IRCF REPTILES & AMPHIBIANS
CONSERVATION AND NATURAL HISTORY

INTRODUCED SPECIES

First record of the Unisexual Lizard *Gymnophthalmus underwoodi* (Squamata: Gymnophthalmidae) in Cuba

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Gymnophthalmus underwoodi, the Smooth-scaled Worm Lizard, was described by Grant (1958) from Barbados. It is a unisexual and parthenogenetic species (Hardy et al. 1989, Avila-Pires 1995) associated with leaflitter and grassy, open, sunny places. It has been reported in human situations like houses, gardens, and agricultural areas (Schwartz and Henderson 1991, Henderson and Powell 2009). The distribution of this species comprises northeastern South America and many of the Lesser Antilles, where some populations have a natural origin whereas others have been introduced by humans (Williamson and Powell 2004, Powell et al. 2011). Recently, Scantlebury et al. (2010) reported *G. underwoodi* from the easternmost part of the Dominican Republic, which was the first record of this species in the Greater Antilles, where it can readily be distinguished from all native eyelid-less lizards by having only four fingers and large cycloid body scales.

During a herpetological survey in Altos de Quintero (Santiago de Cuba City, eastern Cuba), in June 2011, a subadult *Gymnophthalmus underwoodi* (SVL = 29.5 mm) was found near the student residence at the University of Oriente (20°02'41"N and 75°41'03"W, 41 m a.s.l.; Figs. 1–2). The species was identified by LMD and confirmed by R. Powell based on photographs. Further observations and captures occurred on 11–16 October 2011 on the university campus, and additional individuals were detected either basking or actively moving in the leaf-litter between buildings at 1100 and 1400 h. Voucher specimens (N = 5) were deposited in the herpetological collection of the Museo Nacional de Historia Natural de Cuba (MNHNCu 4700–4704). Specimens measured 29.5–40.6 mm (mean = 36.3 mm) snout-vent length (SVL). Two individuals were in different stages of pregnancy. MNHNCu 4701 (SVL = 39.5 mm) had two round vitellogenic eggs measuring 2.5 x 2.0 mm (right) and 2.8 x 2.3 mm (left), respectivelly; the right egg was higher in the abdominal cavity than the left one. In MNHNCu 4702 (SVL = 40.6 mm), eggs were fully developed, longer than wide, measuring 9.3 x 4.7 mm (right) and 9.0 x 4.3 mm (left), respectively; eggs were positioned as in the other female; a third, smaller but vitellogenic egg, measuring 2.3 x 2.2 mm, was found under the largest egg in the left oviduct. Stomach contents of MNHNCu 4704 consisted of two homopterans (leafhoppers; each measuring 3.8 mm total length), a caterpillar (7 mm), a small spider (1 mm), and a small piece of plant material prob-

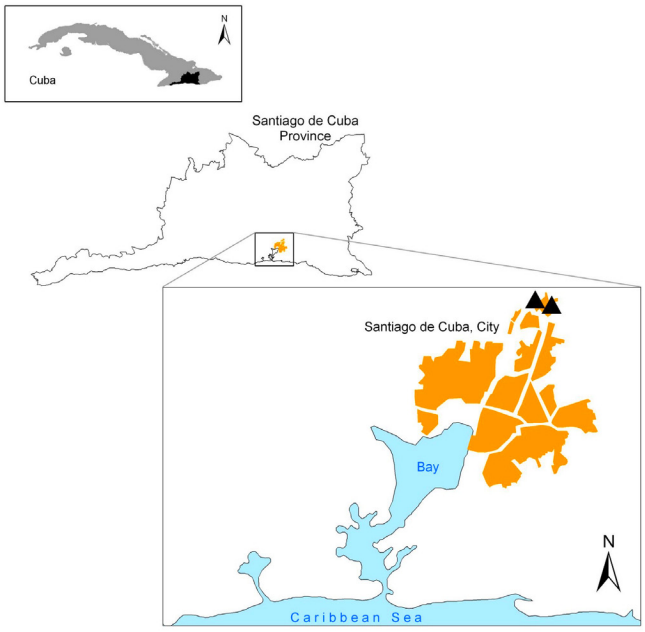

Fig. 1. Distribution of *Gymnophthalmus underwoodi* in Altos de Quintero, Santiago de Cuba, Cuba. Map by Gabriel Fajardo.

Fig. 2. Lateral and dorsal views of an adult *Gymnophthalmus underwoodi* from Altos de Quintero, Santiago de Cuba City, Cuba (MNHNCu 4703). Photographs by Yasel U. Alfonso.

ably ingested adventitiously with prey. Stomachs were empty in the other specimens.

After the discovery of *Gymnophthalmus underwoodi* on the campus of the University, additional specimens were found in the herpetological collection of the Centro Oriental de Ecosistemas y Biodiversidad, BIOECO (BSC.H). The earliest record is BSC.H 3574, collected in 2007 by Lionis Melián in the immediate vicinity of Puerto de Santiago de Cuba (Santiago de Cuba harbor); BSC.H 3575 was collected in September 2008 by local people in a garden in the Urban Center José Martí, Santiago de Cuba; BSC.H 3576 was collected in October 2011 by Freddy Rodríguez in a backyard in Reparto Vista Alegre; and BSC.H 3577 was collected in December 2011 by local people in the city of Santiago de Cuba, but without an exact locality.

This second record of *Gymnophthalmus underwoodi* in the Greater Antilles suggests a rapid human-mediated colonization by this lizard in recent years, the success of which is likely enhanced by the reproductive modality of the species. A reasonable hypothesis is that the introduction of this species into Cuba occurred at the Santiago de Cuba harbor, probably via shipments from South America. Once established in the vicinity of the harbor, these lizards, well adapted to disturbed habitats, appear to have rapidly spread through much of the city.

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Fig. 3. Adult *Gymnophthalmus underwoodi* MNHNCu 4701 (left) and MNHNCu 4702 (right) showing eggs at different stages of development in the abdominal cavity (see text for more information). Photographs by Luis M. Díaz.

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