

RESULTS FROM DAILY BIRD CHECKLIST RECORDS FOR LASKEEK BAY 1990-2003

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ABSTRACT

Daily checklists of birds recorded at East Limestone Island and adjacent waters of Laskeek Bay were kept by Laskeek Bay Conservation Society staff and volunteers throughout the field seasons of 1990-2003. In most years this covered the period from April – mid July. Occurrence was expressed in terms of the numbers of days on which a species was recorded as a percentage of all days for which checklist records were available. These data were combined by ten-day periods. When data for all years were combined, this gave a picture of average patterns of occurrence for each species. Summer visitors mostly arrived April or early May, except for Swainson's Thrush, which arrived in early June. Winter visitors had mainly left Laskeek Bay by mid-May. Passage migrants, mainly geese, shorebirds, gulls and the Pacific Loon, passed through in May, with return passage for shorebirds occurring in July.

INTRODUCTION

From the start of the Laskeek Bay Conservation Society camp at East Limestone Island in 1990, a daily checklist of birds observed has been kept by camp personnel. For the most part, the presence of species is simply recorded without any notes on numbers. However, additional notes for unusual sightings, including numbers of birds seen, or interesting natural history notes, are recorded in the daily camp log. Effort has varied from day to day with weather conditions, the demands of work and the particular interests of the camp supervisors and volunteers. The presence in camp of keen birders has generally been associated with an increase in the number of species recorded daily and sometimes with the identification of unusual species. However, a comparison of inter-year variation (see below) suggests that the composition of the camp had little effect after the first year of activities.

Because information on numbers is generally lacking, I have analysed the data on the basis of the mean numbers of species recorded daily and the proportion of days on which each species was recorded in relation to year and date. I address the following questions:

- (1) How many species have been recorded in Laskeek Bay?
- (2) How does the number of species recorded vary among years and with date?
- (3) How does the presence of different species in Laskeek Bay vary with time of year over the period when the camp has been occupied?
- (4) Do species vary in their occurrence from year to year?

These results are compared with accounts in *The Birds of British Columbia* (Campbell et al. 1990-2001) and *The Birds of North America* (Gill & Poole, various dates), as well as with the status given in *A Checklist of the Birds of Haida Gwaii* (Morris 2001).

STUDY AREA AND METHODS

Most bird sightings recorded in the daily checklist were made on or from East Limestone Island. Some additional sightings made from boats in the vicinity of the island were also included. All sightings should have been visible from the island, even if not made from the island. Most records involved birds identified to species, but occasionally only genera were recorded (e.g. Scoter spp., Jaeger spp., Loon spp.). The latter have been omitted from analyses presented here.

Records for 1990-2003 were included in this analysis. The lengths of field seasons in each year varied from 46 d in 1990 to 127 d in 1997, being >90 d in all years after 1991 (Table 1).

Table 1
Start and end of field seasons and total number of days when personnel were present on East Limestone Island in 1990-2003

Year	Start	End	Duration (d)
1990	1 May	15 June	46
1991	29 March	14 June	78
1992	3 April	2 July	91
1993	9 April	15 July	98
1994	5 April	15 July	102
1995	26 March	14 July	111
1996	26 March	8 July	105
1997	20 March	24 July	127
1998	22 March	9 July	110
1999	3 April	14 July	103
2000	1 April	18 July	109
2001	2 April	25 July	115
2002	29 March	6 July	100
2003	29 March	4 July	98

Data were extracted by counting the number of days on which each species was recorded for each 10 d period (1-10 April, 11-20 April, etc.). These frequencies were summed over all periods to obtain annual totals of days seen. For inter-year comparisons, only the period during which the camp was occupied in every year was used (1 May – 10 June). Years were summed by 10 d periods to provide numbers of days that each species was seen in each 10 d period. The latter counts were expressed as percentages of all days in the period during which the camp was occupied, to give an index of changes in occurrence with season (% occurrence by period).

RESULTS AND DISCUSSION

Numbers of species seen

We recorded 112 species on or near East Limestone Island during the field seasons of 1990-2003. A further eight species were recorded in the 1980s by the Canadian Wildlife Service camp at Reef Island, making the total of 120 species reported from Laskeek Bay to date (Appendix 1). Most of those seen from Reef Island, but not from East Limestone Island, were offshore species such as shearwaters and other tubenoses that generally remain in the open waters of Hecate Strait.

Excluding the short season of 1990, annual species totals ranged from 59 in 1992 to 75 in 1998. The mean number of species recorded daily during the 1 May – 10 June period ranged from 14 in 1990 to 28 in 1994, but did not fall below 21 after 1991. Fifteen species were recorded on >75% of days, a further six species on >50% of days and a further 15 on >25% of days. The remaining 76 species were recorded on less than one quarter of the days for which the camp was occupied. Sixteen species were recorded on only one day. Thirty-five species were recorded on less than five dates and therefore are regarded as occasional visitors: these included 1 species of swan, 1 goose, 5 ducks, 1 loon, 1 storm-petrel, 1 fulmar, 6 shorebirds, 2 jaegers, 6 gulls, 1 auk, 1 crane, 4 birds of prey, 1 hummingbird, 1 woodpecker and 3 songbirds.

Taking the years from 1993 onwards, when numbers of species seen daily did not differ greatly among years, the average number of species seen daily rose from 19 in early April to a peak of 28 in mid-May, falling slightly thereafter. The peak in mid-May probably reflects the passage of a number of migrant species through the area. However, compared to other areas, the numbers seen daily are very stable.

Species occurrence in relation to time of year

Because the period of the camp cuts across the period when winter visitors are leaving, summer visitors arriving and passage migrants passing through, many species showed substantial within-season variation in the frequency with which they were recorded.

Winter visitors

Loons, grebes and sea-ducks were mainly winter visitors to Laskeek Bay. Most of these species declined after April (Figs 1, 2). The least common, the Western Grebe, was seen on only six dates, all before 11 May. This is despite the fact that it occurs in the adjacent inlets (Sewell Inlet, Selwyn Inlet) sometimes in flocks of >100 birds. The Horned Grebe, recorded on only 33 days, was not seen after 29 April. The Pacific Loon was an exception, being rare in April, but common throughout May and early June (Fig. 1), when it was presumably on passage to Alaska. Common Loons occurred on most days from late March through 10 May, becoming less common thereafter, but being recorded in all 10-day periods. The Harlequin which was common in April, almost disappeared by mid-May, but became common again from 21 June onwards. This pattern may reflect failed breeders returning to the coast from breeding grounds in the interior.

The commonest sea ducks in Laskeek Bay in April were the Harlequin and White-winged Scoter, the latter far outnumbering Surf Scoter, which dominates the numbers of sea ducks in Skidegate Inlet at the same season. Black Scoter, never recorded on more than 10% of days, was the least common scoter. Long-tailed Duck, very abundant in April off Sandspit, was seen on only 27 days and Greater Scaup, common in Skidegate Inlet, was seen only four times

Loons, Grebe

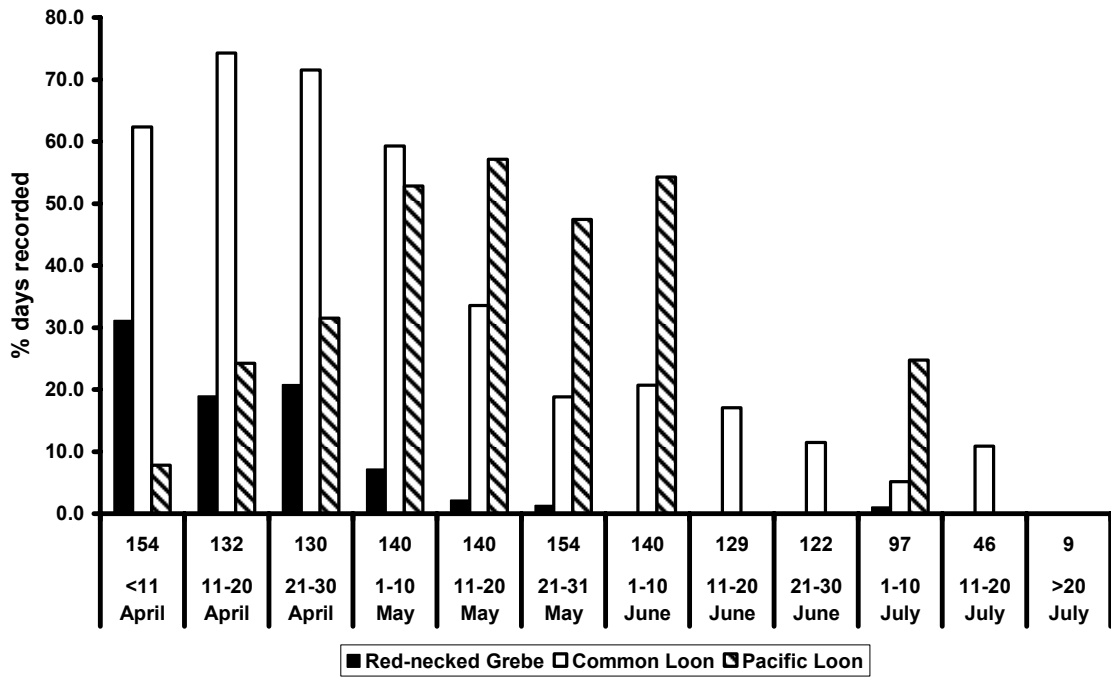


Figure 1

Sea Ducks

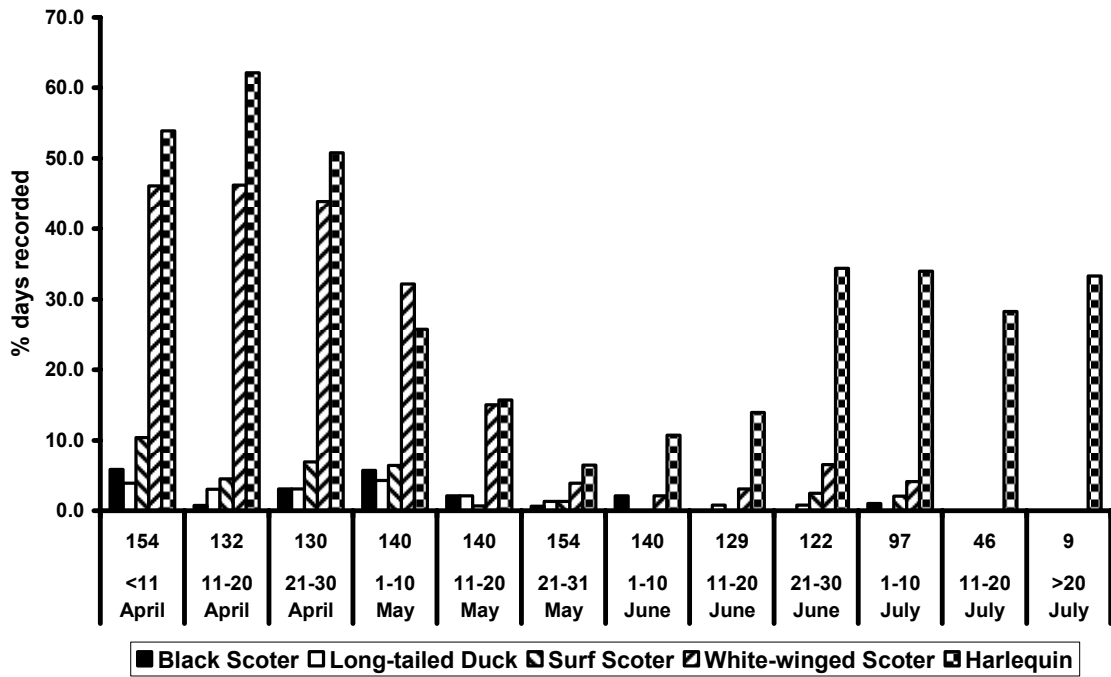


Figure 2

The Double-crested and Brandt's cormorants were both most common in April, more or less disappearing after mid-May, although infrequent observations continued through June. Double-Crested Cormorant was described as "uncommon non-breeding resident" and Brandt's Cormorant as "vagrant" in Haida Gwaii by Campbell *et al.* (1990). However, in Laskeek Bay they both appear to be mainly winter visitors, with the former outnumbering the latter by about 10:1. Double-crested Cormorants wintering in Laskeek Bay possibly originate from Alaska. The Pelagic Cormorant, a resident in Haida Gwaii, remained common throughout the season (Fig. 3).

Summer visitors

Several small songbirds are summer visitors to Laskeek Bay. The earliest to arrive is the Hermit Thrush, about 10 April, followed by Townsend's Warbler, which starts to be recorded frequently in mid-April (Fig. 4). Orange-crowned Warbler is slightly later, becoming common in late April. Campbell *et al.* (2001) suggest that the main arrival of Townsend's Warbler in Haida Gwaii is in the first week of May: our records suggest a somewhat earlier date. Interestingly, they note that Orange-crowned Warbler arrives before Townsend's Warbler in southern BC, the reverse of the case in Laskeek Bay.

Pacific Slope Flycatcher generally arrives in early May, while records of Swainson's Thrush do not become common until early June. The difference in timing between Hermit Thrush, a relatively short-range migrant to the south-western US, and the very similar-looking Swainson's Thrush, which travels to South America, is striking, with the former arriving almost two months in advance of the latter. Wilson's Warbler, which has been recorded on only 13 days, was not sighted earlier than 2 May – most records were in late May and June. Rufous Hummingbird occurred in small numbers from late March, but became frequent only after mid-April.

Among seabirds, both the Marbled Murrelet and Rhinoceros Auklet, although recorded in small numbers throughout the period of observations, became more common after mid-April, the former being most frequent in late June and early July, about the time that young birds should be fledging (Fig. 5). The increase in Marbled Murrelet sightings during April appears to reflect a shift at that season from the inlets to the outer coast, as the species is common in Cumshewa Inlet in March (LBCS unpublished observations). Tufted Puffin, which was very infrequent, was not seen in April.

Passage migrants

The main passage migrants recorded at East Limestone Island were geese and shorebirds. Both Canada Goose and Brant were recorded fairly frequently from mid-April to mid-May, with a peak during 21-30 April (Fig. 6). Brant appeared to be a little later and a little less synchronized than Canada Goose, being seen on >30% of days from 11 April – 10 May. Both species were seen mainly in flocks of up to 200 flying northward over the sea.

Among shorebirds, Black Turnstone was a winter visitor to Haida Gwaii and was present from the start of the season. The species was infrequent after the end of April, but began to re-appear in late June and was regular in small numbers in July (Fig. 7). Both Whimbrel and Wandering Tattler were seen in small numbers in May, with the latter re-appearing in July. The reappearance of Black Turnstone and Wandering Tattler in July presumably represents a return passage of failed breeders. Whimbrels were recorded in flocks of up to 85, some of which roosted on rocky foreshore areas before resuming migration. Wandering Tattlers were normally solitary, and fed exclusively on rocks in the inter-tidal zone. The peak passage dates for all shorebirds coincided closely with those given by Campbell *et al.* (1990).

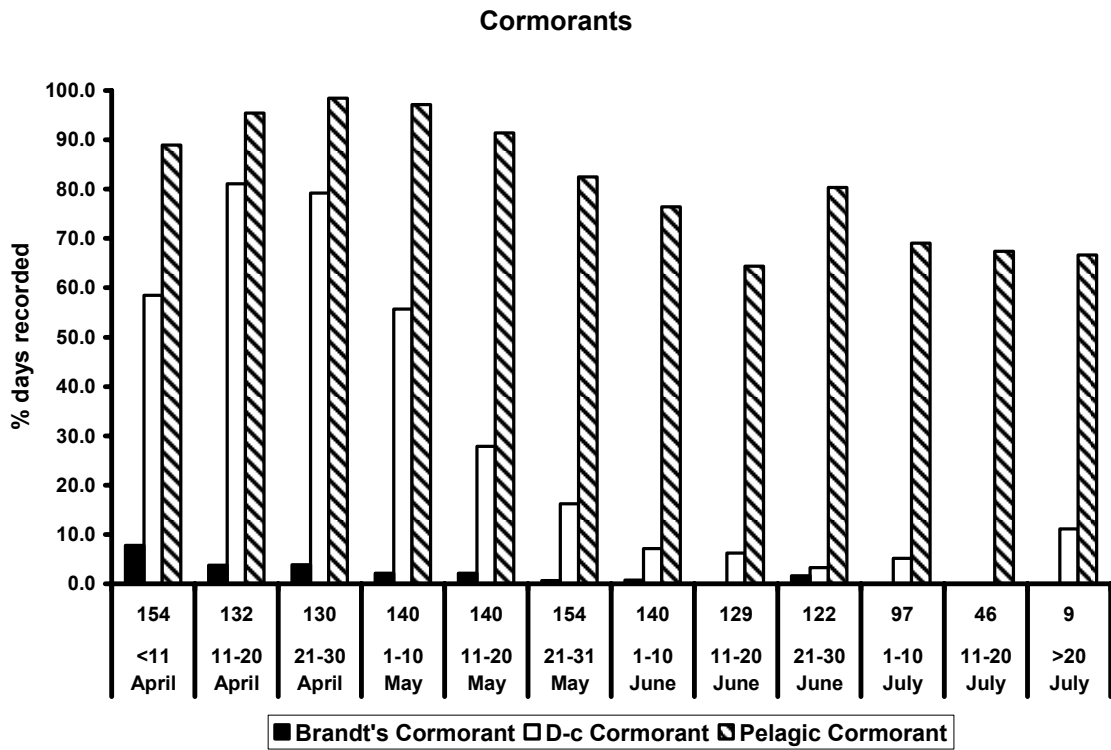


Figure 3

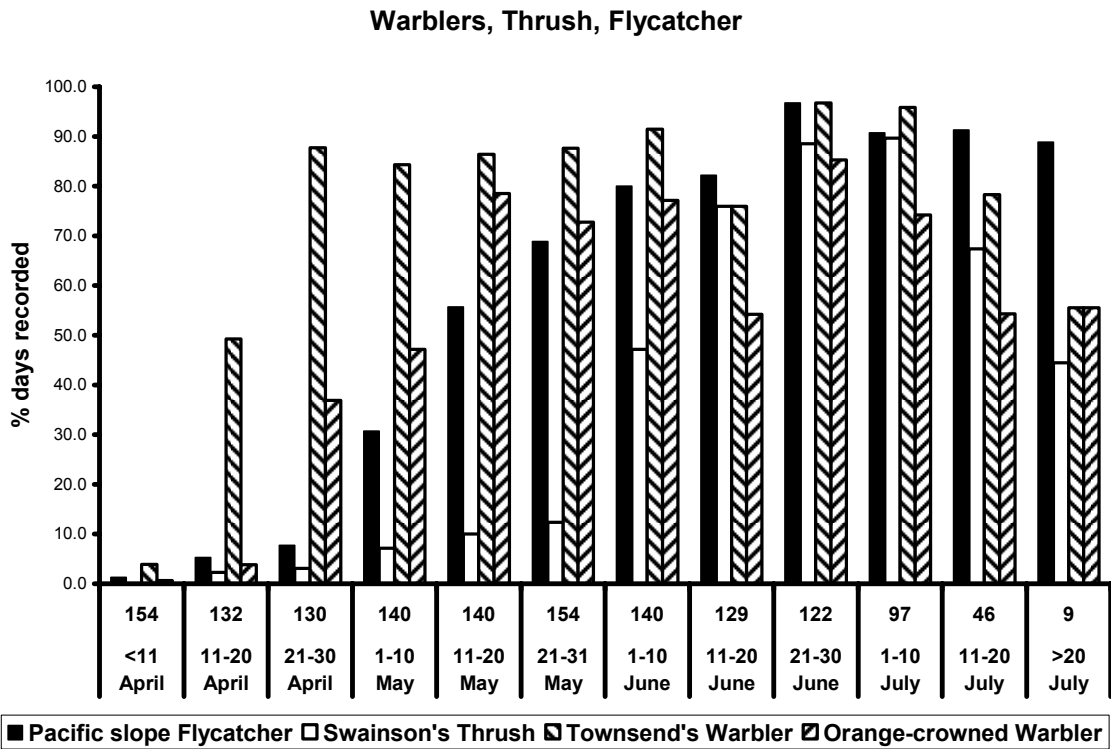


Figure 4

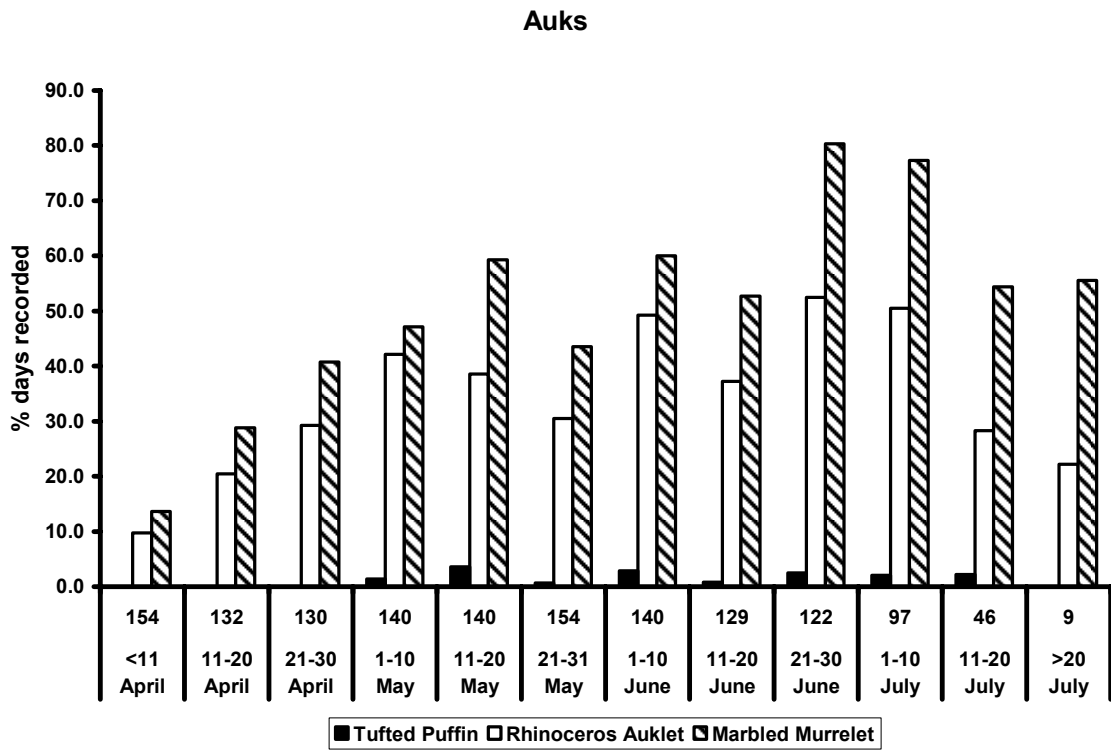


Figure 5

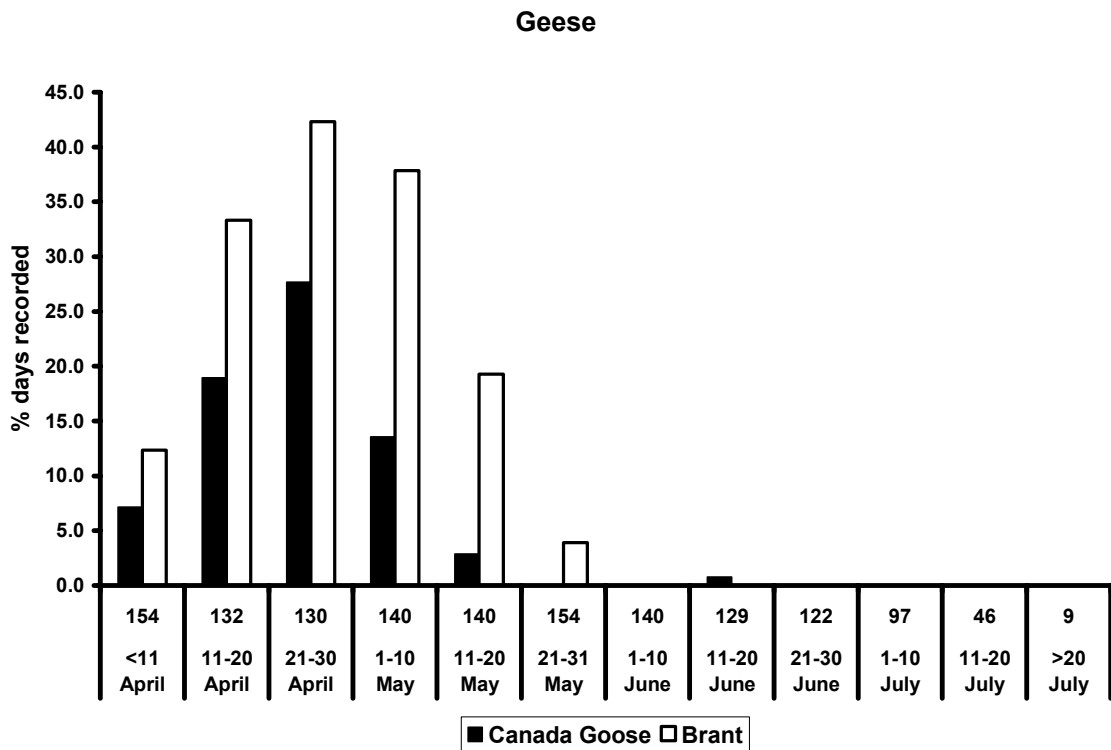


Figure 6

Shorebirds

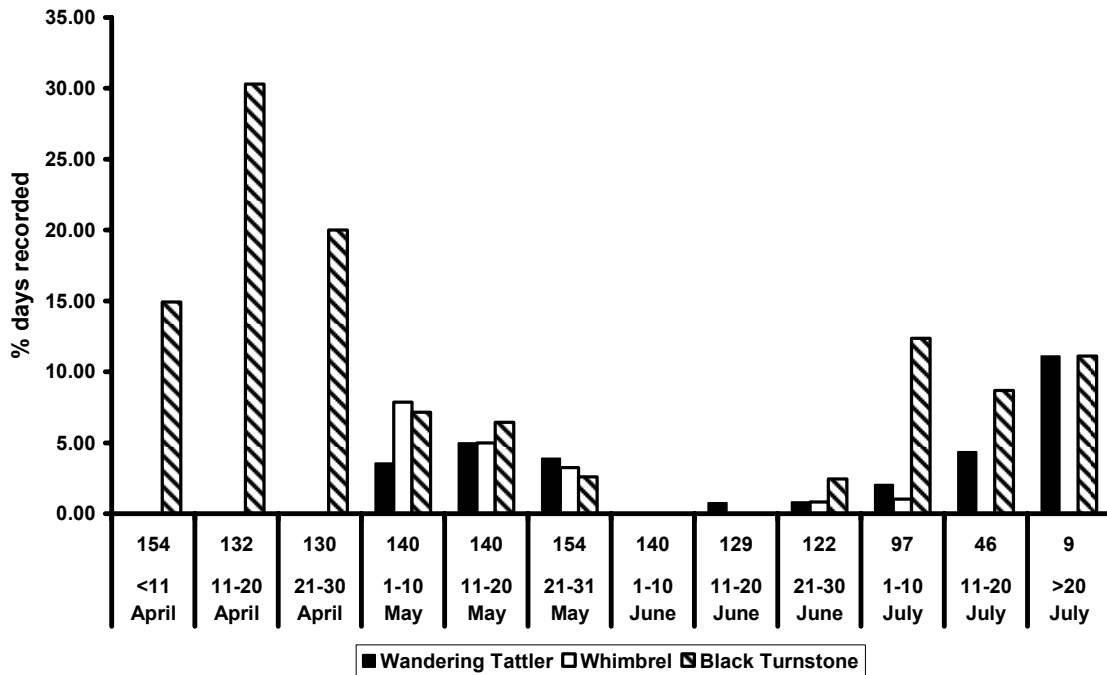


Figure 7

Although usually regarded as winter visitors in Haida Gwaii (Campbell et al. 1990), records of both Herring Gull and Thayer’s Gull suggested that these species are also passage migrants through the region. Records of both species increased during April, peaking in late April (Herring Gull) or early May (Thayer’s Gull) (Fig. 8). Herring Gull continued to be seen in small numbers throughout the season, but Thayer’s Gull was not recorded after May.

The Black-legged Kittiwake, another nominal winter visitor, occurred throughout the season in some years, especially 1993 and 2001, when it was frequent in June. Herring Gull was also frequent in June 1993, suggesting some common factor in its occurrence. Kittiwakes were not recorded at all in four years, supporting the previous observations of Gaston and Jones (1990) that the species occurrence in Hecate Strait exhibits high inter-year variation.

Gulls

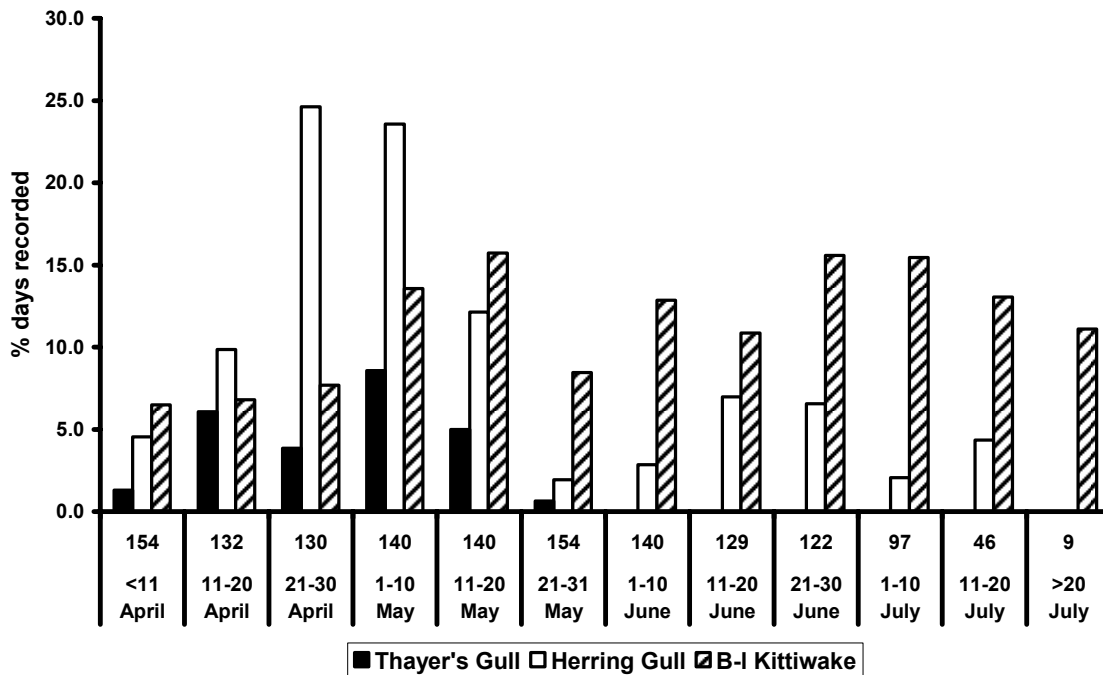


Figure 8

Residents

Most resident species necessarily showed no seasonal trend. However, the two finches that specialize on tree seeds, Pine Siskin and Red Crossbill, both appeared more frequently in May and June than in April. When data from all years were combined, Red Crossbill sightings increased steadily through the season to a peak in early July (Fig. 9). However, this pattern was not seen in every year. In 1997 and 2002 crossbills were seen almost daily to 20 June, but much less frequently thereafter. Conversely, in 2000 and 2001 they were uncommon in April and May, but seen more or less daily in June and July.

Pine Siskin was the most irregular species. It was recorded on approximately one day in three when all years were combined, but recorded on only a few dates in 1991 and 2000. In other years, it was usually most frequent in May, but in 1993 and 2001 it was irregular before 11 June and in 2002 it was uncommon after 20 April. Both Pine Siskin and Red Crossbill are known to be nomadic in response to fluctuations in seed crops and their occurrence at East Limestone Island may be determined by population changes on the adjacent larger islands.

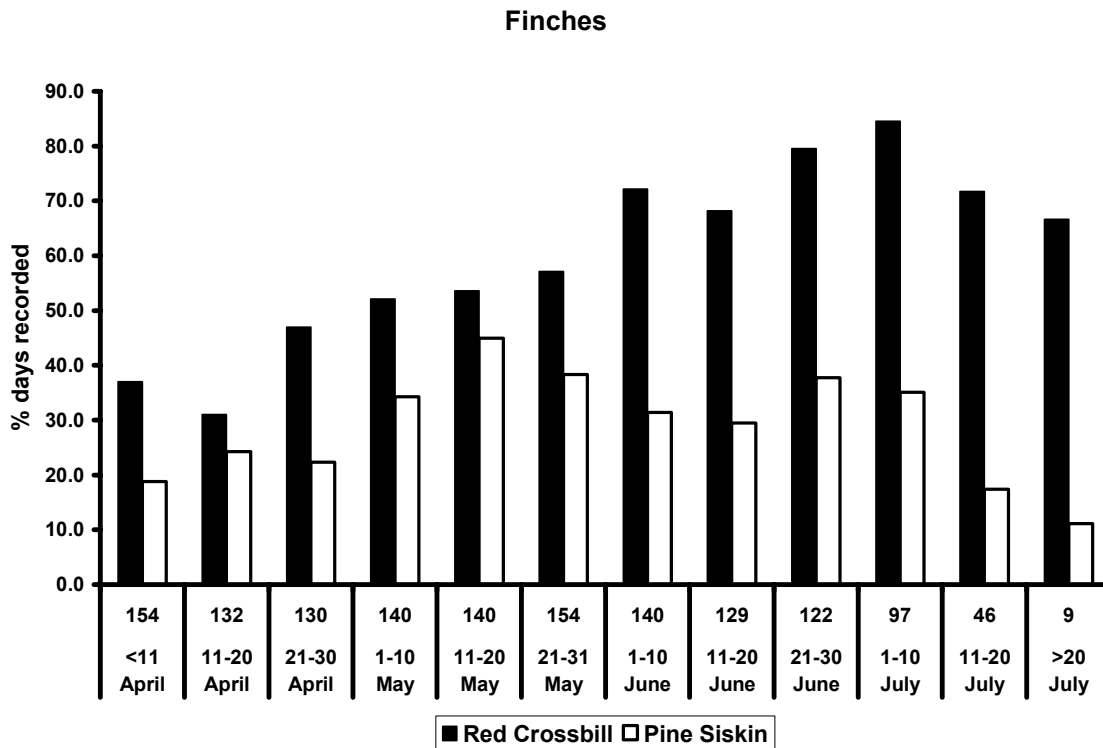


Figure 9

DISCUSSION

The data accumulated in the daily checklists kept at East Limestone Island throughout the season over 14 years demonstrate the value of systematic record keeping even when the observations are casual or irregular. The observations indicate clearly the date of arrival of summer visitors and passage migrants and, perhaps more importantly, because less often noted, the date of departure of winter visitors. For relatively uncommon species, such as Brandt's Cormorant, Thayer's Gull or Wandering Tattler, patterns can only emerge when data is combined over several years. Our data clarifies the pattern of occurrence of these birds in Laskeek Bay.

REFERENCES

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- Gaston, A.J. & Jones, I.L. 1991. Observations of seabirds and marine mammals in western Hecate Strait in spring and early summer 1984-1989. *Canadian Field-Naturalist* 105: 550-560.
- Morris, M. 2001. Checklist of the birds of Haida Gwaii. Laskeek Bay Conservation Society, Queen Charlotte City, BC.

Appendix 1
Number of days recorded for all species observed at East Limestone Island during 1990-2003

Year	Days recorded														Totals
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Days of observations	46	78	91	98	102	111	105	127	110	103	109	115	100	98	1347
Species	Scientific name														
Trumpeter Swan	<i>Cygnus buccinator</i>														
Great W-fronted Goose	<i>Anser albifrons</i>														
Canada Goose	<i>Branta canadensis</i>														
Brant	<i>Branta canadensis</i>														
Mallard	<i>Anas platyrhynchos</i>														
Northern Shoveler	<i>Anas platyrhynchos</i>														
Northern Pintail	<i>Anas platyrhynchos</i>														
Green-winged Teal	<i>Anas platyrhynchos</i>														
Greater Scaup	<i>Aythya marila</i>														
Lesser Scaup	<i>Aythya marila</i>														
Harlequin Duck	<i>Histrionicus histrionicus</i>														
Surf Scoter	<i>Melanitta perspicillata</i>														
White-winged Scoter	<i>Melanitta fusca</i>														
Black Scoter	<i>Melanitta nigra</i>														
Long-tailed Duck	<i>Clangula hyemalis</i>														
Bufflehead	<i>Bucephala albeola</i>														
Common Goldeneye	<i>Bucephala clangula</i>														
Barrow's Goldeneye	<i>Bucephala islandica</i>														
Common Merganser	<i>Mergus merganser</i>														
Red-breasted Merganser	<i>Mergus serrator</i>														
Blue Grouse	<i>Dendragapus obscurus</i>														
Red-throated Loon	<i>Gavia stellata</i>														
Pacific Loon	<i>Gavia pacifica</i>														
Common Loon	<i>Gavia immer</i>														
Yellow-billed Loon	<i>Gavia adamsii</i>														

Horned Grebe	<i>Podiceps auritus</i>	0	6	0	1	1	0	4	3	10	4	3	0	2	0	34
Red-necked Grebe	<i>Podiceps grisegena</i>	0	2	1	1	3	14	16	16	11	14	9	8	19	3	117
Western Grebe	<i>Aechmophorus occidentalis</i>	0	0	0	2	1	0	0	0	0	3	0	0	0	0	6
Northern Fulmar	<i>Fulmarus glacialis</i>	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3
Sooty Shearwater	<i>Puffinus griseus</i>	0	2	2	19	11	3	3	3	8	2	2	9	5	3	72
Fork-tailed Storm-Petrel	<i>Oceanodroma furcata</i>	3	12	5	0	8	13	5	6	9	11	2	3	20	12	109
Leach's Storm-Petrel	<i>Oceanodroma leucorhoa</i>	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
Brandt's Cormorant	<i>Phalacrocorax penicillatus</i>	0	2	1	4	5	0	6	1	2	2	3	2	0	4	32
D-crested Cormorant	<i>Phalacrocorax auritus</i>	1	16	15	43	37	40	40	32	39	36	40	45	47	39	470
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>	23	63	79	93	99	100	92	80	82	87	83	110	90	93	1174
Great Blue Heron	<i>Ardea herodias</i>	0	0	0	0	0	2	0	0	0	0	2	0	1	0	5
Northern Harrier	<i>Circus cyaneus</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Osprey	<i>Pandion haliaetus</i>	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Bald Eagle	<i>Haliaeetus leucocephalus</i>	44	75	82	95	102	109	99	108	104	101	105	115	99	97	1335
Coopers Hawk	<i>Accipiter cooperii</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Sharp-shinned Hawk	<i>Accipiter striatus</i>	0	0	1	1	3	0	1	31	20	5	3	21	1	5	92
Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	6	0	1	2	0	1	0	2	3	0	7	0	2	25
Merlin	<i>Falco columbarius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Peregrine Falcon	<i>Falco peregrinus</i>	15	20	10	56	67	35	45	14	31	15	2	7	6	3	326
Sandhill Crane	<i>Grus canadensis</i>	0	1	0	0	1	0	0	0	2	0	0	0	0	0	4
Semipalmated Plover	<i>Charadrius semipalmatus</i>	0	0	0	0	0	0	1	0	3	0	0	0	0	0	4
Black Oystercatcher	<i>Haematopus bachmani</i>	44	74	84	98	102	109	100	107	103	102	108	115	100	95	1341
Wandering Tattler	<i>Heteroscelus incanus</i>	1	0	3	1	0	3	2	4	2	0	0	7	1	0	24
Whimbrel	<i>Numenius phaeopus</i>	1	2	0	2	3	0	8	3	1	1	0	2	1	1	25
Black Turnstone	<i>Arenaria melanocephala</i>	1	5	4	6	6	4	7	9	12	13	28	23	10	4	132
Spotted Sandpiper	<i>Actitis macularia</i>	0	0	0	2	0	0	0	0	1	0	0	0	2	0	5
Surfbird	<i>Aphriza virgata</i>	0	0	0	0	4	0	0	0	2	0	0	0	0	0	6
Dunlin	<i>Calidris alpina</i>	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
Western Sandpiper	<i>Calidris mauri</i>	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
Lesser Yellowlegs	<i>Tringa flavipes</i>	0	1	0	0	0	1	2	0	0	0	0	0	0	0	4
Common Snipe	<i>Gallinago gallinago</i>	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Red-necked Phalarope	<i>Phalaropus lobatus</i>	0	1	0	0	0	0	0	0	1	0	0	0	1	0	3
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1

Parasitic Jaeger	<i>Stercorarius parasiticus</i>	0	0	0	11	0	0	0	0	0	0	0	0	0	1	12
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Bonaparte's Gull	<i>Larus philadelphia</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Mew Gull	<i>Larus canus</i>	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2
California Gull	<i>Larus californicus</i>	0	0	0	2	0	0	0	0	0	2	0	0	0	0	4
Herring Gull	<i>Larus argentatus</i>	1	8	2	25	9	2	12	5	13	20	8	6	1	19	131
Thayer's Gull	<i>Larus thayeri</i>	0	1	0	0	0	0	0	0	0	9	3	0	0	22	35
Western Gull	<i>Larus occidentalis</i>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Glaucous-winged Gull	<i>Larus glaucescens</i>	41	58	73	97	86	110	100	106	99	101	108	115	100	95	1289
Glaucous Gull	<i>Larus hyperboreus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
Sabine's Gull	<i>Xema sabini</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Black-legged Kittiwake	<i>Rissa tridactyla</i>	0	3	0	54	4	4	4	1	3	31	2	51	0	13	170
Arctic Tern	<i>Sterna paradisaea</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Murre	<i>Uria aalge</i>	0	0	0	32	8	3	0	6	12	4	6	2	4	17	94
Pigeon Guillemot	<i>Cephus columba</i>	46	65	66	91	98	108	93	103	94	96	104	112	91	89	1256
	<i>Brachyramphus marmoratus</i>															
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	18	19	35	56	47	79	81	48	74	24	28	86	57	31	683
Ancient Murrelet	<i>Synthliboramphus antiquus</i>	39	71	70	79	72	83	83	73	95	81	77	85	88	86	1082
Cassin's Auklet	<i>Ptychoramphus aleuticus</i>	5	15	14	32	39	42	33	22	32	26	5	34	30	42	371
Rhinoceros Auklet	<i>Cerorhinca monocerata</i>	7	6	15	64	52	34	32	26	25	31	47	67	48	31	485
Horned Puffin	<i>Fratercula corniculata</i>	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Tufted Puffin	<i>Fratercula cirrhata</i>	1	0	1	5	5	3	0	0	0	2	0	0	2	1	20
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	17	4	7	25	15	28	42	14	17	5	69	72	57	27	399
Rufous Hummingbird	<i>Selasphorus rufus</i>	18	45	48	87	83	81	61	50	67	66	82	56	54	63	861
Anna's Hummingbird	<i>Calypte anna</i>	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Belted Kingfisher	<i>Ceryle alcyon</i>	0	2	15	40	67	41	24	60	79	51	27	47	27	20	500
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>	39	71	85	92	96	108	99	100	102	99	108	102	100	90	1291
Lewis's Woodpecker	<i>Melanerpes lewis</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Hairy Woodpecker	<i>Picoides villosus</i>	6	18	36	59	54	86	75	66	73	74	63	80	58	72	820
Northern Flicker	<i>Colaptes auratus</i>	6	20	68	6	11	12	37	42	73	32	34	18	44	3	406
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	0	15	43	46	72	66	54	78	66	63	64	66	41	46	720
Northwestern Crow	<i>Corvus caurinus</i>	41	72	85	94	101	109	99	120	107	101	108	105	100	96	1338
Common Raven	<i>Corvus corax</i>	40	66	76	96	102	109	99	115	106	101	108	105	99	84	1306
Tree Swallow	<i>Tachycineta bicolor</i>	0	0	0	2	0	1	0	0	6	3	3	6	4	9	34

Violet-green Swallow	<i>Tachycineta thalassina</i>	1	0	0	0	0	0	1	0	0	0	0	0	0	10	12
C-backed Chickadee	<i>Poecile rufescens</i>	9	43	76	91	94	82	83	64	81	94	107	85	97	84	1090
Red-breasted Nuthatch	<i>Sitta canadensis</i>	0	4	8	50	42	14	9	31	18	17	3	13	13	9	231
Brown Creeper	<i>Certhia americana</i>	2	25	41	65	32	19	33	47	65	66	67	32	16	54	564
Winter Wren	<i>Troglodytes troglodytes</i>	32	72	76	92	100	107	93	122	110	102	107	104	97	95	1309
American Dipper	<i>Cinclus mexicanus</i>	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Golden-crowned Kinglet	<i>Regulus satrapa</i>	4	32	60	87	80	72	84	79	103	92	103	87	90	86	1059
Ruby Crowned Kinglet	<i>Regulus calendula</i>	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2
Swainson's Thrush	<i>Catharus ustulatus</i>	5	2	20	37	18	45	34	42	35	27	70	46	22	41	444
Hermit Thrush	<i>Catharus guttatus</i>	39	47	75	80	89	85	75	99	96	84	97	95	95	82	1138
American Robin	<i>Turdus migratorius</i>	0	0	1	1	4	0	0	0	15	5	7	0	0	8	41
Varied Thrush	<i>Ixoreus naevius</i>	20	72	81	83	89	104	10	70	104	81	101	93	98	96	1102
Orange-crowned Warbler	<i>Vermivora celata</i>	0	33	43	48	75	33	63	47	56	63	53	68	55	66	703
Townsend's Warbler	<i>Dendroica townsendi</i>	6	52	71	83	86	88	76	92	88	86	92	92	74	80	1066
Wilson's Warbler	<i>Wilsonia pusilla</i>	1	0	1	0	0	0	0	0	0	0	3	3	2	2	12
Savannah Sparrow	<i>Passerculus sandwichensis</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Fox Sparrow	<i>Passerella iliaca</i>	4	3	28	21	7	6	1	8	2	2	28	19	5	19	153
Song Sparrow	<i>Melospiza melodia</i>	11	64	63	65	50	37	18	55	53	83	70	60	38	19	686
Dark-eyed Junco	<i>Junco hyemalis</i>	1	32	59	70	94	94	58	44	49	60	48	63	65	35	772
Pine Grosbeak	<i>Pinicola enucleator</i>	0	0	0	1	1	0	0	0	0	0	0	0	3	0	5
Red Crossbill	<i>Loxia curvirostra</i>	3	39	32	70	86	90	55	83	66	66	56	55	52	49	802
Pine Siskin	<i>Carduelis pinus</i>	2	8	25	31	62	48	58	41	28	33	3	14	27	51	431