

Shorebirds Depend on a Chain of Healthy Habitats

Habitat Sweet Habitat!

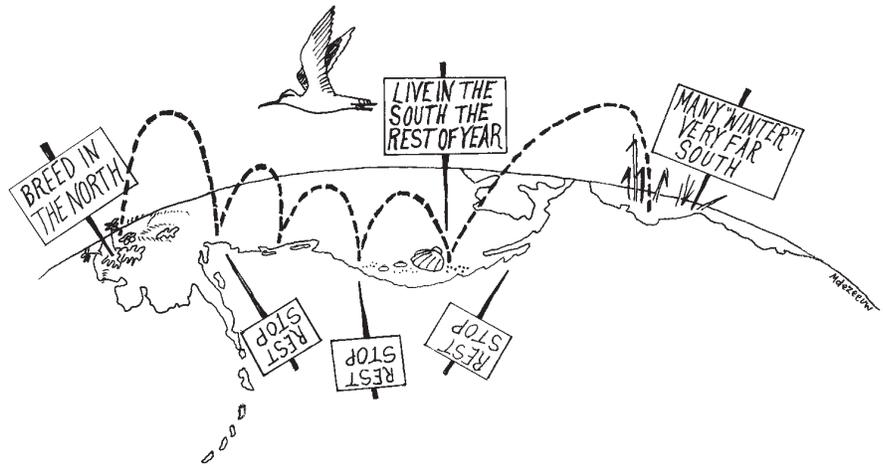
- Migratory shorebirds depend on at least three habitats for their survival: where they breed, where they winter, and migratory stopover sites in between.
- Habitat loss is the leading cause for declining animal populations, including shorebirds!
- White-rumped Sandpipers that breed in northern Canada and Alaska are also found in virtually every Latin American and Caribbean country during the rest of the year.
- Biologists estimate that five to eight million shorebirds rest and refuel at Alaska's Copper River Delta mudflats each spring. This makes it one of the most important stopovers in the world.

Healthy Habitat

Shorebirds, like all wildlife populations, rely on healthy habitat. This means that where they find food, water, and shelter is pollution-free and supports a food web rich in biological diversity. The greater the biodiversity in an area, the more stable and healthy the animal and plant populations will be in order to survive tough times such as drought or disease.

Birds of Open Space

In its most basic definition, shorebird *habitat* is open space. Open, in landscape terms, means without significant canopy cover (plants blocking the sky above). A few shorebird species live or *roost* in deciduous woodlands, but in general they are *adapted* to live on sandy or rocky *shores* and open grassy areas. For adult shorebirds, the *flock* supplies more shelter than the habitat. Individuals in the flock take shelter from wind behind each other. The bird at the end of the



flock, facing the wind, eventually hops to the back of the flock, forcing another to take its turn as windbreak.

Shorebird Habitats Many Shorebirds Rely on Wetlands

Wetlands are areas with soils that hold water and with plants and animals adapted to wet conditions on land. There are many different types of wetlands, including *estuaries, inland mudflats, tundra, river and stream corridors, potholes, playa lakes, salt and freshwater marshes*. Ocean shoreline habitats like *beaches, mudflats, and rocky-intertidal* areas can also be considered wetlands. For a more detailed description of these wetlands, see the Glossary or the Student Readings found in the Appendix.

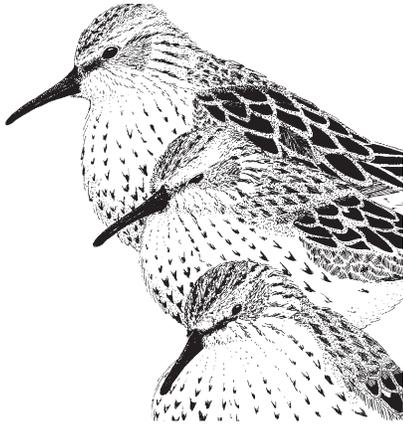
These areas all have in common water that pools on or near the surface and saturates the soil. How long and how wet an area stays depend on the type of soil, plants, and the slope of the land. Some kinds of wetlands dry up each year, but they are still wetlands. Remember: a sponge is still a sponge, even when it is dry. Many shorebirds, like Western Sandpipers, nest on upland tundra in the Arctic, a relatively dry type of habitat formed on *permafrost*.

This frozen ground does not allow rain or melting snow to drain, so pools of water abound.

The shallow water in wetlands provides for plant growth, allows penetration of light and warmth, and provides buoyancy and an abundance of food for young and adult shorebirds. Wetlands are an *invertebrate* soup of snails, worms, insect larvae, crabs, shrimp, and sand fleas (the staple of many shorebird diets).

Some Shorebirds Prefer Uplands

Shorebirds that do not need wetlands are found on grasslands. For example, Buff-breasted Sandpipers and Killdeer have adapted to live in open, short-grass habitats. Unlike most ground-nesting shorebirds, the American Woodcock prefers to nest in trees found near grassland habitat. These birds snatch bugs from the grass and the surface of the soil. Unfortunately, like wetlands, grasslands are being replaced with human development and agriculture. Because there are fewer short-grass prairies, these birds are now trying to use pastures, farm fields, gravel areas, golf courses, school grounds, and lawns for resting, feeding, and nesting. In these areas they face another set of hazards — poisoning



from lawn and agricultural pesticides and disturbance and destruction of nests by machinery and recreational vehicles. With a little awareness and some minor changes, shorebirds and people can share these habitats.

Most Shorebirds Depend on Habitat in Three Geographical Areas

Shorebirds may use three very different habitat types and geographic areas for breeding, resting during migration, and living the majority of the year. For instance, shorebirds that nest in the northern tundra may migrate

inland, stopping near ponds and spending the winter on southern *mudflats*.

During the *breeding season*, migratory shorebirds spend only two months each year nesting and raising their young in inland tundra, grassland, or on ocean, lake, or river beaches. During the *nonbreeding season*, they live in more southern areas at mudflats, estuaries, and beaches.

During migration, shorebirds depend on areas where they can stop to rest and feed. Shorebirds follow different paths during spring and fall migration, increasing the number of different places they may use throughout their journeys. These *stopover sites* tend to be small beaches, prairie potholes, inland lakes, and estuaries, areas where a stream or river drains into the sea. Some shorebird species stop in agricultural fields, short-grass prairies, and other open, dry areas. Stopover sites might be small but are full of food and support a concentration of thousands, or even millions, of shorebirds every spring and fall.

Shorebirds Use Traditional Sites

The migratory paths and stopover sites used by shorebirds year after year are considered traditional shorebird sites. When a large flock congregates at one stopover or nesting site, the entire group is extremely vulnerable. A storm, oil spill, or some other threat can mean disaster! Shorebirds do not have the time or energy to search for an alternative site. Each shorebird species has evolved over many generations into a design best suited to its habitat type. Good land stewardship by landowners, managers, and the public can help ensure that healthy habitats are available to migratory birds throughout their life cycles.

Explore the World with Shorebirds!

To teach your students about the habitats shorebirds need, try these classroom activities found in the guide:

- [Shorebird Food Webs](#)
- [Can't We Share?](#)
- [Wetland Metaphors](#)
- [Match the Habitat Cards](#)
- [Types of Habitat](#)
- [Map Your Habitats](#)
- [When the Grass Was Greener](#)

Some Shorebirds and the Habitats They Use

<i>Sandy Beach</i>	<i>Rocky-intertidal</i>	<i>Tundra</i>
Wilson's Plover Sanderlings American Oystercatcher Long-billed Curlew Dunlin Red Knot	Ruddy Turnstone Black Oystercatcher	Ruddy Turnstone Buff-breasted Sandpiper American Golden-Plover Red Knot White-rumped Sandpiper
<i>Saltwater Marsh</i>	<i>Freshwater Marsh</i>	<i>Grassland</i>
Wilson's Phalarope Greater Yellowlegs Dunlin Short-billed Dowitcher Killdeer	Greater Yellowlegs Dunlin Short-billed Dowitcher Killdeer White-rumped Sandpiper	Buff-breasted Sandpiper American Golden-Plover Long-billed Curlew Mountain Plover Killdeer

**See Appendix for full list*