

## Half-time Herping on One Big Prairie

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Konza Prairie Biological Station just a ten minute drive from Manhattan Kansas is a 3,487 hectare tallgrass prairie managed by Kansas State University. I was there to study the effects of fire on freshwater cordgrass (*Spartina pectinata*) dominated wetlands, and while I had this landscape available to me I spent countless hours on it from spring through fall and even some winter days. While my major focus was plants, I've always had an abiding interest in herps and on KPBS I found them or they found me.

Access to research sites is usually provided by wide and well mowed fire breaks that occur between all of the KPBS fire treatments. It wasn't uncommon to round a corner or crest a hill and find an ornate box turtle (*Terrapene ornata*) proceeding on the same trail headed towards me. But as I became more familiar with the wetlands, I found more turtles there. Particularly during summer heat I found turtles resting on cool moist marsh muck beneath low density cordgrass culms, reminding me of diamond-back terrapins (*Malaclemys terrapin*) I had seen in the shadows of saltmarsh cordgrass from when I was a master's degree candidate on the Virginia Barrier Islands. Late on a very warm July evening I was walking by the margins of a wetland looking for any new or strange plant or animal phenomena when I noticed a tiny and bright red point of light emanating from the brown muck. On close inspection I saw that it was the reflection of sunset light on the eye of a box turtle intently fixed on me as it was buried up to its chin in the marsh.

Another herp I found in the cordgrass wetlands was Cope's gray treefrog (Heinrich and Kaufman, 1985). The seminal paper by Jaslow and Vogt (1977) suggests that Cope's gray treefrog (*Hyla chrysoscelis*) is the most likely candidate for open prairie habitat. I found the first frog by accident while I was sweep netting for insects associated with freshwater cordgrass and after sequentially releasing seven grasshoppers, I was surprised to find that what I thought was the eighth grasshopper had a recognizably vertebrate face. I almost wildly threw the net aside but fortunately realized it was the face of a treefrog. When I related this encounter to the K-State herpetological experts, I was surprised to hear them say that treefrogs didn't frequent the typically dry cordgrass wetlands and only ventured to open water to breed and otherwise foraged in the gallery forests on Konza. Despite those assurances I continued to find treefrogs in the wetlands most often on the broad leaves of common milkweed. Cope's gray treefrog is probably the only member of the genus *Hyla* to occur on Konza where it is near the western limit of its range (Hillis et al., 1987; Conant and Collins, 1991; Bartlett and Bartlett, 2006). Cope's gray treefrogs were only found in the *Spartina* wetlands in the spring, their appearance coincidental with the flowering period of common milkweed (*Asclepias syriaca*) a frequent plant in these wetlands. During their flowering period milkweeds attracted many different species of

flies in fairly high numbers and those in turn attracted several kinds of spiders. This invertebrate diversity no doubt attracted the occasional Cope's gray treefrog (Freed, 1982).

Another and unique encounter with a Cope's gray treefrog occurred while I had my camera along on an investigation concerning a female jumping spider (*Phidippus princeps*) as possible mimic of milkweed flowers. I noticed a dark shape on a low and deeply shaded milkweed leaf that on closer inspection turned out to be another treefrog. What made this individual unique was that it was a very close approximation in both body coloration and pattern to a Pine Barrens treefrog (*Hyla anderssonii*). While the resemblance to *Hyla anderssonii* was uncanny, the frog was clearly a Cope's gray treefrog displaying tuberculate skin rather than the smooth skin associated with *H. anderssonii* (Cope, 1889; Conant and Collins, 1991). Furthermore the pale margin along the lateral body and legs is rough rather than smooth as in *H. anderssonii* and there is pale flecking on the hind foot not associated with *H. anderssonii*. The dark coloration extending from nare through the eye and to the shoulder is either black or very dark gray while the same area on *H. anderssonii* is purplish brown to lavender (Conant and Collins, 1991; Dickerson, 1906). Had Cope found this specimen, he would perhaps have considered it a distinct variety. He did name other varieties such as *H. versicolor phaeocrypta*, no longer recognized. This particular frog is likely far more distinct from the typical *H. chrysoscelis*.

In the wide expanses of the tallgrass prairie, snakes can be highly elusive. Typically I only heard a swishing sound through grass culms sometimes accompanied by the sight of a rapidly exiting length of snake. I found the best time to see relatively immobile red-sided garter snakes (*Thamnophis sirtalis parietalis*) was a narrow window of time in early spring very soon after a controlled burn. The first time I encountered one I walked past a large elevated burned off culm of big bluestem and a snake was there was just on the other side. We surprised





one another. Later in the season I might occasionally see a red-sided garter snake gliding apparently effortlessly through dense grass stands, and since I was upwind I could observe it for a while. Only once I saw an approximately 3-foot-long black rat snake (*Elaphe obsoleta obsoleta*) glide up a small conical hill just east of the *Spartina* wetlands.

I was with several other graduate students one October afternoon when one of them found a single lethargic specimen of a Texas horned lizard (*Phrynosoma cornutum*). It was by an abandoned limestone cistern once used as a cattle trough. The

coloration of this lizard was an exact match for the limestone rim of the cistern and together with the shape and lethargy, the lizard matched the surrounding jagged limestone rocks that littered the uplands.

Several times I went to limestone and chert strewn uplands fields and I lifted slabs. Typically spaces under slabs were vacant. On one occasion I lifted a slab to find a western slender glass lizard (*Ophisaurus attenuatus attenuatus*) and twice found prairie ringneck snakes (*Diadophis punctatus arnyi*).

The most commanding herp I found while traversing the margins of a small stream on Konza searching for rare or unusual aquatic plants. In a wide bow of the stream I saw what appeared to be a small sand-colored boulder covered in long waving strands of green algae. I marveled at how this boulder seemed so round and smooth when I noticed that the head of the common snapping turtle was noticing me! This behemoth must have been nearly as long as the 19 and 3/8 inch record described in Conant and Collins (1991).

Until I left Konza Prairie, I continued to occasionally find Cope's gray treefrogs in the wetlands despite the experts' dismissals. Though I found no additional treefrogs resembling *H. andersonii* in the *Spartina* wetlands, my small sample size with sporadic sampling does not preclude the existence of this hypothetical variety.

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