

## Project Update: June 2022

We continue with the intense fieldwork along the northern coast of Yucatán to monitor the secretive movements of the Yucatecan cantil (*Agkistrodon russeolus*) and to identify the specific characteristics of the sites this species selects. We are radio-tracking snakes at three sites with different degrees of human disturbance, including: 1) a highly anthropised site that contains hotel complexes and luxury front beach developments, where we equipped eight snakes (four males and four females) with radio transmitters. Of those snakes, unfortunately we lost two: one was preyed upon by an unknown animal, and the other was accidentally killed by a hotel worker while removing weeds; 2) a non-anthropised site with coastal dune scrub vegetation, where we are currently radio-tracking three snakes (males); and 3) a site with “intermediate” human disturbance, where we could only equip a snake (male) with a radio-transmitter. The latter is an extra site for our work, since initially we had only contemplated studying snakes in the first two habitat conditions. Although the thick, thorny scrub vegetation (Fig. 1), coupled with the intense heat and high relative humidity at the study sites make the relocation of the snakes pretty challenging, the acquisition of these unique data is totally worth it!



Fig. 1. JAOM during fieldwork monitoring individuals of *Agkistrodon russeolus* with radio-telemetry on the northern coast of Yucatán.

We are in the final stretch of our fieldwork as we only have 2 months left to complete the full year of radio-tracking snakes. Those next 2 months (July and August) are the wettest of the year in the region; therefore, it will be very interesting to observe the activity of these snakes since during the dry season they have remained hidden with an almost complete cessation of movement to withstand the extreme high temperatures (Fig. 2).

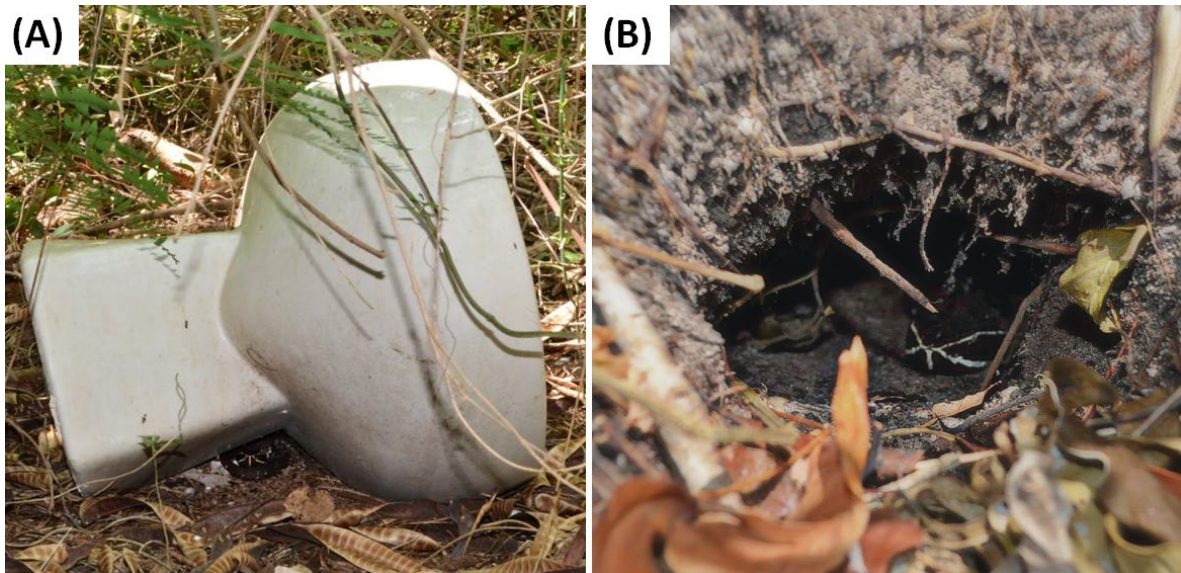


Fig. 2. (A) Yucatecan Cantils in the anthropized site frequently use rubble as shelters, in this case a male (ID: \*574) using a toilet. (B) A male *A. russeolus* (ID: \*333) from the non-anthropized site inside a mammal burrow to avoid the intense heat of the dry season.

In addition to obtaining information on movements and habitat selection, we have been able to witness interesting observations that allow us to learn more about the natural history of *Agkistrodon russeolus*. For instance, on some occasions we observed the foraging tactics used by the snakes with their tails to attract prey (i.e., caudal luring; Fig. 3).



Fig. 3. A female of *A. russeolus* (ID: \*262) displaying caudal luring among the undergrowth.



Among the highlights, we observed a predation event of a crested caracara (*Caracara plancus*) feeding on a non-radio-equipped individual of *A. russeolus* (Fig. 4) while we were trying to locate one of our radio-equipped snakes. From that event we wrote a natural history note that was already published in the journal *Herpetological Review*. We also observed reproductive courtship behaviour between two of our radio-equipped snakes (male ID: \*085, and female ID: \*771; Fig. 5) while relocating them. These observations provide valuable information to expand our knowledge about the autecology of the species, which we also intend to publish to make it available to the scientific community and the public.



Fig. 4. Remains of an adult *Agkistrodon russeolus* preyed upon by a *Caracara plancus* (inset) at the anthropized study site.



Fig. 5. Courtship behavior between two of our radio-equipped *A. russeolus* (male ID: \*085, and female ID: \*771); the male used his head by rubbing his chin on the female's body.