

CHARACTERISTICS OF THREE NATAL DEN SITES OF AMERICAN MARTEN IN THE LOWER MAINLAND REGION OF SOUTHWESTERN BRITISH COLUMBIA

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Little is known about the denning requirements of American Marten (*Martes americana*) in North America, despite being a common and widely distributed mammal. It inhabits forested regions in Canada and Alaska and is less common but widespread in forested, mountainous country in the contiguous western United States (Buskirk et al. 1994).

Ruggiero et al. (1994, 1998) summarized details for 116 den sites in North America, listing 10 different characteristics. Logs, trees, and rock piles accounted for 69% of all dens while snags, stumps, log piles, ground middens, root wads, and human-made structures accounted for the remaining sites used by martens. About 16% of the latter were snags.

In British Columbia, the only reported den sites in published literature are from Vancouver Island where two were found, both under stumps, occupied by females with young (Baker 1992, Hatler et al. 2008).

This note puts on record details for three American Marten den sites discovered on the southwest mainland coast of British Columbia, an area where martens are now scarce.

Chadsey Lake Den Site

On June 18, 1955, while exploring in the Chadsey Lake region of Sumas Mountain in the central Fraser River valley, an old-growth broken snag with a large cavity was located on a hillside (Figure 1). My field notes were as follows:

“... I thought it might be a spot for the American Marten to make her nest so I watched the woods near the snag and in a short time she showed up in a nearby tree. She hung about the area chattering at me. I thought I must check the cavity so I looked for poles from thin trees to make a ladder. I cut them

down, hauled them to the snag, cut rungs, and lashed them together with fine rope and string. I set the ladder against the snag and held it in place with guy ropes for safety as no one would find me here if I fell.

As I climbed to the cavity the female marten gets very agitated and snarled and chattered at me from the end of an evergreen branch. She also made hissing-like sounds and stamped her front feet on the branch. I thought for a moment she might attack me but she climbed higher up the tree.

The cavity was full of mosses, grasses, and fur from various other mammals. I heard sounds within the nest ball so I opened it up and found three small young with their eyes just open.

They were friendly, warm, and furry little creatures. I closed the mossy nest, climbed back down, dismantled the ladder, and hid the parts nearby for a future nest check.

*The den site was 30 feet above ground in an old fir [Douglas-fir, *Pseudotsuga menziesii*] snag with a diameter at breast height of 29 inches. The cavity entrance was 5 inches in diameter”.*

Langley Den Site

The second den site was located on a wooded escarpment above Glen Valley between Jackman Road (e.g., 272nd Street) and Countryline Road near Langley, BC. on April 10, 1957. Comments, paraphrased from my field notes, are as follows:

“On April 10, 1957, I discovered a female marten looking out of a hole in a snag of an old-growth tree on a wooded escarpment. From what I could see with my field glasses the animal’s fur is a nice dark brown with the throat below its chin an orangey colour. A very nice looking animal with a fox-like face. No doubt rare in these parts. I have seen many of these

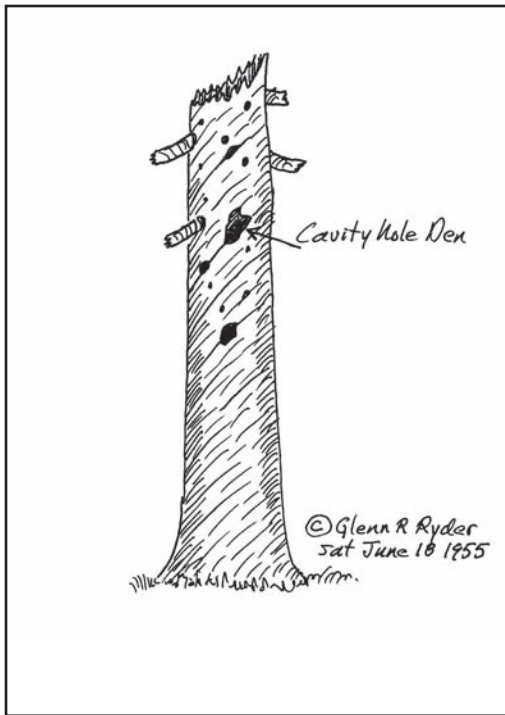


Figure 1. Field sketch of the location of an American Marten natal den site near Chadsey Lake, BC. 18 June 1955 (Drawing by Glenn R. Ryder).

mammals at Celista, B.C.

The cavity was about 25 feet up on the south side of the snag. I surmised the marten had young or she would not have been in the cavity.

I returned to the woodland early on the morning of April 18 to observe the den site. Within a few hours I watched her leave the cavity and vanish into the woodlands, probably to hunt for herself, and likely her young.

I started cutting timber some distance from the den site to build a ladder with rungs that will be held up with rope guy wires so I can look into the cavity one day soon. I finished the ladder and hid it in the woods until I returned at a later date and month.

On June 14, I returned to the den site and within a short time the female marten left the snag to go

hunting. I put the ladder in place with ropes and started to climb to the den site [Figure 2]. As I was about to look in the cavity I heard the female in a nearby tree and saw her run out to the end of a large Douglas-fir branch, started stamping her front feet and began snarling and chattering and making hissing sounds. I thought she might attack me but began running up and down the tree.

The den site contained four small young whose eyes have recently opened. I left the area quickly so the kits could be attended.

The den site was in an old snag with a diameter at breast height of 24 inches”.

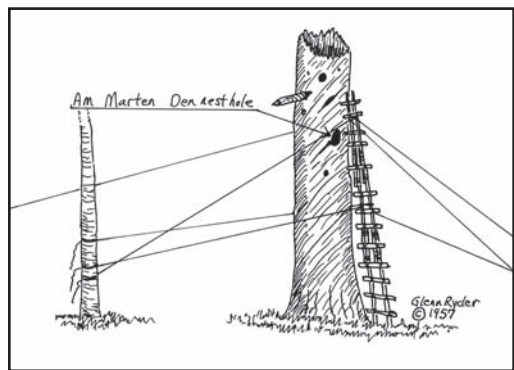


Figure 2. Field sketch of ladder and supporting ropes used to check the contents of an American Marten natal den site near Langley, BC. 14 June 1957 (Drawing by Glenn R. Ryder).

Kanaka Creek Den Site

“While exploring mixed coniferous woods on a north-facing hillside above Kanaka Creek on June 11, 1959 I located a cavity hole about 20 feet up in a tall, stately old-growth Douglas-fir remnant. The snag originally had two tops but now has only one as the other had broken off some years ago.

I built a ladder lashing the rungs far apart to get the job done and placed it against the snag (Figure 3). As I was making my way up the ladder I saw the female marten watching me from the branch of a Douglas-fir. Using a small stick and a flashlight I gently parted the nesting materials of mosses, grasses, and leaves to examine the contents. I heard

some small voices and soon counted four kits whose eyes had opened only a couple of days earlier. They showed no fear of me and stayed inside the warm nest ball.

They are certainly neat-looking little creatures. Too bad I do not own a camera. A must for the future."

Summary Notes

Since observations of wild American Marten litters are rare anywhere in North America (Ruggiero et al. 1994, 1998), the following notes from British Columbia are of interest. The American Marten uses two types of den sites throughout its life, natal and maternal. The former is used for parturition and the latter is frequented by the female and her young but not used as a birth site. All of the dens found in southwestern mainland British Columbia from 1955 to 1959 were natal sites.

All three den sites were in old-growth Douglas-fir snags, remnants of earlier logging activities. Entrances to the nests ranged from 6.1 to 9.2 m above ground.

Information on the size of wild marten litters is sparse but ranges from one to five kits per litter and averaging about three kits (Hatler et al. 2008). The average size for three litters from southwestern British Columbia was 3.7. American Martens breed in July and August and eight to nine months later give birth to young the following spring in March and April (Hatler et al. 2008). Back calculating for litters found in this article, and knowing that the eyes of marten kits open at about six weeks old, the breeding chronology would cover the period from early May through mid-July when the young first leave the den site.

American Marten remains a very rare mammal in the mixed coniferous forests on mountain slopes adjacent to a region that is rapidly becoming urbanized. Identifying remaining large snags, and providing complete protection from disturbance or removal in the region, might help maintain mammal biodiversity in the extreme southwestern mainland of British Columbia.

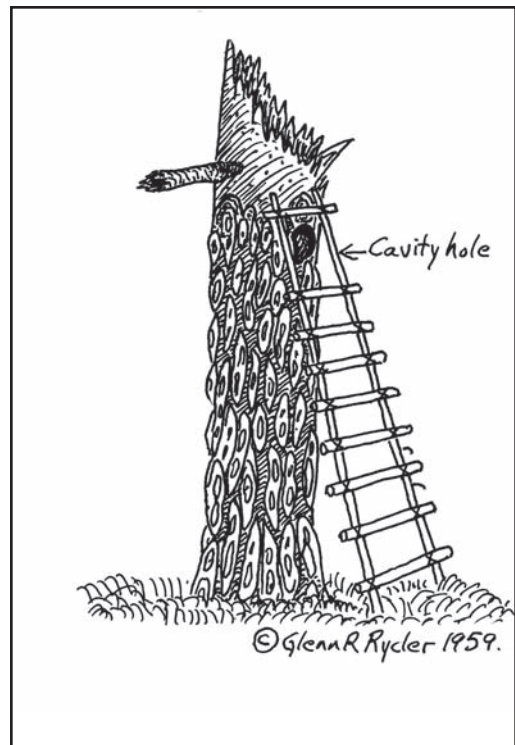


Figure 3. American Marten natal den site with access to its kits through the top of an old-growth Douglas-fir snag. Kanaka Creek, BC. 11 June 1959 (Drawing by Glenn R. Ryder).

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Wayne Campbell encouraged me to write up this historical information and also provided literature sources and editorial comments.

About the Author

Glenn is a passionate and experienced naturalist who has spent his entire life exploring, carefully documenting, painting, photographing, and writing about plants and animals in British Columbia. In the 1950s, one of his mammal field guides he often referenced was “*How to Know the American Mammals*” by Ivan T. Sanderson.