

NORTHERN ILLINOIS UNIVERSITY

**STATUS OF BLANDING'S TURTLES, *EMYDOIDEA BLANDINGII*, AND  
POPULATION ECOLOGY OF MIDLAND PAINTED TURTLES, *CHRYSEMYS  
PICTA MARGINATA*, AT  
MIDEWIN NATIONAL TALLGRASS PRAIRIE**

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ABSTRACT

This thesis provided a basis for determining the status of Blanding's turtles and the population distribution, abundance, and habitat usage of midland painted turtles, *Chrysemys picta marginata*, at Midewin National Tallgrass Prairie in Will County, Illinois. During 2001 and 2002, mark-and-recapture and visual surveys were performed on five pond sites and one creek within the Manufacturing and Load-Assembly-Packaging Areas. Sampling sites included Hidden Pond at A18 (0.5 hectares), Hidden Pond at A19 (0.29 hectares), Blodgett Road Pond (2.23 hectares), Ash Pile Pond (1.40 hectares), Doyle Lake (6.47 hectares), and Prairie Creek. All captured turtles were notched for identification, measured for shell dimensions, and classified by gender. Also, 30 turtles in the 2002 census were measured for abdominal annuli to obtain age information. Population size was estimated for each location using Schumacher's and Lincoln-Petersen methods.

No Blanding's turtles were trapped or seen during surveys in either year. Because of not being able to locate Blanding's turtles at Midewin, I included historical and current information on the status of Blanding's turtles in four Illinois counties surrounding the study site. Recommendations for Midewin include more research to determine if Blanding's turtles are still present. If further research does show a small population, there should be active management of the population using radiotelemetry and surveys. If research proves the turtles are no longer in this area, Midewin may want to consider reintroducing them in the future to help preserve this threatened species.

Painted turtles were common at Midewin and, during 2001 and 2002, there were 267 total captures of 201 individual painted turtles consisting of 34 adult males, 40 adult females, and 101 juveniles. Chi-square tests revealed a significant difference between the observed and expected frequencies of juveniles, adult males, and adult females among locations. ANOVA results indicated no significant difference in mean plastron length among adult males among locations. However, there was a significant difference in mean plastron length among adult females. Furthermore, ANOVA results revealed a significant difference in mean mass among adult females and adult males. Population estimates for four locations ranged from 23 – 506 turtles.