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NOTES ON BASKING BEHAVIOR OF THE STINKPOT (*STERNOTHERUS ODORATUS*) AND ITS IMPLICATIONS FOR PREDATION RISK – Although the ecology and behavior of the Stinkpot (*Sternotherus odoratus*) were reviewed in Carr (1952) and Ernst et al. (1994), little is known about the consequences of basking behavior by this species in Virginia (Mitchell, 1994). This highly aquatic turtle does not usually thermoregulate by basking. Most basking behavior has been described as resting in shallow water or floating at the surface with the top of the carapace exposed to sunlight (Ernst et al., 1994). Stinkpots have been observed occasionally basking on the bank or on limbs of fallen trees (JCM, pers. obs.). What has not been noted is the seemingly unwariness of Stinkpots during this behavior. Unwariness during basking may help us understand the predation success of Bald Eagles (*Haliaeetus leucocephalus*) and other predators on this species. In addition, the biological needs of the Stinkpot may enable them to take advantage of basking sites that are suboptimal for other syntopic turtle species.

On 19 March 2006, one of us (JDK) observed two Stinkpots basking on logs at Waller Mill Reservoir in Williamsburg, James City County, Virginia. These observations were made from a kayak. When approached, the first turtle dropped into the water when JDK was within 1 m of the log. However, the second turtle appeared to be sleeping. Its head was down and resting on the log. It was easily captured. Although the turtle did mouth gape, it never opened its eyes. Some of its behavior can be attributed to the cool water and ambient temperatures. On 4 June 2006, while kayaking the upper reaches of the Chickahominy River in New Kent County, Virginia, just south of Route 155, JDK encountered approximately 12 Stinkpots basking on the bank and various logs. The river in this area is narrow (5 m) and shallow (<1 m) with a dense vegetative overstory. Two Stinkpots were easily captured by hand. These turtles also appeared to be sleeping, as their eyes were closed and the only response to being picked up was mouth gaping.

Bald Eagles have been documented to feed on a wide variety of turtle species. Remains (i.e., shells) of Diamond-backed Terrapins (*Malaclemys terrapin*) and Stinkpots were the most frequently encountered turtle species in and under Bald Eagle nests of the Chesapeake Bay region (Clark, 1982; Markham, 2004). Predation on Diamond-backed Terrapins was attributed to their behavior of only searching the horizon during basking, which makes them susceptible to predation

from above (Carl Ernst pers. comm., in Clark, 1982). No explanation was given for predation on Stinkpots. However, their unwary basking behavior may allow Bald Eagles to catch these turtles while they are on basking logs. Although the dense overstory at the Chickahominy River site would prevent predation by predatory birds, the open water of Waller Mill Reservoir would allow a Bald Eagle to successfully capture a basking Stinkpot. Unwariness on basking sites with overhanging vegetation may also allow other predators, such as raccoons, to catch Stinkpots.

Painted Turtles (*Chrysemys picta*) were the only other turtle species observed basking at the Chickahominy River site. Several Painted Turtles, Sliders (*Trachemys scripta*), and Red-bellied Cooters (*Pseudemys rubriventris*) were observed basking on a large, but separate, log near one of the observed Stinkpots at Waller Mill Reservoir. No Stinkpots were observed at either site basking on logs with larger turtles. Because larger turtles displace smaller turtles for basking sites (Lovich, 1988; Lindeman, 1999), Stinkpots may have to find other suitable basking sites. However, Stinkpots appear to be able to take advantage of basking sites used only by hatchlings or juveniles of the larger species (JDK, pers obs.). The first Stinkpot encountered at Waller Mill Reservoir was observed basking beside a juvenile Painted Turtle of similar size. In addition, the physiology of Stinkpots may enable them to use marginal basking sites. Since these bottom walkers spend a significant amount of their time underwater, their shells remain wet, and abundant algal growth often covers their shells (Ernst et al., 1994). Thus, basking may not be as critical to their biology as it is to other aquatic turtle species. Basking sites selected may be the result of the inability of this small turtle to compete with larger turtles for prime basking sites. Conversely, physiological needs of Stinkpots may also allow them to exploit basking sites that are suboptimal for other syntopic turtles. Observations of emydid and Stinkpot interactions are needed to further address these inferences.

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LITERATURE CITED

- Carr, A. 1940. Handbook of Turtles of the United States and Canada. Cornell University Press, Ithaca, New York. 542 pp.
- Clark, W. 1982. Turtles as a food source for nesting Bald Eagles in the Chesapeake Bay region. *Journal of Field Ornithology* 53: 49-51.
- Ernst, C. H., J. E. Lovich, & R. W. Barbour. 1994. *Turtles of the United States and Canada*. Smithsonian Institution Press, Washington, DC. 578 pp.
- Lindeman, P. V. 1999. Aggressive interaction during basking among four species of emydid turtles. *Journal of Herpetology* 33: 214-219.
- Lovich, J. E. 1988. Aggressive basking behavior in Eastern Painted Turtles (*Chrysemys picta picta*). *Herpetologica* 44: 197-202.
- Markham, A. C. 2004. The influence of salinity on diet composition, provisioning patterns, and nestling growth in Bald Eagles in the lower Chesapeake Bay. Master's Thesis, College of William and Mary, Williamsburg, VA. 127 pp.
- Mitchell, J. C. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, DC. 352 pp.
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