

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND, BRITISH COLUMBIA, 1981-1995

NICOLAAS A. M. VERBEEK, Department of Biological Sciences, Simon Fraser University, Burnaby, British Columbia V5A 1S6

Our knowledge of the birds on Mitlenatch Island, British Columbia, is largely confined to a list of species seen by many naturalists and visitors, recently compiled by Sirk et al. (1993). Sirk et al. mixed information on the status of birds on Mitlenatch with that from nearby Cortes Island, but this leads to erroneous results for Mitlenatch. During the 12 years (1981-1995, minus 1982, 1989, and 1992) my colleagues and I did research on Mitlenatch Island, we kept a daily record of species seen and their numbers. My objective here is to list the species we saw, which includes 32 species new for the island, report on the status of each, provide some details of the nesting activities of the breeding birds, and compare the avifauna on Mitlenatch Island with that of Cortes Island.

STUDY AREA AND METHODS

Mitlenatch Island (36 ha), located at the north end of the Strait of Georgia (Fig. 1), southern British Columbia, is isolated from other islands in the region. It lies 6 km from Hernando Island to the northeast, 7 km from Cortes Island (122 km²) to the north, and 13 km from Miracle Beach on Vancouver Island to the west. Cortes is covered mostly with Douglas Fir (*Pseudotsuga menziesii*). Nine salt-water bays and four brackish lagoons are scattered around the island, while the interior has a number of lakes, ponds, marshes, meadows as well as small streams with riparian vegetation. The human population lives mostly on the southern half of the island (Sirk et al. 1993). Sirk and others have made an inventory of the birds of Cortes starting in the early 1970s. In contrast, Mitlenatch, a seabird sanctuary, is uninhabited and has few trees, mostly patches of Lodgepole Pine (*Pinus contorta*), Scouler's Willow (*Salix scouleriana*), and Quaking Aspen (*Populus tremuloides*). Most of the island is covered with grassy meadows, moss-covered rocks, and copses of shrubs (Brooke et al. 1983). Fresh water is limited to a few vernal pools and small rocky troughs. Two large bays provide intertidal habitat, but most of the shoreline consists of steep, rocky cliffs. The island provides nesting habitat for, among others, a large colony of Glaucous-winged Gulls (*Larus glaucescens*), Pigeon Guillemots (*Cepphus columba*), and a large population of Northwestern Crows (*Corvus caurinus*). We spent a total of 871 days on Mitlenatch while studying the gulls, guillemots, and crows: 108 days in the second half of April, 331 in May, 226 in June, 152 in July and 54 in the first half of August. These 871 days were spread over 41 months.

I calculated the abundance of each species on Mitlenatch as follows: Annual occurrence (seen one out of 12 years scored 1, seen every year scored 12) times monthly occurrence (seen during 1-3 months, out of a total of 41 months, scored 1, 4-20 scored 2, 21-37 scored 3, and 38-41 scored

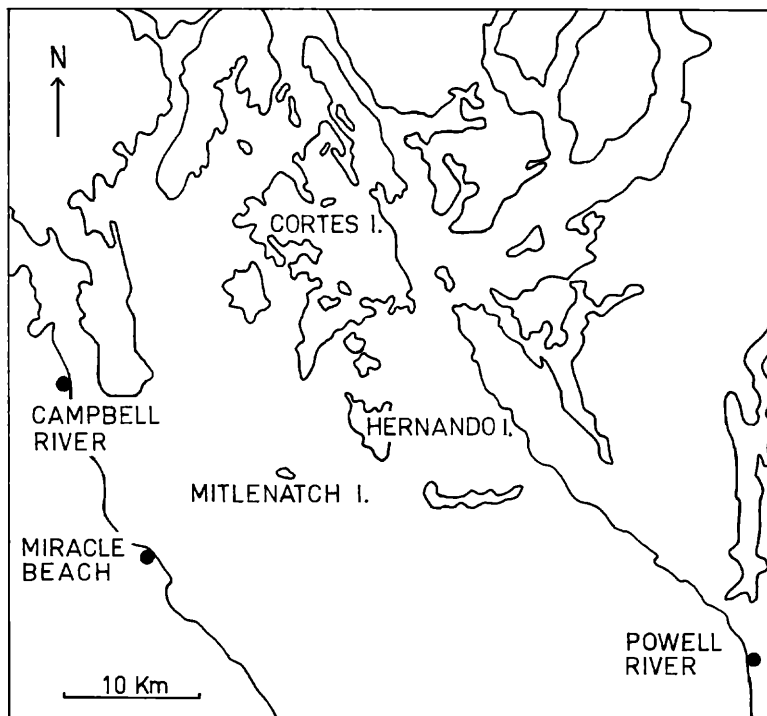


Figure 1. Location of Mitlenatch Island in relation to Hernando and Cortes islands at the north end of Georgia Strait, British Columbia.

4) times number of weeks seen (1-4 weeks, out of a total of 124 weeks, scored 1, 5-20 scored 2, 21-62 scored 3, 63-104 scored 4, 105-120 scored 5, and 121-124 scored 6). The product of annual, monthly, and weekly occurrence was used to define the abundance categories as follows: 1-9 **accidental**, 10-46 **very rare**, 47-144 **rare**, 145-242 **uncommon**, 243-279 **common**, and 280-288 **abundant**. In parentheses behind each species are given its abundance (abbreviated), the number of years in which it was seen (maximum 12), the total number of days it was seen (maximum 871), expressed in absolute numbers and as a percentage.

RESULTS

Loons and Grebes

Red-throated Loon (*Gavia stellata*): one on 1 May 1984 and 1 Jul 1985 (ac, 2, 2, 0.2%). Pacific Loon (*G. pacifica*): Apr-Jun, mostly in May (vr, 10, 44, 5.1%). Common Loon (*G. immer*): Apr-Jul (r, 12, 228, 26.2%). Yellow-billed Loon (*G. adamsii*): one immature 11-21 May 1984 (ac, 1, 5, 0.6%). Horned Grebe (*Podiceps auritus*): Apr and early May, rarely to mid-May. In

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

years with an early spring it may be absent in May (vr, 12, 82, 9.4%). Red-necked Grebe (*P. griseogen*): occasional Apr-May and once in Aug. Latest spring record 19 May (vr, 5, 29, 3.3%). Western Grebe (*Aechmophorus occidentalis*): recorded twice in Apr and in May; may occur more commonly offshore and thus be overlooked (ac, 4, 4, 4.6%).

Storm-Petrels, Cormorants, and Herons

Fork-tailed Storm-Petrel (*Oceanodroma furcata*): seen 16 Aug 1984 (ac, 1, 1, 0.1%). Double-crested Cormorant (*Phalacrocorax auritus*): present in small numbers and found nesting (9 nests) in 1991 (W. Campbell pers. comm.) (a, 12, 871, 100%). I have no information on first egg dates for this and the next species as we did not want to disturb the birds. Pelagic Cormorant (*P. pelagicus*): about 330 birds nested in 1985 (a, 12, 871, 100%). Great Blue Heron (*Ardea herodias*): mostly single birds (up to five) Apr-Aug, typically on calm days. Usually do not stay around very long because the Glaucous-winged Gulls often harass them (r, 12, 62, 7.1%).

Geese and Ducks

Greater White-fronted Goose (*Anser albifrons*): a pair grazed on grassy knolls on 1, 4, 6 and 18 May 1991; occasionally migrating flocks pass the island in May (ac, 4, 12, 1.4%). Snow Goose (*Chen caerulescens*): five grazed on the island 25 May-5 Jun 1988; occasional migrating flocks seen offshore in Apr (ac, 4, 11, 1.3%). Brant (*Branta bernicla*): migrating flocks offshore in Apr and May, and smaller numbers (1-3) seen occasionally in Jun and Jul. One single bird in the intertidal from 4 Jun to 3 Jul 1986 (vr, 6, 33, 3.8%). Canada Goose (*B. canadensis*): single birds or pairs in Apr and May, possibly looking for nesting opportunities, and the occasional offshore flock. The species breeds in southwestern British Columbia. One Cackling Canada Goose (*B. c. minima*) was present on 28 Apr 1993 along with two bigger Canada Geese (vr, 8, 12, 1.4%).

Green-winged Teal (*Anas crecca*): Apr-Aug, mostly in May. Seen singly or in groups of up to 56 resting or feeding near the tide line (r, 12, 62, 7.1%). Mallard (*A. platyrhynchos*): seen mostly in Apr and May, less frequently in Jun and Jul. Breeding on the island was suspected earlier but not confirmed until 1986 when two nests were found (10 eggs 18 May, 8 eggs 19 May). Other nests were found in 1988 (5 eggs 26 Apr, 9 eggs 29 Apr), 1990 (8 eggs 29 Apr, fledged 24 May), 1993 (7 chicks 14 May), 1994 (11 eggs 26 Apr, fledged 13 May and a second nest not checked for its content), and 1995 (10 eggs 18 Apr, fledged 17 May). Nests are located in tall grass near shore or inland, at times 250 m from shore. Ducks manage to lead their chicks safely to shore, often fighting Glaucous-winged Gulls along the way. Once on the water chicks are harassed by Bald Eagles (*Haliaeetus leucocephalus*), Glaucous-winged Gulls, and Northwestern Crows, and they do not survive beyond 24 hours (r, 12, 148, 17.0%). Northern Pintail (*A. acuta*): most frequent in Apr, also May-Aug in small numbers (1-3) (vr, 7, 12, 1.4%). Blue-winged Teal (*A. discors*): present in most years in small numbers (1-12) Apr-Jun; earliest 25 Apr, latest 8 Jun (vr, 9, 15, 1.7%). Cinnamon Teal (*A. cyanoptera*): pairs or single males 29 Apr, 6, 11, and 12

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

May, and 12 Jun (vr, 5, 5, 0.6%). Northern Shoveler (*A. clypeata*): in Apr, May (especially), and Jun. Earliest 27 Apr, latest 4 Jun (vr, 10, 21, 2.4%). American Wigeon (*A. americana*): 1-11 birds in Apr and May, feeding among intertidal algae. Earliest 21 Apr, latest 20 May (vr, 9, 25, 2.9%).

Greater Scaup (*Aythya marila*): seen on 30 Apr 1984 and 17 May 1983 (ac, 2, 2, 0.2%). Harlequin Duck (*Histrionicus histrionicus*): seen every day. Increases from about 50 in Apr, 100 in May, to 150-200 in Jun and Jul. No counts are available for Aug (a, 12, 871, 100%). Oldsquaw (*Clangula hyemalis*): seen offshore in Apr and May (vr, 5, 10, 1.1%). Black Scoter (*Melanitta nigra*) (ac, 4, 12, 1.4%), the least common of the scoters, seen in all months (except Aug), as is the Surf Scoter (*M. perspicillata*) (r, 12, 107, 12.3%) and White-winged Scoter (*M. fusca*) (r, 12, 54, 6.2%). Common Goldeneye (*Bucephala clangula*) (ac, 2, 10, 1.1%) and Barrow's Goldeneye (*B. islandica*) (ac, 3, 12, 1.4%) seen rarely in Apr and May. Bufflehead (*B. albeola*): inshore in Apr and May (ac, 5, 18, 2.1%). Common Merganser (*Mergus merganser*) (ac, 6, 14, 1.6%) and the more common Red-breasted Merganser (*M. serrator*) (vr, 10, 80, 9.2%) occur Apr-Jul.

Diurnal Birds of Prey

Turkey Vulture (*Cathartus aura*): small numbers (1-3) on windy, sunny days Apr-Jul (vr, 12, 28, 3.2%). Osprey (*Pandion haliaetus*): seen May-Aug (vr, 5, 6, 0.7%). Bald Eagle: present every day and nesting on the island since 1994. Takes adult Glaucous-winged Gulls at sea and on, or near, the nest, as well as gull chicks (a, 12, 871, 100%). Northern Harrier (*Circus cyaneus*): single birds seen in Apr, May, Jul and Aug. Do not stay long as they are chased off the island by Northwestern Crows (vr, 9, 42, 4.8%). Sharp-shinned Hawk (*Accipiter striatus*) (vr, 7, 12, 1.4%) and Cooper's Hawk (*A. cooperii*) (ac, 3, 3, 0.3%) present as single birds that stay around for at most a few hours. Red-tailed Hawk (*Buteo jamaicensis*): seen infrequently in Apr, May, and Jul (ac, 3, 10, 1.1%). American Kestrel (*Falco sparverius*): seen every month but mostly in Apr (ac, 3, 12, 1.4%). Merlin (*F. columbarius*): occur in Apr and May and again in Aug but do not stay long because Northwestern Crows harass them (vr, 8, 18, 2.1%). Peregrine Falcon (*F. peregrinus*): most frequent in Apr and May but occurs also in Jun and Aug. Arrival on Mitlenatch coincides closely with the spring arrival of Whimbrels (*Numenius phaeopus*). One was seen to capture a Whimbrel (vr, 10, 34, 3.9%). Gyrfalcon (*F. rusticolus*): 19 and 20 Apr 1985, 28 Jul 1985 (the first Jul record for this species in south-coastal British Columbia; Campbell et al. 1990), and between 5 and 17 Aug 1984 (ac, 2, 9, 1.3%).

Shorebirds

Black-bellied Plover (*Pluvialis squatarola*): seen mainly in Apr (earliest 23) and May (latest 29), once 11-13 Jun and on 5 Jul (vr, 10, 42, 4.8%). Lesser Golden-Plover (*P. dominica*): single birds on 10 May 1990 and 13 Jun 1983 (ac, 2, 2, 0.2%). Semipalmated Plover (*Charadrius semipalmatus*): a rare transient between 8 and 19 May (ac, 3, 6, 0.7%). Killdeer (*C. vociferus*): occurs almost every year from Apr to Aug. A male

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

was present throughout late Apr 1995 but he had not attracted a female by the time I left in late May (r, 10, 90, 10.3%). Black Oystercatcher (*Haematopus bachmani*): at least 5–8 pairs nest on Mitlenatch. Median date of first eggs is 13 May (standard deviation 5 days, range 4–23, $n = 33$ nests) (a, 12, 871, 100%). Greater Yellowlegs (*Tringa melanoleuca*): small numbers (1–9) Apr–Aug (r, 12, 73, 8.4%). Lesser Yellowlegs (*T. flavipes*): less common than the Greater and not seen in Apr (vr, 10, 29, 3.3%). Wandering Tattler (*Heteroscelus incanus*): appears in late Apr in some years (earliest record 28 Apr), but the bulk shows up in May. A few birds seen in Jun in some years are nonbreeders (Campbell et al. 1990). Returning migrants visit the island from early Jul into Aug (c, 12, 291, 33.4%). Spotted Sandpiper (*Actitis macularia*): appears around mid-May to early Jun and again from late Jul to Aug (r, 12, 48, 5.5%). Whimbrel: present in late Apr early May as single birds or in flocks of as many as 37. They may feed on grassy knolls, but more often they are not seen during the day but reappear again in the evening to roost (see also under Peregrine) (r, 12, 256, 29.4%). Long-billed Curlew (*Numenius americanus*): seen once on 25 Apr 1983 (ac, 1, 1, 0.1%). Marbled Godwit (*Limosa fedoa*): 1–3 seen between 11 and 26 May, sometimes in the company of Whimbrels. One bird was present 23–25 Aug 1984 (vr, 5, 9, 1.0%). Ruddy Turnstone (*Arenaria interpres*): appears in May and Jul, mostly along the south side of the island (vr, 12, 15, 1.7%). Black Turnstone (*A. melanocephala*): more common than the Ruddy, occurring more frequently in Apr than in May, absent in June, and reappearing in Jul and Aug (r, 12, 183, 21.0%). Surfbird (*Aphriza virgata*): present Apr–Aug and particularly frequent in Jul (r, 12, 49, 5.6%). Red Knot (*Calidris canutus*): seen on 21 and 26 Apr, 26 May, and 22 Jul (ac, 4, 4, 0.5%). Not reported in Apr by Campbell et al. (1990). Sanderling (*C. alba*): seen rarely (10 Jul and 11 Aug), perhaps because the island does not provide appropriate beach habitat (ac, 2, 2, 0.2%). Semipalmated Sandpiper (*C. pusilla*): seen on 28 Jun and throughout Jul (ac, 4, 11, 1.3%). Western Sandpiper (*C. mauri*) (r, 12, 108, 12.4%) and Least Sandpiper (*C. minutilla*) (r, 12, 120, 13.8%), the two most often seen of the peeps, occur Apr–Aug, most frequently in Jul during southward migration. Pectoral Sandpiper (*C. melanotos*): seen on 22 and 25 May 1991 and 14–22 Jul 1983 (ac, 2, 6, 0.7%). The species is considered a rare to locally common spring migrant along the coast (Campbell et al. 1990). Rock Sandpiper (*C. ptilocnemis*): seen twice in May, but it is rather easily overlooked as most of the rocky coastline cannot be seen from land (ac, 2, 2, 0.2%). Dunlin (*C. alpina*): seen mostly in ones or twos (rarely more than ten) in Apr and as late as 26 May; one bird on 14 and 15 Jul (vr, 9, 55, 6.3%). Short-billed Dowitcher (*Limnodromus griseus*) (vr, 11, 27, 3.1%) and Long-billed Dowitcher (*L. scolopaceus*) (r, 12, 44, 5.1%) occur mostly in groups of 1–3 birds, occasionally up to 11, during Apr, May and Jul; not seen in Aug and rarely seen in Jun. Common Snipe (*Gallinago gallinago*): appear during the night in stormy, wet weather, in all months except Aug. They may stay a few days if sufficient rain has fallen to provide temporary areas with standing water (vr, 7, 11, 1.3%). Red-necked Phalarope (*Phalaropus lobatus*): a rare sighting of 42 birds on 26 May 1983 (ac, 1, 1, 0.1%).

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

Jaegers, Gulls, Terns, and Auks

Pomarine Jaeger (*Stercorarius pomarinus*): two seen on 16 Aug 1984 (ac, 1, 1, 0.1%). Franklin's Gull (*Larus pipixcan*): one seen on 1 Jun 1983 (ac, 1, 1, 0.1%). Bonaparte's Gull (*L. philadelphia*): seen singly or in flocks of up to 70 birds, present throughout spring and summer, especially in Apr and Aug (r, 10, 61, 7.0%). Mew Gull (*L. canus*): 5 adults on 25 Apr 1984, 1 adult on 22 Apr 1986, single immatures on 2 May 1987 and 31 Jul 1986 (ac, 3, 4, 0.5%). Surprisingly uncommon, considering that Campbell et al. (1990) regarded it a common to abundant spring migrant along the coast. Ring-billed Gull (*L. delawarensis*): small numbers May-Aug (vr, 6, 28, 3.2%). California Gull (*L. californicus*): 1-6 seen almost daily flying over the island or roosting among Glaucous-winged Gulls (a, 12, 506, 58.1%). Herring Gull (*L. argentatus*): may occur more frequently than indicated, but they are difficult to distinguish with certainty from the many hybrid Glaucous-winged Gulls (ac, 3, 3, 0.3%). Glaucous-winged Gull: about 2100 pairs nest (Campbell et al. 1990); median date of first eggs 2 Jun (range 17 May-18 Jun, $n = 285$ nests; Verbeek unpubl. data) (a, 12, 871, 100%). Glaucous Gull (*L. hyperboreus*): one second-year bird seen on 30 May 1983 (ac, 1, 1, 0.1%). Sabine's Gull (*Xema sabini*): one seen offshore on 6 Jun 1985 (ac, 1, 1, 0.1%). Caspian Tern (*Sterna caspia*): 1-12 individuals fly over the island early May-Aug, occasionally diving for fish in the bays and rarely roosting among the Glaucous-winged Gulls on the beach (r, 12, 280, 32.1%). Arctic Tern (*S. paradisaea*): seen once on 14 May 1987 (ac, 1, 1, 0.1%).

Common Murre (*Uria aalge*): present offshore Apr-Aug (a, 12, 161, 18.5%). Pigeon Guillemot: about 134 pairs nest; median date of first eggs 8 Jun (range 26 May-23 Jun, $n = 173$ nests; Emms and Morgan 1989) (a, 12, 871, 100%). Marbled Murrelet (*Brachyramphus marmoratus*): present Apr-Aug (a, 12, 871, 100%). Rhinoceros Auklet (*Cerorhinca monocerata*): may be seen in late Apr but generally not until May-Aug. We found six severed heads in a meadow at Echo Bay on 27 Jun 1980. A search for possible nests nearby yielded none. Four nests found in 1991 (W. Campbell pers. comm.) (c, 12, 871, 100%). Tufted Puffin (*Fratercula cirrhata*): single birds flying by on 11 May 1983 and 23 Jul 1985 (ac, 2, 2, 0.2%).

Doves, Owls, and Nighthawks

Rock Dove (*Columba livia*): seen on 17 and 30 Jun 1985 (ac, 1, 2, 0.2%). Mourning Dove (*Zenaidura macroura*): one seen 25 May 1984 and 12 May 1993 (ac, 2, 2, 2.3%). Barn Owl (*Tyto alba*): one on 24 Aug 1984 and 25 Apr 1994. The latter was being mobbed by Northwestern Crows (ac, 2, 2, 0.2%). Long-eared Owl (*Asio otus*): one bird mobbed by crows on 23 May 1988 (ac, 1, 1, 0.1%). Snowy Owl (*Nyctea scandiaca*): one bird present 30 Apr-14 May 1985 (ac, 1, 15, 1.7%). The latest previous coastal record for British Columbia was 12 May (Campbell et al. 1990). Northern Pygmy-Owl (*Glaucidium gnoma*): a skeleton found in the woods on 11 May 1985. The bird probably died during the winter. Short-eared Owl (*Asio flammeus*): one on 3 May 1984, 16 May 1985, and 5 May 1988 (ac, 3, 3,

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

0.3%). Common Nighthawk (*Chordeiles minor*): single birds seen between 4 and 21 Jun (ac, 4, 7, 0.8%). They probably reside on nearby islands and occasionally move farther afield on calm evenings.

Swifts, Hummingbirds, Kingfishers, and Woodpeckers

Black Swift (*Cypseloides niger*) (vr, 5, 6, 0.7%) and Vaux's Swift (*Chaetura vauxi*) (vr, 6, 11, 1.3%) are rarely seen over Mitlenatch on days with low overcast skies, May–Aug. Rufous Hummingbird (*Selasphorus rufus*): present Apr–Aug. No nests found; however, a female collected spider webs in 1984, suggesting that she was building a nest (c, 12, 308, 35.4%). Belted Kingfisher (*Ceryle alcyon*): infrequent Apr–Aug. The island offers few suitable perches from which they can dive, and the Northwestern Crows pursue them when they have caught a fish. They generally do not stay very long (vr, 9, 40, 4.6%). Downy Woodpecker (*Picoides pubescens*): seen 27 Apr 1984 (ac, 1, 1, 0.1%). Northern Flicker (*Colaptes auratus*): present 5–9 Aug 1985 (ac, 1, 5, 0.6%).

Flycatchers, Larks, and Swallows

Western Wood-Pewee (*Contopus sordidulus*): earliest and latest record 4 and 31 May, respectively (ac, 4, 7, 0.8%). Willow Flycatcher (*Empidonax traillii*): seen Jun to Aug (vr, 6, 25, 2.9%). Hammond's Flycatcher (*E. hammondi*): one seen 10–11 May 1993 (ac, 1, 2, 0.2%). Pacific-slope Flycatcher (*E. difficilis*): occasional visitor, heard between 11 May and 20 Jun (ac, 5, 8, 0.9%). Say's Phoebe (*Sayornis saya*): a rare transient on the coast of British Columbia (Campbell et al. 1997). One present 14–16 May 1981 (ac, 1, 3, 0.3%). Western Kingbird (*Tyrannus verticalis*): present on 19 Jun 1984 (ac, 1, 1, 0.1%). Eastern Kingbird (*T. tyrannus*): present on 10 Jul 1987 (ac, 1, 1, 0.1%). Horned Lark (*Eremophila alpestris*): 1–4 birds 20 Apr–15 May, median passage day 3 May (vr, 5, 13, 1.5%). The race of these larks was not identified. *E. a. strigata*, which occurred in southern British Columbia, may be extirpated. Perhaps remnants of this race still persist on some of the islands (W. Campbell pers. comm.). Purple Martin (*Progne subis*): two flew over the island on 21 Jun 1990 (ac, 1, 1, 0.1%). Tree Swallow (*Tachycineta bicolor*): 6 seen on 3 May 1985 (ac, 1, 1, 0.1%). Violet-green Swallow (*T. thalassina*): nests in rock crevices and in a nest box; present from Apr to about the third week in Jul; during cold, wet, windy days in Apr and early May they are absent. Eggs from late May to mid-Jun, 4 fledglings on 8 Jul 1985 and 10 Jul 1987 (c, 12, 623, 71.5%). Northern Rough-winged Swallow (*Stelgidopteryx serripennis*): rare Apr–Jul (ac, 4, 8, 0.9%). Bank Swallow (*Riparia riparia*): one seen on 17 Aug 1984 (ac, 1, 1, 0.1%). Cliff Swallow (*Hirundo pyrrhonota*): rare in Apr, May, and Aug (ac, 2, 4, 0.5%). Barn Swallow (*H. rustica*): median arrival date 27 Apr (range 23 Apr–1 May, $n = 11$ years), present to Aug; absent on cold, wet windy days in Apr and early May. Nests on the cabin. Median date of first eggs in first clutches 29 May (13 May–14 Jun, $n = 37$), in second clutches 6 Jul (2–11 Jul, $n = 8$). Median clutch size 5 (4–6, $n = 22$). Coast Garter Snakes (*Thamnophis elegans*) and Northwestern Crows are predators of

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

nestlings. The number of breeding pairs has declined from 10 pairs in 1985 to 1 pair in 1997 (a, 12, 736, 84.5%). Similar declines have been reported elsewhere in British Columbia (Campbell et al. 1997).

Crows, Chickadees, Nuthatches, and Wrens

Northwestern Crow: about 55 pairs nest on the island; median date of first eggs is 6 May (range 17 Apr–6 Jun, $n = 348$ nests) (a, 12, 871, 100%). Common Raven (*corvus corax*): a pair was present most days in 1986 and built a nest but no eggs were laid. Particularly common 1984–86, much less common since then (r, 11, 186, 21.3%). Mountain Chickadee (*Parus gambeli*): one seen 21 Apr–6 May 1985 (ac, 1, 14, 1.6%). Chestnut-backed Chickadee (*P. rufescens*): one on 29 and 30 Apr 1993 (ac, 1, 2, 0.2%). Red-breasted Nuthatch (*Sitta canadensis*): rare, Apr–Jun (ac, 3, 8, 0.9%). Bewick's Wren (*Thryomanes bewickii*): a breeding pair Apr–Aug 1984; they had five fledglings on 23 May. A single bird on 1 Jul 1987 (ac, 2, 100, 11.5%). Winter Wren (*Troglodytes troglodytes*): mostly single birds in Apr and throughout May and twice in Jun (18 and 25 Jun). It is not clear whether these are migrants or local dispersers (vr, 9, 17, 2.0%).

Kinglets and Thrushes

Golden-crowned Kinglet (*Regulus satrapa*): 1–2 (up to 12) seen per day, in Apr and May, and one record for 13 Jun 1990 (vr, 10, 43, 4.9%). Ruby-crowned Kinglet (*R. calendula*): 1–2 (up to 5) birds per day in Apr and May (vr, 10, 46, 5.3%). Mountain Bluebird (*Sialia currucoides*): a female seen on 3 May 1985, when Mitlenatch was enveloped in a dense morning fog (ac, 1, 1, 0.1%). Campbell et al. (1997) listed the species as an uncommon spring transient around Georgia Strait. Townsend's Solitaire (*Myadestes townsendi*): seen on 10 and 11 May 1993. Mitlenatch was in a dense fog during the night of 9–10 May (ac, 1, 2, 0.2%). Swainson's Thrush (*Catharus ustulatus*): a pair nested in 1983, otherwise rare in May, Jun, and Jul (ac, 3, 43, 4.9%). Hermit Thrush (*C. guttatus*): single birds, staying on average 2 days, almost every year between 24 Apr and 19 May (vr, 8, 22, 2.5%). American Robin (*Turdus migratorius*): frequent visitor Apr–Aug, with some singing males but no nests (r, 12, 158, 18.1%). Varied Thrush (*Ixoreus naevius*): accidental in Apr and May (ac, 3, 12, 1.4%).

Pipits, Waxwings, Starling, and Vireos

American Pipit (*Anthus rubescens*): migrating individuals and small flocks from Apr to mid-May, with stragglers through late May (vr, 12, 205, 23.5%). Cedar Waxwing (*Bombycilla cedrorum*): three seen on 2 Jul 1984 and 23 May 1985 (ac, 2, 2, 0.2%). European Starling (*Sturnus vulgaris*): nests in crevices in cliffs and rotten tree trunks. Flocks come from neighbouring islands to roost in the lodgepole pine stands (250 birds in Jun, 400 in Jul). Starlings are probably the main agent for the introduction of fruiting trees and shrubs (Brooke et al. 1983) such as the Red Elderberry (*Sambucus racemosa*), which arrived on the island in 1992 (Verbeek unpubl. data) (a, 12, 871, 100%). Solitary Vireo (*Vireo solitarius*): single sightings on 21 Apr 1985, 20 May 1990, and 5 Jun 1990 (ac, 2, 3, 0.3%). Warbling Vireo (V.

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

gilvus): single birds on 19 and 26 May 1986, 12 and 28 May 1987, 28 May 1990, and 4 Jun 1985 (ac, 4, 6, 0.7%).

Wood Warblers

Orange-crowned Warbler (*Vermivora celata*): regular Apr–May migrant and likely present before we arrived in some years (r, 12, 182, 20.9%). Yellow Warbler (*Dendroica petechia*): mainly May and early Jun and occasionally in early Jul. Earliest sighting 3 May 1983, median 22 May (r, 12, 87, 10.0%). Yellow-rumped Warbler (*D. coronata*): Apr–Jul, but mostly moving through in May (r, 12, 131, 15.5%). Black-throated Gray Warbler (*D. nigrescens*): occurs along the southern mainland coast of British Columbia (Munro and Cowan (1947). Seen on 26 and 30 Apr 1993 and 10 May 1994. Infrequent, perhaps because its high-pitched song may be lost among the noise made by the gulls (ac, 2, 3, 0.3%). Townsend's Warbler (*D. townsendi*): a male seen on 3 May 1995 (ac, 1, 2, 0.2%). Individuals that end up on the island may not stay long because of the absence of suitable habitat, which may explain the species' rarity. Macgillivray's Warbler (*Oporornis tolmiei*): earliest record 29 Apr 1993, most birds in May, and recorded once in Jun and Aug (vr, 5, 10, 1.1%). Common Yellowthroat (*Geothlypis trichas*): seen infrequently from late Apr to Aug; earliest record 23 Apr 1984 (vr, 10, 70, 8.0%). Wilson's Warbler (*Wilsonia pusilla*): mainly a May migrant, earliest 30 Apr 1985, latest 5 Jun 1990, median 20 May (r, 12, 78, 9.0%).

Tanagers, Grosbeaks, and Sparrows

Western Tanager (*Piranga ludoviciana*): single males on 25 May 1984 and 19 May 1988 (ac, 2, 2, 0.2%). Black-headed Grosbeak (*Pheucticus melanocephalus*): one seen on 23 Jul 1983 (ac, 1, 1, 0.1%). Spotted Towhee (*Pipilo maculatus*): about 7 pairs nest. Nest with 3 eggs on 24 Apr 1984, fledglings 15 May 1981, 23 May 1984 and 1986 (a, 12, 871, 100%). Chipping Sparrow (*Spizella passerina*): seen on 14, 16, and 25 May, and on 19 and 24 Jul (vr, 5, 5, 0.6%). Savannah Sparrow (*Passerculus sandwichensis*): present when we arrived in mid-Apr to about the third week in May, with stragglers until the end of May (vr, 12, 346, 39.7%). Fox Sparrow (*Passerella iliaca*): earliest record 22 April 1986, last 11 May. One territorial male sang from 26 Apr until 11 May 1988 but failed to attract a mate and left (ac, 3, 15, 1.7%). Song Sparrow (*Melospiza melodia*): common breeding bird (a, 12, 871, 100%). Lincoln's Sparrow (*M. lincolni*): earliest record 26 Apr 1985, last 14 May 1985, median 3 May (ac, 6, 16, 1.8%). Golden-crowned Sparrow (*Zonotrichia atricapilla*) (vr, 12, 61, 7.0%) and White-crowned Sparrow (*Z. leucophrys*) (vr, 12, 63, 7.2%) pass through in Apr and early May. Occasionally a male White-crown establishes a territory, sings several weeks (to 22 May in 1986), and then leaves. Dark-eyed Junco (*Junco hyemalis*): found in the woods in Apr and May, and rarely Jun (vr, 6, 12, 1.4%).

Meadowlark, Blackbirds, and Finches

Red-winged Blackbird (*Agelaius phoeniceus*): infrequent Apr–Jul (vr, 7, 22, 2.5%). Western Meadowlark (*Sturnella neglecta*): usually single birds,

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

often staying in the meadow 2–3 days, Apr–Jun. Their appearance usually coincides with strong winds and substantial rainfall during the night (vr, 6, 14, 1.6%). Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*): seen Apr–Jun, most frequently in May (vr, 6, 15, 1.7%). Regarded a casual visitor to the Puget Sound lowlands and gulf islands by Munro and Cowan (1947). Brewer's Blackbird (*Euphagus cyanocephalus*): two birds on 23 May 1983 (ac, 1, 1, 0.1%). Brown-headed Cowbird (*Molothrus ater*): pairs to groups of up to 27 birds, Apr–Aug. More common in the 1980s than in the 1990s. A fledgling fed by a Song Sparrow on 8 Jul 1981 (c, 12, 532, 61.1%). Purple Finch (*Carpodacus purpureus*): a male 2–3 May 1986 and 29 April 1988 (ac, 2, 3, 0.3%). House Finch (*C. mexicanus*): a few seen May–Jul (vr, 5, 9, 1.0%). Red Crossbill (*Loxia curvirostra*): individuals mostly fly over Mitlenatch, without landing, May–Jul, most commonly in Jun (vr, 7, 24, 2.8%). Pine Siskin (*Carduelis pinus*): mostly fly over the island Apr–Jul, most often in May (r, 11, 138, 15.8%). American Goldfinch (*C. tristis*): Apr–Aug, most frequent in May and Jun. Increase in numbers in May coincides with fruiting of dandelions (*Taraxacum officinale*). May breed on the island; adults feeding a recent fledgling 27 Jul 1984 (u, 12, 502, 57.6%). Evening Grosbeak (*Coccothraustes vespertinus*): seen on 7 Jun 1981, 8 and 9 Jun 1990, and 1 May 1995 (ac, 3, 4, 0.5%).

DISCUSSION

I observed 166 species of birds on Mitlenatch Island between mid-April and mid-August, 1981–1995. Twelve of these are known to breed or to have bred on the island. Sirk et al. (1993) listed an additional 11 species reported in the same period in other years. Ten of these are accidental and one is very rare. Sirk et al. provided information on the relative abundance of species of birds on Cortes and assumed that the results apply to Mitlenatch as well. Given the differences between the two islands this is unrealistic in many cases. For instance, the Belted Kingfisher and California Gull on Cortes, to name but two, are considered common and rare in summer, respectively, while on Mitlenatch they are uncommon and abundant, respectively. In addition, Sirk et al. (1993) indicated the status of some species on the basis of a whole year, for parts of the year for others, even if such species are present all year (e. g., Black Turnstone). As my Mitlenatch data apply only to the period mid-April to mid-August, I had to determine the status of all birds on Cortes that occurred in that same period. I did this consistently as follows. Sirk et al. (1993) divided each month in four weeks. If a species was present in a given week they assessed its abundance as abundant, common, uncommon, rare, very rare, or accidental. I gave the rating for abundant 6 points, common 5, uncommon 4, rare 3, very rare 2, and accidental 1. All scores for each week (maximum 16 weeks) from mid-April to mid-Aug were then added. I then assigned an abundance value to each species as follows: 1–3 accidental, 4–15 very rare, 16–48 rare, 49–81 uncommon, 82–93 common, and 94–96 abundant. I analysed the results (Table 1) separately for aquatic (loons to ducks, rails to puffins) and terrestrial species, because many of the aquatic species share the waters between the two islands, while terrestrial species may be hampered in reaching Mitlenatch by those same waters.

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

Table 1 Relative Numbers of Species of Birds in Six Abundance Classes on Cortes^a and Mitlenatch Islands, Mid-April–Mid-August

Abundance	Aquatic birds				Terrestrial birds			
	Cortes only	Both Islands		Mitlenatch only	Cortes only	Both Islands		Mitlenatch only
		Cortes	Mitlenatch			Cortes	Mitlenatch	
Abundant	0	1	9	0	0	1	6	0
Common	0	4	2	0	2	15	3	0
Uncommon	1	8	0	0	9	29	1	0
Rare	5	33	16	0	1	23	6	0
Very rare	2	15	18	2	5	12	29	0
Accidental	11	2	17	12	8	3	38	6
Total	19	63	63	14	25	83	83	6

^aStatus of birds on Cortes determined from information in Sirk et al. (1993) (see Discussion).

Cortes and Mitlenatch share 63 species of aquatic birds. The status of some species is the same on both islands (e.g., Surf Scoter, Western Sandpiper); for some it is very different (e.g., Great Blue Heron common on Cortes, rare on Mitlenatch; California Gull abundant on Mitlenatch, rare on Cortes). Among the 19 species that are found only on Cortes, Pied-billed Grebes (*Podilymbus podiceps*) require ponds with some emergent vegetation, and Wood Ducks (*Aix sponsa*) and Hooded Mergansers (*Lophodytes cucullatus*) need wooded sloughs, which are not available on Mitlenatch. Most aquatic species recorded exclusively from Cortes (19 species) or from Mitlenatch (14 species) are very rare or accidental (68% on Cortes, 100% on Mitlenatch); none of them are abundant or common. Mitlenatch has a higher proportion (64%) of very rare and accidental aquatic species than does Cortes (37%), as expected from its smaller size and lack of fresh water.

Cortes and Mitlenatch share 83 species of terrestrial birds (Table 1), and, as with aquatic birds, the status of each species may be the same or different on each island (e.g., Chestnut-backed Chickadee and Ruby-crowned Kinglet common on Cortes, accidental and very rare, respectively, on Mitlenatch). Among the 25 species lacking from Mitlenatch, 11 are common to uncommon and presumably breed on Cortes. One of these, the Blue Grouse (*Dendragapus obscurus*), is not able to fly to Mitlenatch. The Brown Creeper (*Certhia americana*) and three resident woodpeckers, the Hairy (*Picoides villosus*) and Pileated (*Dryocopus pileatus*), and Red-breasted Sapsucker (*Sphyrapicus ruber*), could reach Mitlenatch, as do other resident woodpeckers (Downy and Northern Flicker, both accidental on Mitlenatch), and may be expected to do so accidentally in the future. Woodpeckers in general may avoid flying over large bodies of water. The six remaining uncommon species on Cortes, the Band-tailed Pigeon (*Columba fasciata*), Barred Owl (*Strix varia*), Olive-sided Flycatcher (*Contopus borealis*), Steller's Jay (*Cyanocitta stelleri*), House Wren (*Troglodytes aedon*) and

THE STATUS OF SPRING AND SUMMER BIRDS ON MITLENATCH ISLAND

Hutton's Vireo (*Vireo huttoni*) were not seen on Mitlenatch during my study. Three times as many terrestrial birds on Mitlenatch (82%) are accidentals or very rare (Table 1) than on Cortes (26%).

One advantage for an observer on Mitlenatch is good visibility so that even birds that visit the island rarely nevertheless have a good chance of being sighted. For many birds Mitlenatch would seem to be on the way to nowhere, and most, particularly passerines, may well arrive by accident. If by accident they end up near Mitlenatch, the island probably serves as a magnet, particularly for migrating passerines during rainy nights with strong winds, during which sudden influxes of species, particularly passerines, are common. Those that are stranded on the island apparently find it hard to make a living on it and soon leave or are still programmed to migrate. Of 58 species of presumed breeding passerines on Cortes, 52 have been seen on Mitlenatch as well. Yet only 6 of the 52 species breed there every year, including two species of swallow, obviously not restricted by habitat, and two additional species are known to have bred there once during this study.

ACKNOWLEDGMENTS

I thank E. Basalyga, S. Emms, M. Guillemette, J. Hagen, B. Jobin, R. Malcolm, P. McConnell, K. Sars, and J. Wiczorek for their assistance in the field. I thank W. Campbell for information on the breeding of Double-crested Cormorants and Rhinoceros Auklets. The British Columbia Department of Lands, Parks and Housing gave permission for my research on Mitlenatch Island, M. Dueck and M. Rody gave much appreciated logistical support, and the Natural Sciences and Engineering Research Council of Canada supported my research of which this paper is a spin-off. I thank W. Campbell and P. Unitt for their comments and suggestions.

LITERATURE CITED

- Brooke, R. C., Verbeek, N. A. M., and Kirbyson, J. W. 1983. An annotated vascular flora of Mitlenatch Island, British Columbia. *Syesis* 16:23-38.
- Campbell, R. W., Dawe, N. K., McTaggart-Cowan, I., Cooper, J. M., Kaiser G. W., and McNall, M. C. E. 1990. *The Birds of British Columbia*, vol. II. Mitchell Press, Vancouver.
- Campbell, R. W., Dawe, N. K., McTaggart-Cowan, I., Cooper, J. M., Kaiser G. W., McNall, M. C. E., and Smith, G. E. J. 1997. *The Birds of British Columbia*, vol. III. Univ. Br. Columbia Press, Vancouver.
- Emms, S. K., and Morgan, K. E. 1989. The breeding biology and distribution of the Pigeon Guillemot (*Cepphus columba*) in the Strait of Georgia, in *The Ecology and Status of Marine and Shoreline Birds in the Strait of Georgia*, British Columbia (K. Vermeer and R. W. Butler, eds.), pp. 100-106. Spec. Publ. Can. Wildlife Serv., Ottawa.
- Munro, J. A., and Cowan, I. McT. 1947. A review of the bird fauna of British Columbia. *Br. Columbia Prov. Mus. Spec. Publ.* 2.
- Sirk, G. P., Gronau, C. W., and Zwickel, F. C. 1993. *Birds of Cortes and Mitlenatch Islands, British Columbia*. Privately published. Available at Swamp's Edge, Box 36, Whaletown, BC, Canada V0P 1Z0.

Accepted 25 July 1997