

NATURAL HISTORY NOTES

Duel in the Desert: When Predators Collide, A “No Win” Natural History Observation

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On July 4 of 2002, this author was radio tracking a female Gila Monster to the source of its signal. It was with some satisfaction that I noted her strongest signal was coming from under a pack rat midden that was in turn beneath a familiar Hackberry thicket. This thicket was instantly recognized, as three radioed *Crotalus atrox*, one other radioed Gila Monster, and a Desert Tortoise have been observed here in times past. The thicket is gaily festooned with bits of aging flagging. The fact that yet another known monster had chosen to utilize this site launched it to a “Super Site” status. Six different herps occupying a single square meter of ground put this particular site above all others on our study plot, located in South-Central Pinal County, Arizona.

Whilst the usual fumbling in the backpack for the datasheet, thermometer, GPS unit, camera etc. ensued, a strong whiff of Kingsnake musk directed my eyes to the right of the thicket. As the datasheet was already affixed to my clipboard, I scribbled a few lines on the sheet that was actually supposed to be reserved for the Gila Monster being tracked. One of the handwritten lines has this to say: “The photos will be good enough to recreate the story.”

The incident was first noted at 0808, and was occurring on a 50% interspersed shaded portion of open bajada at 818 meters in elevation. A 1.5 meter tall Chain-fruit Cholla was casting the shade on the participants. A small Triangle-leaf Bursage was ca. 1 meter behind the combatants, and the Hackberry thicket was perhaps two meters to the west. The ground temperature was 35.5 degrees C, ambient air temperature was 41 C, with an estimated 0 % clouds, 12% humidity, and calm conditions rounding out the weather aspects of this observation.

We allow the pictures to say a thousand words:



Fig. 1

An estimated 280mm snout-tail, 6.5mm girth Desert Kingsnake (*Lampropeltis getula splendida*) is observed bunched in a ball around the head and throat of an estimated 800mm snout-tail, 18mm girth Western Coachwhip (*Masticophis flagellum*

testaceus). It is estimated that the mass of the Coachwhip is at least 5 times greater than that of the Kingsnake.



Fig. 2

Closer examination reveals that the upper jaw of the Kingsnake is blocking the vision of the left eye of the Coachwhip, while the Kingsnake's lower jaw is actually clamped on the inner upper palate of the Coachwhip's gaping mouth. This photo and others demonstrate that at no point in the observation did the Coachwhip bite the Kingsnake's lower jaw. The Coachwhip seems to be having difficulty breathing, as evidenced in the next photo.



Fig. 3

The action in this fight is painstakingly slow. As photographer of this event, I remained stationary, and by 0842, the participants have rotated enough to give me this angle. Note the extended glottis on the

Coachwhip. Note also that the Coachwhip has now rotated enough to see the witness of the battle at hand. While the Kingsnake is doubtless aware of my presence during the entire observation, it can do nothing about it. As this photo is taken, it is probably the first the Coachwhip is aware of my presence. The reaction following this photo is instantaneous. The Coachwhip drags the Kingsnake into the bursage behind both participants.



Fig. 4

Taken at 0857, my last photo of the event. Note that the Kingsnake has managed to get two more loops around the neck of the Coachwhip, and the Coachwhip's tongue is lolling out of its mouth. I had an appointment to make, and was out of film, so I made my break with plans on returning as soon as I could. During the 49 minutes of my watching this event, it was my opinion that the Kingsnake had the upper hand at all times.

I was able to persuade my wife Dianna that she had nothing better on the Fourth of July to do than go back out to the site with me. We picked up more film enroute, and arrived at 1142. We spent a half hour searching for the participants, but they could not be found.

On July 6, at 2025, I revisited the site. There was a strong smell of death hanging about the area, which I traced to a hole beneath a Pencil Cholla patch around 3 meters east of the arena. Many a fine mind encouraged me to dig this site up to seek a conclusion to the event, but this author was happy with what he had.

It is interesting to note that this observation started and ended with utilization of the oft-neglected human sense of smell.

Discussion:

Since this observation had neither a solid beginning or ending, this author can only speculate on each. As for how the battle started, my guess is that the Coachwhip initiated the show. Both species are noted snake-eaters. The reasoning behind the first strike going to the Coachwhip is the position of the Kingsnake's head upon my arrival. I can think of no way that the Kingsnake could get his mouth around the upper jaw of the Coachwhip unless that mouth was open in the first place. Perhaps a mid-body grab by the Coachwhip yielded a retaliatory bite from the Kingsnake, which surprised the Coachwhip into letting go. This would then allow the Kingsnake to throw the coils around the neck of its adversary.

As for the conclusion of the fight, the scent of death might indicate that the Kingsnake won. If the Kingsnake lost, the Coachwhip would have devoured it and there would be no stench emanating from the site.

But the result was most likely two dead snakes in the hole. Harry Greene was kind enough to offer to buy me a shovel to dig the site up. When I mentioned that I had a gold shovel in mind, he had this to say: "I'll pay for the gold shovel in hopes that you will discover what really happened to that kingsnake... did it gain big-time from its ambitious predatory lust, or pay the ultimate price, as evidenced by two snake skeletons in that stinky hole?"

The last line on my datasheet, written on 7/6/02, concurs with the thoughts of Dr. Greene: "Now, the question is this: did the Kingsnake die trying to eat the Coachwhip? Likely scenario!"

