MONITORING COMMON LOONS IN THE BULL RUN WATERSHED, OREGON, 1987

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Summary
Common Loons (*Gavia immer*) were monitored in the Bull Run Watershed, Mt. Hood National Forest, Oregon, from April through June, 1987. Two to six loons were present from early April through the end of May, with the greatest numbers observed in mid-April. The Upper Reservoir, and for a shorter period the Lower Reservoir, received consistent use. A loon was observed twice on Bull Run Lake, but none was seen on the smaller lakes during the study. As in the past several years, a loon territory was evident at the North Fork on the Upper Reservoir. Both aggressive territorial defense and courtship or pair formation behaviors were observed. There was no evidence that loons nested in the Watershed. Several habitat enhancement projects were carried out, mostly at the Goodfellow Lakes. I extended the investigation begun in 1986 into what is known about past and recent occurrence of Common Loons in Oregon, Washington, British Columbia, and California. Information was solicited from state and federal agencies and private groups. I presented the results at the North American Loon Conference.

OBJECTIVES

1. Document Common Loon occurrence in the Bull Run Watershed and determine period of activity.
2. Identify primary Common Loon activity areas in the Bull Run Watershed.
3. Document observations of any reproductive activity.
4. Describe opportunities to maintain or improve habitat conditions for breeding Common Loons in the Bull Run Watershed.
5. Compare Common Loon behavior in the Bull Run Watershed during spring with behavior on the Oregon coast, where loons occur during migration but probably do not nest because of the saltwater environment.

METHODS

Visits to the Watershed to monitor loons were made every three to four days during April, and every five or six days during May and early June, 1987. I used the same observation points on the Lower and Upper Reservoirs as in 1986. Bull Run Lake was visited generally once per week, and the Goodfellow Lakes every week or two. I visited Hickman Lake once, but none of the other small lakes.

Two habitat enhancement projects were carried out. A second floating loon nest platform was built and placed in the Upper Reservoir, at the mouth of Fir Creek. After the loon monitoring was completed, a volunteer work group from the Catlin Gabel School improved fish spawning and rearing habitat on Middle and Upper Goodfellow Lakes, including building several log debris rafts for fish hiding cover that could also be used for loon nest sites.

RESULTS

Occurrence and period of activity – My first visit to the Watershed was not until 4/2/87, but no loons were observed then (Figure 1). On 4/6, four loons were seen. The approximate arrival date of loons is similar to that in 1986.

The number of loons observed peaked on 4/13 when six loons were seen. Although the peak was less pronounced that in 1986, it occurred within three days of the same date. Five loons were seen on 5/3, otherwise two or three loons were noted. The last date loons were seen in the Watershed was 5/29. The number of loons using the Watershed appeared to be lower than in 1986. While loons arrived about the same date, they remained at least a week longer this year.

As in 1986, it appeared that some loons were present for only a few days while others remained for many weeks. Without marked loons it is difficult to recognize individuals, however several situations permitted estimates of length of stay. One loon in basic rather than alternate plumage was seen on three consecutive visits between 5/3 and 5/14, but neither before nor after those dates. Presumably this was one individual that apparently stayed between 12 and 16 days. A pair of loons seen in the same area on two consecutive visits apparently stayed between three and ten days. An individual loon was consistently seen in the North Fork area between 4/6 and 5/25. The predictability of sightings and behavior in that area are indications that one loon may have remained in the Watershed for between 50 and 58 days.

Primary activity areas – Consistent with the 1986 findings, loons used the Upper and Lower Reservoirs and Bull Run Lake, but sightings were most frequent on the Upper Reservoir (Figures 1 – 4). Also consistent with the 1986 findings, loons used most sections of both main reservoirs, however there were significant clusters of activity on the Upper Reservoir just below the North Fork logboom and also near Deer Creek. Bull Run Lake was ice-covered through mid-April, and loons were only seen twice, both times in May.

The predictability of sightings at the North Fork on the Upper Reservoir indicate that one loon may have utilized only one area of the Watershed. But the recognizable individual loon in basic plumage was seen on the Lower Reservoir on 5/3, on the Upper Reservoir at Deer Creek on 5/10 and 5/14, and later on 5/14 at the North Fork.

Observations of reproductive activity – With the exception of a loon in basic plumage seen between 5/3 and 5/14, all of the loons observed in the Watershed were adults in breeding plumage. On two consecutive visits, a pair of loons swimming parallel was seen on the lower Reservoir, but they apparently did not stay to nest in the Watershed.

Two observations of pair behavior or courtship involved a loon in basic plumage. Because my concurrent observations at Tillamook Bay showed that all adult loons had completed their prenuptial molt before 4/28, I believe this individual was in immature bird. During both observations, the adult loon apparently slightly lifted its head and neck feathers, which intensified the density of the black color. The two loons swam parallel, dove in synchrony, and tapped the water surface. During the last observation, the adult loon also made a series of shallow dives, emerging facing the immature loon but with the white breast underwater, the black head and neck tipped forward, and the bill turned aside. Multiple sources in the literature describe Common Loon behavior around the nesting territory, including loons maximizing the visibility of their white surfaces (breast, belly, wing under-surfaces) and pointing the bill toward another loon during aggressive encounters with other loons, but minimizing white areas and showing the black head and neck while interacting with a mate. All published studies of loons that I have found looked at behavior on nesting areas and in winter, with no known studies of pair formation or pre-nesting courtship. I think it is likely that my observations were of courtship and attempted pair formation.

On many visits, a single adult loon swam around the area between the North Fork and Deer Creek, often crossing the reservoir just above Deer Creek and moving back up the reservoir. In 1986, this area had appeared to be the boundary of the territory defended by the North Fork pair. On several occasions this year, the loon made aggressive motions towards another loon, including one fight that included wing blows. Because this behavior predictable and was consistent with so many previous observations, I think it may have been the male from the loon pair seen in 1984 through 1986 defending this territory. Whether the female died during the winter or abandoned this unproductive breeding habitat is also open to speculation. Both of the observations of the immature loon interacting with, and possibly being courted by, an adult loon occurred in the North Fork territory.

Although no nesting or nesting attempts occurred in the Bull Run Watershed in 1987, it appeared that the Upper Reservoir above Deer Creek again was defended by an adult loon, which may have courted an immature loon. Both reservoirs appear to be annual stopover places for migrating loons to rest, forage, and possibly form pairs or strengthen bonds.

Opportunities to maintain or improve habitat for loons – One visit to Hickman Lake found no loons, no fish although abundant aquatic invertebrates, and minimal opportunities for loons to nest. One adult loon was seen during fall migration on Upper Goodfellow Lake. No other work was conducted to improve habitat.

ADDITIONS TO BIBLIOGRAPHY IN THE 1986 REPORT

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