List of Shorebird Profiles

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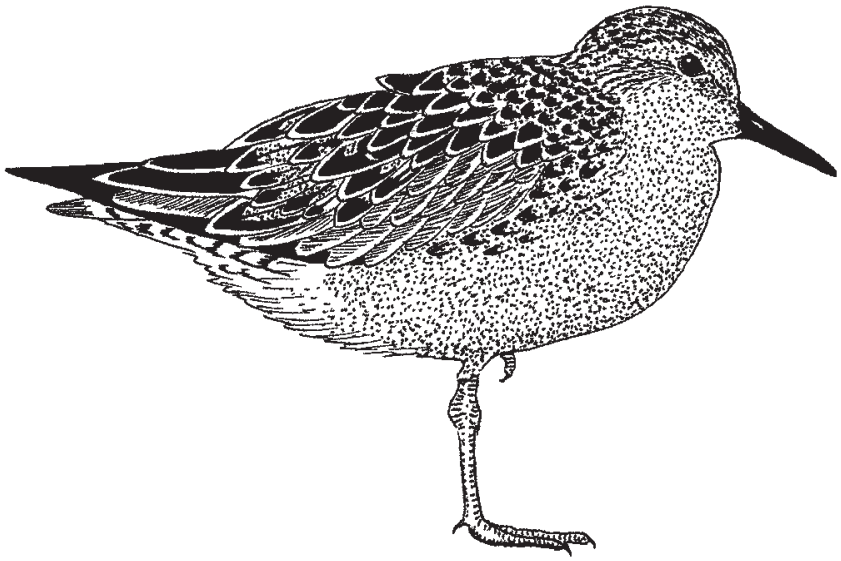
Red Knot

(Calidris canutus)



Description
The Red Knot is a chunky, medium sized shorebird that measures about 10 inches from bill to tail. When in its breeding plumage, the edges of its head and the underside of its neck and belly are orangish. The bird's upper body is streaked a dark brown. It has a brownish gray tail and yellow green legs and feet.

In the winter, the Red Knot carries a plain, grayish plumage that has very few distinctive features.

Call
Its call is a low, two-note whistle that sometimes includes a churring "knot" sound that is what inspired its name. Generally, they are quiet fliers except for an occasional soft "kuret".

Non-breeding Habitat
Red Knots are mostly marine shorebirds in the nonbreeding season. They probe the mud and sand for mollusks, especially bivalves (small marine animals with a two-part shell) which they swallow whole!

Breeding
Red Knots breed from June through August in the high Arctic. Long days and massive numbers of insect foods make the arctic areas of Canada an ideal spot for raising their young. Males set up the territories and begin courtship display flights. After selecting a female, the pair mates and then quickly builds a nest from lichen, moss, and willow leaves. Red Knots usually nest on high, dry ground. It takes the female about 6 days to lay four camouflaged eggs that together weigh more than half her own body weight!

Both parents take care of the chicks during their first few days of life. Then the female leaves the male behind to continue caring for the brood. She prepares for her long migration flight south to Florida or South America.

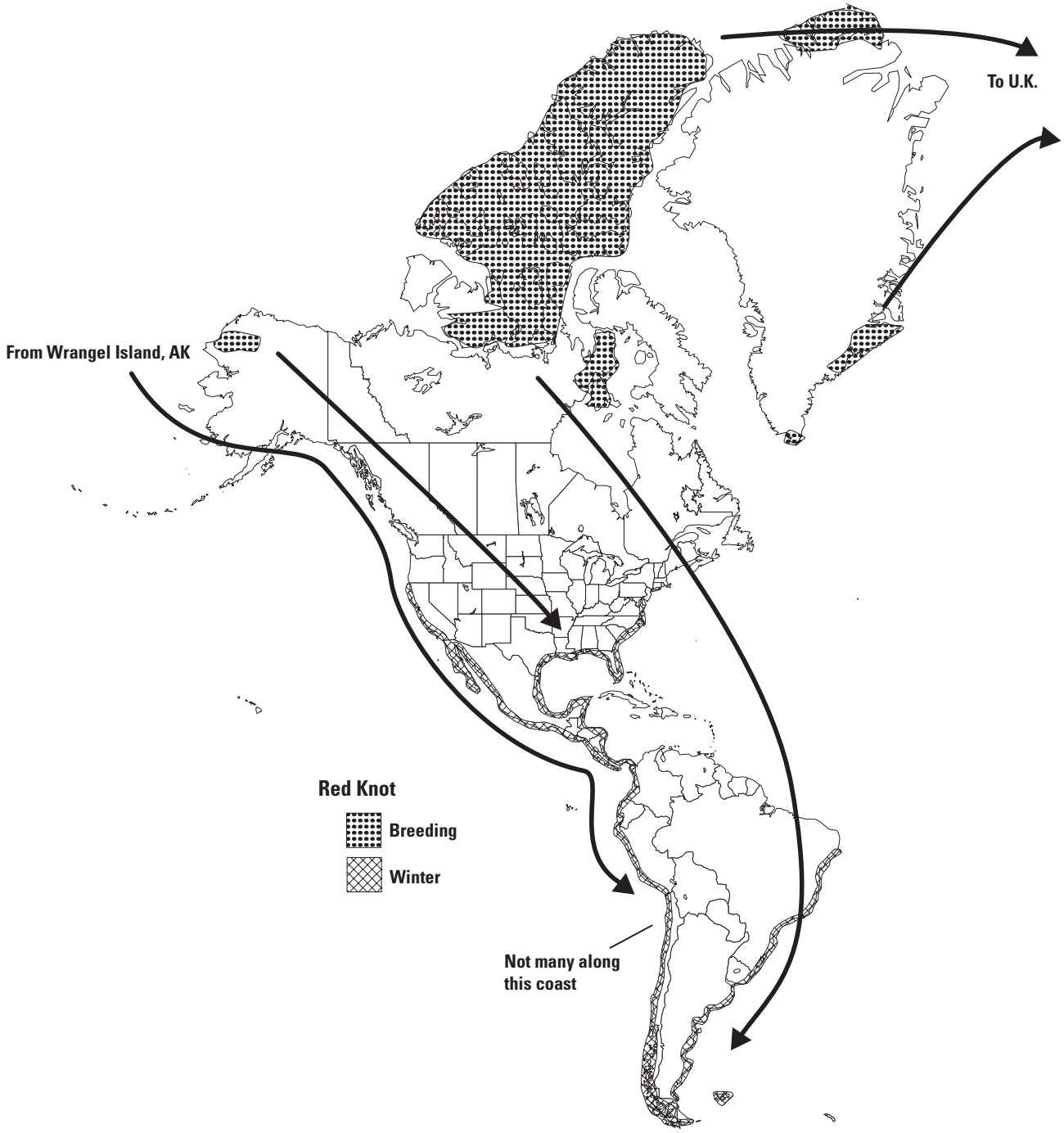
Migration
Juvenile Red Knots begin their fall migration about two to three weeks after the adults have left. Many fly to rich stopover sites found along the Atlantic coast. Here they stop to feed on tiny blue mussels, worms, and other invertebrates. After resting and fattening up, many Red Knots continue over the Atlantic to South America finally stopping in Tierra del Fuego- the southern tip of Argentina. They stay here, in an area pockmarked with tidal pools, for several months dinning on local mussels.

In March and April, the Red Knots moves again, this time up the coast of South America toward their northern breeding grounds. When they arrive on the U.S. Atlantic Coast many Red Knots stop along the Delaware Bay to feast on horseshoe crab eggs. In only two weeks they double their bodyweight! This critical stopover site is what fuels the rest of their flight to the Arctic, a miraculous 20,000-mile round trip!

Today's Population
The Red Knot was once very abundant in North America. Today, scientists estimate that approximately 145,000 of these birds remain along the Atlantic flyway. About half of them stop at Delaware Bay.

Potential Threats to Red Knots
Delaware Bay also happens to be the second largest petrochemical port in the eastern U.S. A major oil spill could seriously affect these birds and their food supply. Also, some local fishermen use horseshoe crabs, the Red Knot's main food source, as bait.

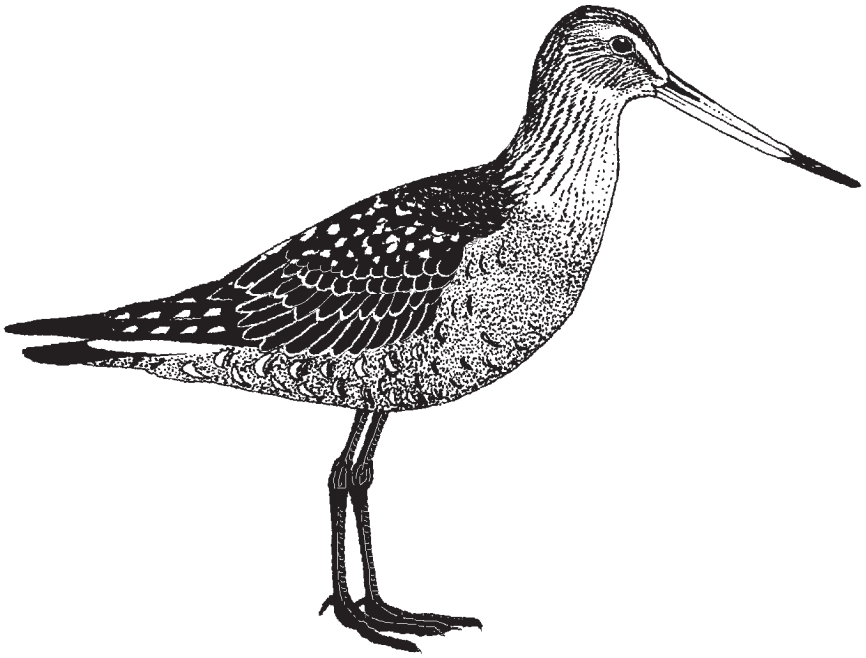
Something to Think About….
How might fisherman and shorebirds share the important Delaware Bay horseshoe crabs so there is enough for both?



Note: Arrows indicate general migration routes for both spring and fall.

Hudsonian Godwit

(Limosa haemestica)



Description
The Hudsonian Godwit is a large crow-sized bird with a long, straight or slightly upturned bill. It has a dark tail with a white patch on top. In breeding plumage, the male has a chestnut colored breast and the base of its bill is orange.

Behavior
These birds are gregarious and often seen in large flocks. They are also swift and powerful flyers.

Call
The call of the Hudsonian Godwit is a common "kaweep kaweep".

Non-breeding Habitat
Hudsonian Godwits use a variety of inland and coastal wetlands including estuaries, mudflats, salt marshes, and sandy shores during the winter and migration. They feed mostly on invertebrates.

Breeding
The adults nest from late May through July in lowland marshes or near northern tundra coasts or rivers. Males make noisy flights to claim a territory. After mating, both the male and female incubate the four eggs. The female typically sits on the nest during the day and the male at night. The nest is a depression about 5 inches across under the edge of a dwarf birch tree that usually sits on the dry top of a sedge marsh. When the adults no longer need to guard their chicks, the young become secretive for about ten days, then reappear on nearby shorelines.

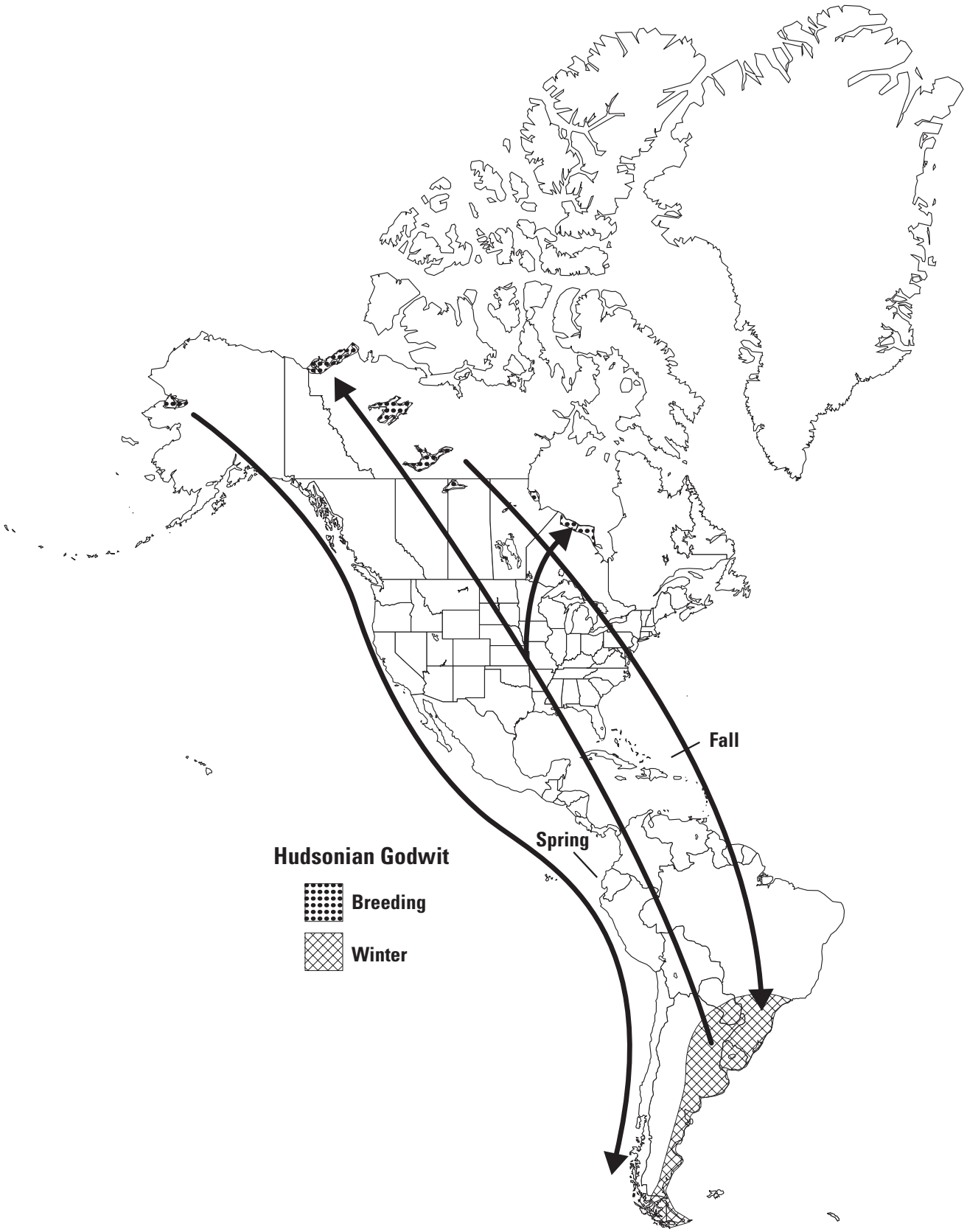
Migration
Most Hudsonian Godwits have an elliptical migration meaning that they use one migration route in the fall and another to return to their breeding grounds in the spring.
After breeding in the low Arctic, Hudsonian Godwits gathers at Hudson Bay and James Bay in Canada. The young birds make this trip when they are only ten weeks old! The Hudsonian Godwits then continue southeast, passing over the coast of the US, the Atlantic Ocean, the east coast of South America and finally to the tapering coast of Argentina and Chile. Here, they spend from October to April eating worms, mollusks, and insects along estuaries, grasslands and rice fields. Their spring migration is more westerly, using freshwater wetlands along the Central Flyway.

Since most people rarely see Hudsonian Godwits, they were once thought to be endangered. They hide nests far from people, in marshes and tundra. In addition, they only stop once or twice during the trip, making their migration truly amazing!

Today's Population
Scientists once thought that the Hudsonian Godwit was a rare shorebird. Today, about 11,000 birds use the Atlantic flyway, only one fifth of the total North American population. More than 10,000 Hudsonian Godwits pass through James Bay, Canada in late summer on their way south. Over 7,000 of these shorebirds spend their winter in Bahia, San Sebastian and Tierra Del Fuego in Argentina.

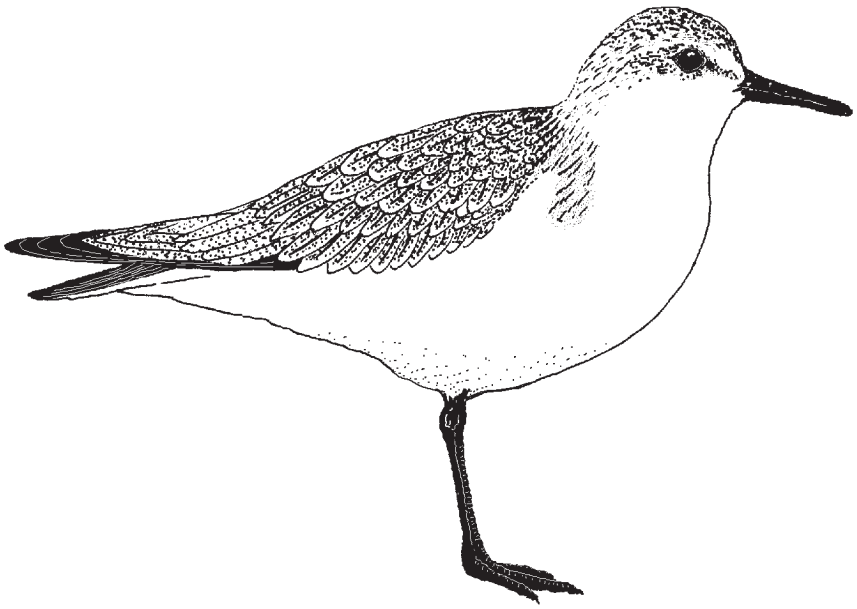
Threats to Hudsonian Godwits
Scientists aren't sure if agricultural chemicals affect Hudsonian Godwits. It is possible that many of these shorebirds could be affected by large oil production or shipping accidents when they concentrate at the tip of South America.

Something to Think About…
What is the advantage of elliptical migration (using one migration route in the spring and a different one in the fall)?


Fall
Spring
Hudsonian Godwit
Breeding
Winter

Sanderling

(Calidris alba)



Description
The Sanderling is a small sandpiper easily identified by the large amount of white on its feathers. In winter plumage Sanderlings are one of the palest sandpipers around and have a light gray back that blends into their white belly.

During breeding, both males and females are bright rusty-red on their backs and breasts. They have a white belly, and black legs and bill.

Behavior
A quick way to identify Sanderlings is watching their feeding behavior. At first glance they seem to be chasing the waves. They are really pecking for small food in the beach sand as the waves recede back from the ocean.

Call
Their flight calls are a "twick" or "kip", and sometimes a short trill. Their song is a "churring" delivered in bursts during courtship.

Non-breeding Habitat
Unlike other small sandpipers, the Sanderling is most commonly seen at beaches in the winter and during migration. Here it gets its nickname "wave chaser" from the way it runs after the ocean waves pecking for tiny invertebrates left behind on the surface of the sand.

Breeding
Sanderlings nest in the arctic. Here they eat the buds of dwarf trees and moss, and then later mosquitoes. Males are the ones to set up territories and begin courtship displays. After mating, the pair builds a nest of dried willow leaves in an open area. The female lays a clutch of 3-4 eggs for the male to protect and later raise.

In this species, the female may then lay a second clutch of eggs with the same male, termed double clutching. She takes care of this second family herself. Sanderlings are also polyandrous meaning that the female may form another pair bond with a new mate and lay more eggs in his nest.

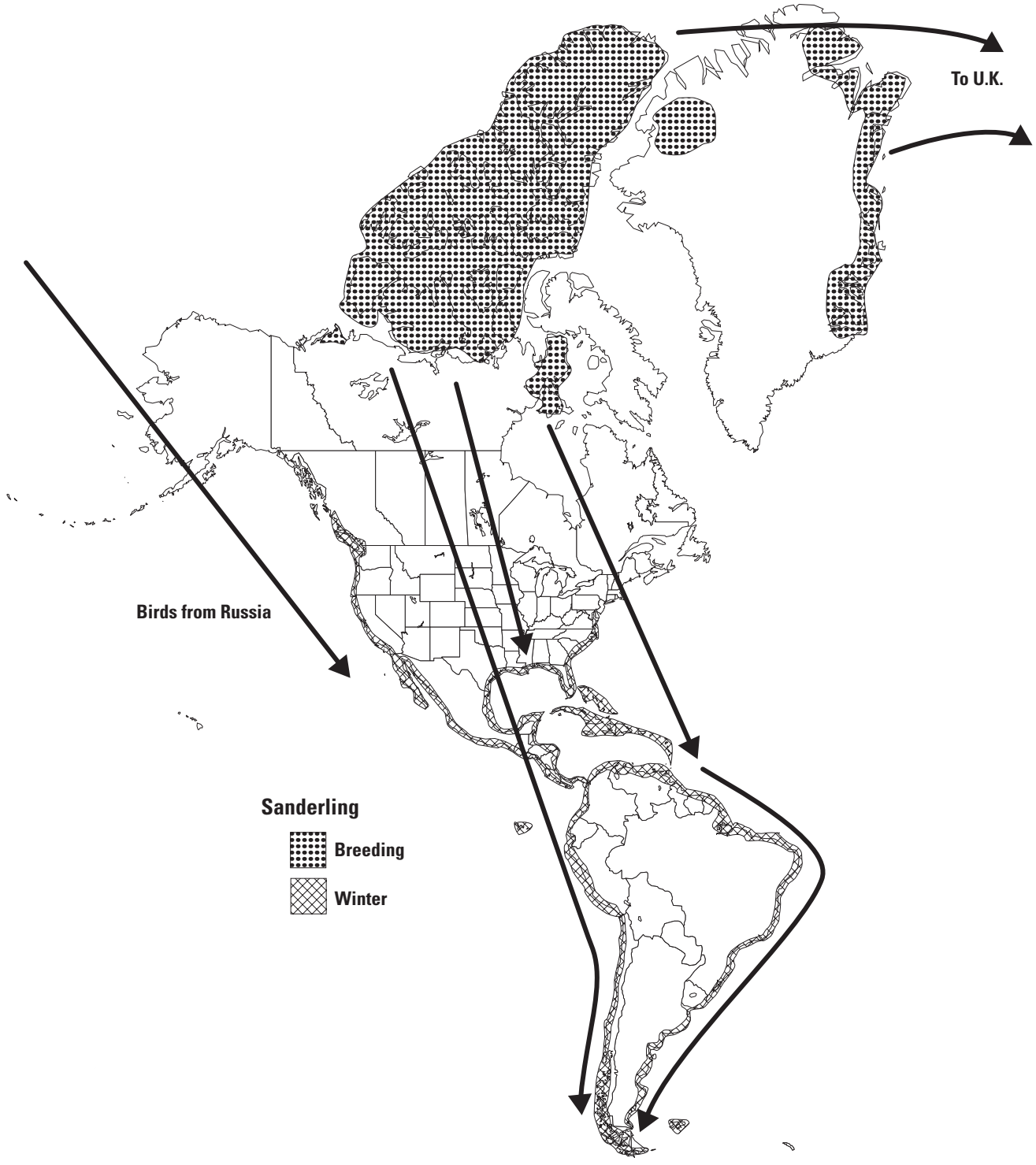
Migration
The Sanderling is one of the most widespread of all shorebirds. It is most commonly found in huge numbers on the east coast in Delaware Bay feeding with knots and turnstones. It also has a long migration route. Some of the Canadian nesters migrate south down both the Pacific and Atlantic Coasts as far as Tierra del Fuego in Argentina. Others choose to stay as far north as Alaska or Massachusetts during the North American winter. They return to their breeding grounds in late March and stay until late May.

Large flocks of Sanderlings fly between staging grounds to "refuel" their bodies by feeding on high-energy invertebrates. Some of non-breeding individuals remain south all year.

Today's Population
Currently, the population of Sanderlings is estimated to be about 300,000 birds. But, like many other species of shorebirds, their numbers are declining. Based on population surveys, scientists believe that the Sanderling population along the Atlantic Flyway has shrunk a great deal in the past three decades.

Threats to Sanderlings
What is effecting the population of Sanderlings? The loss of habitat and food is a serious problem. They winter along beaches where \chances of conflicts with people are high. Human disturbances like boats, ATV's, cars, and even dog walking can scare nervous birds off their resting and feeding grounds. This causes them to waste valuable energy and time feeding. If the disturbance is great enough, some Sanderlings may not return to their feeding and resting grounds at all.

Something to Think About…
Polyandry, where a female forms pair-bonds with two or more males in one summer, and double clutching, are not common breeding traits among birds in general. What might be the advantage of this mating system to shorebirds?



Note: Arrows indicate general migration routes for both spring and fall.

Ruddy Turnstone

(Arenaria interpres)

Description
The Ruddy Turnstone is a stocky, medium-sized shorebird. Its striking breeding plumage has patterns of black, white and rust on its back. It also has a black bib, white belly, and short pinkish-orange colored legs. You can still see its black bib when it is carrying its duller winter plumage.

Behavior
Observing the behavior of the Ruddy Turnstone is key to identifying it in the field. This bird gets its name from the way it uses its strong neck and bill to flick seaweed sideways or to turn over small stones looking for food. In sandy areas, this bird also digs holes in search of buried prey like the horseshoe crab eggs on Delaware Bay.

Call
The Ruddy Turnstone has a distinctive call that sounds like a low-pitched rattle.

Non-breeding Habitat
The Ruddy Turnstone can be found on coasts south of their Arctic breeding grounds throughout the world. They also inhabit rocky shorelines and sandy and muddy areas. Here they eat mostly small crustaceans.

Breeding
These shorebirds nest on the drier ridges of coastal tundra that stays moist and provides food until late summer. Ruddy Turnstones first eat the plants that come up early in the season, before most animal foods are available. They switch to invertebrates as they slowly appear. Turnstones arrive on their breeding grounds in late May or early June.

Territorial behavior includes courtship flights and calls that begin from the time they form pair bonds until their chicks hatch. Turnstones will perch on rock outcrops to let females know that they are ready to mate. Pairing is completed by early to mid June.

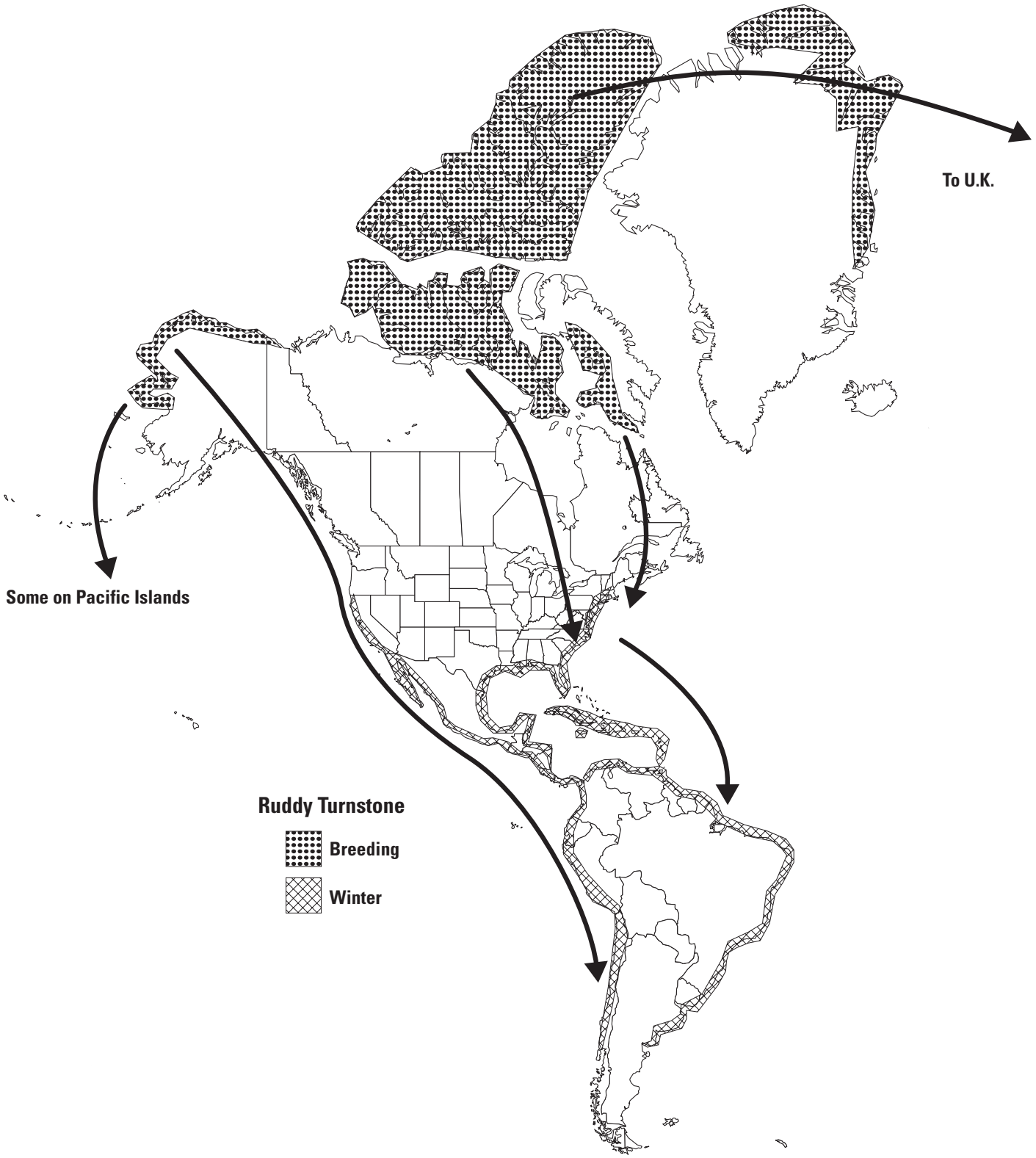
Turnstones make their nests in wet areas that support small mounds of plant material. They don't mind the nests of other birds being close by. Both male and female help keep the eggs warm. Soon after hatching, the female leaves the male to care for the chicks.

Migration
Turnstones use both the Atlantic and Pacific Flyways to reach Mexican, Panamanian, and South American nonbreeding grounds. Flocks fly in tight groups when moving locally, but in loose lines when migrating long distances.

Today's Population
Scientists estimate through bird population surveys, that there are about 138,000 Ruddy Turnstones along the Atlantic Flyway. Like other shorebirds, the Turnstone population is also declining.

Threats to Ruddy Turnstones
The reasons for the decline of Ruddy Turnstones are the same as for many other types of shorebirds: habitat loss and human disturbances.

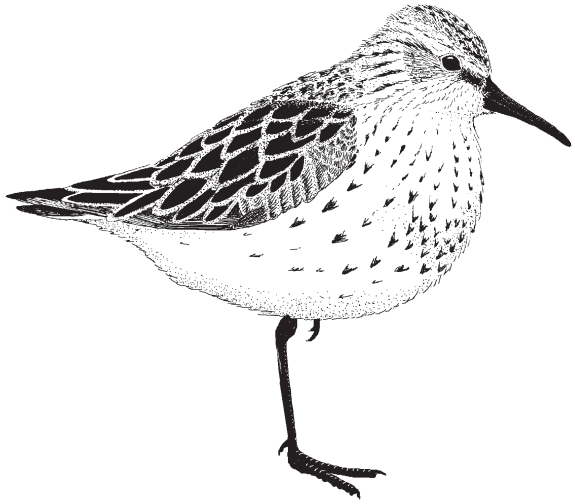
Something to Think About…
What other shorebirds have been named after a feeding behavior, the sound of their call, or a physical trait?



Note: Arrows indicate general migration routes for both spring and fall.

Western Sandpiper

(Calidris mauri)



Description
The Western Sandpiper is a very small shorebird, only 6 ½ inches from the tip of its bill to the tip of its tail. It has speckled rust and tan colors on its head and shoulders. Its belly is an off-white to light buff-color. You can see dark, arrow-shaped spots on the breast and sides. This coloration helps the little Western Sandpiper blend in very well with its background. Its toes are slightly webbed and its legs are black. The slender, black bill droops a little at the tip. Males and females look alike, but females are heavier with longer bills.

Behavior
Western Sandpipers are found in large flocks. They walk near the water's edge, constantly probing in the mud for tiny clams, worms, and sand fleas.

Call
This little shorebirds lets out a high-pitched, raspy "jeet".

Non-breeding Habitat
Western Sandpipers are found mostly along the coast from California to Peru. They are also sometimes found in inland wetlands.

Breeding
The male Western Sandpiper usually arrives a few days before the female to breed in the tundra in mid-to late May. This vast, open, treeless habitat of the far north is covered with a layer of permafrost. This frozen ground doesn't allow for good drainage so the area is dotted with pools of water and small ponds.

The male selects a nesting site on the tundra and then defends it against other males. When the female arrives, she helps the male build a shallow, grassy nest. Western Sandpipers have very small territories and build their nests close together on small, grassy mounds. The nest is often hidden beneath a low shrub.

The female lays four spotted eggs and both parents take turns incubating them. The chicks hatch after 21 days. They are covered with soft, speckled down and begin searching for food right away. Like most other shorebirds that nest on the tundra, Western Sandpipers feed on large numbers of insects that hatch there each summer.

The Western Sandpiper has to watch for predators like foxes, weasels, and gulls. The parent will sometimes pretend to have a broken wing and drag itself away from the nest to distract a predator. This tactic works well because if a predator attacks the parents they can simply fly away. Another defense the chicks have is their instinct to "freeze", sitting perfectly still, when a parent gives an alarm call.

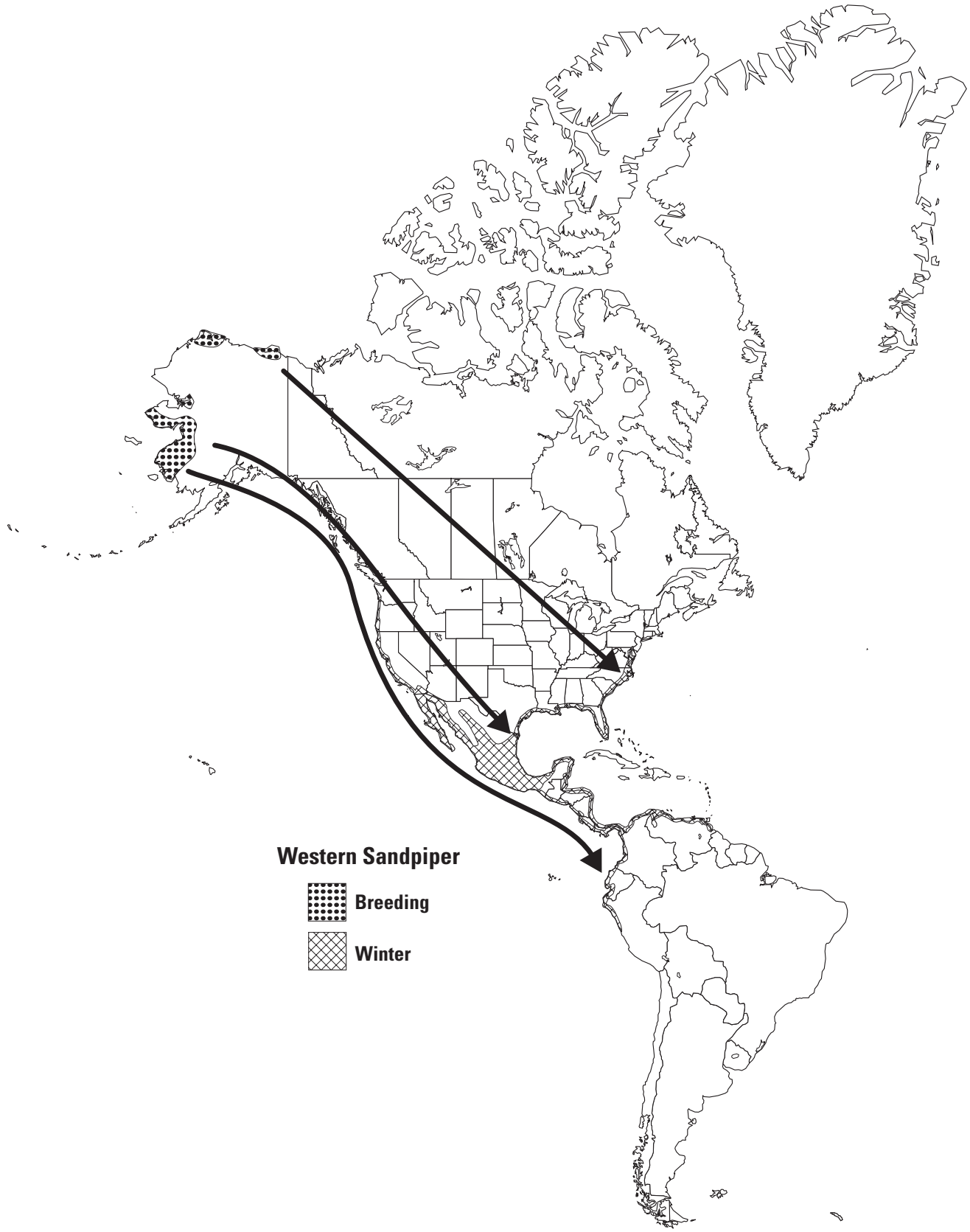
At first, both parents tend the young birds. A few days before the chicks are ready to fly the female leaves the male to stay with the chicks until they fledge, at about 19 days old.

Migration
Early in April, they form huge flocks and begin the long migration to breeding grounds in the far north. Most use the Pacific Flyway and travel to Northwestern Alaska. Some even fly across the Bering Sea to the eastern tip of Russia!
Adult birds gather to begin the long flight south by the end of July. Young birds stay in the nesting area, gorging themselves on insects and exercising their young flight muscles. In mid-August, they too form large flocks and fly south for the winter.

Today's Population
Western Sandpipers are considered common and abundant shorebirds. About 3 ½ million Western Sandpipers are found globally. Biologists think about 80% of these shorebirds pass through the Copper River Delta in Alaska during spring migrations along the Pacific Flyway. Much smaller numbers of Western Sandpipers also use the Central Flyway.

Threats to Western Sandpipers
Western Sandpipers rely on wetlands for feeding areas. Slowly, wetlands are being replaced by farm lands and urban sprawl. Some towns in the United States and Canada have passed laws to protect wetlands from destruction.

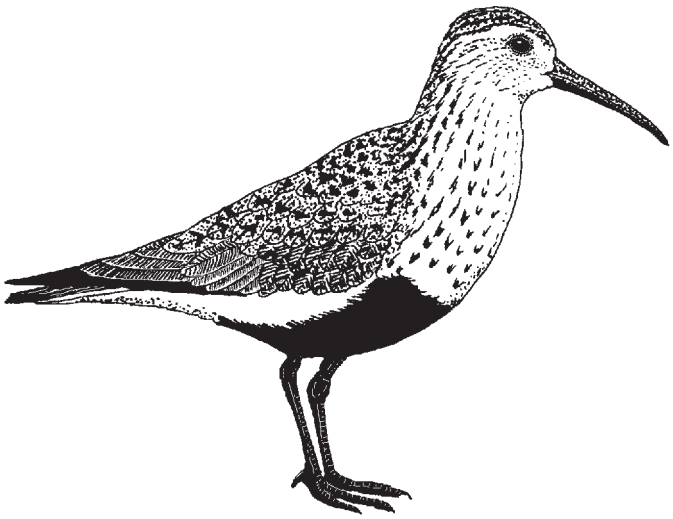
Something to Think About…
What are people, agencies, or local organizations in your area doing to help preserve wetlands?



Note: Arrows indicate general migration routes for both spring and fall.

Dunlin

(Calidris alpina)



Description
The Dunlin is smaller than a Robin – about 8 inches from the tip of its bill to the tip of its tail. The Dunlin has reddish speckled back feathers and a light-colored breast with dark streaks. It used to be called the red-backed sandpiper. It has black legs and a black bill that droops a little at the end.

The most distinctive trait of the Dunlin's plumage is seen during the summer breeding season, when it is the only shorebird, besides the Rock Sandpiper, with a black belly patch. Even in a giant flock of peeps (small shorebirds), a few of those tar-black patches will give away the presence of Dunlins!

Behavior
Dunlins are amazing to watch. They fly in large flocks with each bird flying at the same speed and in the same direction. In almost an instant they can all turn in unison and make you wonder how they do it. During migration and winter, Dunlins feed near the water's edge by probing with swift movements in the soft mud for tiny clams, worms, insect larvae and shrimp-like animals.

Call
Its call, heard during migration, is a harsh, slurred "kree."

Non-breeding Habitat
Dunlins prefer muddy estuaries but are sometimes seen feeding on sandy coasts. In the winter, Dunlins live along the shore in warm climates from British Columbia to Mexico and in the east north to Massachusetts and New Jersey. Dunlins that breed in Alaska will fly to Japan China and Korea. Some will even stay in Alaska for the winter. They are not found south of the equator.

Breeding
Dunlins have a circumpolar breeding distribution, meaning that they are found throughout the world in northern arctic areas. In April and May, they arrive at their breeding grounds of northern Alaska, Canada, Scandinavia, and Russia. The male sings in the air as a courtship display designed to attract a female and claim a nesting territory. The pair then makes a shallow, very hard to see nest that is lined with grass or willow leaves. The female lays four eggs that are greenish with green and brown splotches.

The parents take turns incubating the eggs for 22 days. While one parent is sitting on the nest, the other feeds nearby on spiders, beetles, earthworms, and adult and larval flies. After the chicks hatch, they grow very fast. They fledge in about 20 days. Adult birds leave the young and begin flying south in to mid-August.

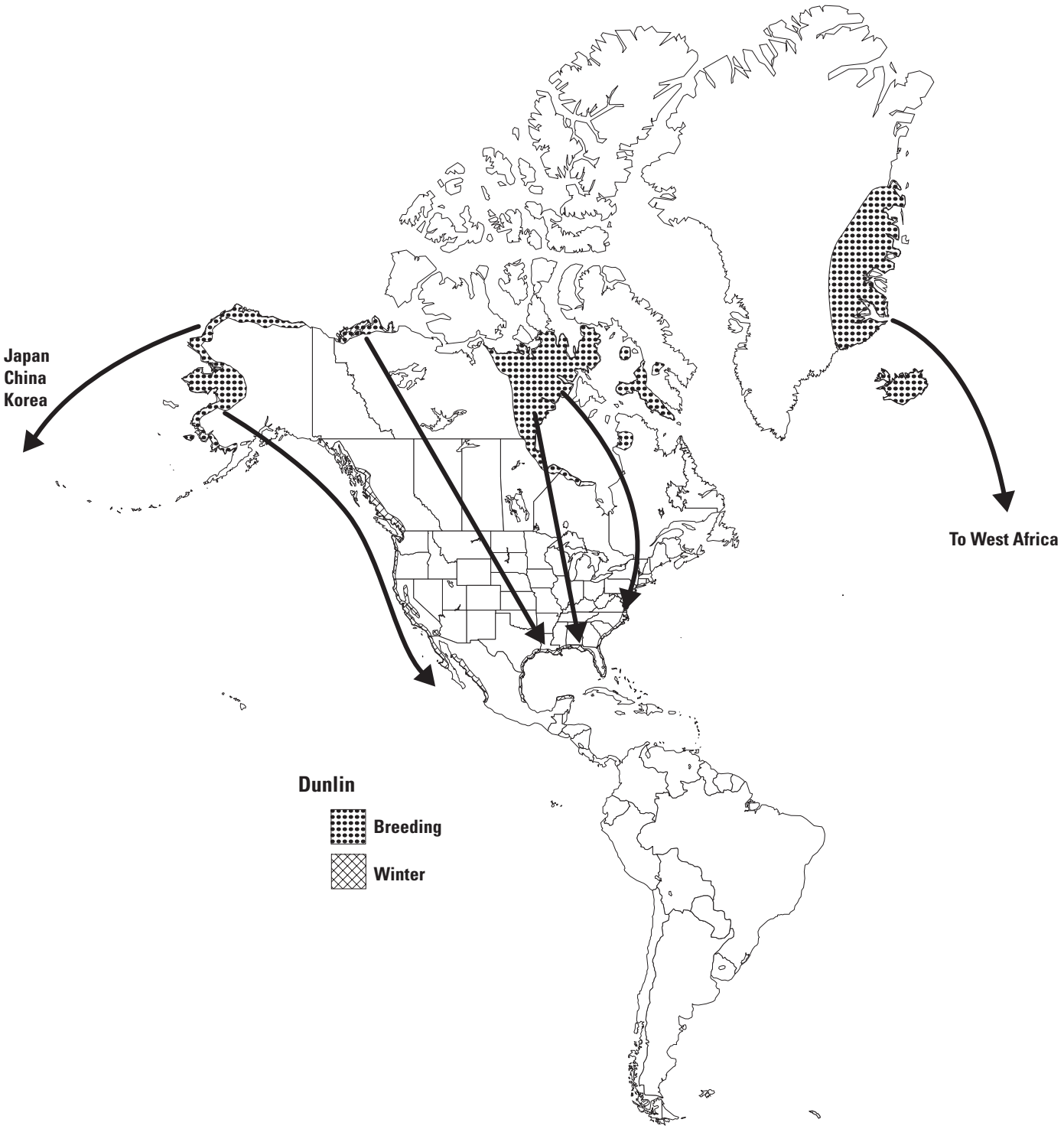
Migration
Dunlins use all three migration routes within the United States, which keeps the west coast, central, and eastern populations separated.

Dunlins begin their spring migration north, first staging in large flocks, in late March or early April. They begin their fall migration much later than other small sandpipers starting in mid- August. Some Dunlins stay in Alaska until October, a few will stay all winter. As they migrate, Dunlins stop at wetlands, especially coastal or estuarine mudflats, to feed.

Today's Population
Of the 3.1 million Dunlins found around the world, about 1.5 million are found in the United States. The largest populations of migrating Dunlins use the Pacific and Atlantic Flyways.

Threats to Dunlins
Like other shorebirds, Dunlins depend on clean, healthy wetlands for survival. Pollution is killing the life in some wetlands. Oil spills kill the tiny animals that shorebirds need for food. If oil covers a bird's feathers, it can't keep warm. Birds that accidentally eat oil may be poisoned, produce fewer eggs, or be generally less healthy which makes migration even harder for them.

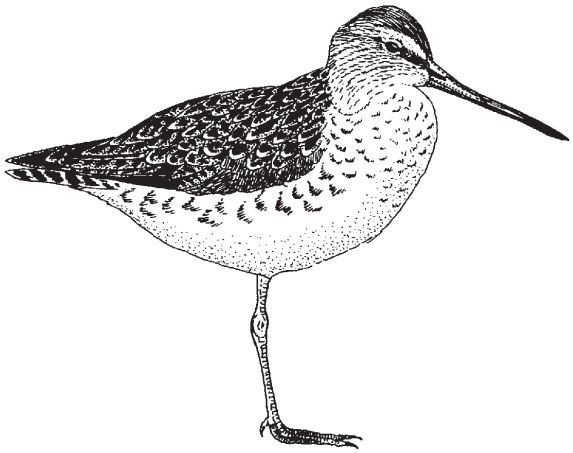
Something to Think About…
What is being done in your area to protect your wetlands from oil spills?



Note: Arrows indicate general migration routes for both spring and fall.

Dowitchers

(Limnodromus spp.)



Description
Dowitchers are beautiful shorebirds. Overall they appear rusty-colored, with darkish, brown spotted backs and a rusty-brown breast and belly. They are much larger than Western Sandpipers and Dunlins – closer to the size of a Robin. They have long, black, snipe-like bills and green legs.

There are two species of Dowitchers found in North America, the Long-billed Dowitcher and the Short-billed Dowitcher. The one physical difference between them is the length of their bill. The Long-billed Dowitcher has a bill only slightly longer and heavier than that of the Short-billed Dowitcher. The best way to tell them apart is by their calls. During migration these shorebirds feed on worms, clams, snails, and sand fleas.

Behavior
Dowitchers feed using their bills in an up and down motion of the head like a sewing machine. They often dip their entire heads into the water.

Call
The calls of the Long-billed and the Short-billed Dowitchers are quite different. The Short-billed Dowitcher makes a soft "tu-tu-tu" during migration. The Long-billed Dowitcher, on the otherhand, makes a high-pitched "keek". Their songs are different too. Although true songs of birds are heard only during their breeding season and on their breeding grounds, you might hear the song of the Short-billed Dowitcher during any time of the year.

Non-breeding Habitat
These shorebirds are essentially coastal in the winter. You will often find large flocks feeding on intertidal mudflats. Long-billled dowitchers will winter on all southern United States coasts and throughout Mexico. Short-billed dowitchers will winter along southern United States and northern South American coasts.

Breeding
Dowitchers nest in muskeg, tundra, and wooded marshes along the Alaskan and Russian coast or inland Canada. The male arrives at the breeding grounds first and chooses a nesting site. He claims his territory and courts the female by hovering over the nesting site and singing.

The female helps the male build a nest on the ground with grass and soft moss. Long-billed Dowitcher nests are often in such wet habitat that the bottom of the nests are wet! The female lays four green eggs that are spotted with a buff color. For 21 days, the parents take turns incubating the eggs. The female spends a very short time in the Arctic! As soon as the chicks hatch from their eggs, she leaves! The male is left to care for the chicks. Like other shorebirds, Dowitcher chicks can walk when they hatch, but they cannot fly for several weeks.

The male protects the chicks from predators and shows them how to look for insects, beetles, and the seeds of water plants. Once they are a few days old, the chicks begin exercising their tiny wing muscles by stretching then out as they walk. Soon they take short, flying steps as they run about looking for food.

As soon as the chicks can fly, the male gathers with other males to begin the flight south. The young birds stay behind and practice flying for another week or so. Like most shorebird species, the Dowitcher young are left to find their own way south.

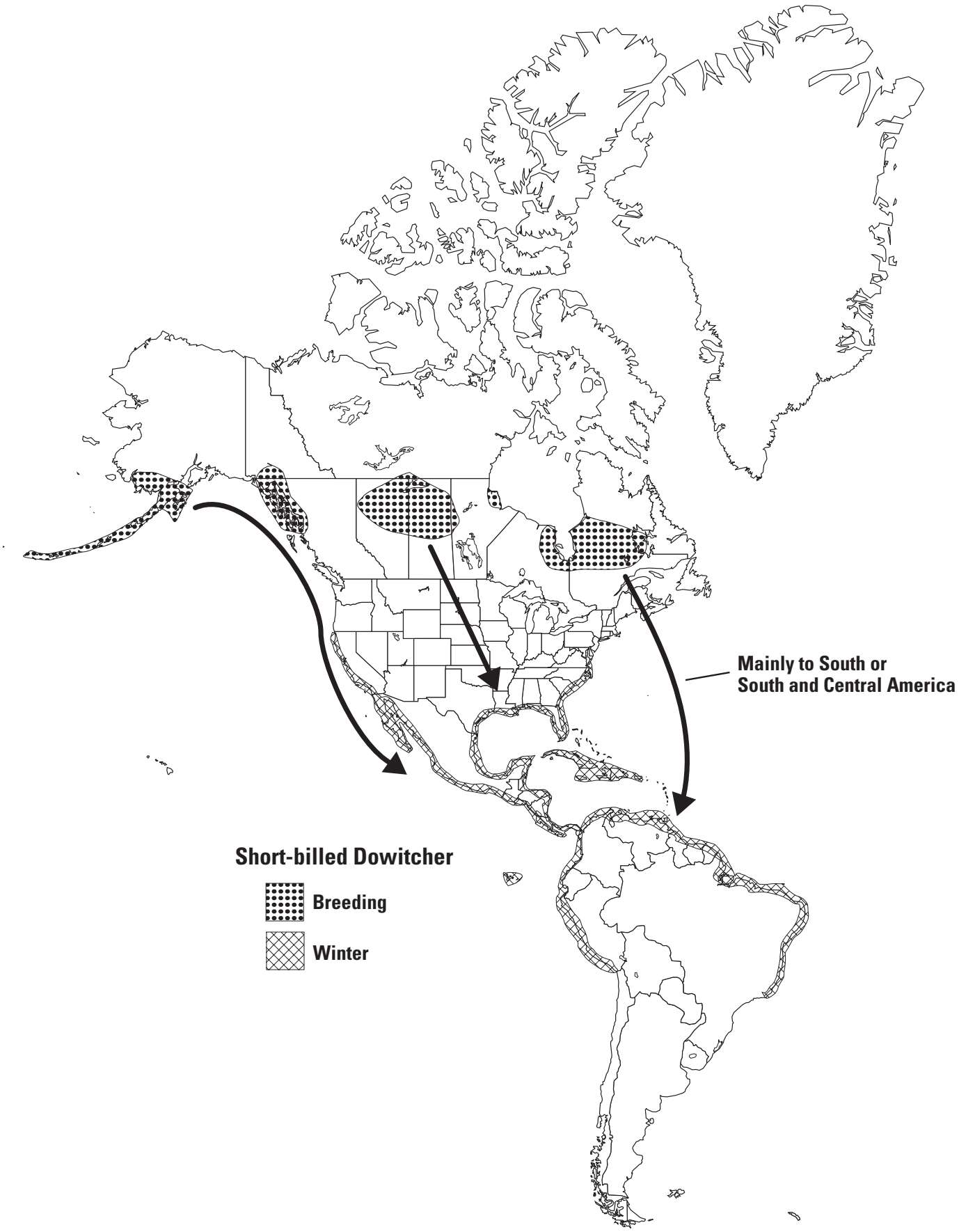
Migration
Long-billed and Short-billed Dowitchers will use all 3 migration routes. They begin migrating northward in small groups in early March. During the flight north, Dowitchers travel 2,500 miles at a time without stopping to rest and feed! When they do stop, migrating Dowitchers use a variety of inland and coastal wetland habitats to rest and feed.

Today's Population
Population counts suggest a larger population of Long-billed Dowtichers (about 500,000) than Short-billed Dowitchers (320,000). The largest number of Short-billed Dowitchers migrate along the Pacific Flyway, whereas more Long-billed Dowtichers use the Central Flyway.

Threats to Dowitchers
Dowitchers were once hunted in great numbers for North American markets. Today, the greatest threat to shorebirds, including Dowitchers, is the loss of the wetlands they depend on.

Something to Think About….
What other shorebird populations were hurt by the market hunting of the early 20th century?

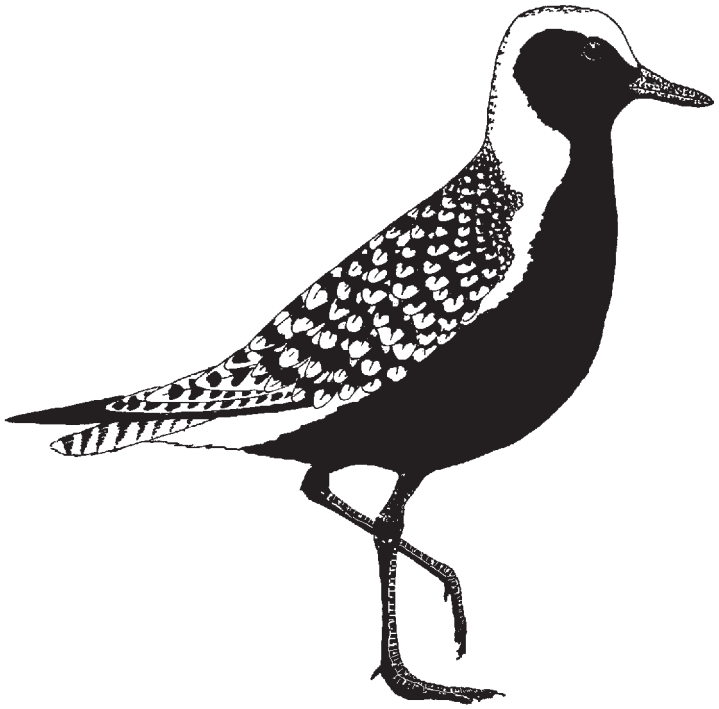
Note: Arrows indicate general migration routes for both spring and fall.



Note: Arrows indicate general migration routes for both spring and fall.

Black-bellied Plover

(Pluvialis squatarola)



Description
The Black-Bellied Plover is a medium-sized, plump, handsome shorebird. It has a short but sturdy bill and large eyes. Its summer breeding plumage, is a stunning black and white speckled back with black face, neck and breast. It has white undertail feathers and a distinct white strip down each side of its neck. Notice how the black of its belly extends all the way to the face, unlike the Dunlin. The "under arms" (under the wing, close to the body) are always black. The legs and short bill are also black.

This plover is also known in Europe as the Grey Plover or Silver Plover named after its much duller winter coloring.

Behavior
This plover feeds by watching and then running toward the water's edge to pick the food off the surface.

Call
The call is a loud, sad 3-note whistle "tlee-oo-ee", with the second syllable lower in pitch than the first or last.

Non-breeding Habitat
Black-bellied Plovers of the Western United States spend the winter in grasslands and beaches along the coast from British Columbia to Chile. They feed on earthworms, grubs, and beetles they find there.

Breeding
The male chooses a nest site that is usually on a grassy mound with a good view of the tundra. He defends the nest site, or territory, against other males and courts the female with a short, zigzag, or "butterfly," flight. Because plovers are so alert on the breeding ground, some scientists believe other shorebirds nest near plovers to take advantage of their watchfulness.

Parents work together to build the nest. The male makes the scrape, the female lines it with grass or lichens and lays four pink, green, or brownish eggs speckled with dark spots. The parents take turns incubating their eggs for 23 days. Like other shorebirds, they may abandon their eggs if they are disturbed.

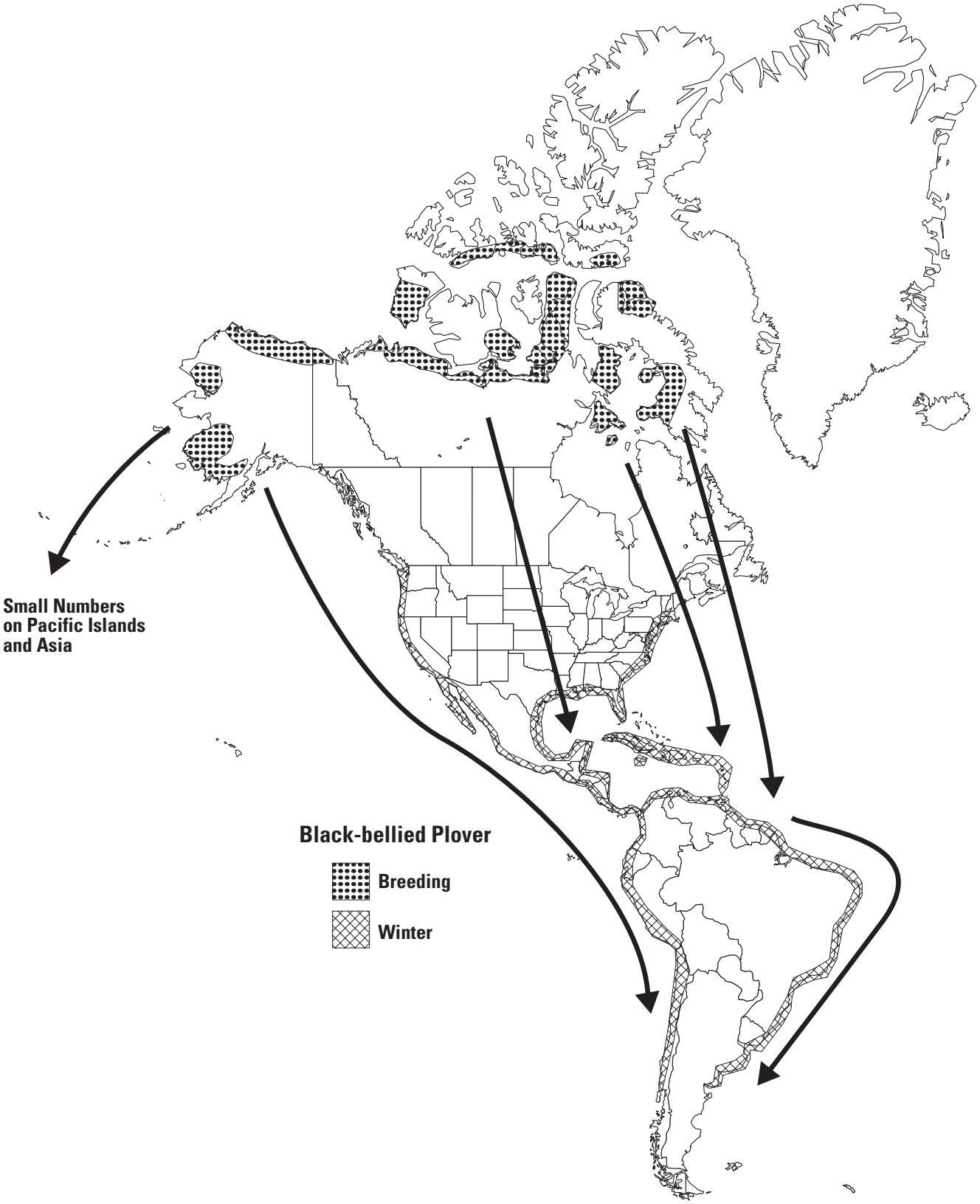
In the northern tundra, the land of the midnight sun, young Black-bellied Plovers eat a lot and grow fast. Both parents help care for the chicks. They show them how to hunt for insect larvae and beetles.

In July or August, the adults begin the long migration south. As soon as their wing muscles are strong, the young chicks head south too. During fall migration, Black-bellied Plovers often stop to feed in wetland areas, stopover sites, along their route.

Migration
Like many other shorebirds, these plovers are great long-distance fliers. In mid-April Black-bellied Plovers begin the long flight north to their breeding grounds in the tundra. They fly in small, mixed flocks all the way to the coast of the Arctic Ocean.

Today's Population
Bird Survey counts show that almost 500,000 Black-bellied Plovers are found globally. Almost 40%, about 200,000, are here in North America.

Something to Think About…
Does your community have healthy, clean wetlands where Black-bellied Plovers and other shorebirds can feed?



Note: Arrows indicate general migration routes for both spring and fall.

Black Oystercatcher

(Haematopus bachmani)

Description
The Black Oystercatcher is a large, dark, funny looking shorebird. It has dark grayish plumage year-round. It has a long and heavy orange-red bill, bright yellow eyes and large pink feet.

Behavior
Black oystercatchers use their laterally-flattened bills to pry open shellfish.

Call
The Black Oystercatcher makes loud, piping whistles that sound like "wheep, wheep."

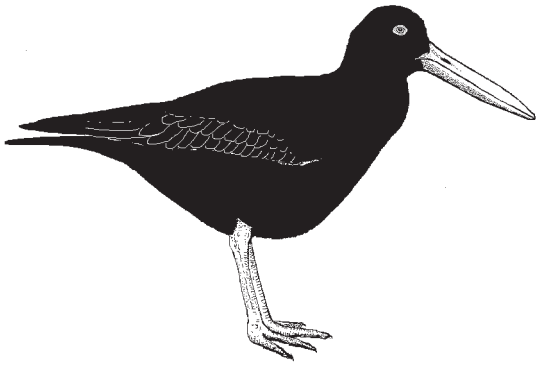
Habitat
Black Oystercatchers are shorebirds of American Ocean shorelines. More than half of the entire population lives on the sandy and gravel beaches and rocky shores of the Alaska coast and nearby islands.

Contrary to what its' name implies, oystercatchers do not feed primarily on oysters. They prefer to eat other mollusks such as clams and mussels, limpets, whelks and chitons. They will also eat crabs, sea urchins, and barnacles. They use stabbing and hammering to pry open or crack shells to reach their prey. They are fun to watch!

Black Oystercatchers use their long bill to probe the mud for unsuspecting clams or mussels. When the oystercatcher finds one with its' shell slightly open, it jams its' bill into the opening and tears the soft flesh out of the shell. Oystercatchers also use their bills like a chisel to pry mollusks off the rocks.

Nonbreeding
Black oystercatchers spend the nonbreeding sites in flocks along mussel-rich habitats of the Pacific coast.

Breeding
Black Oystercatchers are monogamous breeders. They establish and defend well-defined feeding and nesting territories and return to them year after year. They select a site above the tideline to build a nest of rock flakes, pebbles, or pieces of shell. The female usually lays 1-3 pear-shaped, buff-colored, speckled eggs. She will re-nest if weather or predators destroy the first clutch.



Both the male and the female Oystercatcher incubate the eggs for about 26-32 days until the eggs hatch. Unlike other shorebirds, adult Black Oystercatchers provide food for their young. One parent guards the chicks while the other goes off in search of a family meal. Parenting of young oystercatchers extends well beyond the usual 3 weeks when most other shorebird species stop taking care of their young. In fact, adults may care for the young more than a month and sometimes as long as six months. During this time, biologists speculate that the young are learning the very specialized feeding techniques to eat their tough prey from their parents.

Migration
Although some Black Oystercatchers are considered to be resident shorebirds, meaning they do not migrate for the non-breeding season, northern populations likely do fly south for the winter. However, most will regroup into post-breeding flocks and spend the winter near their nesting area.

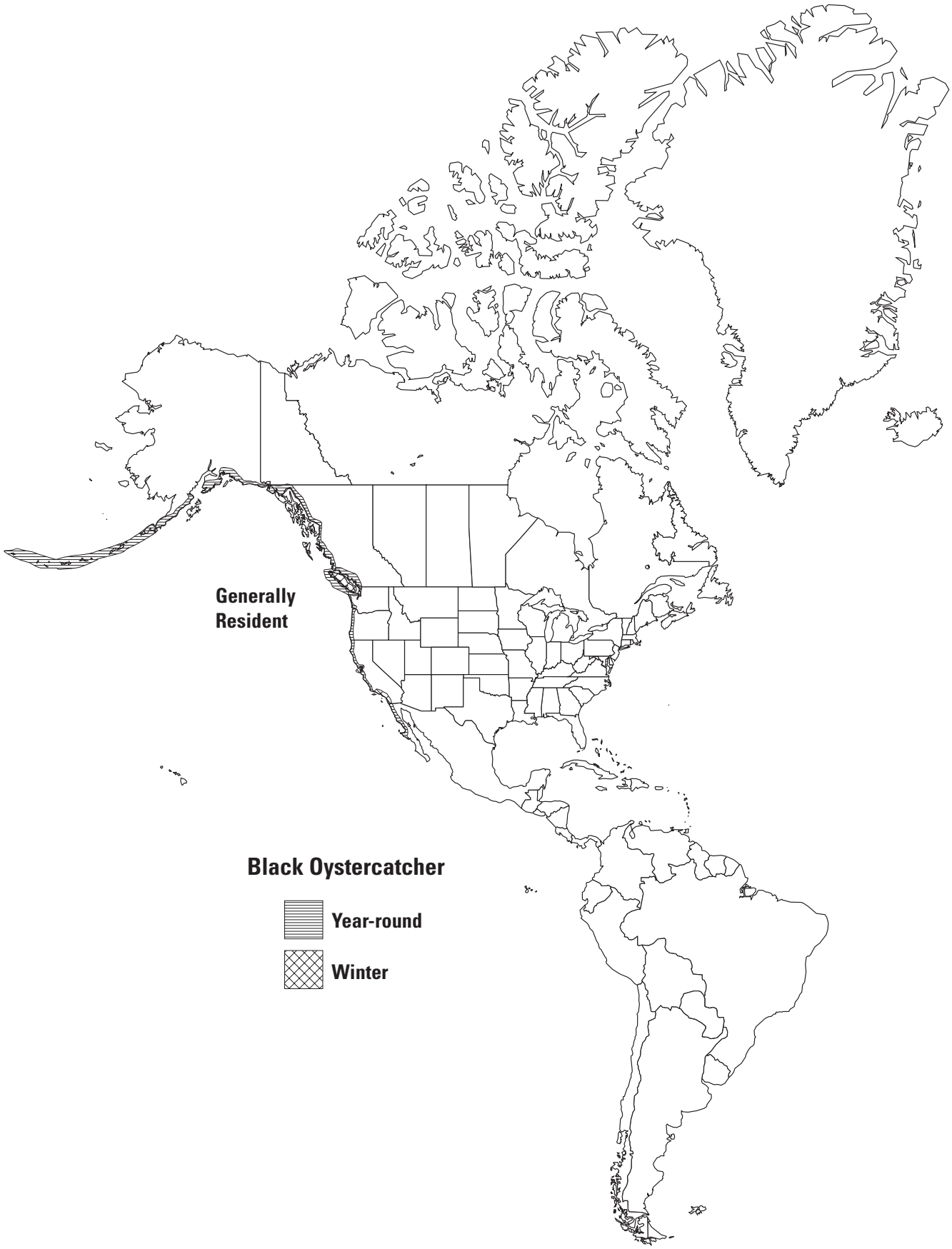
Today's Population
Biologists suspect that disturbance of shoreline habitat has been the primary reason for the low population levels of this West Coast shorebird. There are about 11,000 Black Oystercatchers worldwide today. More than half of the population is found along Alaska's coast and coastal islands. About 1,000 Black Oystercatchers are found in Prince William Sound.

Potential Threats to Black Oystercatchers
Because Black Oystercatchers feed and breed on shorelines, they are especially susceptible to oil spills. A big oil spill, like that of the Exxon Valdez in 1989, can contaminate shorebird nests, the feathers of chicks and adults, and contaminate the clam and mussels beds these birds depend on for food. When this happens, Black Oystercatchers are forced to abandon their nests and chicks in search of new feeding grounds.

Predators, like river otters, red foxes, glaucous-winged gulls, bald eagles, and common ravens, are a big threat to Black Oystercatchers. In fact, biologists think that the reason these shorebirds live and nest along rocky shorelines is to make it harder for predators to reach their eggs and chicks.

Something to Think About….
How can we protect Alaska's rocky shoreline and the Black Oystercatcher from another big oil spill?

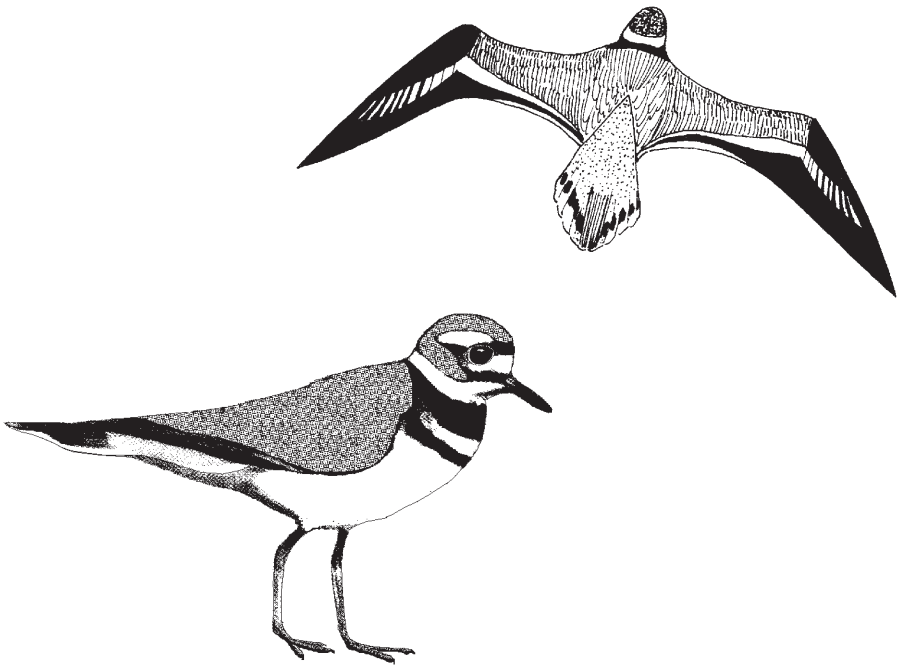
The news often reports of oil spills around the world. How could we protect wildlife species and habitats along the entire oil transportation corridor?



Note: Arrows indicate general migration routes for both spring and fall.

Killdeer

(Charadrius vociferus)



Description
The Killdeer is the most widespread and maybe the best-known shorebird in North America. At 10 ½ inches tall, it is about the same size as a Robin. Its beak is small compared to other sandpipers. It has two black bands that stretch across its chest and a pure white belly. When the Killdeer flies, you can see its beautiful reddish-orange tail feathers. Males and females look alike.

Behavior
Because Killdeers have short bills, they tend to pick insects from the surface of the ground, rather than probe into the mud looking for invertebrates or clams.
You usually see Killdeers alone or in pairs running in a "watch-run-peck" pattern.

Call
Their call is a loud "killdee, killdee" and it is often one of the first shorebirds you hear returning in the spring.

Habitat
Killdeers are not shy birds. In fact, they seem not to be bothered by people. You can find them feeding in meadows, pastures, gravel beaches, and on the edges of freshwater rivers and ponds.

Nonbreeding
During the nonbreeding season Killdeer use a wide range of grassy and wetland habitats. They will also be seen more frequently in flocks.

Breeding
You often find Killdeer nesting in farm fields, on suburban lawns and even in gravel parking lots. A Killdeer nest is nothing more than a scrape in stones, gravel, or pebbles. The rocks are a sort of camouflage for the four speckled eggs the female lays. Perhaps one of the best-known shorebird displays is the "broken-wing act" of the Killdeer. When a predator threatens their eggs or chicks, the adult Killdeer drags its wing in an attempt to lure it away. Of course, once fooled, the Killdeer quickly flies up to safety.

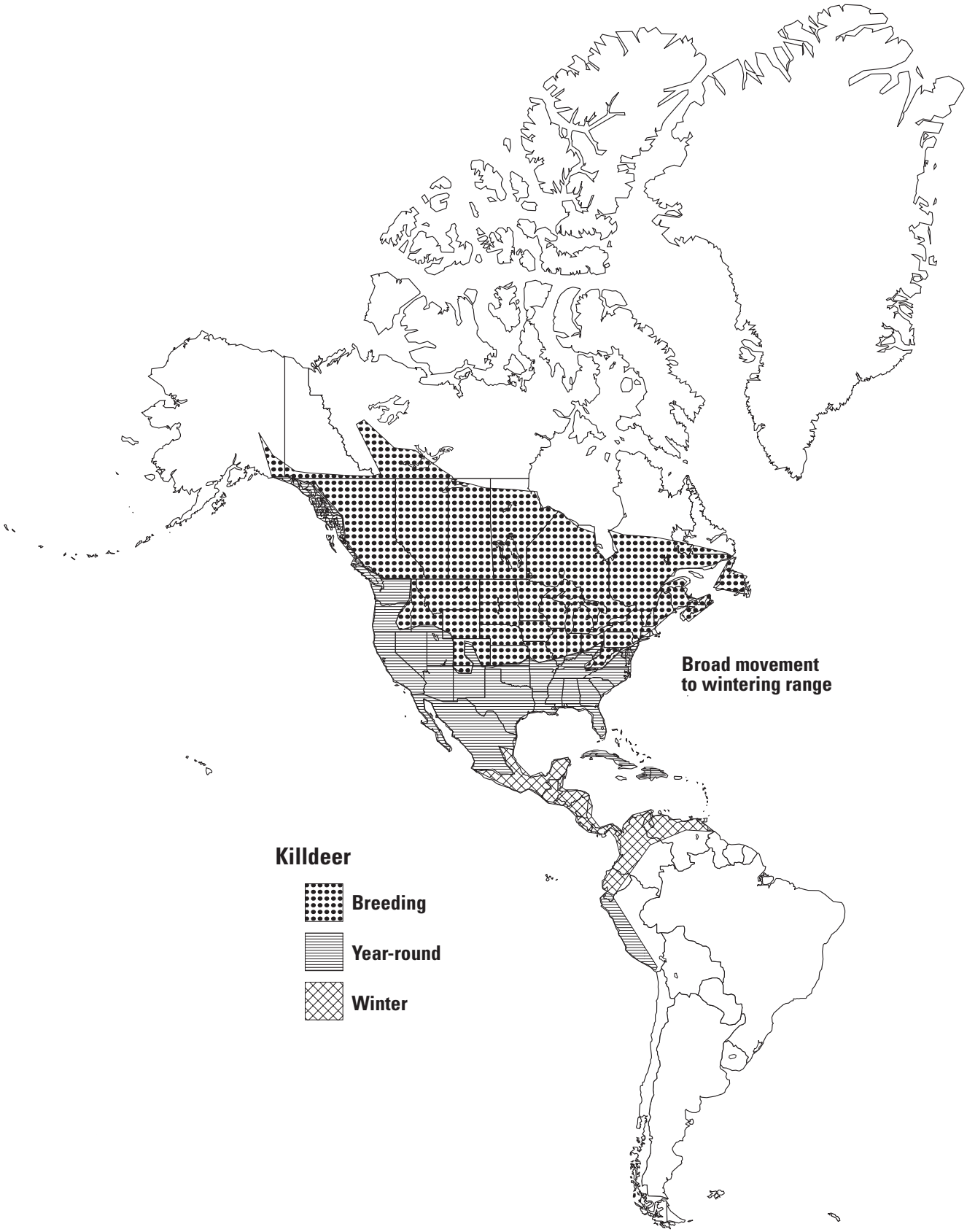
Migration
In the winter, many Killdeers stay in the southern United States. Others go to Mexico, Central America, or even South America. A few Killdeer will also travel to the Canadian Arctic and south Alaska to nest and breed, but most tend to nest and breed in the central United States and along the Pacific and Atlantic coasts. Take a look around and see if you can find one!

Today's Population
Once the target of market hunters the population of Killdeer dropped dramatically. Today Killdeer are more common then they ever were. Biologists estimate a population of 1 million birds in North America. Unlike most shorebirds, Killdeer seem to like many of the habitat changes brought on by people! Only in the west may their population be declining.

Threats to the Killdeer
Perhaps the most dangerous threat to the Killdeer is its tolerance for urban yards, parks, and gardens. Where there are people there are bound to be cats and dogs; domestic predators. Other urban predators like foxes, coyotes, and raccoons also do extremely well alongside people. They have learned to feast on the pet food and birdseed we leave outside and the kitchen scraps we throw in our garbage. These animals are very serious predators of Killdeer chicks and eggs.

Agricultural areas aren't much safer for the Killdeer either. Farm machinery may damage nets and eggs and can kill chicks.

Something to Think About…
What other shorebirds have developed behaviors, like the Killdeer's "broken wing act" that fool or scare away predators?

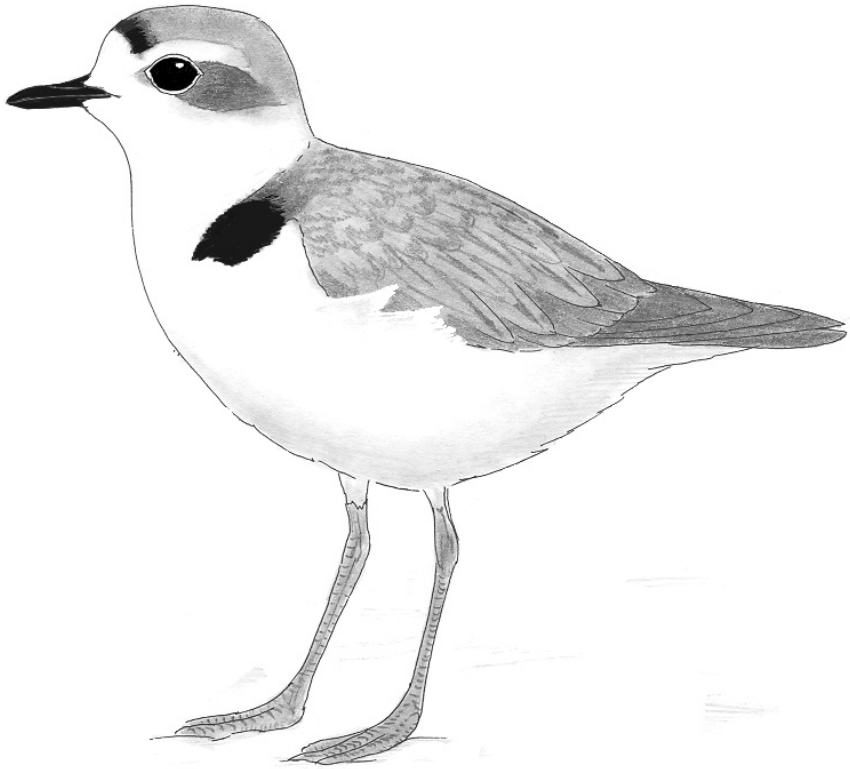


Note: Arrows indicate general migration routes for both spring and fall.

Snowy Plover

(Charadrius alexandrinus)

A Federally Listed Threatened Species



Description
The Snowy Plover is a small shorebird with a thin bill and black legs. During breeding season, males have a black forehead, ear patch and partial neck-ring. These areas are all brown in females.

In winter plumage, both the males and females carry the female's duller summer plumage.

Behavior
Their short, slender black bills are used to pick a wide variety of insects and aquatic invertebrates. Their camouflage coloring allows them to seemingly disappear from sight because they blend so perfectly with their environment.

Call
Its call is a low "krut" and a soft, whistled "ku-wheet."

Nonbreeding
These birds primarily spend the nonbreeding season in coastal habitats, including beaches and other salt water wetlands

Habitat
The Snowy Plover is found primarily on barren sandy beaches and flats along the Pacific coast from southern Washington to southern Baja, California and into the Salt Lake area. A second population is located between the Gulf Coast and South Central United States. Snowy Plovers are uncommon at freshwater wetlands even during migration.

Breeding
The breeding season for Snowy Plovers starts in mid March and runs through mid September. Snowy plovers breed in loose colonies. You will find their nests in flat, open sandy beaches or by brackish or saline wetlands. The majority of snowy plovers are site-faithful, meaning that they return to the same breeding spot year after year. In fact, Snowy Plovers often nest in the exact same location as they did the year before.

The usual clutch size is three eggs. For 27 days, male and female Snowy Plovers take turns incubating their eggs. Males incubate at night, females during the day. Plover chicks are precocial, and leave the nest and nesting territory within hours after hatching to search for invertebrate foods on the beach or in the sand dunes. Chicks fledge within 30 days.

Unlike other types of shorebirds, Snowy Plovers will renest after the loss of a clutch or brood or sometimes even when they have successfully hatched a nest. Female Snowy Plovers are polygamous meaning they will sometimes choose a new mate and start another nest. She may build this new nest in the same spot or move altogether, sometimes up to several hundred miles away.

Migration
Plovers that nest along the coast also spend their winter there. The coastal and interior group of Snowy Plovers will stay together along the California coast. However, the coastal population of the Western Snowy Plover does not, for the most part, breed with interior birds. Many Snowy Plovers on the Gulf Coast are year round residents.

Today's Population
Nesting Western Snowy Plovers were once found further along the

Pacific coast. California alone had 53 breeding sites before 1970. Today, only 20 nesting areas can be found. The largest colony of Snowy Plovers nests in the abandoned salt ponds and levees surrounding active salt ponds in San Francisco.

In Oregon, only 6 of the 20 original colony sites remain. On the southern Washington coast, only 2 of 5 colony sites are active. The number of Snowy Plovers breeding has also declined to less than 1,5000 birds, most of which are now found in California.

Threats to the Western Snowy Plover
Unfortunately for the Snowy Plover, nesting season (mid March to mid September) is the peak summer recreation season along West Coast beaches: Memorial Day through Labor Day. People walking, jogging or running pets on the beach; riding off-road vehicles and horses; and beach raking all upset the Snowy Plover's breeding routine.

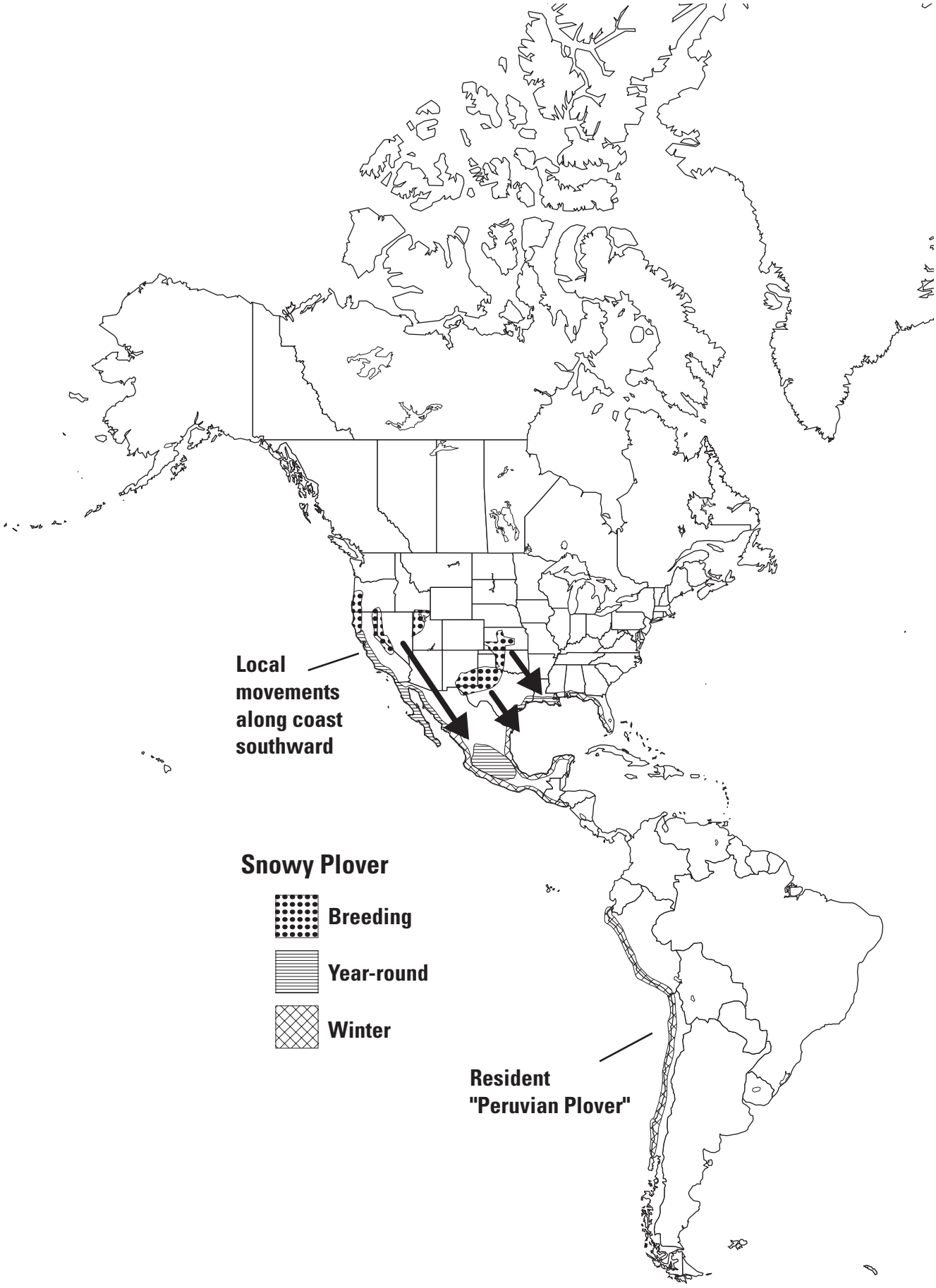
When people scare Snowy Plovers off their nests, chick mortality increases. To avoid intruders, adult Snowy Plovers will leave their chicks wet and unattended. A nest of eggs can quickly be buried by blowing sand or overheat on a sunny day. Plovers crouching down in depressions trying to hide have been found run over on their nests!

Another big problem for Snowy Plovers is beach raking. Throughout Los Angeles County and parts of Orange County, California, entire beaches are raked daily or weekly to remove trash and tidal debris. This makes it impossible for plovers to nest. Machinery crushes plover nests and chicks and the noise from these large machines scare the adults away. Raking beaches also removes the kelp and driftwood that invertebrate foods live on.

Habitat destruction also hurts snowy plover breeding sites. Residential and industrial developments, recreational facilities, roads, parking lots, and summer homes have wiped out valuable nesting habitat. European Beach Grass, introduced to the West Coast around 1898 to stabilize sand dunes, has spread up and down the coast. Snowy Plovers prefer to nest in unvegetated sandy areas. The introduction of this exotic plant has wiped out about 50% of the potential coastal nesting sites for the Snowy Plover.

Predators are also a threat to Snowy Plover eggs, chicks, and adults. Animals that do well around people, like the American crow, raven, and red fox, do the most damage.

Something to Think About…
How can the snowy plover and people share the Pacific Coast? Agencies responsible for protecting endangered species are dedicated to doing everything necessary to save the plover, but the work cannot be done by agencies alone. As caretakers of our environment, all of us can contribute to the protection of the plover. What can you and your friends do to help the Snowy Plover survive?



Note: Arrows indicate general migration routes for both spring and fall.

Pacific Golden-plover

(Pluvialis fulva)

Description
The Pacific Golden-Plover appears nearly identical to the American Golden Plover. In fact, scientists once thought these were both just subspecies of the Lesser Golden Plover.

The Pacific Golden-Plover is a medium-sized shorebird with a small black bill that is clearly shorter then its head. It has black legs.

In flight, the Pacific Golden Plover has uniformly dark underparts and a grayish underwing. Its black head, nape and back are spangled with gold and white markings. It has a black face and throat. A white stripe runs down both sides of its head and neck to the lower sides of its breast.

Behavior
The birds that feed in urban grasslands during the nonbreeding grounds seem to be unaffected by human activities. In fact, these birds can be seen roosting during the night on roof tops!

Call
The Pacific Golden Plover has a two-to-three part whistle that sounds like "chuwi" or "chuweedle."

Nonbreeding Habitat
These shorebirds will use mudflats and beaches found around Pacific islands. Many use plowed fields, pastures, lawns and golf courses in Hawaii islands, and other short-grass habitats where they eat grasshoppers, crickets, and grubs.

Breeding
Pacific Golden Plovers nest in Siberian and northwestern Alaskan tundra. They have many pair-bonding displays but perhaps the most spectacular is the male's Butterfly Display Flight. Sometimes done alongside the female, the two birds fly up into the air and land together holding their wings up in a V and calling with a series of complex whistles. Other courtship displays designed to catch a female's attention are head-to-tail rocking, scraping the ground, and wing-stretching.

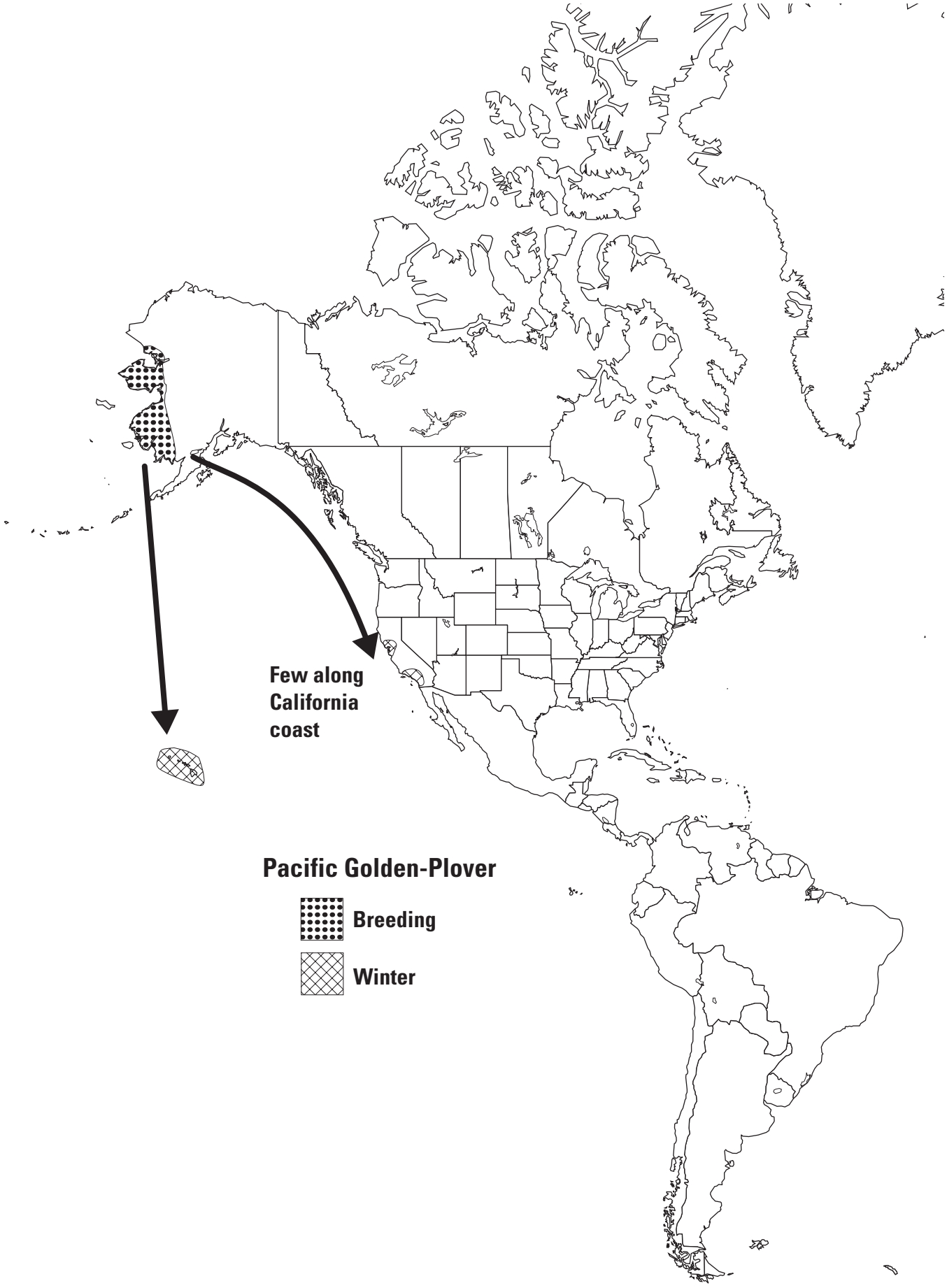
Both males and females guard the simple depression they make for a nest, incubate the eggs and tend to the chicks. Pacific Golden Plovers can be highly territorial and will use elaborate aerial displays, vocalizations, chases, and even fights to protect their nests and chicks.

Migration
The Pacific Golden-Plover and the American Golden-Plover have very different migration routes but both make some of the longest migrations in the world and undergo long nonstop flights over water. Pacific Golden Plovers winter in South East Asia, Australasia, or on the Pacific Islands. The birds that nested in Alaska migrate over the Pacific Ocean often choosing to winter in Hawaii.

Threats to Pacific Golden Plovers
Like many shorebirds, market hunting of the 19th and early 20th centuries nearly wiped out the Pacific Golden-Plover. Today, contaminants, feral animals, roaming pets and bad weather during migration take their toll on these birds.

Thankfully, most of the breeding ranges of the Pacific Golden Plovers remain in tact today and they are relatively unexploited. Agriculture, ranching, and urbanization are putting their winter ranges and migratory routes under pressure. Those that winter on Golf Courses in Hawaii do come in contact with hazardous chemicals.

Something to Think About…
What prevents hunters today from shooting migrating shorebirds?



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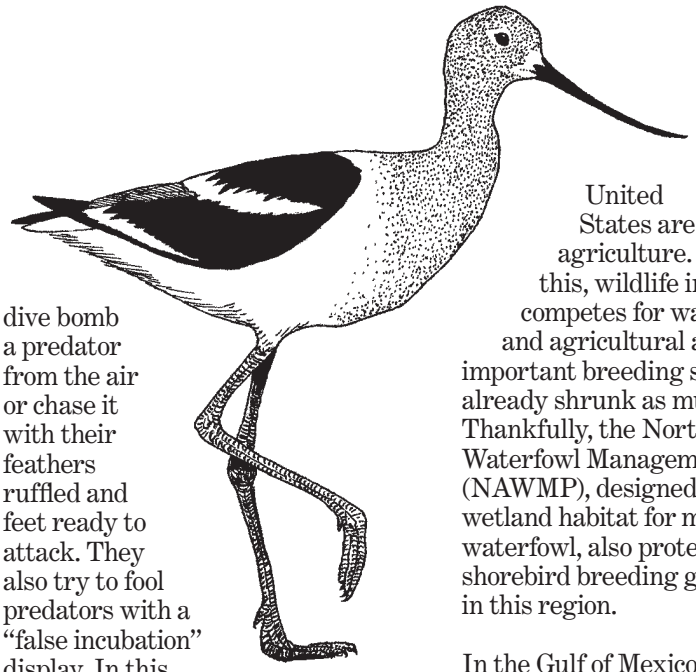
American Avocet

(Recurvirostra americana)



Description
This tall, graceful, beautiful bird has long, gray-blue legs and a long, slender, upturned black bill. The male and females look the same in all plumages except that the male's bill is a little longer and straighter than the female's. During the breeding season their grayish hood turns a rust color. American Avocets have wings that are black and white above. They have white underwings and a white belly.

Behavior
Avocets are easy to spot in a group by the way they sweep their slim, upcurved, sensitive bills side to side through the water straining out aquatic insects, crustaceans, tiny shrimp and fish. You can find them frequently swimming, like phalaropes, and tipping up to feed like marsh ducks.

Call
The call of the American Avocet is a loud "wheet."

Nonbreeding
Avocets will use a wide variety of habitats in the nonbreeding season. They may also gather and feed in large flocks.

Habitat
These long-legged waders prefer shallow lakes, sloughs, and marshes year around. American Avocets are more commonly found in the West where they breed on sun-baked flats near saline lakes, North American prairies, lakes and marshes in the Great Basin, and at coastal estuaries and ponds.

Breeding
American Avocets are monogamous, semi colonial breeders found in especially large numbers in the marshes of the Great Salt Lake and the northern Great Basin.

American Avocets are well known for their aggressive displays. They will dive bomb a predator from the air or chase it with their feathers ruffled and feet ready to attack. They also try to fool predators with a "false incubation" display. In this case, the bird crouches on the ground as if it is incubating its eggs. As soon as the predator gets close, the avocet gets up and runs away leaving a confused predator behind.

These shorebirds also have elaborate courtship rituals. For example, after copulation, the mating pair crosses bills and the male drapes his wing over the female's back. Together the male and female select a site and build a simple hollow lined with grass where the female lays 3 or 4 eggs. Avocets are known to rebuild flooded nests using sticks and feathers.

Migration
American Avocets are considered to be medium-range migrants flying about 2,000 miles to their wintering grounds on the shores of the Southern United States and Mexico.

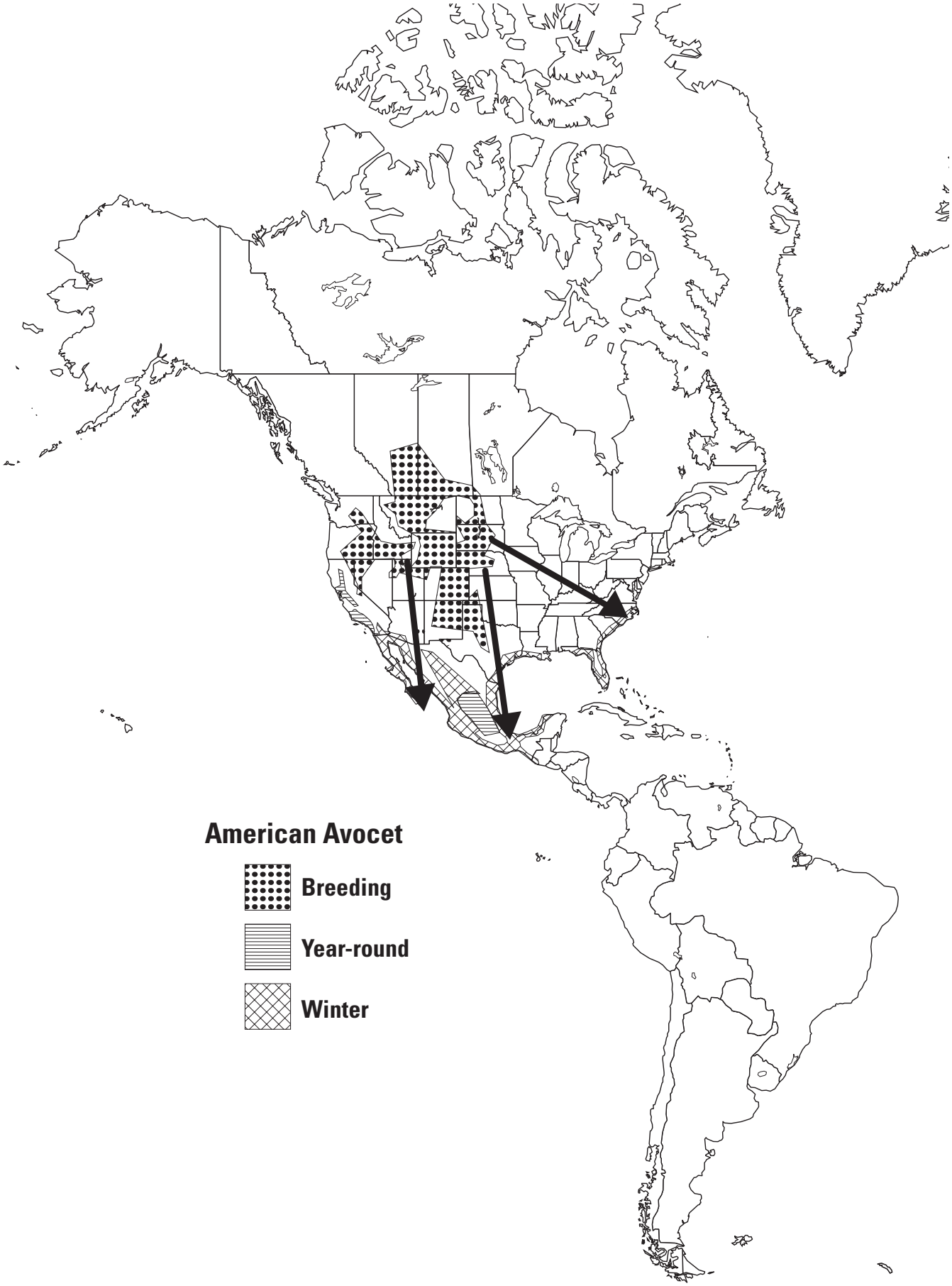
Today's Population
There are about 450,000 American Avocets today. Most are found in western North America using the Central Flyway during migration

Threats to the American Avocet
Today, half of all upland grasslands in the prairie pothole region of the United States are now agriculture. On top of this, wildlife in the dry west competes for water with urban and agricultural areas. Some important breeding sites have already shrunk as much as 90%. Thankfully, the North American Waterfowl Management Plan (NAWMP), designed to protect wetland habitat for migrating waterfowl, also protects what shorebird breeding grounds are left in this region.

In the Gulf of Mexico, possible oil spills threaten avocets. The Houston Ship Channel, an Inter- Coastal Waterway with the largest oil port in the United States, runs right along Bolivar Flats Reserve, an important staging site and wintering area for avocets.

Another important wintering area on the Gulf of Mexico, Laguna Madre, has been drained to grow cotton and sorghum. Agricultural herbicides and pesticides runoff into this wetland poisoning the food chain. Scientists found that shorebirds in Laguna Madre had enough chemical residue in their bodies to make them unable to reproduce.

Something to Think About…
What other programs, besides the NAWMP, are in place to preserve shorebird habitat? You might want to check out the "conservation link" on the Shorebird Sister School Program to find out (http://sssp.fws.gov).



Note: Arrows indicate general migration routes for both spring and fall.

Black-necked Stilt

(Himantopus mexicanus)

Subspecies Hawaiian Stilt (Ae'o in Hawaiian) is a state and federally listed endangered bird.

Description
The Black-necked Stilt is one of the largest shorebirds. Stilts measure 14-23 inches tall, about the size of a crow. The Black-necked still also has the reputation of having the longest legs of any of the shorebirds. In fact, its legs are so long, that the bird appears to walking on "stilts."

Black-necked Stilts are tall, slim waders with bubble-gum pink or reddish-pink legs you can't miss. Their long, needle-like bills are built to feed in water and also on the shore. The males are glossy black above with white underparts. Females are brownish- black above. Both males and females have a white forehead and spot over the eye and carry the same plumage all year.

Behavior
Stilts are often seen wading in deep water in search of food. They can be very aggressive when defending their nest and young. This is to make-up for their flashy appearance that almost eliminates any chance of using camouflage for defense.

Stilts prefer to land and take off from the water. They also have a habit of shaking the mud off their feet when leaving the water.

Call
The Black-necked Stilt's call is a loud "kek "kek" "kek."

Nonbreeding
Stilts will use coastal habitats during this time.

Habitat
You will find Black-necked Stilts on the edges of salt and sewage ponds and shallow inland wetlands. They eat aquatic invertebrates, fish, bugs, and brine shrimp and flies.

Breeding
Stilts always breed near water. In fact, they may even nest on wet ground! Their nest is a shallow depression on an island or along the shores of a lake, pond, or stagnant pool. They sometimes line their nests with pebbles, bits of shells, and sticks. Black-necked Stilts lay 4 buff-colored eggs that are well camouflaged by brown or black marks.

Like avocets, parents are monogamous, semi-colonial nesters, known for their aggressive displays against predators. Male and female stilts take turns incubating the eggs. In the hot environments where these birds nest, stilts help cool their eggs and increase the humidity in the nest by soaking their belly feathers in water before sitting on their clutch. Belly soaking eventually covers the eggs in a muddy, salty crust.

Black-necked Stilts are tolerant of other shorebirds nesting nearby. You often see them in the company of other stilts and avocets. However, they can be very territorial and aggressive toward neighboring chicks. Parents carefully keep their broods separated. A chick that wanders into another family's territory may get severely pecked on the back of its head!

Migration
Found throughout the southern and western United States, Back-necked Stilts migrate to coastal areas in the Southern United States and Central and Northern South America. The most critical staging sites are central California, the Salton Sea, and the Great Salt Lake.

Today's Population
Biologists estimate that 850,000 Black-necked Stilts can be found globally. Of these about 150,000 are found in North America. Most Black-necked Stilts use the Central Flyway.

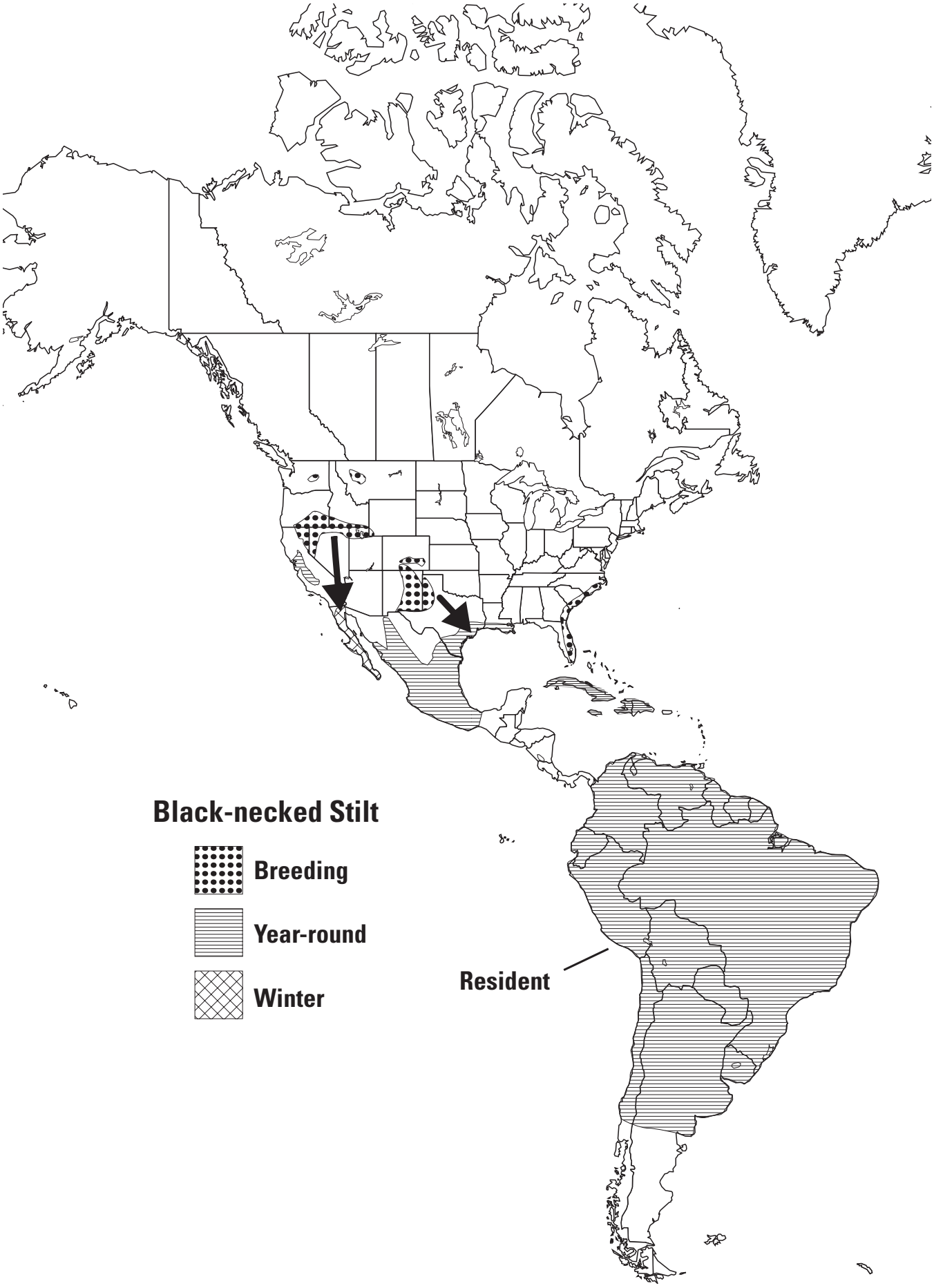
The Ae'o, a non-migrating Hawaiian subspecies of the Black-necked Stilt, was brought to the brink of extinction by hunting, habitat loss, and the invasion of non-native mammalian

predators like the mongoose. Today, thanks to a ban on hunting and intense predator management, there are more than 1,4000 Ae'os on 6 of the 8 major Hawaiian Islands.

Threats to Black-necked Stilts
When water from wetlands is diverted to irrigate crops much runoff is often contaminated with residues of agricultural chemical and by products. High concentrations of selenium were found at Kesterson National Wildlife Refuge in California. Here, large numbers of stilts and other shorebirds were being poisoned by selenium.

Like many other shorebirds, habitat loss is always a threat. Yet, for Black-necked Stilts, this threat is counterbalanced in some areas by their use of salt and sewage ponds, agricultural evaporation ponds, and rice fields.

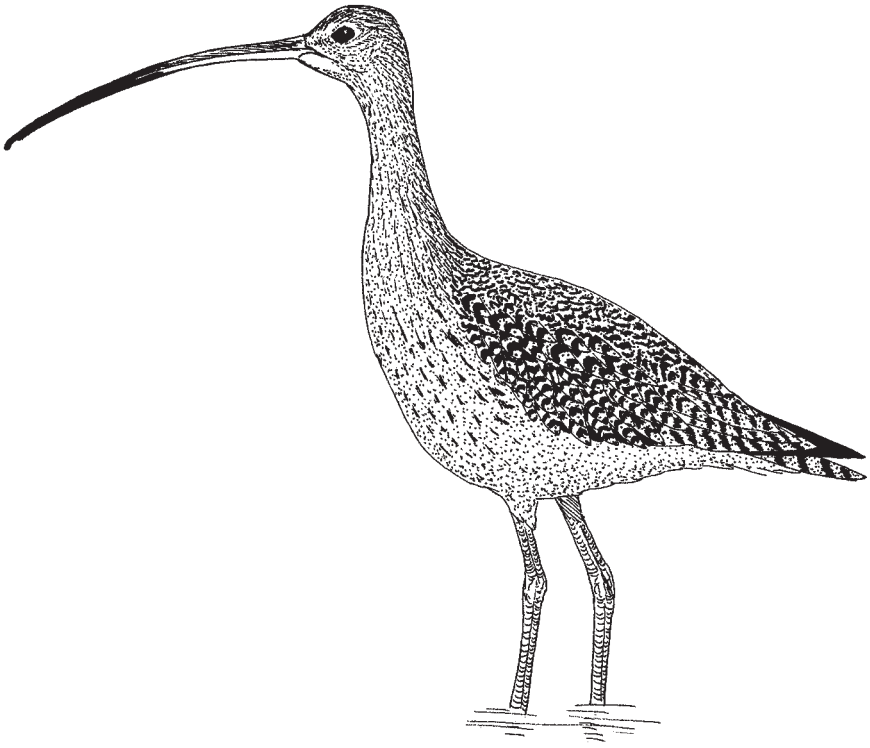
Something to Think About….
What North American shorebirds are on the federally endangered list?



Note: Arrows indicate general migration routes for both spring and fall.

Long-billed Curlew

(Numenius americanus)



Description
This is North America's largest sandpiper. It gets its name from its decurved bill, which may be as long as 9" in females.

Female Long-billed Curlews are larger than males, but their plumage are almost identical. They are cinnamon brown with black and buff-colored speckling above and cinnamon-buff below. They have grayish-blue legs and bright cinnamon buff wing linings.

The Long-billed Curlew is sometimes confused with the Whimbrel or the Marbled Godwit when it tucks its bill under its wing in a common shorebird resting pose.

Behavior
The tip of the curlew's upper mandible is actually soft and used to "feel" for prey as it probes the mud.

Call
The Long-billed Curlew also gets its name from their call that sounds like "cur-lee."

Nonbreeding Habitat
During the non-breeding season and during migration you'll find Long-billed Curlews on coastal beaches, salt marshes, and mudflats along estuaries, dining on fiddler crabs, crustaceans, small fish, and amphibians. Its bill is best adapted for capturing shrimp and crabs living in deep burrows on tidal mudflats.

Breeding
The Long-billed Curlew is one of only 9 species of shorebirds that breed on prairie and grasslands from West Central United States to the Prairie Provinces of Canada. Here they eat mostly grasshoppers, crickets, beetles, and earthworms.

Their nest is most often a bowl shaped grass-lined hollow on the ground. Sometimes the female Long-billed Curlew chooses to line her nest with rabbit, goose, or livestock droppings! Once the nest is complete she lays four light beige to greenish or olive speckled eggs that are heavily speckled.

Both the male and female incubate the eggs and defend the young. About 2-3 weeks after the eggs hatch, the female abandons the male to care for the brood.

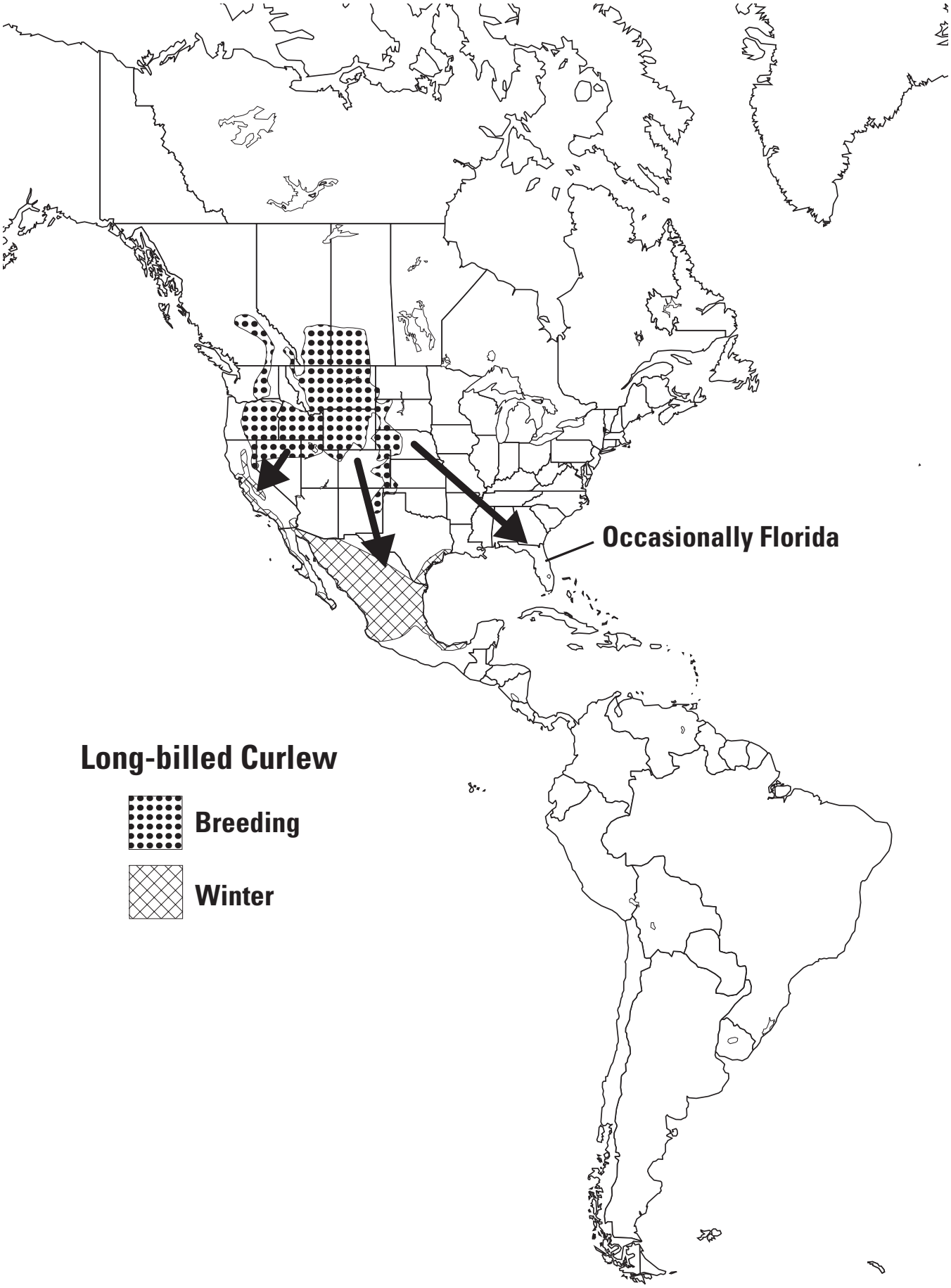
Migration
These medium- distance migrants, spend the winter on the coasts of California, Central America, and the Gulf of Mexico. While migrating, you might find Long-billed Curlews in plowed fields using their bills like tweezers to pull earthworms from their burrows.

Today's Population
These birds used to breed on U.S. prairies all the way to the Mississippi River. Unfortunately, market hunting and agricultural development has greatly reduced the Long-billed Curlew's range to the West Central United States.

Threats to the Long-billed Curlew
Today, some of the most endangered wetlands in the United States are the prairie potholes of the American Great Plains. Already over half of these unique habitats are gone, drained for agriculture and urbanization. This has dramatically reduced the range and the breeding potential of many shorebirds including the Long-billed Curlew.

Fortunately, the North American Waterfowl Management Plan (NAWMP) is helping to bring back some of these critical wetlands. An emphasis on restoring marginal farmland that was once prairie pothole habitat should help the Long-billed Curlew.

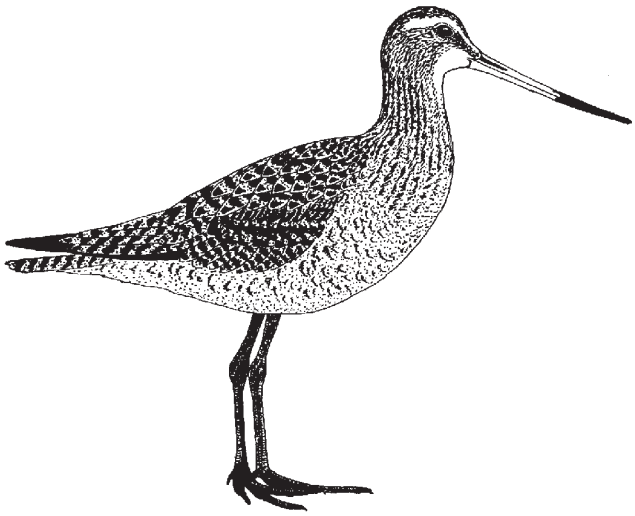
Something to Think About…
What other shorebirds breed in prairie pothole habitat?



Note: Arrows indicate general migration routes for both spring and fall.

Marbled Godwit

(Limosa fedoa)



Description
This large shorebird is named for the marbled pattern of its upperparts which looks a lot like the patterns of the Long-billed Curlew. Like the curlew, Marbled Godwits are cinnamon-brown above speckled with black and buff coloration. Their plumage is cinnamon buff below with bright wing linings of similar color. They have medium length grayish-blue legs.

The key identification feature of the Marbled Godwit is its slightly upcurved, bi-colored bill. During breeding season the base of the godwit's bill is a brownish orange. The rest of the year it is pink at the base and blackish-brown toward the tip.

Call
The Marbled Godwit is also named for its call, a strong "ga weet ga weet." During the breeding season, Marbled Godwits often call in flight.

Non-breeding Habitat
In the non-breeding season, Marbled Godwits are essentially coastal birds. You will find them on intertidal flats of bays or rivers using their bill to probe deeply into the wet sand, mud, or soil.

Breeding
Western species of Marbled Godwits breed in grassy meadows of the northern interior of North America. Here they eat grubs, insect larvae, tubers, and the seed of aquatic plants.

Marbled Godwits perform many courtship displays intended to attract a female's attention. One of the most interesting is the Ceremonial Circling Flight. In this display, the male rises 20-90 meters from the ground and begins circling his territory with slow wingbeats and repeatedly calling "Ger-whit ." When he's satisfied that he has a female's attention he glides with his wings spread out wide or makes a steep, impressive dive to the ground.

Like many shorebirds, Marbled Godwits are monogamous and lay 4 eggs in a simple hollow in the grass. Both male and female incubate the pale colored, spotted eggs and care for the brood. Marbled Godwits are so confident of their camouflage that they rarely flush from the nest if a predator approaches. In fact, biologists have discovered that adults can sometimes be picked up right from the nest!

The chicks are precocial, pecking and jabbing at insects and invertebrates in the grass from the very first day they hatch. Once the chicks are grown, male Marbled Godwits will leave their mate and flock together on the breeding ground.

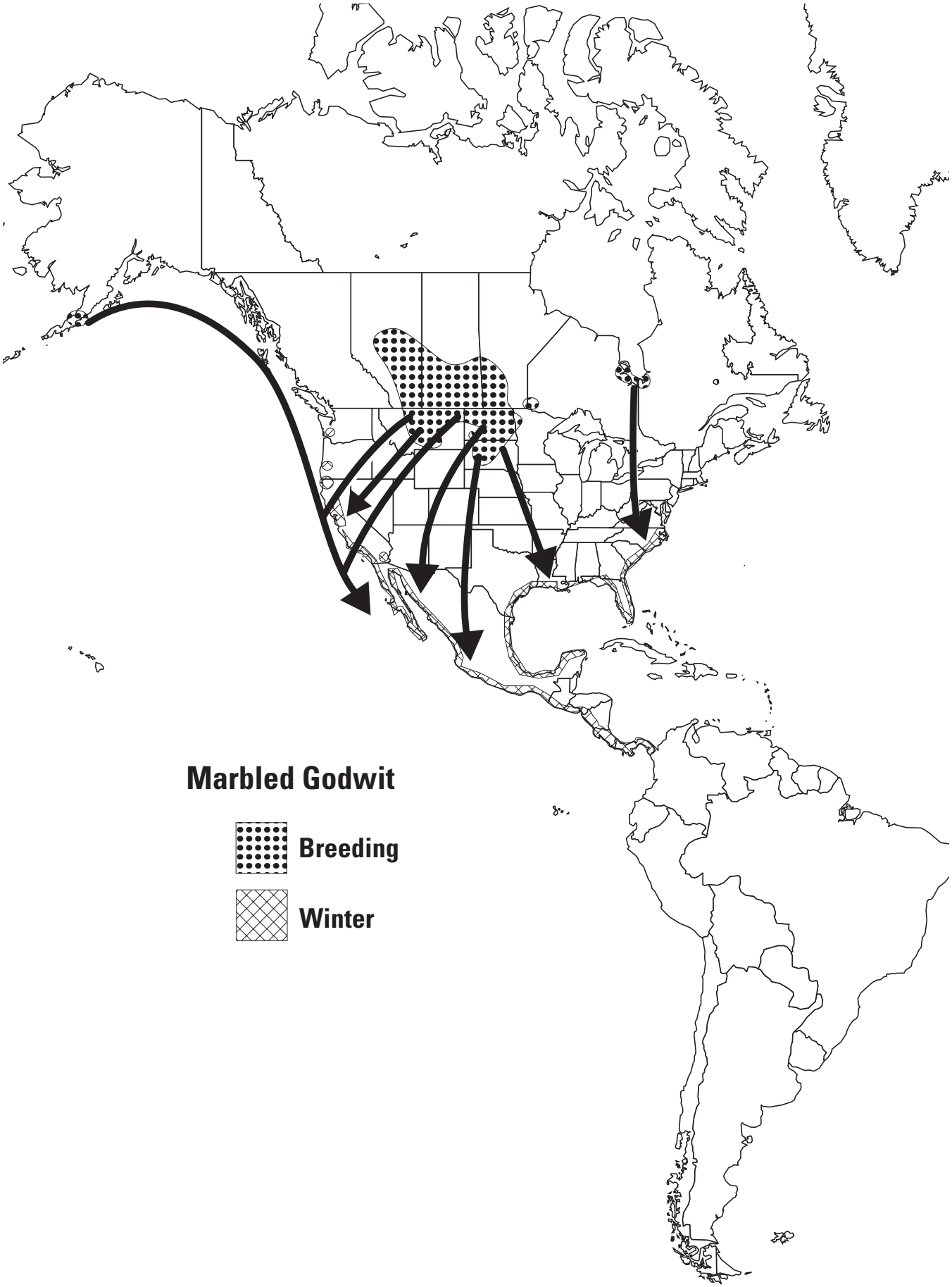
Migration
This medium-distance migrant moves primarily along the Central and Pacific Flyways for wintering grounds on the West Coast. You can find them from Oregon to Central America feasting on sand crabs. Up to 200,000 Marbled Godwits stage at one time on the Great Salt Lake in the spring. They are less common but still regularly found along the East Coast from Virginia to Florida and on the Gulf Coast.

Today's Population
In the 19th century, many Marbled Godwits were found along the northeastern Atlantic Coast and southward. But, market hunters nearly wiped out the population. Thanks to wildlife hunting laws that protect shorebirds, their numbers have increased. Still, it is fairly rare to see a Marbled Godwit north of Virginia today.

Threats to Marbled Godwits
Today, some of the most endangered wetlands in the United States are the prairie potholes of the American Great Plains. Already 57% of these unique habitats are gone. In fact, 50% of the wetlands across in the United States have already been drained for agriculture and urbanization. This has dramatically reduced the range and the breeding potential of many shorebirds including the Marbled Godwit.

Fortunately, the North American Waterfowl Management Plan (NAWMP) is helping to bring back some of these critical wetlands. An emphasis on restoring marginal farmland that was once prairie pothole habitat should help the Marbled Godwit.

Something to Think About…
What other shorebird populations were severely affected by market hunting in the late 18th and early 20th centuries?



Note: Arrows indicate general migration routes for both spring and fall.

Spotted Sandpiper

(Actitis macularia)

Description
The Spotted Sandpiper is slightly smaller than a Robin standing 6-8" tall. It has a thin, short, pointed bill and small eyes. Its legs are usually green.

In non-breeding plumage, Spotted Sandpipers are grayish-brown above and white below and are missing the "spots" they were named for.

In breeding season however, they are mostly brown above with a heavily spotted underside.

Behavior
Spotted Sandpipers are sometimes called "bobbers" after the way they constantly teeter, bobbing their tails up and down when standing on the sand or mud.

When flying, Spotted Sandpipers look as if they are "fluttering." On long distance migration flights they switch to more efficient deep wingbeats similar to that of other shorebirds.

You sometimes see Spotted Sandpipers snap an insect in midair.

Call
Spotted Sandpipers make loud, repeated whistles like "weet weet weet" or Peet weet."

Nonbreeding
They use a wide variety of habitat during this season including beaches, estuaries, ponds and riverbanks.

Habitat
The Spotted Sandpiper is the most widespread breeding sandpiper in North America because it eats many different kinds of wetland animal life. You will find Spotted Sandpipers in virtually any coastal or inland wetland across the continent except in the farthest southern and northern areas of the United States.

Breeding
Spotted Sandpipers are sexually dimorphic, a more unusual breeding arrangement than most other shorebirds. Sex roles are reversed. It is the female that arrives on the breeding ground first, stakes out the territory, courts the male and then defends the nest. One the other hand, male Spotted Sandpipers tend the eggs and the chicks. Females are also sometimes polyandrous. They will mate and nest with more than one male within a single nesting season.

Migration
It is very common to see individual Spotted Sandpipers migrating south across the continent to the coastal southern United States. They also overwinter in the Caribbean and from Central America south to Northern Argentina and Chile.

While most shorebirds are known for their spectacular migratory flocks, Spotted Sandpipers migrate singly or in small groups.

Today's Population
Because the Spotted Sandpiper migrates singly or in small groups, population numbers are very hard to estimate. Biologists suspect that the population of Spotted Sandpipers lies within the 50,000 – 250,000 birds.

Threats to Spotted Sandpipers
In Mexico, Central America, and Ecuador wintering sandpipers rely on a system of coastal mangrove swamps for food and shelter. Many parts of this habitat are being changed to meet the needs of commercial shrimp farms that also rely on the nutrient rich waters.

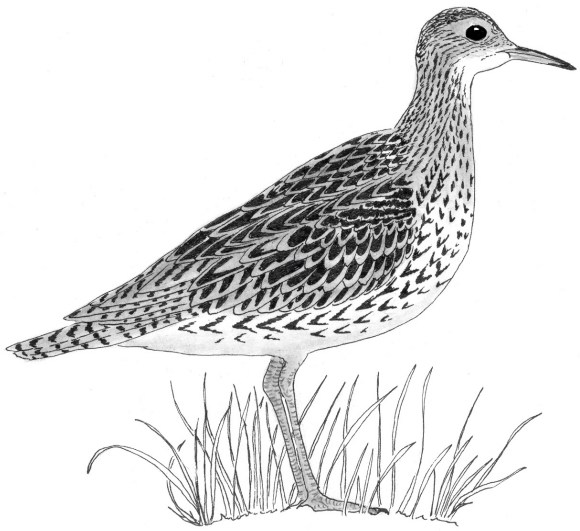
Another long-term threat to these and other shorebirds wintering in South America is the use of agricultural chemicals like DDT. While the use of DDT had been banned in the United States, shorebirds are picking up toxic levels of these chemicals when they feed on their wintering grounds. The highest levels of DDE (a toxic residue of DDT) were found in Spotted Sandpipers in Peru. This can make them unable to reproduce, weaken them for their migration back to breeding grounds, and cause death.

Something to Think About…
What other shorebirds have unusual mating systems like sexual dimorphism or polyandry? Why might these systems be an advantage in breeding?

Note: Arrows indicate general migration routes for both spring and fall.

Upland Sandpiper

(Bartramia longicauda)



Description
This odd-looking shorebird who almost never visits the shore is often seen with just its head and neck above the grass. The plumage of both the male and female look alike.

Upland Sandpipers has very long wings and a long thin neck. Their head is small which makes their eyes appear overly large. Their legs are long and yellowish.

Behavior
You sometimes see Upland Sandpipers perched on top of fence posts or telephone poles. They have a habit of stretching their wings up when they first land. Perhaps they are announcing their territory to other Upland Sandpipers nearby.

Call
Upland Sandpipers have what is described as a long, rolling "pulip, pulip" call.

Nonbreeding
These birds prefer similar habitat for nonbreeding as during the breeding season.

Habitat
The Upland Sandpipers gets its name from its preference for grassy habitats; pastures, prairies, alfalfa fields, golf courses, and even airports. They feed mostly on small invertebrates but also eat some weed seeds. In fact, unlike most other shorebirds, Upland Sandpipers spend most of their life away from water!

Breeding
The Upland Sandpiper is what biologists call a "widespread nester." They are found nesting from southeastern Alaska to the Central Prairies and the Great Plains and then all the way to the northeastern United States.

Upland Sandpipers rarely nest alone. Loose colonies breed from the end of April into August. Most are found in the Dakotas, Nebraska, and Kansas where there is prairie habitat. One the other hand, in the east where little prairie habitat remains, over ½ of the Upland Sandpipers nest on airport land!

Together the male and female build a typical shorebird nest, a scrape on the ground thinly lined with cow manure or grass. They may make up to 12 scrapes before finally deciding on one to use as their nest! Then the female lays 4 eggs evenly spotted with dark brown. Upland Sandpipers raise only one brood of precocial young in a season.

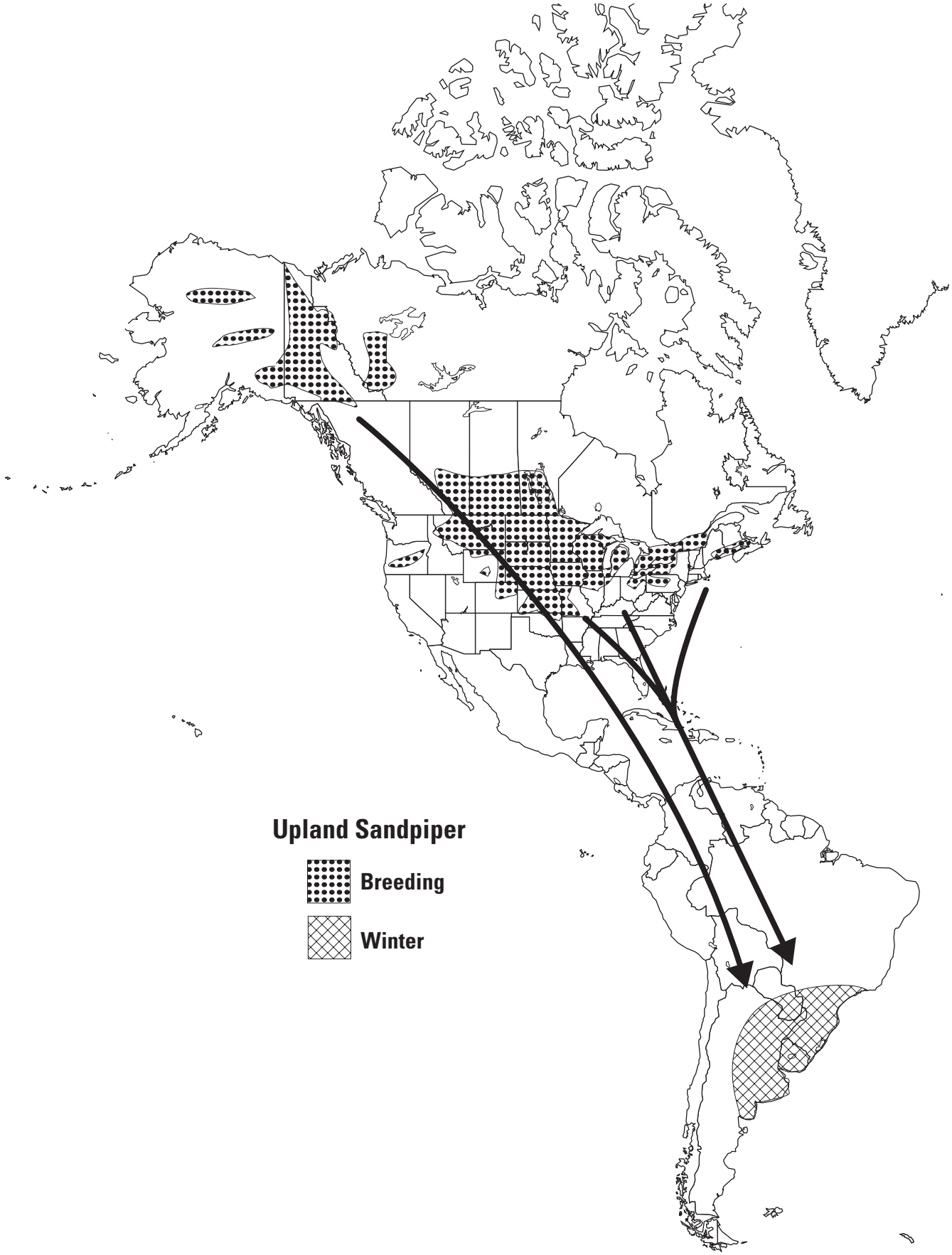
Migration
These shorebirds spend 8 months during the nonbreeding season in the pampas of South America. Most migrate through the interior of both the United States and South America using grassy fields as staging areas along the way. Most return to their nesting grounds using the same migration route.

Today's Population
The Upland Sandpiper was once found in great numbers throughout much of the United States. Early settlers collected their eggs and hunted the adults until their population dropped. Farmers plowed the prairies for agriculture making the situation for the Upland Sandpiper even worse. Today, the numbers of Upland Sandpipers continue to decline in the northeast but appear to be climbing in the central United States.

Treats to Upland Sandpipers
The greatest threat to this shorebird is loss of wintering ground in South America. Pampas, a sea-like plain of grassland habitat, is easily transformed to agriculture. This makes it one of the most threatened ecosystems in South America today.

Here in the United States, many Upland Sandpipers nest on privately owned ranch land. Their nests and young are disturbed, sometimes even trampled, by grazing cattle. Other potential nesting habitats have been lost to agriculture.

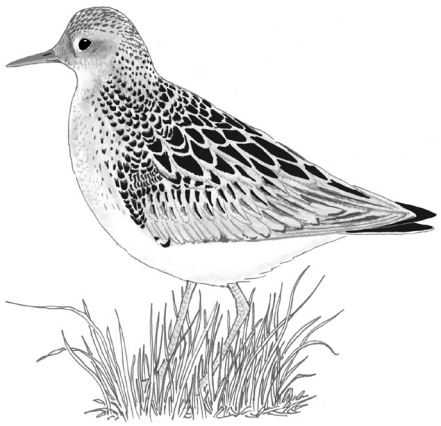
Something to Think About…
What is being done to protect the South American pampas and other important shorebird nonbreeding habitats?



Note: Arrows indicate general migration routes for both spring and fall.

Buff-breasted Sandpiper

(Tryngites subruficollis)



Description
The Buff-breasted Sandpiper is as an elegant and handsome shorebird. Its' small head makes this shorebird resembles a pigeon.

All the plumages of this medium sized shorebird are similar. It has a streaked brown crown and a buffy face and breast. It has a short, black bill and yellow-green legs.

Behavior
Male Buff-breasted Sandpipers are known for using the double wing breeding display when courting females. In this display, the male stretches out both of his wings, tips his bill toward the sky, and stands up tall on outstretched toes. Then he shakes his entire body moving his wings up and down making "tick" sounds. The females approach him as if they are inspecting the silvery-white linings of his wings.

Call
Buff-breasted Sandpipers are usually quiet birds. They sometimes make a low, growling "pr-r-r-reet" while in flight. These sandpipers also make clicking noises in the breeding season when doing courtship displays to attract females.

Non-breeding Habitat
The Buff-breasted Sandpiper is rarely found next to water. During the winter and migration you can find them on golf courses, airports, and the dry mud around rivers, inland lakes and reservoirs.

Breeding
Buff-breasted Sandpipers are known for their unique mating system. These shorebirds use leks, a gathering place where males make intense breeding displays to attract females. These leks are found on the drier tundra of the northern Alaska coast or on high arctic islands of Canada.

Once a male and female have formed a pair bond, the males will defend a 30-50 foot territory by chasing other males away or with wing-flashing and wing-waving displays. Flutter-jumping, where two males rise together up in the air as high as 20 to 40 feet, is also meant to intimidate other males.

Once the pair has mated, the male, who is promiscuous, begins looking for another mate. The female is left to build her nest, lay and incubate her eggs, and raises her chicks alone. She selects the nest site and digs a scrape on the ground. She lines her nest with lichens, dead willow leaves, or moss. She then lays four buff-colored eggs that are heavily camouflaged with dark spots and splotches. Buff-breasted Sandpiper chicks are very precocial and soon after hatching move quickly through the grass catching their own food.

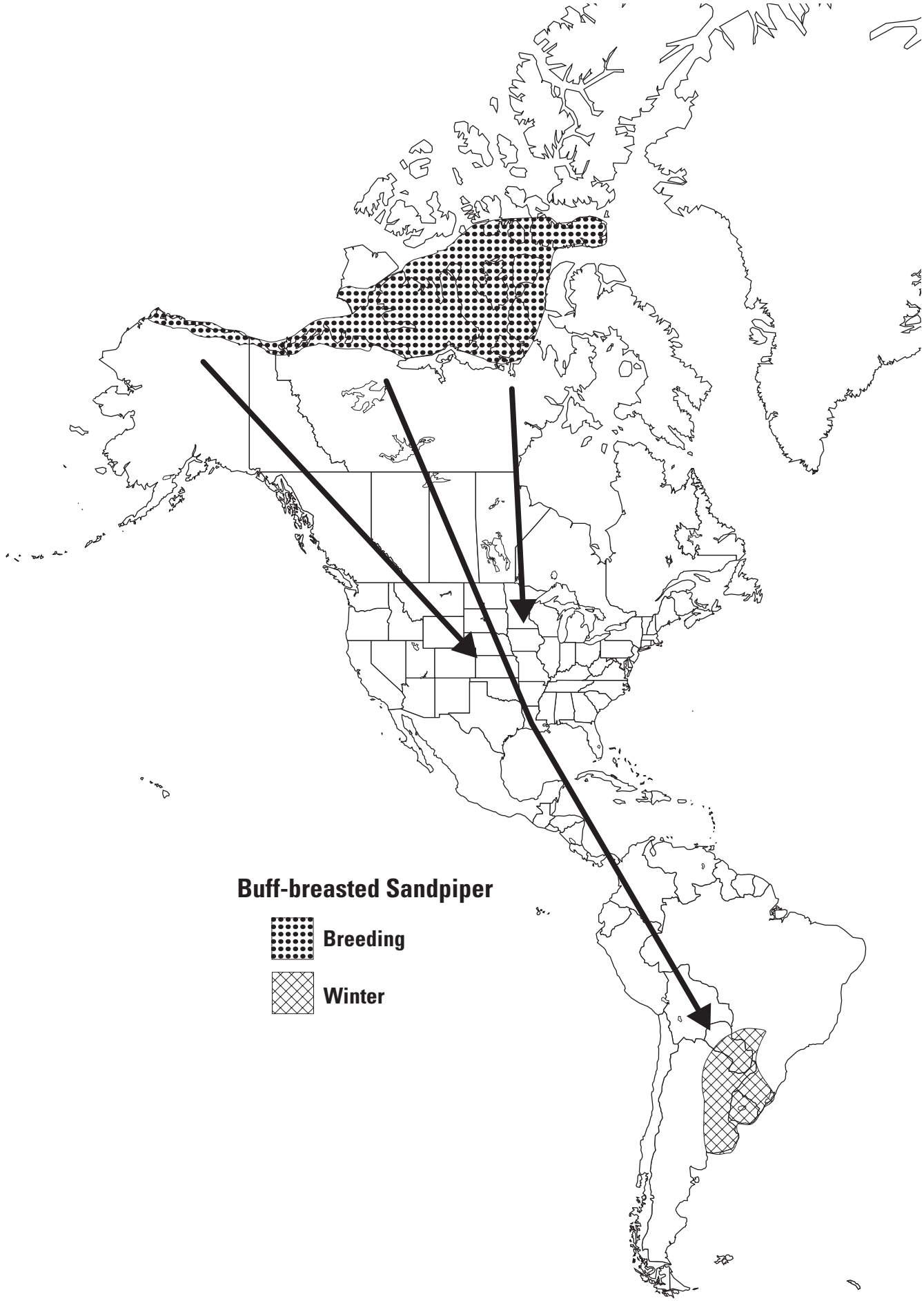
Migration
Buff-breasted Sandpipers migrate south through the center of both North and South America stopping to winter on the grazed pampas of South America. They use the same route, perhaps veering a little more to the east, on their way back to their breeding grounds in the spring. During migration flights, Buff-breasted Sandpipers prefer to stop on short grass habitats to feed on fly and beetle larvae, other insects, and spiders. They rarely eat marine invertebrates.

Today's Population
Human activities like hunting and agriculture brought the Buff-breasted Sandpiper to near extinction in the early 1920s. Their extreme tameness and tendency to return to a wounded bird made them easy targets for hunters. Today, there are probably less than 25,000 of these grassland shorebirds left.

Threats to the Buff-breasted Sandpiper
Biologists don't expect things to get any better for the Buff-breasted Sandpiper in the near future for several reasons. They are already a small population of birds. Very little of the habitat they need is left and much of the remaining grassland is privately owned. Buff-breasted Sandpipers also stage in large numbers at sites that are threatened by further development.

Perhaps the most critical threat to Buff-breasted Sandpipers today is the loss of their wintering grounds in South America. Pampas, a grassland habitat, is easily transformed to agriculture and is one of the most threatened ecosystems in South America today.

Something to Think About…
What other shorebirds use leks as part of their mating system?



Note: Arrows indicate general migration routes for both spring and fall.

American Oystercatcher

(Haematopus palliatus)

Description
Large and showy, and a bit funny looking, the American Oystercatcher is a common coastal salt marsh and sandy beach shorebird. Its bright red-orange bill is sturdy and laterally flattened, built for opening mussels and oysters. In young birds the bill is a pinkish brown and dusky black toward the tip. It has a yellow eye and an orange-red eye ring.

Breeding and non-breeding plumage is almost identical in American Oystercatchers. They have black heads and necks and dark blackish-brown underreports. They have white wing and uppertail patches. Their legs are a tan or sand color.

Males and females look alike but females are larger and heavier than males.

Behavior
Oystercatchers use their bill to probe the mud for soft-shell and razor clams. Once they have hold of their dinner, they have two techniques for removing clams and mussels from their shells. They might plunge their bill, which is a cross between a knife and a chisel, into the open shell of an unsuspecting clam. Or they "hammer" the shell with a few well-aimed blows.

Call
The American Oystercatcher makes a combination of loud rising and lowering whistles that sound like ""weep wheep."

Nonbreeding
These birds use coastal habitats during this time. The largest flock of American Oystercatchers on the Atlantic coast spends the nonbreeding season at Cape Romain National Wildlife Refuge.

Habitat
These shorebirds are only found in marine waters on the east and west coasts. New, large coastal reserves in Virginia and North Carolina are protecting critical habitat where the largest groups of oystercatchers now live.

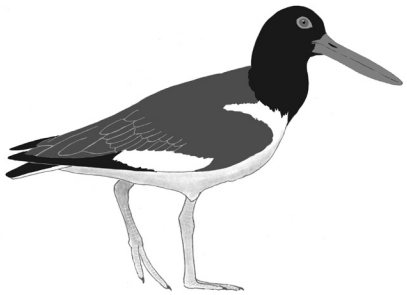
Breeding
The eastern race of American Oystercatchers breed on the Atlantic and Gulf Coasts from New England south to Texas. The western race uses the shores of western Mexico and Central America. Since Oystercatchers are monogamous and most don't migrate, biologists think that these shorebirds may mate for life!

American Oystercatchers nest on marsh islands, upland dunes, or right on the beach. Their nest is a simple scrape lined with tiny pebbles, bits of shell and seaweed. A pair of oystercatchers may make up to five nests before deciding on which one to use! In marshy spots the oystercatcher may line its nest with reeds. The 1 –3 eggs they lay are extremely well camouflaged. They are colored like the sand and marked with dark splotches that look like little bits of shell and stones.

Oystercatchers are perhaps the most attentive of all shorebird parents. Without the rush to migrate, oystercatchers spend up to a year feeding and teaching their chicks how to find and open clams and mussels.

Migration
The American Oystercatcher is considered to be a resident shorebird. They will flock up in the fall and winter but only those birds from the middle and northern Atlantic regions migrate south in the winter.

Today's Population
Unlike other shorebirds, the numbers of American Oystercatchers along the Atlantic Coast has grown in the last two decades. In fact, this is one of the few shorebirds that has actually expanded its range northward. Their success may have

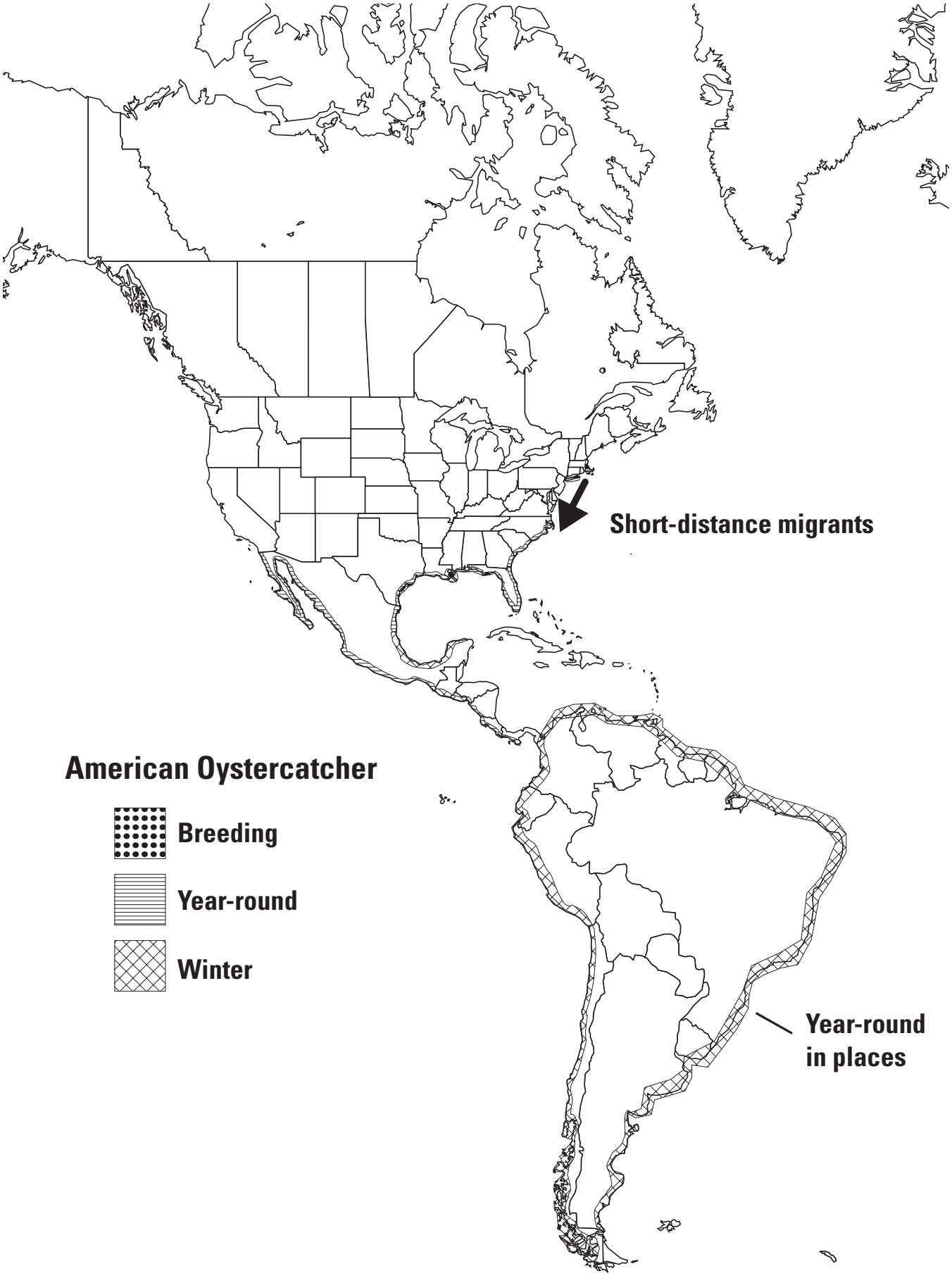


to do with the fact that they are such specialized feeders and attentive parents. It may also help that they are strictly coastal birds that migrate only short distances if at all! Still, today's population of American Oystercatchers is still less than 10,000 birds.

Threats to American Oystercatchers
These shorebirds are shy and intolerant of people. Since coastal property is always in demand for recreation and development, people are perhaps the greatest threat to breeding American Oystercatchers.

The American Oystercatcher builds nests in open, sandy areas they are very vulnerable to predators like red fox, cats, dogs, or even other birds. Pollution is another threat to the oystercatcher population if the levels are high enough to affect the shellfish these shorebirds feed on.

Something to Think About…
Can you find another shorebird whose population has actually increased in the last decade? Why is this species doing better today than ever before?



Note: Arrows indicate general migration routes for both spring and fall.

Wilson's Phalarope

(Phalaropus tricolor)

Description
This medium-sized, swimming member of the sandpiper family has the longest and slimmest bill of all the sandpipers. Its black bill looks almost like a needle. It has a large body with a long neck and a small head.

Females are larger and more brightly colored than males. Their underparts are patterned pearly gray, rufous red, and black in the breeding season. The female's crown, nape and hindneck are a solid pearly gray. They have a black eye mask that continues down both sides of the neck.

The male Wilson's Phalarope has similar but duller coloring. In the non-breeding season, both males and females have a gray back, crown, and eye mask. Their underparts are white.

Behavior
Phalaropes look almost frantic when they feed. Spinning like wind-up toys on top of the water, they create a small whirlpool that temporarily stuns the larvae, crustaceans, and insects they feed on. Then they use their needle-like bill to pick their prey off the upper layer of water.

Call
The call of the Wilson's Phalarope includes a hoarse "wurk" and other low croaking sounds.

Nonbreeding
This species of pharlarope uses fresh and saltwater wetlands during the nonbreeding season.

Habitat
Wilson's Phalaropes are salt lake specialists, found almost entirely in western North America during migration.

Breeding
Wilson's Phalarope is the largest and the most terrestrial of the three phalaropes found in North America (the others are the Red-necked Phalarope and the Red Phalarope which stay primarily in the ocean). Their partially lobed feet help them walk on aquatic plants and wetland grasses.

A primarily inland shorebird, the Wilson's Phalarope breeds exclusively in the Nearctic on the grassy borders of shallow lakes, marshes, reservoirs, and prairie wetlands.

Wilson's Phalaropes, like Spotted Sandpipers, are sexually dimorphic. Sex roles, like plumage, are reversed. Females court the male and will chase other females away from her territory. Once she has found her mate, the pair looks for potential nest sites. A few days before laying the eggs, the male begins building a grass-lined hollow that serves as their nest. After laying 3-4 buff-colored eggs with brown markings, the males chases the female away and takes over the job of incubating the eggs and caring for the chicks. Sometimes female phalaropes are polyandrous and may chose to mate again with another male.

Migration
Wilson's Phalaropes begin their southern migration early in the summer, well before most other North American shorebird. While the other two species of phalaropes winter at sea, the Wilson's migrates 3,000 miles to the fresh and brackish wetlands of South America. Females are often seen migrating as early as June.

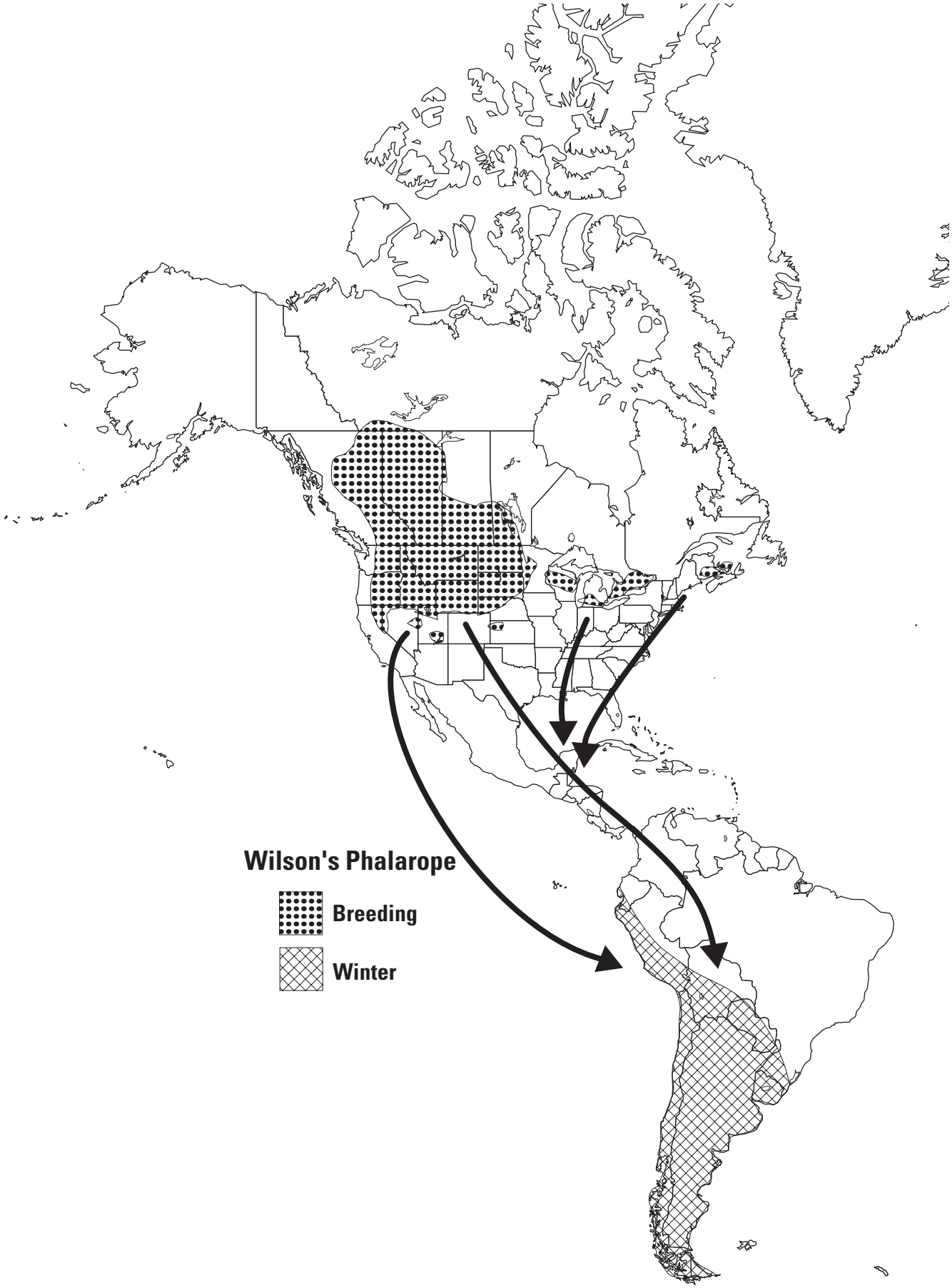
Today's Population
Biologists think there are about 830,000 Wilson's Phalaropes in the United States and Canada with most along the Central Flyway.

One of the most well known and critical staging areas for Wilson's Phalaropes is Mono Lake in Northern California. Here as many as 90,000 of these shorebirds have been counted feeding and resting on the saline

mudflats, almost doubling their weight gorging on brine shrimp. This extra source of "fat fuel" prepares them for their non-stop, 60 to 70 hour migration flights to South America!

Threats to Wilson's Phalaropes
Many of the Wilson's Phalaropes that stop at Mono Lake are headed for Mar Chiquita, a wetland system in Argentina that is part of the Western Hemisphere Shorebird Reserve Network. Flocks of 500,000 of these birds, locally named Chorlo nadador grande (the "great swimmer plover"), are found on this nearly uninhabited region. Mar Chiquita, one of the largest salt lakes in the world is located in the central region of Argentina. A proposal to divert water from the country's Dulce River to neighboring states is under consideration in Buenos Aires. A water diversion project would dramatically change this vast wetland.

Something to Think About…
One of the greatest challenges in migratory bird conservation is the need to protect not only a bird's breeding habitat but also the critical staging areas and the habitats where they overwinter. What is the Western Hemisphere Shorebird Reserve Network and how does to work to meet this challenge?



Note: Arrows indicate general migration routes for both spring and fall.