

Northern Goshawk, *Accipiter gentilis*, Exploits a Beagle Hound, *Canis familiaris*, as a “Beater” to Catch a Snowshoe Hare, *Lepus americanus*

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During a winter Snowshoe Hare (*Lepus americanus*) hunt with a beagle hound (*Canis familiaris*), I observed an adult Northern Goshawk (*Accipiter gentilis*) exploiting the running, barking hound as a “beater” and use strategic locations for attacks. The hawk made three attacks on a hare being pursued by the hound, and subsequently caught and killed it. To my knowledge, this report represents the first record of a Northern Goshawk using this behavior to capture prey.

Key Words: Northern Goshawk, *Accipiter gentilis*, Snowshoe Hare, *Lepus americanus*, beagle, *Canis familiaris*, beater, hunting, Newfoundland.

In eastern boreal forests, Spruce Grouse (*Dendragapus canadensis*), Ruffed Grouse (*Bonasa umbellus*), Red Squirrel (*Tamiasciurus hudsonicus*), and Snowshoe Hare (*Lepus americanus*) comprise major components of Northern Goshawk (*Accipiter gentilis*) diets (Johnsgard 1990: pages 177-182). Goshawks winter throughout their breeding range when these prey species are abundant; however Goshawks in the northern parts of their range may move further south when populations of Ruffed Grouse and especially Snowshoe Hares crash (Palmer 1988; Johnsgard 1990). In my described observation area, hares were abundant, squirrel numbers low, and both grouse species, as well as alternative prey items, very low in abundance (personal observation).

The observations described occurred in western Newfoundland (49°05'N, 57°31'W) on 4 December 2004. The area consists of approximately 70% mixed Balsam Fir (*Abies balsamea*) Black Spruce (*Picea marina*) in various-aged stands and 30% forest openings consisting of small bogs, blowdowns and alder (*Alnus* sp.) swales. Approximately 10 cm of snow had accumulated on bare ground over the previous 10 days.

During a Snowshoe Hare hunt with a beagle hound I observed unusual hunting behavior by an adult female Northern Goshawk (sex and age judged by size and plumage; Palmer 1988). The hawk exploited the running, barking dog as a “beater”, and positioned itself into opportunistic attack locations where prey would likely be flushed ahead of the oncoming hound. The hawk regularly repositioned itself and selected tree-top perches (Kenward 1982) ahead of the dog in locations where it could scan the snow surface. Over approximately 20 minutes I witnessed three attacks on a hare actively pursued by my hound, the last resulting in the hare being caught and killed. With the aid of binoculars, I was able to observe the hawk’s head and its fixation on snow surfaces ahead of the barking hound. I noted the hawk relocate itself 10 times during the described hunt.

The first attack occurred after the hawk had positioned itself on a tree-top perch above a 10 m-wide alder swale which offered enhanced viewing of the snow surface from above. As the barking hound progressed towards the perched hawk, the hare suddenly appeared in the alder swale and the hawk swooped down and attempted to catch it. However, dense alders hindered the bird, and the hare evaded capture. A second capture attempt occurred in similar fashion as the hare ran along the edge of a small bog. The hare re-entered dense cover before the attacking hawk approached to within about 8 m. Both of these capture attempts occurred approximately 40 m from my location. The final attack occurred roughly 60 m from my location in a 10 m by 15 m opening in the canopy. I did not see the attack but heard the hare emit a distress cry about 50 m ahead of the barking dog indicating that it had been caught. After approximately 1 minute the hound reached the attack location where its steady barking changed to intense growling indicating that the dog was then in the presence of the hawk. I advanced toward the kill site when from a distance of less than 5 m an adult Goshawk flew off the snow surface carrying an intact limp hare in its talons. The bird struggled in flight due to the mass of the hare and it was assumed that my sudden appearance had caused the bird to flee with its prey. The snow revealed indications of the attack: hare tracks, wing tip impressions, hare fur, blood and an obvious struggle site while backtracking verified that it was the hare under pursuit of my hound. Due to the quality of trailing by the hound, the hare’s running ability and the apparent normal size of the hare, it is believed that it was in good condition. In addition, hares that I harvested that day and on following hunts in the same area were in excellent condition. These scenes occurred in fairly dense spruce/fir forest with the likelihood that additional attacks, without my detection, had occurred.

On 11 and 18 December 2004 during hare hunts in the described area, an adult Goshawk was observed

several times in the vicinity of the barking hound which was trailing a hare; one unsuccessful attack on a hare trailed by the hound was noted. At no time during these events did I observe the hawk attempt to strike the dog. It was also noted that Goshawks had walked along and followed hare trails on the snow surface (also cited in Palmer 1988), indicating a strong reliance upon hares in that area.

The effectiveness of exploiting beaters has been demonstrated in several species. Cattle Egrets (*Bubulcus ibis*) exploit cattle as "beaters" to flush insects and small mammals (Welty and Baptista 1988: page 422), and by doing so were more efficient than when foraging alone (Dinsmore 1973; Grubb 1976). Both Merlins (*Falco columbarius*) and Peregrine Falcons (*Falco peregrinus*) have followed Northern Harriers (*Circus cyaneus*) (Dickson 1984 in Palmer 1988); and Rough-legged Hawks (*Buteo lagopus*) have been observed following Arctic Fox (*Alopex lagopus*) to catch disturbed voles and lemmings (Welty and Baptista 1988). Reynolds (1965) suggested that beater associations may be regular, as with the Cattle Egret, or may represent an individual capacity to take advantage of a favorable situation. The latter better describes my observations, which likely originated out of curiosity as the Goshawk investigated the dog's barking and was rewarded with prey capture opportunities. As far as I can determine, this is the first report of a Northern

Goshawk or any *Accipiter* sp. utilizing "beating" behavior to aid in prey capture.

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