

Diurnal refuge sharing between species of Cuban snakes of the genus *Tropidophis* (Squamata: Tropidophiidae)

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Snakes of the genus *Tropidophis* Bibron, 1840 have undergone an adaptive radiation in Cuba, where 16 out of the 27 Antillean species occur (Hedges 2002). With this high diversity, coexistence of four species is somewhat common (Rodríguez *et al.* 2013). Coexistence has been hypothesized to be possible due to differences in habitat use based on body shape (Rodríguez-Cabrera *et al.* 2016). Even with potential segregating mechanisms, it is reasonable to expect certain levels of niche overlap. Herein we report three instances of diurnal refuge shared between species of *Tropidophis*.

We observed two instances of interspecific refuge sharing at “Lomas de Banao” Ecological Reserve, in Sancti Spiritus province (21.8820, -79.5981; 560 m a.s.l.). On 18 September 2014, at 1330 h, we found an adult female *T. galacelidus* and an adult female *T. spiritus* under the same rock (Fig. 1A). Nearby, we found another adult female *T. galacelidus* and an adult female *T. melanurus* under a rock. The rocks were piled up on an exposed trail, surrounded by mesophyllous evergreen forest. A closer examination of the snakes revealed that all were pregnant.

We observed a second instance of interspecific refuge sharing at El Nicho, in Cienfuegos province (22.0347, -80.1138; 440 m a.s.l.). On 30 October 2014, at 1035 h, we found an adult female *T. galacelidus* and an adult female *T. semicinctus* under the same rock (Fig. 1B). The rock was by a road in secondary grassland, completely exposed. The surrounding vegetation was mainly second-growth forests and isolated scrubs. A closer examination of the snakes revealed that they were pregnant.

A certain degree of interspecific tolerance can exist between species, especially when resources are limited (Begon 2006). At Lomas de Banao, there were many other potential refuges in the nearby forested areas, however, the snakes were only found at the few rock piles exposed to the sun. These individuals might have selected this limited refuge type for pregnancy-related thermoregulation. At El Nicho, rocky refuges were limited and the one where we found the snakes was the only one available in a radius of over 30 meters.

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Figure 1. Species of *Tropes* (*Tropidophis*) sharing diurnal refuges. (A) *T. galacelidus* and *T. spiritus*. Photo by Raimundo López-Silvero. (B) *T. galacelidus* and *T. semicinctus*. Photo by T.M. Rodríguez-Cabrera.