History of the establishment of a large Northwestern Crow roost in Burnaby, British Columbia

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Abstract: Northwestern Crows roosted in remote areas in the outskirts of Vancouver, B.C., until the early 1970s when they established a roost of about 10,000 crows in Burnaby, B.C.

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The afternoon flight of thousands of Northwestern Crows (*Corvus caurinus*) commuting to a large roost along Still Creek in Burnaby, B.C., has become a news sensation in recent years with many videos, blogs and news stories about the roost (e.g. Hennig 2018, McLachlan 2017). Despite the popularity and enduring interest in this roost, little has been written in the scientific literature about the history of the Still Creek roost. Campbell et al.'s (1997) account for the Northwestern Crow made only a passing reference to a roost in Burnaby and provided no further details despite the roost having been in use for years and being well known to local naturalists. The first published reference to the Still Creek roost was by Verbeek and Butler (1999) who estimated as many as 10,000 crows roosted there in November. Khadraoui and Toews (2015) showed that morning departure from the Still Creek roost was correlated with sunrise. The purpose of this paper is to document a shift in choice of roost sites around Vancouver, B.C., including the establishment of the large crow roost at Still Creek in Burnaby.

In the early 1970s when our observations began, many crows departed from Vancouver for remote sparsely inhabited locations. In 1971, crows from the inner harbour departed for Bowyer Island in Howe Sound. On 24 November 1971 a flock from the inner harbour of Vancouver departed late in the day in the direction of Caulfeild in West Vancouver. On 4 December 1971, about 200 crows were assembled at 1515h at Caulfeild. On 7 February 1972, 450–500 crows were tracked from Caulfeild to their roost on Bowyer Island in Howe Sound. On 28 November 1972, crows left Horseshoe Bay for Bowyer and on 9 December 246, island arrivals were noted. Crows continued to use the island in January and February. On 4 January 1973, 990 crows arrived between 1555–1620 h. Crows were seen flying toward Bowyer on 5 and 13 February and an estimated 800 flew along the West Vancouver waterfront in the direction of Bowyer on 18 February. An important source of crows at the Bowyer Island roost was the former North Vancouver garbage dump near Highway 1 and Lynn Creek where, on 6 February 1973, about 580 crows were present. About 600 were present overnight on Bowyer Island on 24 February 1973 (Pers. comm., R. Lancaster, Vancouver, 25 February 1973).

On 2 November 1973, 606 crows departed northeast from Lake City in Burnaby in the direction of Port Moody. This important observation suggests that the Still Creek roost had not been established by this date. The Bowyer site continued to be used through the winter of 1973 where on 21 December flocks of crows were seen flying west through West Vancouver and in the direction of Bowyer and where, on 4 January 1974, 763 crows arrived in the afternoon. The crows were uneasy that evening on Bowyer and about 125 departed in the dwindling light for nearby Black Mountain. The following day 72 of the 724 crows that arrived on Bowyer departed for Black Mountain. Only 71 crows used Bowyer on 19 March and 37 on 21 March 1974, likely as a result of most crows having dispersed to breeding territories.

The first hint of a change in roosting flights came on 11 September 1974, when crows that normally flew west along the shore of West Vancouver and toward Bowyer Island reversed direction to depart toward the east in the direction of Burnaby. The flight through Burnaby on 20

Figure 1. Crow roost locations and approximate years in use in Burnaby, B.C., from 1974 to 2019. A = 1974, B= c. 1980–2000; C=c. 2003–2007, D= 2008–2019.

September 1974 led to a red alder (*Alnus rubra*) and cottonwood (*Populus balsamifera*) woodlot adjacent to the B.C. Institute of Technology (BCIT) where 200 crows had gathered. At 1930 h on 25 September 1974, 2067 crows entered the trees on the west side of BCIT.

Through the 1980s and 1990s, the crows mostly roosted north of Highway 1 and west of Willingdon Avenue in alders (Figure 1). When this forest was cut to build car dealerships in the 1990s or early 2000s, the crows moved to woodlots east of Willingdon Avenue on either side of Highway 1. One year later, the crows used the north side of Highway 1 along Still Creek and remained there for about 3 or 4 years. Construction of Costco in 2007 displaced the crows yet again to their current location west of Willingdon Avenue, east of Gilmore Street, and mostly north of Still Creek Drive (Figure 1).

In addition to the Bowyer Island roost site, crows made evening flights into the Alouette River and Vedder River valleys, Richmond, and Indian Arm. In their review of Vancouver birds in 1971 and 1972, Campbell *et al.* (1971, 1972) refer to possible roosting locations outside the city which is consistent with our observations at this time.

The reason for the shift in behaviour remains a mystery. American Crows (*C. brachyrhynchos*) choose commercial, well-lit roosts in California (Gorenzel and Salmon 1995) resembling the Still Creek roost. The roost site at Still Creek was in a busy location with Highway 1 skirting along the south side, a busy road along the east and west side, and an office complex in the middle. The BCIT site was a red alder and cottonwood forest near a busy main road. The crows roosted in small decorative trees along the busy, lit up Still Creek Road and in pines (*Pinus* sp.) and red alders along a path following Still Creek. Flocks gathered near sunset in trees, on buildings and on the ground along Still Creek before settling in the roost trees for the night. The commotion remained high long after dark while the crows jostled for positions in the trees and where they remained clearly visible in the bare limbs under the street lights. Once settled, the roost fell eerily silent.

Caccamise *et al.* (1997) showed that marked American Crows flew up to 18 km to join a roost. The evening flight directions of crows toward the Still Creek roost encompassed North Vancouver, Vancouver, north Richmond, north Surrey, New Westminster, Burnaby, Port Moody and eastern Coquitlam which is about a 15–20 km radius around the roost. This collection area also coincidentally approximates the Christmas Bird Count (CBC) circle for Vancouver. Verbeek and Butler (1999) estimated that 10,000 crows used the roost in November which was similar to the average Vancouver Christmas Bird Count tally in the mid-1990s (CBC mean 11,694, range 7008–16,705; 1994–98). This finding suggests that the roost is a good place to estimate the number of crows in Vancouver and the surrounding region.

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