

Status Of The River Cooter, *Pseudemys concinna*, in Illinois

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ABSTRACT

Recent collections and sightings of the state-endangered river cooter, *Pseudemys concinna*, have been made in Alexander, Gallatin, and White cos., Illinois. The largest remaining populations of river cooters in the state likely exist on the floodplains of the Wabash and Ohio rivers. Other possible localities are reviewed and discussed.

INTRODUCTION

The river cooter, *Pseudemys concinna*, was first reported in Illinois by Garman (1890, 1892). His record was based on a specimen (INHS 10367) collected by a Dr. J. Schenck from the Wabash River near Mt. Carmel, Wabash Co. Cahn (1937) recorded *P. concinna* from Horseshoe Lake and Cairo (Alexander Co.), Elizabethtown (Hardin Co.), Murphysboro (Jackson Co.), Metropolis (Massac Co.), Chester (Randolph Co.), and Union Co. Smith (1961) added Elsah (Jersey Co.) to the locality list. Minton (1972) reported records from Knox, Gibson, and Posey cos., Indiana; these counties border the Wabash River opposite of Wabash, White, and Gallatin cos., Illinois. Table 1 lists museum holdings of *P. concinna* from Illinois; the specimen from the Kankakee River in northern Illinois is likely (if not undoubtedly) a release. We have as yet not located the specimen from Elsah cited by Smith (1961).

Taxonomically, Illinois populations of this species have long been in a state of confusion. Upon the recommendation of Dr. John Crenshaw, who studied the species while at the University of Florida, Smith (1961) considered

the Illinois populations as hybrids between *P. floridana hoyi* and *P. concinna hieroglyphica*. Minton (1972) perpetuated this interpretation. Seidel (1981) synonymized *P. f. hoyi* with *P. c. hieroglyphica*. Ward (1984) revised the species, and described *P. c. metterii* from Missouri. Ward (1984) apparently examined no cooter from Illinois, but his map (Ward, 1984: 29) suggests that he considered populations in the state to be chiefly intergrade *P. c. hieroglyphica* X *P. c. metterii*. However, this map does not include any localities in Indiana or southeastern Illinois. Our specimens from this area best fit Ward's (1984) description of *P. c. hieroglyphica*; more extensive studies of the populations in Illinois are required to clarify their systematic status. Iverson (1986) adopted Ward's (1984) arrangement. Collins et al. (1982) suggested using the common name "river cooter" rather than "slider" as listed by Conant et al. (1956).

Pseudemys concinna has always been regarded as rare in the state, or at least difficult to capture. Cahn (1937) wrote that the species' habits were poorly known and it was too rare in Illinois to study except over extended periods of time. Smith (1961) wrote that the turtle was "very rare," being restricted to large rivers and adjacent lakes in the extreme southern counties of Illinois. The last specimen recorded from the state was collected in 1951 (Stone, 1980; Morris and Smith, 1981). Consequently, the species was listed as endangered in Illinois (Kenney, 1978; Morris and Smith, 1981).

In June 1988, the senior author, assisted by Eric McGee, conducted a survey of the cooter on the Wabash, Ohio, and Mississippi rivers, Illinois, for the Illinois Endangered Species Protection Board. Potential localities for the cooter were located on topographic maps. These sites were then visited and scanned with binoculars and spotting scopes. Particularly promising areas were sampled with hoop traps and trammel nets. Also, herpetologists known to have worked within the range of the turtle in Illinois were canvassed to determine if they had encountered the species. Findings from this survey are presented below along with information collected independently by the junior author.

RESULTS

The following recent records, along with historic ones, are plotted in figure 1.

Documented Records

Horseshoe Lake, Alexander Co. (T16S R2W Sec. 21) - An adult female found dead by MAM and Mary Beth Morris at the spillway of the lake on 13 April 1985 confirms the continued existence of the species at this site. Measurements of the specimen (Southern Illinois University at Carbondale, R-2172) are given in Table 2.

EOM collected specimens from two new localities during the course of his survey, as follows.

Beaver Pond, New Haven Township, Gallatin Co. (T7S R15E Sec. 27) - On 20 June 1988 a juvenile *P. concinna* was taken in a trammel net set at this slough of the Wabash River. Table 2 lists the animal's measurements. Voucher slides of the turtle have been deposited with the Illinois Natural History Survey.

Big Lake, Shawnee Township, Gallatin Co. (T9S R10E Sec. 21) - On 16 June 1988 a turtle nest was discovered on the bank of Big Lake, an oxbow on the floodplain of the Wabash River. It contained 14 eggs averaging 38.2 X 25.4 mm and 15.4 g. On 24 August hatchling river cooters emerged from three eggs taken for identification. Measurements of the hatchlings are listed in Table 2; voucher slides of the hatchlings have been deposited with the Illinois Natural History Survey.

Undocumented Records

In addition to the above, competent herpetologists contributed the following records; in each case, river cooters were seen at a site but were not collected, or were collected but not saved for documentation.

Norris City Reservoir, Norris City, White Co. - On 28 May 1987 two basking large adults were observed through binoculars by MAM and George Rose, Illinois Department of Transportation. No river cooters were found on independent visits by EOM and MAM to the site one year later.

Old Channel Lake and Lost Lake, Fox Island Township, White Co. (T4S R13W Sec. 19 and T4S R14W Sec. 24) - Michael Ewert of Indiana University (pers. comm.) collected a male river cooter at Old Channel Lake on 18 May 1988. It was released at the site of capture. On the same day, Ewert also observed a female *P. concinna* through binoculars in nearby Lost Lake, which overlaps the boundary between Indiana and Illinois. Both lakes are muddy oxbows of the Wabash River.

Two other sight records possibly of *P. concinna*, both with less precise locality data, are recorded here to encourage further investigation. John Iverson of Earlham College, Indiana, observed what appeared to be a large river cooter crossing Interstate 57 at Rend Lake, Jefferson Co., IL, on 28 April 1985. However, in swerving across the highway to stop on the shoulder, Iverson attracted the attention of a state highway patrolman, whose interference provided the turtle time to escape. Although identifications made at 55 mi/hr must be viewed with caution, Iverson is an authority on turtles, and little apt to misidentify a full-sized adult. No *P. concinna* has been taken in southcentral Illinois, but Rend Lake is an impoundment of the Big Muddy River (where Cahn [1937] recorded the species in Jackson Co.), offers suitable habitat for the species, and is thus a site worthy of investigation.

Stephen J. Walsh, Florida State Museum, identified two road killed turtles as river cooters on the Illinois River road just north of Pere Marquette State Park, Jersey Co., approximately 10 years ago. The specimens were not saved. If verified, this would be the northernmost record of the species. The species has been taken at Elsah (Smith, 1961), approximately 15 mi S of Pere Marquette, and suitable habitat for it is present in the area, adding credence to the record.

DISCUSSION AND CONCLUSIONS

Based on these findings and literature reports, the optimal habitat of *P. concinna* in Illinois appears to be sloughs and oxbows with abundant macrophytes, located on the floodplains of major rivers. The floodplains of the Wabash and Ohio rivers in White and Gallatin cos. may well hold the largest remaining populations in the state. Not only were several specimens found here, but the region has the largest amount of suitable habitat observed in the study. Unlike much of the Ohio and Mississippi rivers, which have been greatly altered for and by barge traffic, this area has remained relatively natural.

Impoundments may be another bastion for the river cooter in Illinois. The sightings by MAM and Iverson in Norris City Reservoir and Rend Lake, respectively, indicate that such sites warrant attention in future studies of this species.

Although it has been suggested that the river cooter may have been extirpated in Illinois (Morris and Smith, 1981), our records demonstrate that the species is extant. The paucity of records is probably due to the following factors: 1. river cooters occupy relatively inaccessible habitats; 2. they are chiefly herbivorous and are seldom caught on baited hooks or in baited hoop traps; 3. non-herpetologists are likely to confuse them with more common species such as *Trachemys scripta*. Additional study is necessary to clarify the status of the river cooter in Illinois.

ACKNOWLEDGMENTS

We thank M. Ewert, J. B. Iverson, and S. J. Walsh for providing us with their observations; E. McGee, M. B. Morris, and G. Rose for help in field work; and R. A. Brandon (Southern Illinois University at Carbondale), K. Cummings and L. M. Page (Illinois Natural History Survey [INHS]) for allowing us to examine specimens under their care. Funding for field work during which *Pseudemys concinna* was found was provided by the Illinois Endangered Species Protection Board and the Illinois Department of Transportation.

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Table 1. Museum records of *Pseudemys concinna* from Illinois. FMNH = Field Museum of Natural History, Chicago, IL; INHS = Illinois Natural History Survey, Champaign, IL; UIMNH = University of Illinois Museum of Natural History, Urbana, IL.

<u>Museum</u>	<u>Catalog No.</u>	<u>Year Collected</u>	<u>Locality</u>
FMNH	6300	---	Kankakee River, Kankakee, Kankakee Co.*
INHS	2155	1936	Horseshoe Lake, Alexander Co.
INHS	6014	1951	Horseshoe Lake, Alexander Co.
INHS	10367	1890	Mt. Carmel, Wabash Co.
UIMNH	2359	1931	Chester, Randolph Co.

*presumably a release

Table 2. Measurements of five *Pseudemys concinna* collected from Illinois in 1985-1988. CL = carapace length (mm); CW = carapace width (mm); PL = plastron length (mm); H = height (mm); M = mass (g).

<u>Age class</u>	<u>Locality</u>	<u>CL</u>	<u>CW</u>	<u>PL</u>	<u>H</u>	<u>M</u>
Hatchling	Big Lake, Gallatin Co.	35	34	33.5	18	9.7
Hatchling	Big Lake, Gallatin Co.	36	35	34	19	10.4
Hatchling	Big Lake, Gallatin Co.	35	36	34.5	20	10.8
Juvenile	Beaver Pond, Gallatin Co.	101	84	95	42	145.0
Adult female	Horseshoe Lake, Alexander Co.	324	232	296	120	---

