

Acknowledgments

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Unusual Harlequin Duck, *Histrionicus histrionicus*, Nest Site Discovered in Central Labrador

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During telemetry monitoring of adult Harlequin Ducks, *Histrionicus histrionicus*, in 1999, a female was radio-tracked to her nest site. The nest site, only the third recorded in Labrador, was unusual, as it was located 108 m from the nearest river, in open spruce-lichen boreal forest.

Key Words: Harlequin Duck, *Histrionicus histrionicus*, nest, habitat, Labrador.

In May 1999, we began telemetry monitoring of Harlequin Ducks (*Histrionicus histrionicus*) in central Labrador to investigate movement patterns of adult pairs in spring. The objective was to determine if spring aerial surveys provided adequate information on which to base measures to protect occupied breeding habitat from potential disturbance by low flying military aircraft, a commitment to protection identified by the Department of National Defence (DND 1994*). Little information is known on the

breeding habitat of the eastern North American population which was designated as endangered in 1990 (COSEWIC 1998*).

On 26 May 1999, we captured an adult female Harlequin Duck near Fig River (53°04'N, 63°08'W), a tributary of the Churchill River in central Labrador. The river section around the capture site ranged in width from 50 to 150 m and consisted of a series of five pools interspersed with rapids and two small islands. We marked the female with a standard metal band, an alpha numeric, colored (1J, yellow) plastic leg band and attached a tail-mounted VHF transmitter (148.441 MHz). The transmitter signal

*See Documents Cited section.

was heard on the river < 50 m from the capture site on 28 May but the bird was not observed. Telemetry locations on 29 May, 5 and 11 June, were approximately 700 m downstream of the capture site, adjacent to the nest location. Since the bird was not observed on the river during these three surveys, we assumed that she was nesting. She was located using radio-telemetry on 12 June 1999, and flushed when approached. A search of the area revealed a nest on the ground. This is the first Harlequin Duck nest discovered in central Labrador, whereas two others have been previously described on coastal rivers in northern Labrador (Rodway et al. 1998; Chubbs et al. 2000).

The nest was located 108 m from the nearest edge of the river and 250 m from where the female was captured. Generally, Harlequin Ducks do not nest far (< 5 m) from water (Robertson and Goudie 1999). The 22 cm diameter nest was concealed beneath the layered branches at the base of a 10 m tall Black Spruce (*Picea mariana*) tree. Surrounding vegetation consisted of open spruce-lichen forest, a habitat quite dissimilar to others described both in Labrador (Rodway et al. 1998; Chubbs et al. 2000) and elsewhere in North America (Robertson and Goudie 1999). Black Spruce branches that grew into the ground formed a tent-like enclosure which provided 100% vertical nest cover; similar to many nest sites described for the western Harlequin Duck population (Bruner 1997; Robertson and Goudie 1999). The nest bowl was lined with down and dead Black Spruce twigs and contained five eggs. The opening to the nest site was 33 cm high and 15 cm wide. Ground cover within 5 m of the nest was 95% caribou lichen (*Cladonia* sp.) and 5% Sheep Laurel (*Kalmia angustifolia*). The forest was 100% mature Black Spruce, with trees spaced approximately 5 m apart. The nest site was found abandoned when revisited on 19 June 1999. The clutch was missing and assumed depredated. The fate of the female is unknown as she was not relocated or observed after 12 June 1999 and surveys were discontinued after 19 June 1999. However, she was resighted in 2000.

Information on Harlequin Duck nesting habitat in Labrador is limited to two other nest sites, both on coastal rivers (Rodway et al. 1998; Chubbs et al. 2000). Our nest site was in a forested rather than a riparian habitat, and was relatively far from water. Although, the nesting site was dissimilar to that described by Rodway et al. (1998) and Chubbs et al. (2000), all nests found in Labrador have been near rivers with small islands and channels and relatively calm steadies. Other nesting records in North America indicate that Harlequin Ducks select a variety of nesting sites including rock crevices, cliff ledges, woody debris, tree cavities, and islands (Brodeur et al. 1998; Rodway et al. 1998; Bruner 1997). It appears that the selection of favorable

breeding locations by Harlequin Ducks in Labrador may be more dependent on the type and characteristics of the river rather than the microhabitat in the vicinity of the nest site.

Based upon our telemetry locations and that five eggs had been laid by 12 June, we suspect that the female had initiated nesting at least as early as 29 May, resulting in our failure to locate her on the river. In addition, based on the relative proximity of other nest sites to water described in Labrador and elsewhere, our search strategy focussed on the shoreline.

We speculate that the nest may have been so distant from the shore due to extraordinary high spring water levels in this region, which may take two to three weeks to recede. Additionally, numerous observations of Mink (*Mustela vison*) along rivers in this region suggest that female Harlequin Ducks may be nesting far from rivers to avoid these predators.

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“Standing Over” And “Hugging” in Wild Wolves, *Canis lupus*

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During six summers, I observed “standing over” (SO) and “hugging” in a pack of wild Wolves (*Canis lupus*) habituated to me. In SO, one Wolf positions its groin above a recumbent Wolf’s nose. I observed SO among all yearling and older Wolves for 1–180 seconds ($\bar{x} = 69 \pm 46$ S.D.; $N = 16$). SO appeared to be primarily female-oriented and may inform each Wolf of the reproductive status of the other. I observed “hugging” five times and only during years when food competition was minimal.

Key Words: Wolf, *Canis lupus*, behavior, standing over, affection, reproduction.

To help understand the nature of relationships among members of Wolf (*Canis lupus*) packs, the postures of interacting animals are important clues (Schenkel 1947; Zimen 1982; Goodman and Klinghammer 1985). However, because of the elusiveness of Wolves, it is difficult to observe their behavior under natural conditions (Mech 1974). Even the few observational studies that have been conducted of wild Wolves (Murie 1944; Clark 1971; Carbyn 1974; Haber 1977) have failed to quantify most Wolf postural behaviors, including “standing over” (Schenkel 1947) and “hugging” (Goodman and Klinghammer 1985). I attempt here to quantify and analyze these two behaviors in one wild Wolf pack.

Methods

Study Area

This study was conducted during six summers from 1988 through 1996 on Ellesmere Island, Northwest Territories, Canada (80° N, 86° W). There, Wolves prey on Arctic Hares (*Lepus arcticus*), Muskoxen (*Ovibos moschatus*), and Peary Caribou (*Rangifer tarandus pearyi*), and live far enough from exploitation and persecution by humans that they are relatively unafraid of people (Mech 1988, 1995). During 1986, I habituated a pack of Wolves there to my presence and reinforced the habituation annually.

The pack frequented the same area each summer and usually used the same den or nearby dens, but pack composition varied annually (Mech 1995). The habituation allowed an assistant and me to remain with the Wolves daily, to recognize them individually, and to watch them regularly from as close as 1 m (Mech 1988, 1995; National Geographic 1988). During 1759 h of observation, we noted each time an individual Wolf interacted with another Wolf, except for pups, which were not distinguishable from each other.

“Standing over” (SO) is a low-intensity display in which one Wolf casually approaches a recumbent Wolf and stands over or along side the recumbent Wolf so that the standing Wolf’s groin is positioned above the recumbent Wolf’s nose. I found no set pattern of behavior before or after SO by either the active Wolf or the recumbent Wolf — SO took place in a variety of contexts.

In “hugging,” which I have never seen described in wild Wolves and only once in captives (Goodman and Klinghammer 1985), an individual Wolf puts its front legs around the head and neck of another while each lies on its side chest-to-chest, or on its haunches facing each other, or side-by-side on haunches with one placing front legs around the other’s neck.

Only a few instances of SO were observed each year. Therefore sample sizes were too small for statistical comparisons by sex and age class within years. Pooling across years for statistical comparisons was inappropriate because opportunities for

*See Documents Cited section.



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