

## **NNHC Meeting 2002**

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### **A PROPOSED LONG-TERM ASSESSMENT OF A SCATTERED *CHRYSEMYS PICTA PICTA* POPULATION**

Black Rock Forest nature preserve (Orange County, NY, USA) provides a well-protected ecological community for study. The 3700 acres of the forest encompass 7 ponds separated by 200–800 meters. Watercourses providing obvious routes for testudinal translocation connect some, though this generally significantly increases linear travel distance ( $\leq 1200$  meters). In other cases significant ridgelines requiring total vertical displacement of  $\leq 400$  meters need to be traversed. Previous samplings of each pond have confirmed the presence of established populations of *Chrysemys picta picta* (Eastern Painted Turtle), and *Chelydra s. serpentina* (Common Snapping Turtle). Recorded population densities vary from over 80 confirmed individuals (*C. p. p.*) per pond, to less than a dozen. The only other aquatic turtle confirmed in the forest are two introduced specimens of *Chrysemys scripta elegans* (Red-eared Slider). An extended (3–5 year) program of mark-recapture (using a variety of capture methods—basking traps, feeding traps, dip netting), PIT tagging, and extensive data recording is planned, with the purpose of establishing a thorough census (including sex distribution, approximate ages, and growth data) of each pond (sub-population) and the overall forest population and distribution. It is expected that a rigorous mark-recapture program conducted until no new individuals are collected will lead to significantly more accurate estimates of actual population than traditionally employed statistical models based on random sampling. Comparison of capture records should assist mapping of gene flow between sub-populations by indicating movement of individuals from one pond to another.