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## MORPHOLOGICAL INTERGRADATION OF TWO SUBSPECIES OF CHRYSEMYS PICTA WITHIN A DISCRETE METAPOPULATION

Chrysemys picta is a complex of four subspecies, two have ranges including New York State. C. p. picta (Eastern Painted Turtle) is morphologically distinguishable from C. p. marginata (Midland Painted Turtle). The costal scutes of C. p. marginata are disaligned, while the scutes of C. p. picta are not. The plastron of C. p. marginata bears a distinct central melanistic figure that covers approximately $40 \%$ of the plastral surface area. C. p. picta typically has no plastral figure. Intergrades typically display intermediate characteristics and are thus also readily distinguishable from 'pure' individuals of either subspecies. From April to November, 2003, five demes of the metapopulation in Black Rock Forest, Orange County, New York, were sampled and digital images were taken of each plastron and carapace. These images were examined to determine the frequency of the expression of each characteristic. Significant disalignment (indicative of an intergrade) was seen in $46 \%$ of the population with a mean disalignment of $29 \%$. Significant plastral blotching occurred in $28 \%$ of the population, with $66 \%$ of individuals showing no marking. Of the one third of the population expressing any plastral marking, the mark averaged less than $20 \%$ of the plastral area. The frequency of costal scute disalignment ( $35 \%-60 \%$ ) and plastral marking ( $9 \%-53 \%$ ) varied greatly between subpopulations. Profiling the metapopulation did not accurately model subpopulation profiles, nor did subpopulation profiles accurately model the metapopulation. Contrary to historically accepted descriptions, the population appeared to be a predominantly $C . p$. picta population. Neither trait appeared dimorphic.

