

Shorebirds in the Boreal Forest



Shorebirds are not normally the first group of birds that come to mind when one thinks of the boreal forest. For most of us, shorebirds evoke images of coastal mudflats, prairie ponds, or remote arctic tundra. However, there is a group of shorebirds for

which the boreal forest (here defined as the non-alpine parts of BCRs 4,6,7 and 8; see map on page 6) is the heart of their breeding range.

Twelve species of shorebirds are regular members of the boreal forest avifauna including Solitary Sandpiper, Greater and Lesser Yellowlegs, Hudsonian Godwit, and Red-necked Phalarope. The breeding range of five of these species is mostly or completely within the boreal forest. It is interesting to note that these “obligate” boreal forest nesters all tend to be medium- to large-size shorebirds that are among the least known shorebird species on the continent and are difficult to study or monitor.

Perhaps the most mysterious shorebird of the boreal forest is the Solitary Sandpiper. It is a medium-sized species that breeds in patchworks of lakes and ponds, muskeg and bogs in spruce-dominated forest. It has the unusual habit of nesting in trees and using abandoned nests of larger passerines instead of constructing its own. Solitary Sandpipers spend the winter months in Cuba, Mexico, and Central American countries. Because we know so little about the species’ biology or its population size, and because its breeding range is almost entirely within the boreal forest, it is a high priority for future popu-

lation monitoring and life history studies.

Two species of Yellowlegs are widespread inhabitants of boreal forest ecozones. Greater Yellowlegs breed throughout the southern and eastern portions of the boreal forest. Lesser Yellowlegs are more concentrated in western and northern areas. Both winter along the coasts of California and Florida south into Mexico and Central America. Both are large, long-legged shorebirds that breed in muskeg, wet bogs with wooded islands, and coniferous forests that have lots of open areas. They have cryptic nests that are difficult to find, and non-incubating parents are very vocal and engage in mobbing behaviour when humans are still quite far from a nest. They will perch in treetops and alarm-call continuously until an intruder leaves the area, and they will often follow for some distance.

Short-billed Dowitchers have three main breeding ranges—around James Bay and east across boreal Quebec, boreal Saskatchewan and Alberta, and southwestern Yukon and Alaska. This is another boreal species with extremely cryptic nests and

incubation behaviour, and another with a behavioural quirk—female Short-billed Dowitchers rarely participate in raising their young. Breeding habitat ranges from patchworks of stunted forest and tundra at tree-line to string bogs and muskeg. During migration they are commonly confused with the more northerly-breeding Long-billed Dowitcher. In the winter, Short-billed Dowitchers frequent coastlines from the southern United States south to northern South America.

Hudsonian Godwits have a wide geographic range, but within that range known breeding sites are few and far between. Major breeding locations are along the southwest coast of Hudson Bay,

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the west coast of James Bay, the Churchill area, the Mackenzie Delta, and a number of inland locations in Alaska. The paucity of known breeding sites combined with very few known wintering sites in southern South

America mean that this species, like the other boreal shorebirds, could suffer enormous population changes that we would be unable to detect. These large shorebirds are creatures of the forest-tundra transition zone, and breed in areas where open sedge meadows intermix with forest. Like the Yellowlegs, Hudsonian Godwits regularly perch on the tops of conifer trees, and like most of the species listed above, their nests and incubation behaviour are cryptic, making them difficult to study.

The boreal forest shorebirds form an intriguing, if frustrating, suite of species to monitor and study. Recently, a Boreal Forest Committee was formed under the auspices of PRISM (Program for Regional and International Shorebird Monitoring), the Canada-US group responsible for developing and implementing monitoring programs for North American shorebird species. This committee is currently grappling with the issue of monitoring boreal-breeding shorebird populations. Major hurdles include:

► **Lack of baseline information on which to build a monitoring program.** The boreal breeding shorebirds have generally been overlooked in favor of temperate- and arctic-breeding species, which are more prominent in inhabited parts of the continent (either breeding, or during

migration) or are easier to study at some part of their life cycle. Much basic life history information must be obtained to properly devise monitoring protocols.

► **Complex habitats that are difficult to access and survey.** In some ways, the boreal forest is less accessible than the arctic. Boreal habitat varies from forest with discrete ponds to fine-grained bog/swamp/forest/outcrop mixtures to extensive areas of muskeg that are totally inaccessible by foot. The variety of habitats across the boreal forest means that monitoring methods must be assessed as to whether they can be applied broadly across habitat types. There is a low density of roads, particularly in the northern boreal forest, so expensive air access is often necessary.

► **Species have breeding behaviors**

that cause surveyors to over- or underestimate population size. Most of the boreal species exhibit very cryptic behavior during incubation, so that nests are mainly found by accident; or exaggerated alarm-calling and mobbing behaviour that successfully masks the location (sometimes even the general location) of a nest or brood. Some species, such as the Lesser Yellowlegs, engage in both behaviors. It is possible that some species may be most effectively monitored away from the breeding grounds.

There is as little known about boreal breeding shorebirds as about any other group of North American birds, and as a result, we are a long way from devising a conservation strategy with much likelihood of benefiting these birds.

—Vicky Johnston

SHOREBIRDS THAT BREED IN THE BOREAL FOREST

Boreal forest is defined as the non-alpine portions of BCRs 4,6,7 and 8

Species	Scientific Name	Breeding Distribution	Wintering Distribution
Solitary Sandpiper	<i>Tringa solitaria</i>	Boreal forest from Alaska to Labrador; more than 90% of breeding range in boreal BCRs	Southern Texas, Mexico, Cuba, Central America
Greater Yellowlegs	<i>Tringa melanoleuca</i>	Southwest Alaska, central British Columbia to Labrador; more than 80% of breeding range in boreal BCRs	East and west coast of United States, Mexico, Cuba, Central America
Lesser Yellowlegs	<i>Tringa flavipes</i>	Boreal forest from Alaska to east shore of James Bay; virtually all of breeding range in boreal BCRs	Southern coasts of United States, Mexico, Cuba, Central America
Short-billed Dowitcher	<i>Limnodromus griseus</i>	Southeastern Alaska and southwest Yukon; northern Alberta and Saskatchewan; Churchill; James Bay coast east to Labrador; approximately 90% of breeding range in boreal BCRs	Coasts from United States to Cuba and Central America
Hudsonian Godwit	<i>Limosa haemastica</i>	Isolated locations in interior Alaska; Churchill; southwest coast Hudson Bay; west coast James Bay; Mackenzie Delta; more than 80% of breeding range in boreal BCRs	Southern South America
Marbled Godwit	<i>Limosa fedoa</i>	Prairie BCRs; southwest James Bay Coast and James Bay islands; most of breeding range outside of boreal BCRs	Coasts from southern United States to Central America
Wilson's Snipe	<i>Gallinago delicata</i>	Most of Canada south of the tree-line; northern and midwestern United States; approximately 50% of breeding range in boreal BCRs	Central and southern United States, south to northern South America
Spotted Sandpiper	<i>Actitis macularia</i>	Most of North America, south of treeline and south to Texas; approximately 60% of range is in boreal BCRs	California, Texas, Florida south to northern South America
Least Sandpiper	<i>Calidris minutilla</i>	Extreme southern arctic, boreal portions of Alaska, Yukon, Northwest Territories, Newfoundland, northern portion of boreal Quebec; approximately 40% of breeding range in boreal BCRs	Southern United States, Mexico, Central America, northern half of South America
Red-necked Phalarope	<i>Phalaropus lobatus</i>	Southern Arctic, boreal portions of Alaska, Yukon, Northwest Territories, northernmost Saskatchewan, Manitoba, Ontario, northern portions of boreal Quebec and Labrador; approximately 30% of breeding range is in boreal BCRs	Offshore Pacific coast of South America from northern Peru south to central Chile
Semipalmated Plover	<i>Charadrius semipalmatus</i>	Southern arctic, boreal portions of Alaska, Yukon, Northwest Territories, coast Hudson, Ungava, James Bay, Newfoundland; approximately 50% of breeding range in boreal BCRs	Coasts from central United States to northern South America
Upland Sandpiper	<i>Bartramia longicauda</i>	North American prairie, Great Lakes region, taiga cordillera in Northwest Territories and Yukon; majority of range outside of boreal BCRs	South America: Surinam to Argentina