

Red Crossbills forage for salt within the intertidal zone

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Abstract: In 2007 August, a flock of Red Crossbills (*Loxia curvirostra*) was observed extracting and eating crystallized sea salt that had been deposited in a knot of a weathered tree trunk within the intertidal zone in North Vancouver, British Columbia.

Key words: Red Crossbill, *Loxia curvirostra*, forage, salt, intertidal, North Vancouver, British Columbia, Maplewood Flats Bird Sanctuary.

This note documents Red Crossbills (*Loxia curvirostra*) foraging on salt crystals in the upper intertidal zone along the coast of southern British Columbia. Many species of the Fringillidae family, especially the cardueline finches, are attracted to salts (Lindsley, 1921; Aldrich, 1939; Marshall, 1940; Meade, 1942). The salt-foraging behaviour of Red Crossbills is well documented at several anthropogenic sources, most notably road salts along highways (Meade 1942; Bennetts and Hutto 1985; Van Tighem and Gyug, 1984; Adkisson, 1996; Woods and Munro 1996; Campbell *et al.* 2001). Surprisingly, there is limited information on crossbills using naturally occurring salt sources.

On 2007 August 08 at approximately 11:45 Pacific Standard Time, a group of Red Crossbills was observed gathering on a weathered tree trunk located in the upper intertidal zone



Figure 1. The tree trunk on which Red Crossbills (just left of centre) were observed feeding on salt. The trunk would have been repeatedly submerged throughout the preceding winter. Salt was left as a product of seawater evaporation. Maplewood Flats, 2007 August 08.

in North Vancouver, British Columbia (Figure 1). Upon closer inspection, the birds were seen to be extracting and eating crystallized salt that had been deposited in a large knot on the tree trunk. The salt was a product of seawater evaporation following repeated soaking during cycles of high winter tides. The location of this sighting was immediately adjacent to the Maplewood Flats Bird Sanctuary and the Maplewood Flats coastal mudflats area (49° 18' 15" N, 123° 00' 04" W).

Campbell *et al.* (2001:537) state that “crossbills are attracted to salt-impregnated and calcium-rich seepage areas. In British Columbia, these can occur on disturbed hillsides, on coastal mudflats, along the shores of marshes and sloughs and along roadsides.”

The crossbill flock consisted of approximately 12 birds of both sexes. About one-third of the flock was foraging on the trunk at any given time (Figure 2). Males appeared to be less wary than females. Adkisson (1996) has described feeding crossbills as “tame; not sensitive to disturbance”, and describes how easily they are captured while feeding. This apparent tameness was consistent with observations at the North Vancouver location.

The observation that Red Crossbills are reluctant to flush when feeding on a natural salt source confirms that they do not easily abandon such sources once located. This foraging behaviour can expose the species to danger when they feed on roads. Meade (1942) was the first to document mass kills of Red Crossbills along roadways. He estimated “that there were at least a thousand birds killed” in one incident in 1941. Van Tighem and Gyug (1984: 158) reported “Many crossbills are killed on the TCH [Trans Canada Highway] during winters. Flocks land repeatedly on the road surface to pick gravel or salt off the road surface and are hit by vehicles.”

The year 2007 was an irruptive one for Red Crossbills on nearby Vancouver Island and the species was much more abundant than in the previous few years (Stewart 2007). Campbell *et al.* (2001) state “irruptive movements of Red Crossbills, in which very large numbers of birds move in or

out of large geographic areas, occur in response to available food supply". The Bird Checklist from The Conservation Area at Maplewood Flats (WBTBC 2006) indicates that Red Crossbills are "seen there on an average of less than once a year" and the Maplewood Flats Bird Sanctuary is "somewhat out of normal range".

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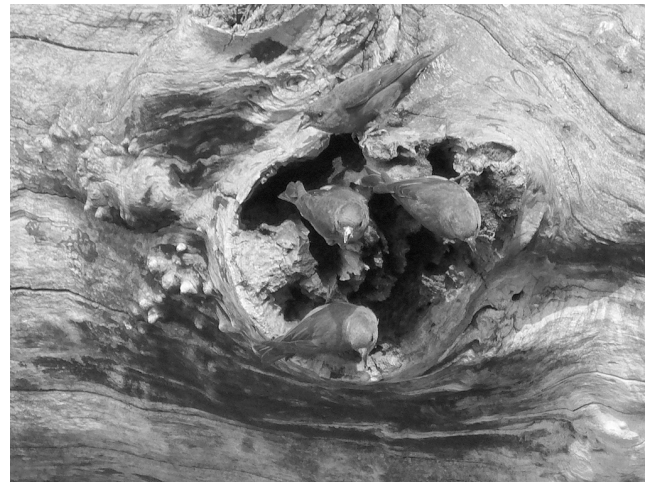


Figure 2. Four adult male Red Crossbills foraging for crystallized sea salt from the knot hole of the tree trunk.

