

Serendipitous Sightings of *Pseudemys* in Southern Illinois

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Serendipity, as defined by the Oxford American Dictionary, is “the making of pleasant discoveries by accident” (Ehrlich et al., 1980). Herein I describe my two serendipitous encounters, nearly 10 years apart, with river cooters (*Pseudemys concinna*) in southern Illinois.

The river cooter is a large emydid turtle attaining a carapace length of up to 37.5 cm (Conant and Collins, 1991), with the largest Illinois specimen measuring 32 cm long (Phillips et al., 1999). It is a southern species, inhabiting large rivers, their tributaries and backwaters, from eastern Texas, Oklahoma, and southeastern Kansas eastward to Georgia, the Carolinas and Virginia.

River cooters were first reported from Illinois by Garman (1890). Apparently never common in Illinois (Garman, 1892), the species was once thought to be extirpated from the state (Morris et al., 1983). However, results of focused surveys by Don Moll in the late 1980s, combined with incidental sightings, verified the continued existence of river cooters in Illinois (Moll and Morris, 1991). Most recent sightings have been in flood-plain lakes and ponds of the Ohio and Wabash River systems of southeastern Illinois (Dreslik, 1997, 1998; Dreslik et al., 2003; Moll and Morris, 1991; Readell and Phillips, 2008). Sightings in the Mississippi River drainage are much less common, and for several counties, are many decades old (Phillips et al., 1999). Due to its scarcity and human modification of its habitat, the river cooter is listed as Endangered in Illinois (Phillips et al., 1999).

Sighting #1

Every spring from 2001 through 2004, I studied amphibian and reptile usage of three recently constructed wetlands on The Nature Conservancy’s Grassy Slough Preserve near Belknap, in Johnson County (Palis, 2007). I sampled the herpetofauna using a variety of techniques including funnel-trapping at drift fences, coverboard sampling, visual encounter surveys, nocturnal frog-call surveys, and hoop net trapping (for turtles). I also kept tally of species encountered incidental to survey activities, such as those encountered while going from one wetland to another.

On 23 May 2003, I spent a lovely morning checking funnel traps and coverboards at all three wetlands. Captures were few, consisting of a half dozen cricket frogs (*Acris crepitans*), a juvenile cottonmouth (*Agkistrodon piscivorus*), and an adult black racer (*Coluber constrictor*). During the afternoon, I conducted visual encounter surveys of two wetlands. Wetland visual encounter surveys consisted of walking and wading for two hours along the shoreline and in near-shore waters, dipnet in hand and binoculars hanging from my neck, recording the number of individuals of each herpetofaunal species I encountered. Wetland surveys yielded sightings of hundreds of frogs

and tadpoles, a single small-mouthed salamander (*Ambystoma texanum*), several red-eared sliders (*Trachemys scripta*) and painted turtles (*Chrysemys picta*), and three copperbelly water-snakes (*Nerodia erythrogaster neglecta*). After completing my survey of the second wetland, I strolled back towards my car on the sparsely vegetated ground below the long, low earthen dam. At 1730 h, I walked up on a large emydid turtle, motionless and oriented towards the wetland. As I passed by I made a mental note, “female red-eared slider.” Something about this turtle, however, gave me pause; the claws on the front feet were extremely long. Long foreclaws are indicative of mature male red-eared sliders who use them to titillate females during courtship. But male red-ears don’t get as large as this turtle. I closely examined the turtle and realized I had discovered an adult male river cooter!

Aware of its imperiled status in the state, I documented my find with photographs. And, upon checking the range map for the river cooter in the *Field Guide to Amphibians and Reptiles of Illinois* (Phillips et al., 1999), I discovered that this turtle represented a new county record.

This sighting was extremely fortuitous. The preserve is 1123 hectares in extent (including 15 constructed wetlands) and bisected from north to south by an approximately 4.5-kilometer-long channelized stretch of the Cache River. The turtle was approximately 130 m from the river at a wetland that, until 1999, was a manicured, plastic-covered field used to grow vegetables on a large, commercial scale. The turtle and I just happened to be at the same spot, at the same time, on the same day; certainly an improbable set of circumstances. One wonders why the turtle climbed the steep clay-mud bank of the deeply-incised Cache River and wandered eastward through a field of weeds. He certainly could not have seen the wetland perched high above the river and hidden behind the earthen berm. Did he know the wetland was there, and if so, what sense(s) did he employ to detect its presence?



Adult male river cooter, *Pseudemys concinna*. Photographed in Johnson County, Illinois, on 23 May 2003 by John Palis.

Sighting #2

Thursday, 7 February 2013 was an unseasonably warm winter day. Under a cloudless sky the air warmed to the low 60s (°F) by late morning. Winter days like these compel me outdoors. I decided to go to Horseshoe Lake in the afternoon to see if snakes were emerging from hibernation. However, as morning rolled into afternoon, the sky became progressively cloudier. Change of plans. Instead, I went to Trail of Tears State Forest, in Union County, to walk the floodplain of Clear Creek, upstream of State Forest Road. I had hoped to find floodplain pools that could be used as breeding sites by amphibians. But I was to make an even more amazing discovery.

When I first arrived at the creek, I scanned for turtles with my binoculars. I saw four adult red-eared sliders, one on a log and three on the steep, west bank. Like the Cache River, the downstream reach of Clear Creek has been channelized and transformed into a steep-sided ditch. Here, the water usually runs brown with silt; but on this day, due to little rainfall, deep water was emerald blue-green and shallow water was clear enough to see the bottom.

As I meandered upstream, periodically scanning the creek for basking turtles, I heard multiple skeins of snow geese as they flew overhead, carried northward by a warm south wind. At 1430 h, nearly 0.6 km upstream of the bridge, I spied a forked log, midstream, adorned with five basking turtles. Viewing them at a distance through my binoculars, I noticed one exceptionally large individual. To prevent disturbing them, I slowly moved closer, keeping trees between myself and the turtles. When close enough, I got on my belly and crawled toward the top of the bank. I slowly raised my head, then my binoculars . . . the big turtle was a river cooter! Like my previous sighting, this one bore the long foreclaws of a male. Because the water was not carrying a load of silt, the turtles were clean, and their colors and patterns were discernible. Unlike the melanistic adult male red-eared slider he lay behind, the cooter was quite colorful. He had multiple narrow, yellow, longitudinal head and neck stripes, and orange-yellow vertical bars on the marginal scutes of the carapace. Although not particularly clear, I could also see fine, irregular lines on the larger scutes of carapace. There was no doubt I was looking at a river cooter. But how do I document it? I pulled out a little, point-and-shoot digital camera and captured an image that included both banks of the creek, the creek itself, and small objects (i.e., the turtles) on the log. Not satisfied, I crawled away from the bank and then slowly made my way to a large bankside tree closer to the basking turtles. Reaching around the tree, I pointed the camera and captured a couple more images, of similar, unsatisfactory quality as the first.

Excited by my find, I continued my upstream trek to look for more turtles. The floodplain soon disappeared and I found myself struggling to stay vertical as I carefully traversed a steep

talus slope that dropped down into Clear Creek. I could not have negotiated the steep slope, with its loose rocks, wet leaves, and mosses, if not for tree and shrub handholds upon which I entrusted my life. The steep slope yielded a beautiful zigzag salamander (*Plethodon dorsalis*) that was exposed during an unplanned slide downslope. I subsequently found two more individuals under rocks.

My upstream jaunt yielded 64 more red-eared slider sightings, but no more cooters. I stopped and turned back at approximately 1.2 km north of the bridge. I counted a total of 75 red-eared sliders on my northward trek, nearly all of which were basking. By 1620 h I was back at the cooter log; the cooter and his slider companions had not moved.

I returned to Clear Creek, with a better camera in hand, twice in following days (9 and 11 February). The weather on these subsequent visits was cooler than the day I saw the cooter and the multitude of red-ears. Naturally, now that I was prepared to document its presence, the cooter was a no-show.

My unexpected sighting of a river cooter in Clear Creek is the first for this species in the Mississippi River drainage of Union County since Cahn's (1937) book, *The Turtles of Illinois*. A river cooter was sighted in Union County in 2006, but that turtle was in the Cache River drainage (Chris Phillips, personal communication, 2013). Like my first observation, the Clear Creek sighting was another case of being in the right place at the right time. The right time, in this case, was an especially unlikely time of year to make such an observation—mid-winter.

Interestingly, both river cooters I happened upon were males. Male aquatic turtles are more likely to make long-distance movements and colonize new habitat than females (Morreale et al., 1984; Tuberville et al., 1996). River cooters are no exception; in a study conducted in southeastern Illinois, males moved greater distances than females and one male relocated from one floodplain lake to another (Dreslik et al., 2003).

My chance encounters of river cooters in southern Illinois suggest: 1) that I am prone to stumble upon rare turtles, or 2) the species may not be as rare as generally perceived. I am inclined to accept the latter explanation over the former, and suggest that focused cooter surveys of streams and floodplain ponds and lakes within the Mississippi River drainage of southern Illinois might yield additional observations of this enigmatic turtle.

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