

Apparent Predation of an American Water Shrew, *Sorex palustris*, by an American Marten, *Martes americana*

TODD POWELL^{1,2}, THOMAS S. JUNG^{1,3}, and KAREN J. CLYDE¹

¹ Fish and Wildlife Branch, Yukon Department of Environment, P.O. Box 2703, Whitehorse, Yukon Y1A 2C6 Canada

² Current address: Fish and Wildlife Division, Alberta Department of Sustainable Resource Development, P.O. Box 9915, Fort McMurray, Alberta T9H 2K5 Canada

³ Corresponding author. e-mail: thomas.jung@gov.yk.ca

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Little is known of the natural history of American Water Shrews, *Sorex palustris*, including their predators. We document an apparent case of predation of an American Water Shrew by an American Marten, *Martes americana*, in the boreal forest of southeastern Yukon.

Key Words: American Marten, *Martes americana*, American Water Shrew, *Sorex palustris*.

Little is known of the natural history of the American Water Shrew (*Sorex palustris*). For example, incidents of predation are rarely noted, despite the fact that the relatively large size of its skull should be easy to identify in the stomachs, scats, or pellets of predators. The American Water Shrew is semi-aquatic and the vast majority of records are from within several metres of a waterbody (Benenski and Stinson 1987, Nagorsen 1996). As such, most non-volant predators of American Water Shrews are aquatic or semi-aquatic, including large frogs, snakes, and fish (Benenski and Stinson 1987; Nagorsen 1996). The American Mink (*Neovison vison*) is the only reported mammalian predator of the American Water Shrew (Benenski and Stinson 1987), and it also is semi-aquatic. We are not aware of any observations of terrestrial mammals preying upon American Water Shrews. Here, we provide an observation of apparent predation of an American Water Shrew by a terrestrial predator, the American Marten (*Martes americana*).

Our observation was made during a live-trapping study of American Marten near Watson Lake, Yukon (60.2°N, 128.7°W). On 13 July 2006, we captured an American Marten and found a dead shrew at the entrance of the trap. The shrew was identified as an American Water Shrew using the key provided by Nagorsen (1996). The trap site was in upland boreal forest, about 350 m from the nearest waterbody.

We surmise that the Marten was carrying the Water Shrew and dropped it prior to entering the trap. Alternatively, the Water Shrew may have been feeding on the bait in the trap, where the Marten found it and killed

it. The latter hypothesis is not likely, however, because the Water Shrew was found outside the trap; for this hypothesis to be more plausible than the Water Shrew should have been found inside the trap. Therefore, we believe that the Marten killed the Water Shrew before it had entered the trap. It is not known, however, if the Marten would have consumed the Water Shrew.

Several studies of food habits of American Marten have reported that shrews are among the least preferred prey item of American Marten (e.g., Cowan and Mackay 1950; Quick 1955; Douglass et al. 1983; Slough et al. 1989; Thompson and Colgan 1990; Nagorsen et al. 1991; Simon et al. 1999). All shrews found in the stomach contents or scats of Marten have been terrestrial species (e.g. *S. cinereus*, *S. hoyi*, *S. monticolus*). Our observation adds the American Marten as a likely predator of the semi-aquatic American Water Shrew.

We do not know where the Marten killed the Water Shrew, but we find it interesting that the Marten may have killed the shrew while it was away from a waterbody. On 8 July 2006, we found a dead American Water Shrew about 400 m from a small pond near Whitehorse, Yukon (60.5°N, 135.1°W) that was killed by a tethered sled dog. In another instance, on 20 September 2005, we trapped an American Water Shrew in a pitfall trap in a clearcut near Watson Lake, Yukon, that was 1.1 km from water. Other observations of American Water Shrews away from water have been noted (e.g., Kinsella 1967; Wrigley et al. 1979). Taken together, these observations suggest that American Water Shrews may make overland movements, and

that they may be susceptible to mortality during these movements, including predation.

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