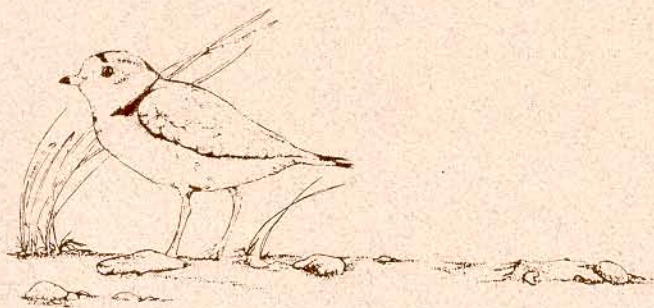


The Endangered Piping Plover and Its Ecosystem

Grand Bay West to J.T. Cheeseman Provincial Park Newfoundland



"Walk along the water's edge and ... we shall hear the plover's voice; a soft musical moan, we cannot tell from where, but clear and distinct above the sound of waves and wind."

Winsor Marret Tyler, 1929

General Description

The Grand Bay West to J.T. Cheeseman Provincial Park area is best known for the Piping Plover (*Charadrius Molodius*) which nest here. The Piping Plover is a small, robin-sized shorebird.

The Piping Plover is well-camouflaged with head, back and wings a pale sandy grey, and white underparts. A white wing-stripe and rump are visible in flight. During the breeding season, the adult has a black stripe across the forehead, a long white eye stripe, orange legs, orange bill tipped with black, and a single black neckband (in some birds the band is not complete across the breast). In the fall, adults moult their distinctive breeding plumage and adopt a duller winter plumage. The adult male and female are similar in size and colour.

When still, the Piping Plover blends into the pale background of open sandy beaches where it feeds and nests. The bird's name derives from its call notes, plaintive bell-like whistles which are often heard before the bird is seen.

The slightly larger Semipalmated Plover is a more common shorebird that occupies similar habitats in the late summer and fall, but is brown.

What is "Endangered"?

For Canada, "endangered" is defined as "Any indigenous species of fauna or flora that is threatened with imminent extirpation or extinction throughout all or a significant portion of its range". In other words, it will soon disappear if nothing is done.

The Ecosystem of the Piping Plover: Grand Bay West to J.T. Cheeseman Provincial Park, Newfoundland

The state of the Piping Plover population is the result of an interaction of physical features such as the habitat and

weather, and biological features such as plants, other animals, and humans. The Piping Plover population is interdependent with these other elements. For example, weather can have an impact on the Piping Plover, particularly when storms wash nests away.

Piping Plovers live on the sandy shores from Grand Bay West to Cheeseman Park. For nest sites they prefer sparsely vegetated sand dunes, sandbars or beaches. They like areas overwashed by past storms but not yet recolonized by plants. One of the key features is a sandy "forebeach" which is used for feeding, such as in the picture of a Piping Plover at the water's edge, avoiding the waves. A somewhat pebbly "backshore" is also desired, as the Piping Plover does not build extensive nests but excavates a small depression in the sand and lines it with small stones, shells, etc.

This Piping Plover habitat is under increasing pressure in North America. Sandy beaches are very uncommon on the Island of Newfoundland. Large sandy beaches such as those extending from Cape Ray to Grand Bay are rarer still, and many that still do exist have been highly disturbed due to human pressure and development. The pressure for development has been even greater on beaches and Piping Plover habitats in other parts of North America.

The dunes between Grand Bay West and Cape Ray are relatively pristine and are one of the best remaining examples of this feature on the Island.

The salt marshes or "barachois" adjacent to the beaches where the Piping Plovers nest play an essential role in the food supply of the plover. It has been well documented that salt marshes are productivity "hotspots". That is, the "biological output" is greater than any other habitat in the world! This can be seen every year by the lush growth of vegetation and the high level of use from wildlife. In particular, salt marshes attract many different species of shorebirds and waterfowl throughout the year.

The salt marshes associated with the beaches are also uncommon throughout the Island. The type of salt marsh at Grand Bay West is even more uncommon.

Environmental interpretive tours are available from J.T. Cheeseman Park Beach or from Grand Bay West Beach. Check at the Visitor Information Centre for times and start and finish dates.

The Piping Plover is part of a complex food chain and natural system. The basis of the food chain is the vegetation, in the form of plankton. This is the food supply for the small invertebrates and insects that the Piping Plover feeds on. The Piping Plover is most commonly viewed running quickly along the wet sand just ahead of the waves where it feeds on small invertebrates, or feeding on "sandhoppers" further back on the beach. These invertebrates which may be seen in a handful of sand are found in the highly productive salt water marshes in this area.

The Piping Plover interacts with other species. Its main natural predators in this area are gulls, which formerly had a diet high in fish offal, but are now starved for other meals. The Piping Plover nests are camouflaged, but sometimes this may not be enough to prevent attacks from gulls. Foxes and crows as well as storms can cause the loss of nest sites.

History of Human Impact

During the 19th century, Plovers fell victim to fashion. Their feathers were used as decoration for women's hats. They were also a popular food item, showing up on many menus as "plovers on toast". Since Plovers were easily killed, their numbers dramatically declined.

Today the Plovers have other problems caused by people. They nest on sandy beaches which also attract people. We build homes and commercial properties near them, we use beaches for recreation and for walking our pets, and we drive all terrain vehicles (ATV's) on them. The biggest threat in this area is from ATV's driving over nests. ATV's also destroy the backshore areas where grass keeps the sand together. When the grass is destroyed, there is nothing to hold the sand in place where the Plover nests are built. ATV's also destroy the food supply of invertebrates where they drive down the lower parts of the beach. All these activities can destroy eggs and young or cause Plovers to abandon their nests. Most people don't do this on purpose but the harm to the plover is just as serious whether it is intended or not.

Present Status

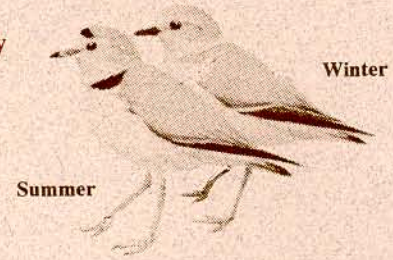
In 1985 the status of the Piping Plover was changed from threatened to endangered species. The Piping Plover is found only in North America, with an estimated world population of 5421 in 1991. These numbers are roughly equally distributed between the inland Canadian Prairies and US Great Plains and Atlantic Canada and US. The population has declined by about 20% since 1991.



The historical population of the Piping Plover is unknown. Within the last 20 years or so they could be found at six Newfoundland beaches; Grand Codroy, Little Codroy, Stephenville Crossing, Lumsden, Big Barasway and Grand Bay West to J.T. Cheeseman Park. It appears that they may have disappeared from some of these beaches. The estimated Newfoundland population was roughly 20 to 30 in 1994. There were 30 Piping Plovers seen in this area in 1995, among these were six nesting pairs and eighteen chicks.

Breeding Biology

Around early to mid-May the plovers return from their wintering grounds around the Gulf of



Mexico and southern US. They stake out their territories, with boundaries understood only by other Plovers. They feed after their long flight and make their nests. Nests are simple depressions scraped in the sand and lined with broken shells and pebbles, into which each female lays 2-4 eggs. The eggs are cream-coloured with fine blackish brown spots. The dark spots help to camouflage the eggs among the pebbles lining the nest. One egg is laid every second day, until the seventh day. Four eggs can total 70-80% of the total body weight of the female plover. Both adults share incubation duties until the young hatch 27-29 days later.

The chicks must grow fast since they have to increase their body weight 4-5 times during the first six weeks to prepare for migration which begins in early to mid-August. During this time the adults must feed constantly. Extensive disturbance from humans risks the Piping Plover not being able to properly incubate and feed their chicks.

SHOREBIRDS IN THE GRAND BAY WEST TO J.T. CHEESEMAN PARK AREA.

Because of its ideal location on the flight paths of many migratory species and its ideal habitat, this area has among the largest variety of shorebirds of any area in the province. All of these birds were carefully verified before listing with help of the Peterson's Guide.

HERONS

American Bittern U*,F,V. 23"(58cm)

A stocky brown heron with a black stripe on the neck. Single birds have been seen during the fall in recent years, with about 4 or 5 estimated to be the total in the area.

Great Blue Heron U,S,F 39-52"(99-132 cm)

A common large, greyish heron with a yellowish bill. Flies with neck folded. Greenish-yellow legs. These are commonly seen during the late summer and fall, mostly as solitary birds, but as many as five have been seen at once.



Great Egret X*,F,V. 38". (95 cm)

A large, stately, slender white heron with a yellow bill (orange when breeding). One Egret was sighted at "Mouse Island" in Port aux Basques in October, 1992.

Snowy Egret X*,V,F. 20-27". (50-68 cm)

A rather small, white heron with a slender black bill, black legs, yellow feet. Recurved plumes on the back during nesting season. There was one sighting in October, 1991.

Little Blue Heron X*,V,F

A slender, medium sized heron. Adult bluish slate with a deep maroon brown neck; legs dark. There have been two sightings during the fall of this rare heron at Mouse Island and near Grand Bay West.

Yellow-Crowned Night Heron X*,V,F. 22-28" (55-70 cm)

A chunky grey heron; head black with a whitish cheek patch and crown. One was sighted at Salt Water Pond near Grand Bay West.

PLOVERS AND SANDPIPERS

Black-Bellied Plover C,F.10-13".(26-34 cm)

A large plover; in breeding plumage with a black breast and pale speckled back. Commonly seen throughout this area in the fall, there have been as many as 8 seen at once in early September, 1995.

Greater Golden Plover X,V,SP,F

Four of these Eurasian species were sighted during May and September, 1994, and two in late May, 1995.

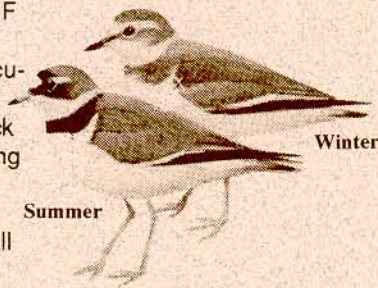
Piping Plover C,B,SP,S

This the largest breeding area in Newfoundland for this endangered species. There were six breeding pairs between 1993 and 1995, with 18 chicks in 1995, for a total population of 30 birds.

Semi-Palmated Plover C,S,F

A dark-backed shorebird with white underparts and a conspicuous black breast band. Bill stubby, yellow orange with black tip. Darker above than the Piping Plover.

Flocks of 25-100 of these are common in late summer and fall along these beaches.



Killdeer C,B,SP,S,F. 9-11" (23-28 cm)

Robin-sized. Brown above and white below, with two black bands on the breast and a blackish bill. In flight, tail appears bright rufous. Often bobs its head.

This rare visitor to Newfoundland is commonly seen in this southwest corner.

Two to three breeding pairs are regularly sighted during the spring, summer and fall near Grand Bay West Beach.



Greater Yellowlegs C,B,SP,S,F. 14"(35cm)

As many as 20 to 30 have been seen at once in Spring, Summer and early Fall. Due to the sighting of chicks near Grand Bay West beach during the summer, there is considered to be a small breeding population.



Lesser Yellowlegs C,S,F. 10 1/2"(26 cm)

This smaller version of Greater Yellowlegs is commonly sighted in late summer and early fall with as many as 20-25 per sighting.

Spotted Sandpiper C,SP,F

In breeding plumage olive-brown above, many black spots below; lacks spotting in fall and winter.

These are commonly sighted during the spring and fall and are generally alone or in pairs.

Approximately 20 or 30 are estimated to be in the area in the appropriate season.



Whimbrel C,B,SP,S,F

17" (43 cm). Crow-sized, with long legs. Grey-brown with striped crown and medium-length curved bill. As many as 20-25 of these have been sighted in rocky bogs and marshes throughout this area in spring, summer and fall.

Sanderlings C,SP,F. 7-8"(18-20 cm)

Bold white wing stripe. Rusty about the head back and breast in summer, and snowy white and pale grey in winter. As many as 50-100 of these non-resident species have been sighted during the spring or fall.

Dunlin U*,F. 8-9". (20-23 cm).

Rust red back and black patch across the belly in summer, grey back and breast in winter. These have been sighted alone or with other species in late August or September prior to 1995. One was sighted on September 9, 1995.

Eurasian Dotterel X,V

Three of this non-resident species have been sighted in September prior to 1994, with an additional sighting September 9, 1995, near Grand Bay West beach.

Semi-palmated Sandpiper C,SP,F. 5 1/2 - 6 1/2". (14-16 cm).

Shorter, stouter bill than the Least, with blackish legs. Large flocks of these are commonly seen in this area in spring and late summer.

Least Sandpiper C,SP,F. 5-6 1/2"(13-16 cm)

Smaller, browner compared to other sandpipers. Yellow-green legs, slight bill and streaked breast. Large flocks of these are commonly seen in this area.

Upland Sandpiper U*,B,SP,S,F. 11 1/2"cm)

A pigeon-headed, large brown sandpiper. Two to three pairs have been sighted at Burnt Island Pond, near this beach area.

Purple Sandpiper C,W 9" (23 cm).
Dark slate with orange-yellow legs; bill orange with black tip. Paler and more streaked in winter. Flocks of 20-30 of these birds are commonly seen during winter months on rocky shores.



Woodcock C,B,SP,S,F

A rotund, almost neckless brown bird with a dead-leaf pattern, barred crown. This nocturnal species is heard more than seen, although it is considered common during the spring, summer and fall.

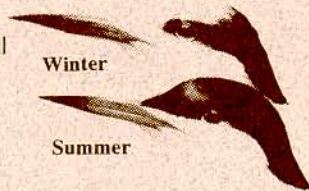
Gull-like birds

Caspian Tern U*, F

Size of a herring gull, with a large red bill and short tail. One or two pairs of this rare species are sighted annually, usually in September. A pair was sighted September 9, 1995 near Grand Bay West beach.

Common Tern ("Stern") C,B,SP,S,F

Pigeon-sized. White with black cap and pale grey back and wings. Red bill with black tip. Deeply forked tail. As many 100-150 of these are commonly seen in J.T. Cheeseman Provincial Park, particularly in late summer, as well as throughout the remainder of this area.



Laughing Gull X,V,SP. 16-17". (40-43 cm)

A small coastal gull, with a dark mantle and black wing tips. head black in summer. One was sighted on a rocky shore in this area during the Spring.

Parasitic Jaeger 18" (45 cm)

Falcon-like; chases gulls, terns. dark with white wing flash. One was sighted July 30, 1995 in Cheeseman Park.

Sabine's Gull X, Sp 13-14" (33-35 cm)

Our only gull with a well-forked tail. One pair has been sighted, April 13, 1992.

Definitions

OCCURRENCE

C = common: likely to be found daily in appropriate season/habitat; locally common U = uncommon: likely to be found monthly in appropriate season/habitat; may be locally common

U*=very uncommon: likely to be found annually in appropriate season/habitat; may be locally uncommon

X=rare: not likely to be found annually; though apparently occurs regularly in very small numbers

X*=very rare: recorded three times or less

STATUS

B=Breeder: known to breed

R=Resident: non-migratory, or maintains a significant year-round population

V=occurrence: outside usual range

I=Introduced: introduced to Newfoundland

SEASONAL DATES (seasons during which a species has been recorded- a lower case entry indicates that a species is less common during that season than indicated by the overall occurrence designation.)

SP = Spring: 21 March- 20 June

S = Summer: 21 June - 20 September

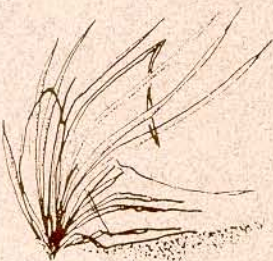
F = 21 September - 20 December

W = 21 December - 20 March

Plants

The dune system from Port aux Basques to J.T. Cheeseman Provincial Park supports plants which must be able to tolerate dry conditions and blowing sand. The marron (dry grass) has long roots that reach down to the water table to secure an adequate source of water. Other roots spread out near the surface of the sand and in this way stabilize the sand. Plants which have adapted to this type of environment include worm-wood, bluebell and wild grape.

Located between the dune area and the stunted forest is a transition zone known as the panne. This is a moist area usually found behind the foredunes whose vegetation and plant life is controlled by the seasonal rise and fall of the water table. Plants which have adapted to the environment include fireweed, pitcher plants which are Newfoundland's provincial plant, white claxer, Blue Flag Iris, One-Eye Daisy, White-Fringed Orchid, Scent-Bottled Orchids, Cotton Grass, Buchbean and Sundew.

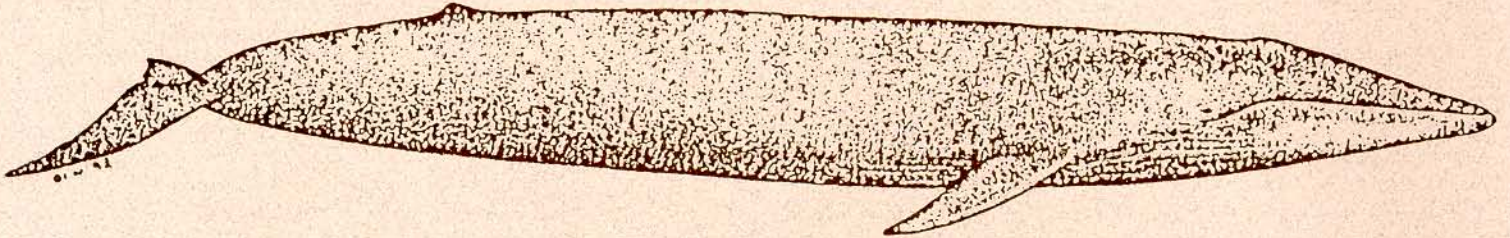


Because of severe weather conditions in this area, the nearby forest is represented by trees (mostly spruce) with stunted growth. The floor of these areas are moist and damp and only plants that need little light can grow. Plants such as Clintonia, Pink-Lady Slippers, Twin Flowers, Bunchberry, Creeping Strawberry, Labrador Tea and the Purple-Fringed Orchid are in great abundance. It is interesting to note that many of these plants were used by Beothuck Indians in the early 18th Century as remedies for many diseases. For example, the root of the pitcher plant was used for many pulmonary complaints. Even today, modern medicines are derived from such plants as the Common Evening Primrose. Oil extracted from this plant is used to cure people suffering from chronic fatigue syndrome. The Common anacin tablet was derived from the willow tree.

Fish and Whales

The salt-water marsh conditions in the barachois leads to excellent conditions for the growth of small fish known as "Mummichogs". These are an excellent food supply for gulls, hawks and other larger birds.

The Southwest Coast is on the migratory path for the Blue Whale. In late winter they appear along the edge of ice on Newfoundland's southwest coast. During the summer months, they are reliably sighted around the Mingan Islands in the Gulf of St. Lawrence, and may also be seen off Cape Ray and Newfoundland's Southwest Coast. Evidence of this is found in the numerous whales that have been beached in this area, and remains of whale skeletons. The jawbone of a blue whale may be seen in J.T. Cheeseman Park. Blue whales are the largest animals on earth, and are considered rare in most locations. The Newfoundland population is estimated to be in the low hundreds.



Local Efforts to Save the Piping Plover from Extinction

Since 1993, local efforts have focused on informing the public about how to use the beaches without having a negative impact on the Piping Plover and its nesting area. The Piping Plover Guardian Program has focused on placing signs around the sensitive nesting areas and asking people to use the beach in a way that does not threaten the birds. Local volunteers have also made several presentations in schools in the area. As well, considerable efforts have been made to have stronger legislation and enforcement to protect this endangered species and its highly significant ecosystem.

A Call to Action

There are many things you can do to help save the Piping Plover and its endangered ecosystem:
Learn about the Piping Plover.

Inform other's about the Plover's plight.

When you are on a beach, walk at the water's edge.

Take litter away from beaches to avoid attracting predators.

Keep your pets away from beaches where Plovers may nest.

Keep all-terrain vehicles away from beaches where Piping Plovers nest.

Respect signs and fences placed to protect Piping Plovers.

Get involved with the Southwest Coast Environmental Preservation Committee, or make a donation through a Guardian or at J.T. Cheeseman Provincial Park.

Produced by the Southwest Coast Environmental Preservation Committee and the Gateway Community Development Corporation with the financial support of the World Wildlife Fund and the Department of Tourism, Culture and Recreation, Parks and Natural Areas Division. Many thanks to Sharon Porter, Heather Cumming, Damien Morrissey, Joe Brazil, Lucy O'Driscoll, Doug Ballam, Stephen Flemming and Bruce Johnson for their advice and support in this project.

CORMACK TRAIL

Grand Bay West to
J.T. Cheeseman
Provincial Park

