher justified the description of the new species as follow: "This species is allied to *Trypanidius insularis* Fisher, but it differs from that species in having the sides of the pronotum more nearly parallel and without a row of coarse punctures along the anterior margin, the antennae and legs densely clothed with short, recumbent, brown pubescence, with a few white hairs intermixed, the underside of the body densely clothed with whitish pubescence and variegated with small, denser pubescent, white spots, and each elytron ornamented with a large triangular yellowish-white pubescent spot covering the apical third and with the tip obtusely produced at the outer margin."

Fisher used the same character state, presence of a large triangular spot, as a primary diagnostic character in all of these descriptions; this suggests that there is not enough justification to treat *T. insularis* and *T. nocturnus* as distinct species.

Among the other authors who cited these species, Zayas (1975) said that he has only collected *T. nocturnus* in Cuba and suspected that the differences of the elytral fascia between the holotype and the paratype of *T. insularis* represent two different variations of the same species. Carelli et al. (2013), in their review of the genus, did not study any specimen of *T. insularis*; they only examined a photograph of the holotype.

In this paper, we propose the synonymy of *Trypanidius insularis* Fisher, 1925 and *Trypanidius nocturnus* Fisher, 1942.

Materials and Methods

We studied photographs of the types of the species involved in this study (Lingafelter et al. 2014). Color photos of holotypes of both species are also available online on the Cerambycidae of the New World photographic catalog (Bezark 2018) and on the USNM's type database (Lingafelter et al. 2018). Those photos were compared with the specimens studied and with original descriptions. Photographs of additional specimens from Puerto Rico and Hispaniola were studied. Observations were made using an ocular micrometer adapted to an Olympus SZX7 0.8–5.6× stereomicroscope. Photographs were taken with a Canon EOS 5 Mark III camera, equipped with a Canon MP-E 65mm f/2.8 1–5× and EF 100 mm f/2.8 macro IS USM macro lens. Multiple images were stacked with the Zerene Stacker AutoMontage software and processed in Aperture software.

The specimens and images from the following public museums and private collections were examined:

AMNH American Museum of Natural History, New York, USA
CMNH Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA
CZACC Colección Zoológica de la Academia de Ciencias de Cuba, I.E.S., Havana, Cuba
CZCTR Museo de Historia Natural "Charles T. Ramsden", Santiago de Cuba, Cuba
FZPC Fernando de Zayas Private Collection, Havana, CUBA
HGPC Horacio Grillo Private Collection, Universidad Central Las Villas, Cuba
SDPC Sergio Devesa Private Collection, Pontevedra, Spain
SWLC Steven W. Lingafelter Collection, Hereford, Arizona, USA
USNM National Museum of Natural History, Smithsonian Institution, Washington, DC, USA

Results

***Trypanidius insularis* Fisher 1925**
Trypanidius nocturnus Fisher 1942, ***new synonym***

Specimens examined. CUBA: (43 specimens: 21 males and 22 females) **CIENFUEGOS Prov.**: Buenos Aires (21°58′00″N/80°9′00″W), may-1952, 1 female (F. de Zayas leg.); jun-1952, 4 females (F. de Zayas leg.); **GRANMA Prov.**: La Platica - P.N. Pico Turquino (20°00′54″ N/76°53′28″W), 27-jan-2007,

1 female at light (250W, vapor Hg) (E. Fonseca leg.); Nagua, (20°7′00″N/76°52′00″ W), 07-jul-1922, 1 male HOLOTYPE of *T. insularis* (S.C. Bruner y C.H. Ballou leg.); **GUANTÁNAMO Prov.**: Guantánamo (20°8′ 40″N/75°12′33′W), 01-jun-1907, 1 female PARATYPE of *T. insularis* (C.T. Ramsden leg.); **ISLA DE LA JUVENTUD Prov.**: Lomas de Siguanea (21°37″00″N/82°58′00″W), 15-ago-2015, 1 female, pinewood, near Hotel Colony (A. Barro leg.); **SANCTI SPIRITUS Prov.**: Topes de Collantes (21°54′49″N/80°01′19″W), jul-1965, 1 male (F. de Zayas leg.); Topes de Collantes, Estación Biológica (21°56′00″N/79°59′00″W), 25-may-2001, 1 male at light (A. Avila, R. Núñez & A. Lozada leg.); 3-may-2002, 1 male at light (I. Martínez leg.); 4-jun-2002, 1 female (A. Lozada, A. Ávila & R. Núñez leg.); Topes de Collantes, mirador (21°51′50″N/80°01′15″W), jul-2009, 6 males + 2 females at light (S. Devesa leg.); ago-2009, 3 males + 1 female at light (S. Devesa leg.); sep-2009, 2 males + 3 females at light (S. Devesa leg.); oct-2009, 1 female at light (S. Devesa leg.); may-2010, 1 male at light (S. Devesa leg.); jun-2010, 1 female at light (S. Devesa leg.); oct-2010, 1 female at light (S. Devesa leg.); jul-2011, 1 male at light (S. Devesa leg.); **SANTIAGO DE CUBA Prov.**: Loma de Calá a Palma Mocha (20°01′48″N/76°54′36″W), 16-jul-1948, 1 male + 1 female ovipositing on freshly cut tree trunk (F. de Zayas leg.); Loma del Gato (20°00′52″N/76°03′19″W), jun-1956, 1 female (F. de Zayas leg.); Pico Turquino (19°59′00″N/76°50′00″W), jun-1964, 2 males + 3 females at light (F. de Zayas leg.). (Fig. 11). **DOMINICAN REPUBLIC**: Azua, East side of crest, Sierra Martin García, 7 km WNW Barrero, 860 m (18°21′N/70°58′W), 25/26-jul-1992, 1 female in cloud forest adjacent to disturbed forest (C. Young, R. Davidson, S. Thompson and J. Rawlins leg.). **PUERTO RICO**: El Yunque National Park, Mt. Britton (18°17′N/65°47′W), 17-jul-2009, 1 male (J. Anderson & G. Setliff leg.); Villalba, 18-may-1940 (L.F. Martorell leg.); Mayaguez, September-1938 (J. Araujo leg.).

Dimensions in mm (males/females). total length 12.5–14.3/13.0–16.7; pronotum length 2.4–2.7/2.4–3,0; pronotum width 3.7–4.2/3.9–4.8; elytra length 9.2–10.3/9.5–12.6; elytra width at humeri 5.0–5.7/5.2–6.8; total length/pronotal length 5.1–5.6/5.1–5.9; elytral length/elytral width 1.8–1.9/1.7–1.9; pronotal length/pronotal width 0.6–0.7/0.6–0.7.

Geographical distribution. Cuba, Hispaniola, Puerto Rico.

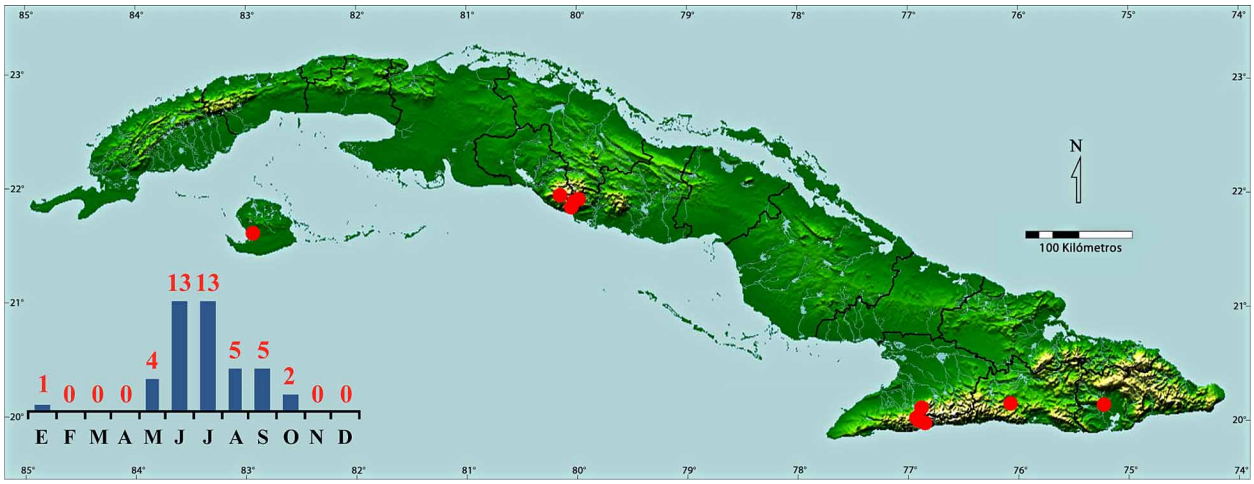


Figure 11. Geographical and spatial distribution of *Trypanidius insularis* Fisher, 1925, in Cuba.

Detailed study of the original descriptions of the two species, examination of the photographs of the holotypes of *T. insularis* (Fig. 1) and *T. nocturnus* (Fig. 3) in the USNM, the paratypes of *T. insularis* (Fig. 2) in the AMNH and *T. nocturnus* (Fig. 4) in the USNM, and 43 specimens collected in Cuba, one specimen from the Dominican Republic (Fig. 8, 9) and one specimen from Puerto Rico (Fig. 10) show that these are the same species. Details of the patterns of pubescence, punctation, color, and other morphology are identical. We conclude that small differences on the pronotum (size of the lateral spine, black spots at apical third, and white pubescence), antennae (size and color of basal annulations on antennomeres) and elytra (shape and dimension of both black spots and yellowish-white fascia at apical

third and sutural area) are intraspecific variation observed in the analyzed specimens. Likewise, the main characteristics previously used to differentiate *T. nocturnus* from *T. insularis* (black spots and a yellowish-white spot in the apical third of the elytra) are present in the description of the paratype of *T. insularis*. The zigzag fascia described in the holotype of *T. insularis* must be considered as a chromatic variation.

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