

**REPORT**

of 1995

**WOOD TURTLE (*Clemmys insculpta*) SURVEY  
ON THE LOWER CANNON RIVER  
&  
MIDDLE FORK OF THE ZUMBRO RIVER**

for

**Minnesota Department of Natural Resources  
Nongame Program**

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## INTRODUCTION

Wood Turtle (*Clemmys insculpta*) surveys of the lower Cannon River in Goodhue County and portions of the Zumbro River in Wabasha County, Minnesota were conducted during April, May, June and July of 1995. Two Wood Turtles were found with an approximate time investment of 93 field hours.

This survey was primarily a follow-up of the 1994 survey (Oldfield, 1994). After the disappointing results of the 1994 season, a subsequent survey was planned for the 1995 season. The results of this survey helped to solidify the findings of the previous field work, indicating that populations of *Clemmys insculpta* on the lower Cannon River may be non sustainable and headed for extirpation.

Results of the work done on the Zumbro River on June 3rd can only be taken in context with the results of the entire survey of the river system conducted by the Minnesota County Biological Survey staff and volunteers.

The goals of the Wood Turtle survey for 1995 were to:

- 1) Locate nesting sites (plane, canoe or foot)
- 2) Map areas of potential and active nest sites
- 3) Survey and monitor the mitigation site in the Cannon Bottoms
- 4) Prepare final report
- 5) Report any evidence of collecting or other threats to the turtle population
- 6) Communicate with Nongame Office during the field season

## METHODS

Methodology essentially remained unchanged from the 1994 season. Either foot travel along the banks and/or kayak travel down the river were the primary means of searching for turtles and evaluating habitat. Due to the difficulty of getting close enough to basking turtles to make positive identification, a 20 power spotting scope was used extensively.

In addition, an aerial survey of the Cannon and Zumbro Rivers was accomplished on the 28th of April with Carol Dorff and a Department of Natural Resources pilot. This was done to map potential nest sites and to establish areas of future ground surveys. The aerial survey was performed prior to full vegetation emergence to enhance visual assessment of river shores and bars.

Procedures for turtle identification and turtle nest identification were similar to that used in the 1994 season (Oldfield, 1994; Oldfield and Moriarty, 1994).

No Wood Turtles were captured during the 1995 season, so processing information is not available.

## RESULTS

Field work was performed from [redacted] to the [redacted] area, including the mitigation site, from April 17, 1995 through July 19, 1995. One day was spent doing field work in conjunction with the Minnesota County Biological Survey team on the Zumbro River. A total of 93 field hours on 12 different days was spent conducting this survey. Weather conditions ranged from clear and warm to overcast and cool.

The fourteen potential nesting sites (PNS) mapped in the 1994 report located between [redacted] and the highway [redacted] bridge, were all carefully surveyed on foot several times. Three sites (one being the [redacted] site) were surveyed between highway [redacted] and the Mississippi River.

This years survey again verified the abundance of the Spiny Softshells (*Apalone spinifera*) in the Cannon River watershed. Painted Turtles (*Chrysemys picta*) are common in the backwaters and ponds found near the river, but again proved to be rare in the main channel. Common Map Turtles (*Graptemys geographica*) were found at various localities in the main channel and in backwaters as expected. Snapping Turtles (*Chelydra serpentina*) are highly aquatic and are generally only seen basking in early spring shortly after emergence. Large numbers of predator destroyed Snapping Turtle nests were observed this year.

Wood Turtle (*Clemmys insculpta*) sightings were only along the main channel of the Cannon River, and were infrequent. On the 21st of May an adult (probably male) was observed basking along the north edge of the river on a log approximately 100 meters down river from PNS-H (refer to maps of 1994 report). The turtle did not allow close approach and positive sex identification could not be ascertained. A second Wood Turtle was observed on the 13th of June right at dusk. This turtle (sex undetermined) was swimming off shore of PNS-0 (refer to maps of 1994 report). Only a brief period of observation was possible before the turtle swam on downstream.

## FIELD NOTES 1995

17 April 1995

Heavy overcast prevented a pre-planned aerial survey of the Cannon and Zumbro River valleys. Instead, Bonnie Brooks Erpelding, Carol Dorff and I scouted the [redacted] in the Cannon River Bottom. One adult *Thamnophis sirtalis* was discovered in the nearby wooded area. Weather conditions were not ideal for reptile activity. Total Hours: 2.0.

28 April 1995

Carol Dorff and I with a D.N.R. pilot conducted an aerial survey of the Cannon River and Zumbro River watersheds. Objectives were to locate and photograph potential turtle nesting sites on the river shores and bars. Total Hours: 4.0.

15 May 1995

I hiked the north side of the Cannon River from the highway [redacted] bridge north toward [redacted]. Large numbers of *Chrysemys picta* and several *Chelydra serpentina* were observed basking at spring fed ponds in the bottoms north of the river. Several *Graptemys geographica* and numerous *Apalone spinifera* were observed at various locations on mud banks and dead fall along the river's edge. No *Clemmys insculpta* were found. Total hours: 12.0.

17 May 1995

I kayaked from [redacted] to the highway [redacted] bridge. Large numbers of *Apalone spinifera* were observed along the banks of the river. The heaviest concentration seemed to be from [redacted] down river to the entrance of [redacted]. Seven *Graptemys geographica* were identified with a spotting scope at various locations right along the edge of the river.

One adult female *Graptemys geographica* was hand captured. The turtle appeared to be very old and was suffering from advanced respiratory disease.\* No turtle tracks or signs of nesting behavior were observed at potential nesting sites. No *Clemmys insculpta* were seen. Total hours: 13.0.

21 May 1995

I hiked in on the north shore from highway bridge heading up river towards . Numerous *Chrysemys picta* and three *Chelydra serpentina* were seen basking at the spring fed ponds. One adult *Clemmys insculpta* was observed with the spotting scope basking on a log on the north side of the river approximately 100 meters downstream from PNS-H. The turtle appeared to be an adult male, but close enough approach for positive sex identification was not possible before the reptile dropped into the water. In addition, five to six individuals of *Graptemys geographica* and numerous *Apalone spinifera* were observed basking along the river's banks. Total hours: 8.0.

1 June 1995

Beginning at 6 p.m., I began searching the in the Cannon Bottoms. One set of turtle tracks of undetermined species was seen along the west edge. No signs of nesting behavior were seen at the site. At PNS-O and along the sides of the bicycle trail in that vicinity, five destroyed turtle nests were found. All destroyed nests were either *Chrysemys picta* or *Chelydra serpentina*. No turtles were observed. Total hours: 4.0.

3 June 1995

As part of the Minnesota County Biological Survey team surveying the Zumbro River for *Clemmys insculpta*, I kayaked the middle fork of the Zumbro River from just south of . The river was small and provided very little quality turtle

habitat, although there were several oxbows and sandy banks along its course. Potential nesting areas were small and either heavily vegetated or badly trampled by cattle. No turtle tracks or turtles were found. Total Hours: 12.0.

13 June 1995

Beginning at 6 p.m., I hiked into the \_\_\_\_\_ area (the access road was closed due to wash out and downed trees). An estimated 25 - 30 destroyed turtle nests were found along the bicycle trail, PNS-O and PNS-P. None of the nests could be positively identified as *Clemmys insculpta*, in fact they all appeared to be nest remains of *Chrysemys picta* or *Chelydra serpentina*. Right at dusk, a reasonably positive identification was made of an adult *Clemmys insculpta* (sex undetermined) swimming in the Cannon River near PNS-O. The turtle apparently swam on down stream. A large adult *Chelydra serpentina* was discovered nesting on a steep sand bank at PNS-O right at darkness. I observed the turtle nesting with flashlight and then headed for the vehicle. Total hours: 4.0.

21 June 1995

I kayaked the Cannon River from \_\_\_\_\_ to the highway \_\_\_\_\_ bridge. Very similar experiences as previous trips this year. Numbers of *Apalone spinifera* and *Graptemys geographica* were observed basking along the edges of the river. Nesting activity at potential nesting sites appeared mostly to be that of these two species. No positive identification of *Clemmys insculpta* or their nesting activity could be ascertained. Total hours: 14.0.

22 June 1995

I spent four hours in the late afternoon hiking into the \_\_\_\_\_ area to specifically check out activity at PNS-O. No turtles of any species were observed and

nesting activity appeared to be nearly over for the season. Nest remains were old and no fresh tracks or nests were found. Total hours: 4.0.

26 June 1996

I hiked in along the north shore from the highway bridge beginning about 5 p.m. Only three turtles were seen basking and they were all *Graptemys geographica*. Turtle nesting for this year was apparently over, as no fresh nesting activity was observed. Total hours: 5.0.

19 July 1995

I kayaked from [redacted] to the highway bridge on the Cannon River. Since nesting season was over, I attempted to make as many positive identifications of basking turtles as possible with the spotting scope. Large numbers of *Apalone spinifera* of all ages classes and both sexes were observed. At least twenty *Graptemys geographica* were found, but not a single *Clemmys insculpta* was located. Total hours: 11.0.

\* This adult female *Graptemys geographica* was removed from the river and was taken home for treatment of pneumonia. Even with intensive treatment, she only lived 9 days.

**Potential Nesting Sites on the Cannon River**  
(Refer to maps of 1994 Report)

- PNS - A      A sand and gravel bar with willows on the south bank of the river
- PNS - B      Sand bar on north side of river immediately down river from entrance. During high water became separated from the bank and formed two small islands.
- PNS - C      A small bar on the north side of the river formed behind a large uprooted tree, primarily gravel substrate.
- PNS - D      Large level sand bank on south side of river with abundant nesting area. Use of this site by various turtle species is high. Used by canoeists for picnicking and camping.
- PNS - E      A large sand bank on the point of an oxbow on the north side. Appears to be a good turtle nesting area.
- PNS - F      Large sand bank on south side of river. Various turtle species frequently seen basking at this site. Two large downed trees.
- PNS - G      Sand bank on south side just prior to oxbows. Appears to offer good turtle nesting areas.
- PNS - H      North sand bank with steep approach at point of oxbow. Used by Wood Turtles in past years. Numerous turtle tracks and several destroyed nests found this year.
- PNS - I      Small sand and gravel bank on south side of river. Turtle track observed.
- PNS - J      Small sand island behind log jam
- PNS - K      Small sand bank on north side with heavy vegetation. No turtle activity observed.
- PNS - L      Small sand bank on south side of river where a female *Clemmys insculpta* was observed nesting. By 11 June this site was underwater.
- PNS - M      Steep sandy hillside on south side of river frequently utilized by nesting turtles, especially *Chelydra serpentina* and *Graptemys geographica*.
- PNS - N      Sandbar south of river difficult to get to by water due to current. Observed a raccoon eating turtle eggs.
- PNS - O      Steep sandy south bank of river used heavily by nesting turtles of all species. Historically, one of the best *Clemmys insculpta* nesting sites along the lower Cannon River.
- PNS - P      Steep south facing sandy bank on a hill just below a housing development. Heavily used by turtles for nesting.

## DISCUSSION AND RECOMMENDATIONS

The results of the 1995 survey of the Cannon River from [redacted] downstream for *Clemmys insculpta* was equally as disappointing as the previous years survey. Considerable effort and time (93 field hours) located two turtles. Indications are very strong that the lower Cannon River Wood Turtle population is indeed in serious trouble. Such a low level of adults will very likely result in future recruitment failure and extirpation of this population. The heavy nest predator pressure in this valley may be enough to insure failure of any future Wood Turtle nesting attempts. The likelihood of young turtles reaching reproductive maturity seems remote.

Any actions taken following these recommendations may be too late to save the Cannon River Wood Turtle, but without trying failure is certain. The following recommendations resulting from these surveys are:

- 1) Protect as much of the river valley as possible with the Scientific and Natural Area designation.
- 2) Curtail all further commercial and recreational development
- 3) Develop nest predator control measures
- 4) Educate the public as to the plight of the Wood Turtle and the value of the natural resources of the Cannon River valley
- 5) Prevent further development of road access to the river
- 6) Prevent development of a second recreational trail on the north side of the river.

Without knowledge of results or future survey plans for the Zumbro River system, I can not make any useful comments or recommendations except that the middle fork of the Zumbro River I surveyed from near [redacted] seems unlikely to harbor any sizable population of Wood Turtles.

Finally a few comments about the \_\_\_\_\_ site downstream from the highway bridge in Goodhue County seem appropriate. I, personally see very little likelihood of any turtle species using this area as a regular nesting site. It is possible that an occasional Snapping Turtle may nest there, primarily because of the relatively large populations of this species and their propensity to wander great distances looking for nesting areas. In the likelihood that turtles begin using this area for nesting at some time in the future, the \_\_\_\_\_ site will require a reasonable degree of maintenance to deal with vegetation encroachment, silting, and changing water level. Future contracts for this type of \_\_\_\_\_ for turtle habitat should be based on a careful evaluation of the success or failure of this project.

## LITERATURE CITED

Oldfield, B. 1994. Report of 1994 Wood Turtle (*Clemmys insculpta*) Survey on the Lower Cannon River for the Minnesota Department of Natural Resources Nongame Program. 20 pp.

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