

THE TYPE MATERIAL OF BUPRESTIDAE (COLEOPTERA) IN THE FERNANDO DE ZAYAS COLLECTION, HAVANA, CUBA

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Abstract

Habitus photographs of holotypes and syntypes of Buprestidae (Coleoptera) in the Fernando de Zayas Collection, Havana, Cuba, are presented. Notes on the identities of the species are given. *Peronaemis viridithorax* Zayas 1988 is synonymized with *Peronaemis monticola* Fisher 1936.

The late Fernando de Zayas (1912–1983) was an avid collector of insects and a member of the Cuban Academy of Science. While known primarily for his research on Cerambycidae (see Nearns *et al.* 2006), he published on other families of beetles as well. Several years after his death, a paper was published describing a number of new Coleoptera with descriptions of varying completeness (Zayas 1988). This paper was not well known until Ivie (1991) published a notice of it including some taxonomic notes on the taxa. The six species of Buprestidae that have holotypes or syntypes in the Zayas collection were all described in that publication, and represent all the buprestids that he described.

The Zayas collection, located at the Zayas house in Havana, Cuba, is housed in 500 Paris Museum-style, glass-topped boxes (Nearns 2006) and is considered one of Cuba's great natural history treasures. As the collection is not accessible except by travel to Cuba, it seems advisable to publish photographs of the type material of Buprestidae that Zayas described for the scientific record. All of the photos were taken by EHN during a visit to the Zayas collection in February 2005.

Peronaemis viridithorax Zayas

(Fig. 1)

Peronaemis monticola Fisher 1936: 343. Current valid name.

Peronaemis viridithorax Zayas 1988: 39. **New synonymy.**

Type locality: CUBA: Oriente Province, beyond Paso de Calas, as ascending Pico Turquino. Zayas (1988: 40) cited four syntype specimens from the type locality. The syntype photographed is a male.

Peronaemis Waterhouse contains six described species, all from the Greater Antilles, and at least one undescribed species from Hispaniola. The very similar genus *Mixochlorus* Waterhouse contains three species, one from Hispaniola and two from Central America. Both genera were described in the same paper (Waterhouse 1887) with only a single species in each. Discovery of subsequent species has blurred the distinction between the two taxa, and all of the species in the two genera might best be placed in one genus.

Only two species of *Peronaemis*, *P. monticola* Fisher and *P. elegans* Fisher, both from Cuba, have a broad, even, greenish stripe on the elytron on the two intervals closest to the suture (*Mixochlorus elegans* Fisher, from Hispaniola, has the sutural region of the elytron green but the coloration is uneven, being expanded slightly in the basal third and more noticeably just beyond the middle). In *P. monticola* the green sutural area is impressed and has dense microsculpture that obscures the distinction between the two intervals. In *P. elegans* the green sutural area is not impressed and the distinction between the two intervals is visible. *Peronaemis elegans* further differs from *P. monticola* in having the lateral depressions of the pronotum more weakly impressed, the posterior angles of the pronotum with well delineated bright green spots (at least in the female), a relatively well defined dark spot near the middle of each elytron, and in lacking the elongate, impressed cupreous spot at the apical third of each elytron found in *P. monticola*.

Peronaemis viridithorax Zayas is a synonym of *P. monticola* Fisher, confirming Bellamy's (2000) speculation that these two names are synonyms. Fisher (1936) based his description of *P. monticola* primarily on the female holotype (USNM). His description of the two male paratypes (one in USNM) is brief, and since there is some sexual dichromatism in *Peronaemis*, perhaps this misled Zayas into thinking his material was a new species. Furthermore, the type locality of *P. monticola* is Cuba, Oriente Province, Pico Turquino, essentially the same locality as for *P. viridithorax*.

***Isophaenus israeli* Zayas**

(Fig. 2)

Xenorhipsis vauriei Cazier 1952:3. Current valid name.

Isophaenus israeli Zayas 1988: 40. Synonymy by Ivie (1991: 400).

Type locality: CUBA: Oriente Province, Guantánamo, Tortuguilla. Zayas (1988: 41) cited a single specimen. The holotype is a male.

Ivie (1991) proposed the synonymy of *I. israeli* Zayas with *X. vauriei* Cazier, described from South Bimini Island, Bahamas, without further discussion. We have compared our image of the holotype of *I. israeli* with an image of the male holotype of *X. vauriei* (AMNH, available at http://research.amnh.org/invertzool/types_db/details.php?specimen_id=59) and concur that the two specimens are conspecific.

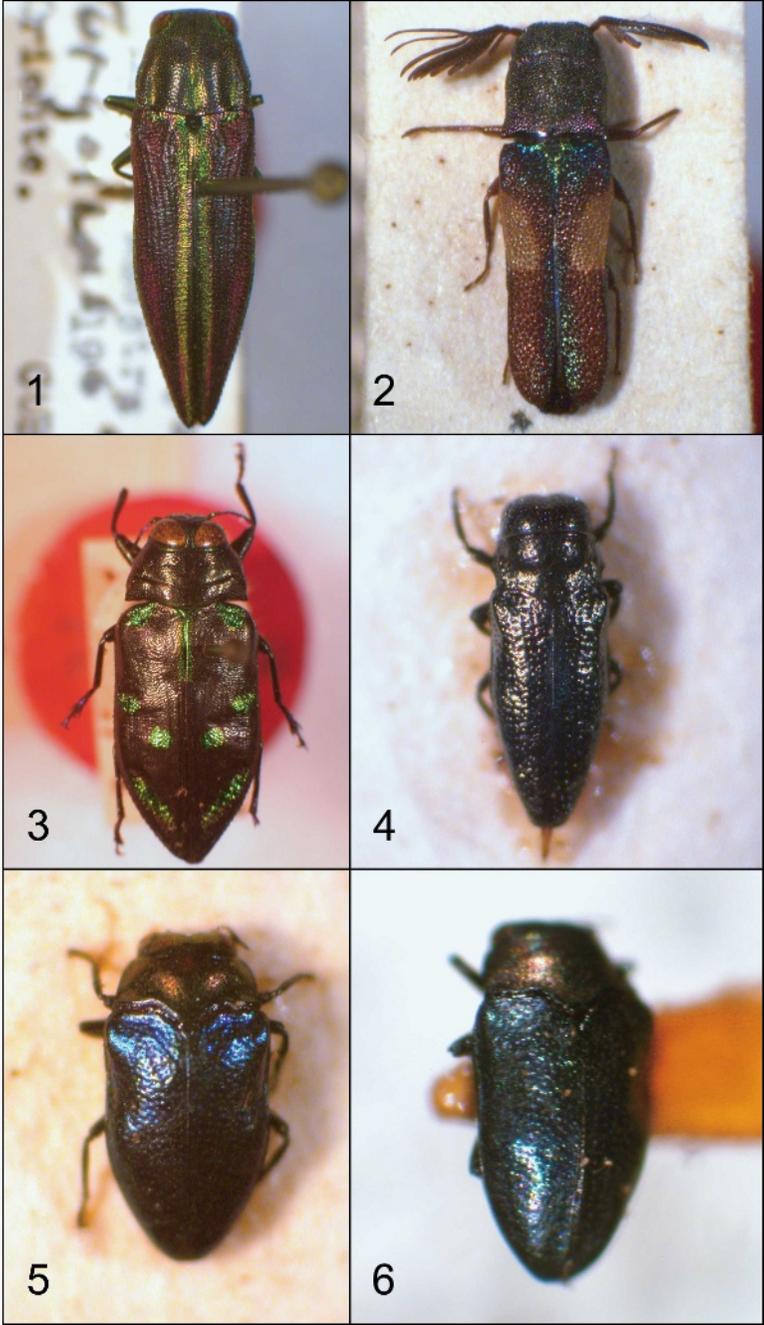
***Actenodes caray* Zayas**

(Fig. 3)

Actenodes caray Zayas 1988: 41.

Type locality: CUBA: Oriente Province, Ciudad Mar. Zayas (1988: 41) cited a single specimen. The holotype appears to be a female.

Actenodes caray is a valid species similar to two other Caribbean species that have roundish metallic spots near the middle of the smooth, non-costate elytron.



Actenodes auronotata (Laporte & Gory), known from the southeastern U.S. (Florida, Georgia, and South Carolina), the Bahamas, Cuba, and doubtfully Haiti, and *A. bellula* (Mannerheim), widespread on Hispaniola, both have two nearly adjacent spots just anterior to the middle of the elytron, and one just posterior to the middle. In *A. caray* there is one spot in the anterior position and one in the posterior, and they are closer together than the anterior and posterior spots in *A. auronotata* and *A. bellula*. Also, *A. auronotata* and *A. bellula* lack the posterolateral green band found on the elytron of *A. caray*. A third similar taxon, *A. auronotatus* var. *jamaicensis* Fisher, from Jamaica, has much larger green spots and narrow green coloration posteriorly along the lateral margin and suture of the elytron. It should probably be considered a valid taxon at the species level but is still known from only a few specimens.

***Taphrocerus tao* Zayas**

(Fig. 4)

Taphrocerus tao Zayas 1988: 41.

Type locality: CUBA: Pinar del Río Province, Viñales. Zayas (1988: 42) cited three syntype specimens from the type locality. The photographed syntype is a male.

This species is most similar to *Taphrocerus timidus* Chevrolat based on the information provided by Fisher (1925) on the Caribbean species, and USNM specimens identified by Fisher as *T. timidus* (from Cuban localities: C. Jatipónico; Nagua, Oriente; and Cienfuegos, Soledad). The USNM specimens have a slightly angulate lateral pronotal margin and a vaguely defined prehumeral carina at the posterior angle of the pronotum which appear to be shared by *T. tao*. *Taphrocerus tao* could be a synonym of *T. timidus*, but only examination of the actual specimens, including genitalia, in a comparative context, will resolve the identity of *T. tao* with certainty.

***Leiopleura cupeyali* Zayas**

(Fig. 5)

Leiopleura cupeyali Zayas 1988: 44.

Neotrachys cupeyali (Zayas). Current valid name.

Type locality: CUBA: Oriente Province, Cupeyal. The photographed specimen, of undetermined sex, is probably a holotype, but no number of specimens was given by Zayas.

Following a suggestion by Ivie (1991), Hespeneide (2006: 239) correctly placed this and the following species in the genus *Neotrachys* Obenberger. The one sentence original description of this species stated that the head and pronotum are golden, and the elytra metallic green, with the venter black. However, the holotype has a dark bronzy or coppery pronotum and dark bluish elytra (Fig. 5). It is possible that the colors have gradually changed with time, but more likely the description was inaccurate. The habitus illustration provided by Zayas (1988:

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Figs. 1–6. Type material of Buprestidae described by Fernando de Zayas, dorsal habitus views. **1)** *Peronaemis viridithorax* (male syntype); **2)** *Isophaenus israeli* (male holotype); **3)** *Actenodes caray* (holotype, probably female); **4)** *Taphrocerus tao* (male syntype); **5)** *Leiopleura cupeyali* (probable holotype, sex undetermined); **6)** *Leiopleura cyanea* (probable holotype, sex undetermined).

fig. 36) is inaccurate in some details, showing antennae that are too large and a more rounded form to the elytral apices.

***Leiopleura cyanea* Zayas**

(Fig. 6)

Leiopleura cyanea Zayas 1988: 44.

Neotrachys cyanea (Zayas). Current valid name.

Type locality: CUBA: Oriente Province, Cupeyal. The photographed specimen, of undetermined sex, is probably a holotype, but no number of specimens was given by Zayas.

The one sentence original description of this species stated that the color is entirely metallic blue. However, the photograph of the holotype shows that the head and pronotum have a decidedly dark bronze or coppery coloration, contrasting with the blue elytra, similar to that of the holotype of *N. cupeyali* (Fig. 5). As the holotype of *N. cupeyali* was collected in June 1964 from the same locality as the holotype of *N. cyanea*, collected in June 1966, it seems highly likely that the two specimens are conspecific.

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