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1 author:

Sheyla Yong
Grupo de Sistemática y Ecología de Artrópodos Caribeños
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The fast-calling short-tailed cricket *Anurogryllus celerinictus* Walker, 1973 (Orthoptera: Gryllidae) occurs in Cuba, Greater Antilles

SHEYLA YONG

Grupo de Sistemática y Ecología de Artrópodos Caribeños. Calle 200 # 3759 entre 37 y 45, Reparto Versalles, La Lisa; La Habana 13500. CUBA. E-mail: delliainsulana@gmail.com

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Anurogryllus Saussure, 1877 (Gryllidae: Gryllinae) is a cricket genus widely distributed across the Americas and currently composed by 28 nominal species (Cigliano *et al*., 2019). According to the current definition (Walker, 1973; Otte & Perez-Gelabert, 2009), this genus is diagnosed by the following characters: **1)** ocelli in a nearly transverse row, i.e., a line drawn between the lower margins of lateral ocelli cuts the median ocellus; **2)** male tegmina with areas specialized for song production, having mirror with one divisor vein and two harp veins; **3)** inner tympanum either absent or small, outer tympanum large; **4)** hind tibia + basitarsus length not longer than hind femur length; **5)** female ovipositor rudimentary.

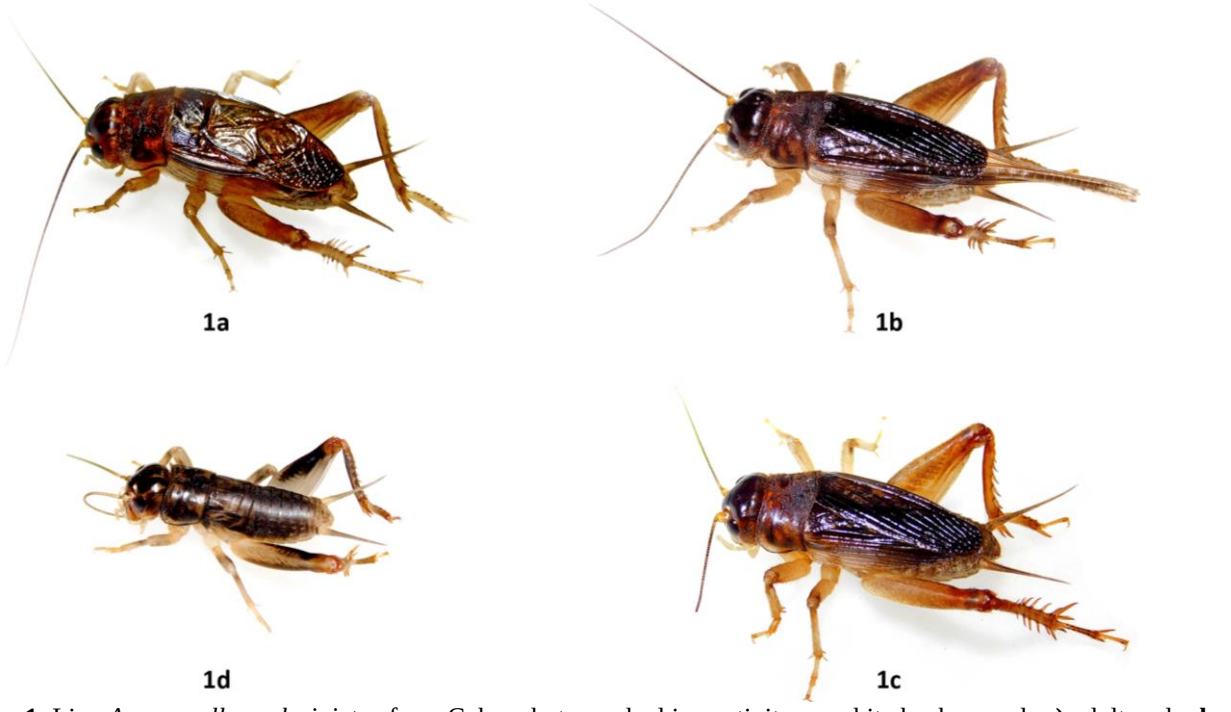


Figure 1. Live *Anurogryllus celerinictus* from Cuba, photographed in captivity on white background: **a)** adult male; **b–c)** same adult female, **d)** juvenile. Note "short-winged" male and that **same female individual** displays either "short-winged" or "long-winged" condition.

Figure 2. Live *Anurogryllus celerinictus* from Cuba, photographed in nocturnal activity at nature: **a)** adult male, calling on a street curb; **b)** "long-winged" male, feeding on a grass root; **c)** "short-winged" male, retreating into its self-dug burrow after being disturbed; **d)** adult male, using a crack in the wall baseboard as burrow.

Until now, four of its species have been recognized to occur in Cuba: *Anurogryllus abortivus* (Saussure, 1874), *Anurogryllus antillarum* (Saussure, 1874), *Anurogryllus cubensis* (Rehn, 1937) and *Anurogryllus muticus caraibus* (Saussure, 1874), all except the latter being national endemics (Otte & Perez-Gelabert, 2009; Yong & Perez-Gelabert, 2014; Cigliano *et al*., 2019).

Recently, around her home at Havana City, the author recorded during calling, photographed *in situ* (fig. 1d) and collected a large series of adult and juvenile specimens of a conspicuous ground cricket. After a careful comparison, they were identified satisfactorily as the Fast-calling Short-tailed Cricket *Anurogryllus celerinictus* Walker, 1973. It was described originally from Jamaica (type-locality), Grand Cayman and Florida (Walker, 1973), but so far never recorded from Cuba. The complete data of the Cuban specimens obtained herein (all deposited in ethanol 80%, in the author's personal collection-SY), are listed as follows:

- CUBA: La Habana Province: La Lisa Municipality: Versalles District: along 200 Street (23°03'58"N - 82°27'03"W, 35 m a.s.l.); 14/November/2015; nocturnal search; S. Yong, 1♂ (SY). Same locality; 4/December/2015; nocturnal search; S. Yong, 1♂ (SY). Same locality; 15/May/2017; nocturnal search; S. Yong, R. Teruel, 1♂ (SY, in ethanol 80%). Same locality; January–February/2019; nocturnal search; S. Yong, R. Teruel; 26 ♂♂, 1♀, 1 juvenile (SY, in ethanol 80%).

All studied specimens are typical *A. celerinictus* according to the original description (Walker, 1973), the main diagnostic characters are listed as follows: **1)** male and female tegmina covering essentially the whole abdomen; **2)** number of tooth in the stridulatory file fewer than 60, with file tooth density 16–19 teeth/mm; **3)** male pronotum posterior width 5.5–6.5 mm.

The genitalia of males from Havana were extracted, photographed and directly compared to those of Jamaican *A. celerinictus* and Hispaniolan *A. muticus caraibus* illustrated by Otte & Perez-Gelabert (2009:

72); even though the differences were subtle, the Cuban sample (fig. 3) definitely matched the former closest. In addition, several of these males from Havana were digitally recorded during calling at early evening; the resulting audio files were compared to those of Floridian *A. celerinictus* available at the Singing Insect of North America website (SINA, recorded by Thomas J. Walker himself) and found to be identical.

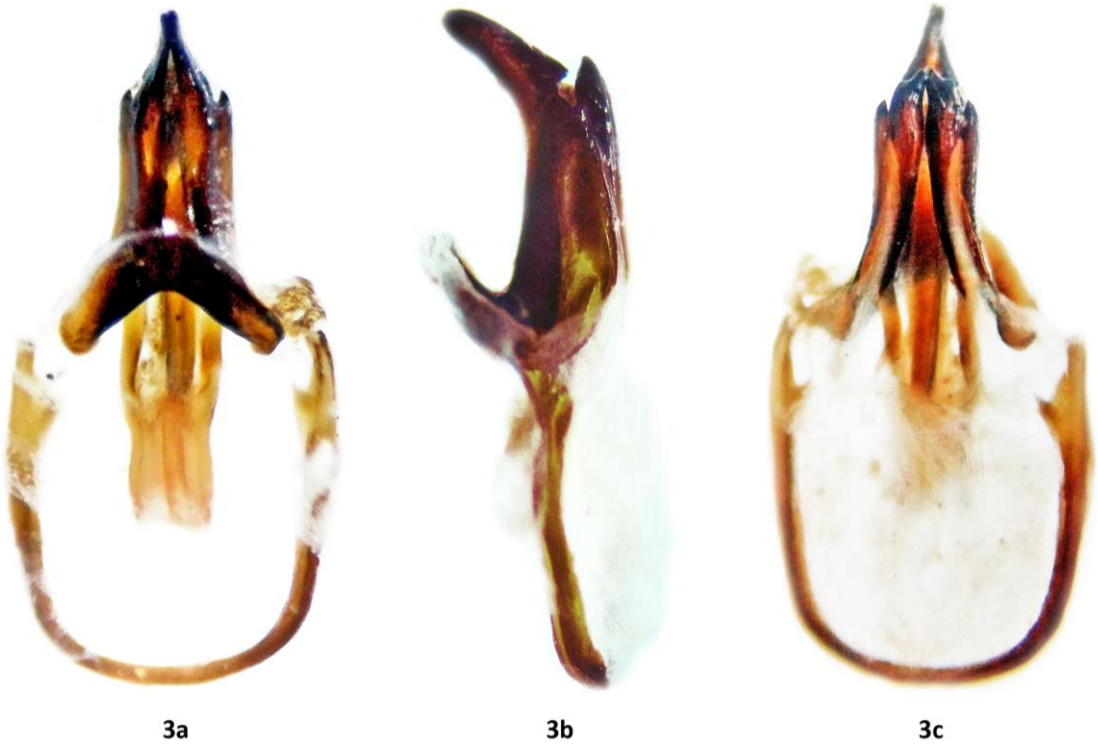


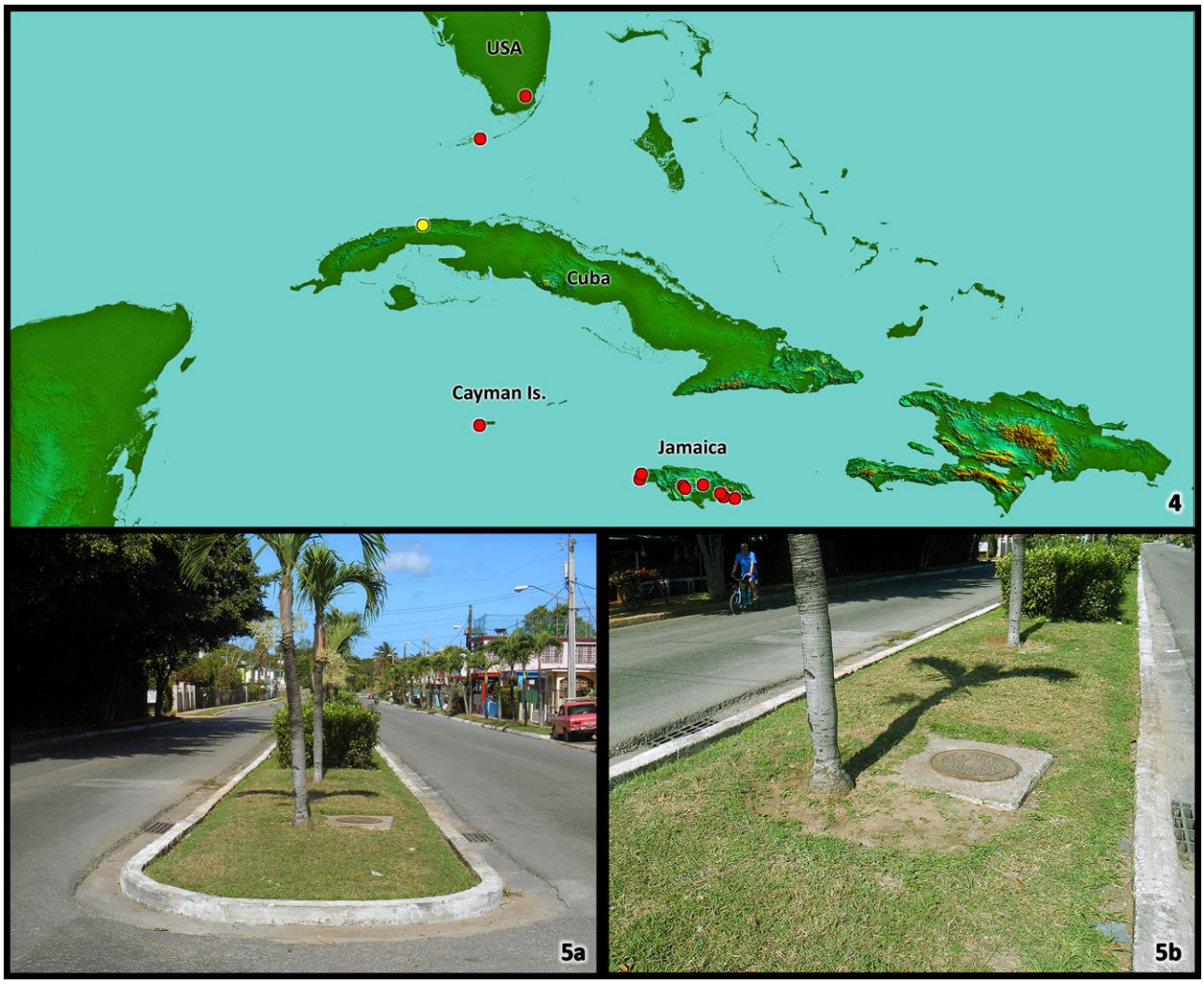
Figure 3. Male genitalia of *Anurogryllus celerinictus*, views: **a)** dorsal, **b)** lateral, **c)** ventral.

It must be noted here that the alae length was implicitly used by Walker (1973: 1270) as a sexual secondary dimorphic character for *A. celerinictus*, e.g., males and females were reported as either short-winged or long-winged, respectively. Nevertheless, amongst the Cuban specimens of this species (both wild and captive-reared), this condition is neither fixed nor sexually dimorphic, i.e., each individual can voluntarily display both conditions (figs 1–2).

In Cuba, *A. celerinictus* is a fossorial species which inhabits in underground burrows, usually dug on the damp soil with very low grass cover in gardens, backyards and parterres (fig. 2c, 5); nevertheless, it can opportunistically use as such the cracks and crevices of wall baseboards and sidewalks (fig. 2d). Males call almost exclusively during early evening (18:30–22:00 hrs. EST), usually sitting in their burrow entrance with abdomen tip off (using the cone-shaped burrow entrance to amplify the sound) or more rarely outside in open ground (fig. 2a). Females apparently leave their burrow only seldom, e.g., only one was found here (figs. 1b–c) and it was starting courtship with a male, just outside the burrow of the latter.

In Havana City it lives syntopically with two common and widespread Caribbean house crickets: *Gryllus assimilis* (Fabricius, 1775) and *Gryllodes sigillatus* Walker, 1869. Nevertheless, both seem to be much more scarce or localized at this site: only one adult male of each species was collected by the author, the former on an unrecorded date of the year 2015 and the latter on February 7th, 2019.

This is the first record of *A. celerinictus* from Cuba (fig. 4) and consequently, the fifth member of *Anurogryllus* known to occur in this country. The species most closely-related to *A. celerinictus* is *A. muticus*, which according to Walker (1973) can be satisfactorily identified best by calling, because both species are morphologically very similar (e.g., a practical example of species' biological concept). Currently, the present author is preparing a thorough revision of the Cuban Gryllidae, which will revisit all species in detail (S. Yong, in prep.).



Figures 4-5. 4 Geographical distribution of *Anurogryllus celerinictus*: previous records (red symbols) and new records (yellow symbols). Image frame = 2,000 x 1,000 km. **5** Habitat and microhabitat of *Anurogryllus celerinictus* at Havana City, Cuba. This section of the grassy parterre yielded 12 of the examined specimens in three consecutive nights.

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