



*Dr. Karen Wiebe,
Researcher*

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*In B.C.'s forests,
migratory birds
depend on riparian
(waterside) habitat.
Let's preserve it!*



Waterside Riches

The shoreline of a lake, pond, stream, or river has moist and fertile soil which supports lush and varied vegetation not found farther from the water. This riparian (waterside) habitat is home to wildlife of all kinds, offering shelter, places to hide from predators, and a variety of foods.

In dry landscapes, riparian habitat stands out in green contrast to its sparser surroundings. But what about the cool, moist forests of northern British Columbia? Do they too have riparian zones?

They do. Biologists estimate that in British Columbia three-quarters or more of all animals use riparian habitat. In forests, the contrast between a riparian zone and its surroundings is less visible than in drier terrain but is also important for wildlife.

Streamside living

A recent study at Takla Lake, near Fort St James, examines how forest birds use riparian habitat in northern British Columbia. The conifers of the upland forest grow right to the banks of streams running into the lake. The forest trees themselves are tallest and thickest near the streams. The riparian vegetation appears around the base of the trees, near the water. It is a dense, deciduous understorey of sitka alder, dogwood, and willow. Except in winter, these thickets are teeming with migrant birds.

Seventy-seven species of birds have been identified in these forests, 46 of which are considered commons. Of the common species, only one in four is a year-round resident. Three-quarters are migratory, flying south in colder weather. Through the seasons, scientists recorded the habitat preferences to see which of them sought, and which avoided, the riparian vegetation.

The bird species can be classed in four groups according to their behaviour:

- **Riparian breeders:** during the summer breeding season, some species build nests in the streamside bushes, concealed from predators and close to insects and nectar. The **Northern Waterthrush**, the **Wilson's Warbler**, and the **Rufous Hummingbird** are riparian nesters.
- **Riparian migrants:** some species, such as the **Varied Thrush** and the **American Robin**, frequent the rich streamside food sources when fattening up for migration, but for breeding they prefer to nest in the upland forest.
- **Generalists:** with a varied diet, some species are able to find food and shelter anywhere in the forest. They neither prefer nor avoid the riparian zone. The **Black-capped Chickadee** is one such versatile year-round resident.
- **Non-riparian:** some species nest and forage in the forest canopy or on the open forest floor and avoid the dense riparian shrubbery where many species compete for food. The **Golden-crowned Kinglet** avoids the riparian zone to nest high in the conifers where it forages for insects. It too is a year-round resident.

As might be expected, the residents have learned not to depend on riparian vegetation, which winter reduces to bare stems. But most migratory and many breeding species do depend on it extensively. Streamside areas are especially well used during migration: they have more species than the surrounding forest during spring and fall, though not in summer or winter.



Additional species

Riparian breeders

American Redstart
Dusky Flycatcher
Fox Sparrow
MacGillivray's Warbler
Song Sparrow
Swainson's Thrush

Riparian migrants

Magnolia Warbler
Ruby-crowned Kinglet
Warbling Vireo

Generalists

Chipping Sparrow
Dark-eyed Junco
Gray Jay
Red-breasted Nuthatch
Red-breasted Sapsucker
Three-toed Woodpecker
Western Tanager
Winter Wren

Non-riparian

Blackpoll Warbler
Pine Siskin
Townsend's Warbler
Yellow-rumped Warbler



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<http://www.pwc.bc.doe.ca/ec/frap/index.html>



Important in all seasons

In all seasons, riparian habitat is more densely filled with birds than the surrounding forest. This may be mainly because insects near the water and seeds from the shrubs provide a rich food source. Without riparian habitat, fewer migratory species would inhabit a local area, and the number of bird species present would drop substantially. In this northern B.C. forest, riparian habitat provides the resources for much of the biodiversity among birds.

When the riparian zones are linear and connected, they may function as corridors – migration highways – through the coniferous forests. Like human travellers, migrating birds need to find stopping places enroute to rest and feed. Situated in lowlands between mountain ranges, riparian corridors may offer the easiest travel routes for birds. If these corridors are fragmented by logging or development, migration through them might be disrupted.



Riparian breeders



Generalists



Riparian migrants



Non-riparian

Preserving forest watersides

Riparian zones in forests are critical for maintaining populations of breeding and migrating birds. In regions remote from settlement, forest riparian habitat may be threatened by careless logging practices and poorly designed access roads. Near towns and cities, forest riparian habitat may be irreversibly eliminated by highways, housing development, and industrial land uses.

Riparian-dependent birds can deal with the loss of a particular waterside zone by moving to another. But as more and more riparian habitat is lost to industry and urban development, the available alternatives become fewer and farther apart. Eventually, if such habitat disappears altogether from a region, so will the birds that rely on it.

Preservation of waterside habitat increasingly depends on careful land use planning. British Columbians should ensure that protection of riparian areas is provided in municipal and forestry plans.