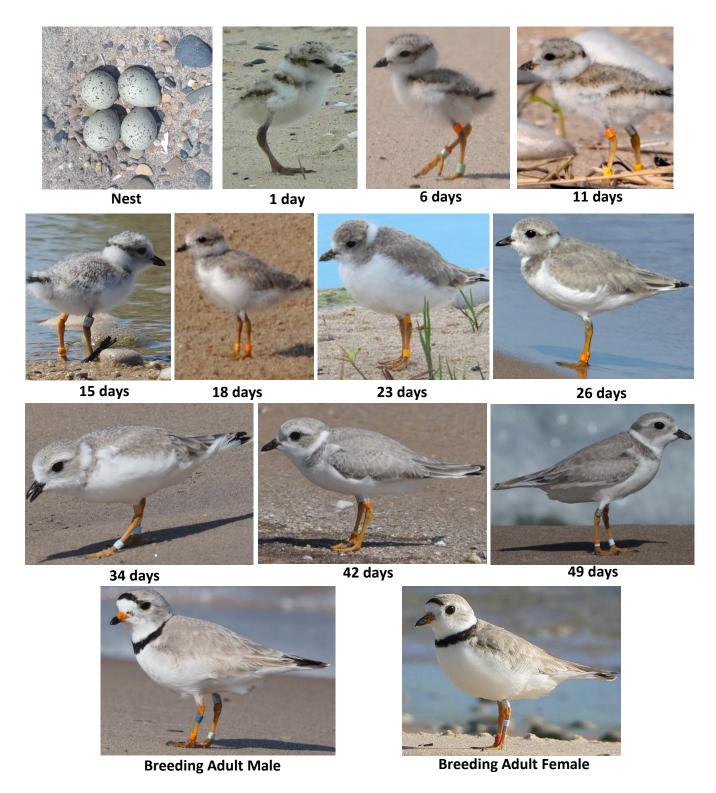
Manual A

Piping Plover Volunteer Handbook







Manuals A-C have been prepared by Birds Canada with support from funders and partners listed on Page 2. Revised April 2019; new revisions will be made available at birdscanada.org.

Special thanks to Alice Van Zoeren for use of photos and materials

Overview

The Piping Plover (*Charadrius melodus*) is a small shorebird and is one of North America's most endangered birds. Piping Plovers are listed as federally and provincially endangered in Canada and Ontario, and they are also a species at risk in the United States. There are three main breeding populations of Piping Plovers in North America: the Prairie, the Great Lakes, and the Atlantic; all together their total population is under 8000 individuals. In the 1980s, the Great Lakes Piping Plover population had as low as 12 pairs, all nesting in the United States. In 2018, there were 67 breeding pairs in the Great Lakes, a massive increase!

Piping Plovers returned to Ontario in 2007, after a 30 year absence. They now nest consistently at Sauble Beach and Wasaga Beach, and are usually found breeding at 2-4 other beaches in Ontario each summer.

Overwhelming support from volunteers and local communities has been instrumental in monitoring and protecting nests. Volunteers play a critical role in recovery efforts by collecting important data and by helping the public fall in love with plovers. Piping Plovers still remain very vulnerable to predation and human disturbance. Beach and dune habitat has been greatly decreased and altered by human development.

Who is Involved

Volunteer Coordinators:

Each beach has a Volunteer Coordinator who leads the volunteer program at their beach. They may be employed by any one of the provincial partners. The Volunteer Coordinator will be your number 1 contact.

Provincial Coordinator; Birds Canada

Ensures recovery efforts are consistent across all nesting beaches, and in the best interest of Piping Plovers. Leads on the beach conservation efforts, supports the volunteer program and conducts outreach. The Provincial Coordinator may also be the Volunteer Coordinator at some beaches.

Provincial Partners:

Environment and Climate Change Canada (Canadian Wildlife Service); leads Federal Legislation and chick banding Ministry of Environment, Conservation and Parks; leads Provincial Legislation (Formally the role of MNRF) Ontario Parks; leads and assists volunteer programs at Provincial Parks Plover Lovers (Stewardship Grey Bruce); leads the volunteer program and outreach at Sauble Beach Friends of Nancy Island; leads the volunteer program and outreach at Wasaga Beach

Researchers: University students and researchers have ongoing Piping Plover studies in Ontario and elsewhere.

Also essential the program:

Municipalities, local stewardship groups and community groups, Bylaw Officials, Conservation Officers, First Nations, residents and cottage owners, funders, and VOLUNTEERS!







An agency of the Government of Ontario Un organisme du gouvernement de l'Ontario



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Environment and Climate Change Canada

Environnement et Changement climatique Canada



The Role of a Volunteer

You will spend most of your time at one nest, observing a pair of plovers while they incubate, or observing a family with chicks while they forage on the beach. You will tell curious beach goers about the plovers, and help them understand how their actions make a difference. You may choose to observe more than one nest during your shift, just make sure that you're collecting all the necessary data before moving on. Your main jobs are:

Outreach and Education

Inspire positive plover experiences! Educate and engage beach goers about Piping Plovers. Encourage visitors to share the beach with Piping Plovers and understand what they can do to help. Help people see the plovers and identify them.

Nest Monitoring and Data Collection

The data you collect is used by Coordinators to track the plover population, health, threats and disturbances. This data is used to make management decisions on the beach, and track the success of outreach efforts over time so that we can make a better program. **Monitor** and observe the Piping Plovers. **Report** problems to Volunteer Coordinators promptly. **Watch** for predators and other disturbances.

If you are interested in helping in more ways, ask your Volunteer Coordinator about opportunities. There may be opportunities to help with surveying beaches in the spring, or to help install or remove exclosures, assist at special events, share photos for outreach, and more.

Be Prepared

You may be working alone, with other volunteers, or with a friend or family member. Shifts range from 2-4 hours, depending on where you are volunteering. Some nests may be a long walk from public facilities (parking lots, washrooms, stores).

- Dress for the weather. Beaches are exposed places with no shade, high wind, and extreme temperatures.
- If you are feeling ill, seek shelter and rest. Your heath is the priority over your volunteer duties.
- NEVER stay on the beach in a thunderstorm. Take shelter in an enclosed building, trailer or a vehicle when thunder and lightning are less than 30 seconds apart, and avoid returning outside for 30 minutes.
- If you see dead fish, birds, or other animals, let your Volunteer Coordinator know. Do not handle them.
- Do not put yourself in harm's way. If anyone becomes abusive or rude, walk away and contact your Volunteer Coordinator or law enforcement (if necessary).

You may want to bring:

- Clothing for all weather (hat, rain gear, sweater)
- Sun protection; most nests have very little shade nearby
- Plenty of water
- Binoculars or a scope; not required, but plovers are much easier to see with optics
- Lawn or camping chair
- Camera with high zoom; not required, but useful for reading bands. Never approach plovers for photos.
- A cell phone with emergency contact information

Be on time, fill out data sheets every shift, and contact your Volunteer Coordinator as soon as possible if you have to change or cancel your shift

Nest Monitoring and Data Collection

You will only need 1 data sheet per shift. If you plan to do 2 shifts back-to-back, please take a second data sheet.

- 1. When you first walk onto the beach fill out **Section A**: Beach Conditions.
- 2. After recording Beach Conditions, walk to the nest that you will be observing. As you walk to the nest make note of disturbances, predators, interactions you have with the pubic, or any single plovers you see; plovers that have not nested or do not have a mate (Sections B, D, F, and H).
- 3. At the Nest:
 - Fill out **Sections B, C and G**, and continue to make notes on outreach and predators. When filling out **Section C and G**, make sure you record what nest you are at.
 - Confirm both adults are attending the nest; wait to see an incubation switch. If the nest has hatched, try to count all of the chicks and both adults.
 - Engage beach goers. Try to keep an eye on the plovers, but do not worry if you lose track of them while talking to people.
 - Walk around the perimeter to look for signs of disturbance (e.g. vandalized signs, footprints entering the perimeter). It may not be necessary to walk in the dunes.
 - If chicks are present on the beach, you may move the "Chicks on Beach" signs to the area where they are spending most of their time. Politely inform beach goers to watch out for chicks.
- 4. After a while, it is okay to check on other nests. Try not to leave your first nest until you've confirmed both adults are tending, and/or all chicks are present. Before you leave, record the amount of time you spent at the nest in **Section C**.
- 5. As you walk to the next nest, continue recording disturbance, predator, and outreach data. When you arrive at the nest, repeat the process from Step 3; ensuring all plovers at the nest are accounted for and appear healthy.
- 6. At the end of your shift, submit the data; ensure your data sheets are added to the volunteer binder, or email data sheets to your Coordinator if volunteering at a remote site.

You may visit all of the nests during your shift. If one nest has more human disturbance, it is a good idea to spend more time there engaging people. Your presence, will help ensure compliance within the nest area, and your enthusiasm for the plovers will be contagious! Additionally, if you see anything worrying with a particular pair, it is best to observe that nest for a longer time, and report back to your Coordinator.

You DO NOT have to visit all nests during your shift; you might have a favorite pair, and choose to spend the whole shift watching them.

Report urgent matters to your Coordinator immediately (refer to Page 15). Report beach violations to the appropriate authority at your beach (i.e. Bylaw, Wardens). Such violations might include; dogs, ATVs, camping, fireworks, etc. Ask your Coordinator for beach specific rules.

What Not to Do

<u>Go inside of the fenced area</u> (except in exceptional circumstances; please discuss with Volunteer Coordinator). The area is closed to all members of the public to allow space for plovers to safely tend to their eggs and young. <u>Approach or handle Piping Plovers</u> (alive, injured, or dead) or their nests/eggs.

<u>Enforce rules or be confrontational</u>: You do not have the authority to enforce rules. Being polite will help the project gain more support from the public. Call your Volunteer Coordinator or law enforcement if required. <u>Interfere with Piping Plover behaviour in any way:</u> Warding off predators (shouting, chasing or using whistles), trying to scare plovers into a 'safer' area, or getting too close. You may accidentally do more harm than good. **Construct or move fences**, unless under direct supervision of Provincial or Volunteer Coordinator.

Page 1 Example

ONTARIO PIPING PLOVER BEACH SURVEY FORM

Beach: Sauble Beach Volunteer Name: Jane Doe

Month: May Day: 25 Start time: 8:00 End time: 12:00

A. BEACH CONDITIONS: (Fill out once, at the beginning of the survey)				
Temp (°C): 22	Wind: Non Slight Mod. High	Weather: Rain Drizzle Overcast Part Sun Sun		
Total people on bea	ach as far as you can see: 1000			

B. ADULT PLOVER SIGHTINGS:

Location	Bands	ands			Sex	Behaviour	
Nest # or location	Top Left	Bottom Left	Top Right	Bottom Right	M/F		
Nest 1	X	B/O	0	В	M	Incubating, and foraging	
Nest 1	0	0/4	X	-	F	She never went to the nest	
Nest 2	X	У	2	0	M	Incubating	
Nest 2	X	6	Of	by	F	Incubating and eating	

C. NEST SUMMARY:

Nest # (ex: Nest 1)	Did you see one adult?	Did you see both adults?	Incubation switch observed? Are they both attending chicks?	# of chicks	Chicks flying	Time spent observing nest (minutes)
Nest 1	Yes	Yes	No switch			120
Nest 2	Yes	Yes	Yes, both attending			100

D. NATURAL PREDATORS: Count predators seen anywhere on the beach during your survey

	Crow	Ring- billed Gull	Herring Gull	Merlin	Peregrine Falcon	Raccoon	Fox	Other
# individuals	5	100	20	7	0	0	0	None

PREDATOR OBSERVATIONS: Interactions with plovers, general behaviours

100 gulls were loafing in the Nest 1 perimeter the whole time I was there

E. SUMMARY: HOW MANY PLOVERS DID YOU SEE DURING YOUR SHIFT?

# Pairs	# Singles	# Total Adults	# Chicks	# Fledge >23 days
2	0	4	None	None

A. BEACH CONDITIONS: Fill out as soon as you step on the beach. This provides a 'snapshot' of the beach.

- **B. ADULT PLOVER SIGHTINGS:** After nests are established, your Coordinator will fill in the band and sex information in this section. You can use it as a reference. If you see single birds, you can add their information as well. Record the main behaviors of the adults; *foraging, incubating, brooding, defensive behavior, etc.*
- **C. NEST SUMMARY:** At each nest, do your best to observe 'the whole family' before you leave the nest. <u>Try to confirm that both parents are incubating the eggs, or tending to chicks</u>. Seeing an 'incubation switch' is the easiest way to know that both birds are there. If you haven't seen one of the adults for your entire shift, let your Coordinator know. Once the nest hatches, try to observe as many chicks as you can (this is not always easy, be patient). This information lets us know that the plovers are healthy.
- **D. NATURAL PREDATORS:** These numbers do not need to be exact. This lets your Coordinator know what threats might be on the beach, so that appropriate management decisions can be made.
- **E. SUMMARY:** Fill this section out at the end of your shift. It helps Coordinators understand exactly how many pairs, singles, and chicks you observed, so that no birds are unaccounted for.

Page 2 Example

HUMAN-RELATED THREATS AND DISTRUBANCE and OUTREACH EFFORTS

F. COMMON DISTURBANCES on Entire Beach	Total (keep count throughout your shift)		Enforcement called	
Dogs OFF leash/ ON leash (throughout entire survey)	On: 0	Off:	5	3 times
Garbage (bins overflowing, excessive trash)	None			Ů.
Vehicles (ATVs, cars, etc), including tire tracks	None			

G. DISTURBANCES within 500m OF NEST	Nest #: <u>7</u>	Nest #: <u>2</u>	Nest #:	Nest #:
Dogs or dog footprints inside perimeter fence	0	7		
People or footprints inside perimeter fence	0	0		
Number of people who walked past nest along shore	10	22		
People 'set up' between perimeter fence and shore	0	3	*	
Groups recreating nearby (Kites, Frisbee, volleyball)	0	7		
People collecting driftwood	0	0		
Boat, kite surfer, paddleboard approaching from water	0	0		

H. OUTREACH	Total
Total number of people spoken to about plovers	20
Positive responses	19
Negative responses	1
Number of people observed reading beach signage	6
Number of people provided with printed materials	5

I. ADDITIONAL OBSERVATIONS: Details on major disturbances, tour groups who came for plovers, etc.

2 bird watchers from New York came specifically to see the plovers!

One local was negative about the plovers, but not rude Everyone else was very friendly!

- **F. COMMON DISTURBANCES ON ENTIRE BEACH:** Keep count during your shift regardless of where you see the disturbance. This gives Coordinators an idea of areas that might need improvements. Example: if trash on the beach is increasing over time, we might try to organize clean up days, add signage, or directly educate people about littering.
- **G. DISTRUBANCES WITHIN 500 METERS OF NEST:** When you're at a nest, record the nest # and keep count of these common disturbances in the area. 500 meters is a rough estimate, it is OK if you don't get it exact (the perimeter fence is usually around 100 meters long). This section lets Coordinators track if human behaviors are getting better over time—which lets us know if our outreach efforts are working. Example: new signage used in 2019, is aiming to decrease the number of people 'set up' between the perimeter and shore; recording this data lets us see if it works!
- **H. OUTREACH:** Record how many people you speak to during your shift, and if the interactions were positive or negative. This helps us track our outreach efforts, and if we're making a positive impact over time.
- **I. ADDITIONAL OBSERVATIONS:** Add any notes here on your interactions with people, or on bird behaviors and threats. Include detailed notes if you witness a predation, the nest hatching, or any disturbances that directly harm a plover or nest—and let your Coordinator know!

Outreach and Education

The public education component of the volunteer's job is largely about helping people learn how to share the beach with plovers. Public education is intended, over time, to minimize unacceptable activities without discouraging acceptable ones. Having a positive ambassador talking to people about plovers is the most effective educational tool possible. People learn more from other people, rather than signs or handouts, especially when they're on vacation. Once they have begun to learn, they begin to care. People who care about the plovers will change their behavior and aid in watching the beaches when volunteers aren't present.

We all need to make a constant effort towards friendly, courteous and effective interactions with the public when representing or discussing the Piping Plover Program.

There may be times when you experience angry or unreasonable people. If an individual is being abusive, refuses to comply, or is a repeat offender, back off and immediately inform the appropriate official. Never get into a heated discussion or an argument with anyone!

Remember:

- People are on the beach to relax and have fun. They should be treated with respect at all times.
- Plovers are hard to see; share binoculars, and help people identify the birds.
- Offer some outreach materials if you have them; kids love tattoos and stickers!
- If you're asked a question that you cannot answer be honest and say you don't know the answer. It is important not to give out false or misleading information. Not knowing an answer is OK.
- Be helpful and friendly at all times. Our goal is to help people enjoy the beach while learning to share it with other species -- not to be the plover police.

Behaviors to watch for:

- People entering or playing next to the perimeter (e.g. throwing balls/flying kites next to it), approaching
 plovers, or spending long periods of time between the perimeter and water; these activities may disrupt
 incubation, or prevent young chicks from accessing the water.
- Some activities can threaten habitat; collecting driftwood, driving on the beach, campfires, etc.
- Plovers think dogs are predators, and may be disturbed even if the dog is on leash. Ask your Coordinator what the policy is for dogs on your beach. If dogs are allowed, politely ask owners to leash them as they walk past the nest, and spend minimal time in the nest area.
- Food, litter, and feeding gulls can increase the number of predators near the nest. Kindly ask people not to feed wildlife. Pick up litter and report excess garbage to the appropriate authority.

If someone looks like they might be doing something wrong:

- Remain positive and give them the benefit of the doubt. Most people are not paying attention and are embarrassed by their action. Start by saying "You may not know, but this area is protected because of endangered birds that live here".
- Another approach is to begin by asking if they'd like to see something rare, cute and interesting. Show
 them a Piping Plover through your scope or binoculars. Tell them about the lives of Piping Plovers,
 answer their questions, then get around to correcting their behavior. By then they'll usually be
 sufficiently invested in the fate of Piping Plovers and they'll gladly comply.

Education is the first step toward understanding, appreciation, and eventually support.

Common Questions Volunteers get Asked

How long do the plovers stay on the beach for?

Piping Plovers arrive in April and May. They will incubate their nests for 1 month, and then it takes 3-4 weeks until chicks learn to fly. Females usually leave the beach before chicks are flying (so they can get a head start on migration), but dads will stick around until the chicks can fly. Most plovers will have left by the end of July, or early August.

What is the fence for? How long does it stay up?

The perimeter fence provides plovers with space to incubate their nests. When they are disturbed too frequently, they may abandon the nest. Chicks often leave the fenced area after nests hatch to explore the beach. Fences remain up until the chicks are flying, so that they have a safe space to retreat to.

What is that 'cage' on the nest?

An exclosure! It keeps predators out, so that adults and their eggs can be kept safe while incubating. Staff with provincial and federal permits install exclosures after the eggs are laid. Adults can easily come and go.

What is their population?

There are less than 200 individuals in all of the Great Lakes, and usually fewer than 20 nests in all of Ontario (Ask your Coordinator how many are currently nesting in Ontario).

Why did they come to Ontario? And why this beach?

Hundreds of Piping Plovers used to nest in Ontario. Their return to Ontario in 2007, shows that their population is recovering in locations where they historically lived! Plovers spend their whole lives on beaches, and prefer big sandy shores, like Wasaga and Sauble Beach. Smaller beaches like Darlington Provincial Park are probably selected because of the surrounding natural area, good vegetation and an abundance of food. They will not nest off of a beach.

What do they eat?

Invertebrates; little tiny bugs. The best grubs are found in the wrack line, and along the shore.

Where do they go in the winter?

Just like people, plovers have favorite vacation spots. Most of Ontario's plovers go to Florida, South Carolina, and surrounding coastal states. Piping Plovers from the Prairies prefer Texas and Mexico. While Plovers from the Atlantic often go to Florida or the Caribbean!

Why are they endangered?

Beach developments and maintenance activities damaged much of their habitat. These are still problems today. Beach recreation also disturbs them and may lead to nests being trampled or abandoned. Thanks to conservation actions, the population is increasing!

What to watch for during nest stages

Incubation; Incubation starts after all the eggs are laid, and lasts around 27 days—then the nest hatches.

Incubation switch behavior: Male and female plovers usually share quite equally in incubating the eggs. Each bird takes a turn incubating for around 2 hours, but sometimes longer. When it's time to trade, the bird off the nest will run quickly to the nest with its head low and body horizontal. When it gets to the nest the incubating bird gets up and leaves in the same fashion.

Abandonment: The primary reasons for nest abandonment are the loss of an incubating adult or serious disturbance in the nesting area. Verify the presence of both parents daily, or as often as possible. If one can't be found or if you know of a disturbance that has occurred, let your Coordinator know and pay particular attention to that nest. The easiest way to verify that both adults are there, is if you see them do an incubation switch; record the observation in Section C of the data sheet.

Nests might be abandoned if you see: adults making a new scrape, or not defending their nest, or no incubating adult for over 2 hours, or the nest appears covered by sand (if you can see it with a scope).

Hatching

When hatching begins you may see new chicks or egg shells in the vicinity of the nest. The adults carry empty egg shells away from the nest soon after chicks hatch. Try to make notes on how many chicks have hatched, and when the hatch starts/finishes. Sometimes the nest takes up to 3 days for all the eggs to hatch.

Let your Coordinator know that the nest is hatching, and let the next volunteer know if you see them, or leave a note in the volunteer binder (if applicable).

The nest is especially vulnerable when hatching. Ensure you do not cause any disturbance.

Chick Rearing

The most difficult and time-consuming job is finding and counting the chicks. Patience is necessary. Always ensure that you are not close enough to cause disturbance. Help beach goers spot the chicks, and encourage people to give them space. Females will often leave the beach before the chicks fledge. Try to observe the female every shift, so we can keep track of when she leaves. Some tips for spotting chicks:

- When the chicks are little they will 'brood' (go under a parent to warm up) (Photo #11, pg. 12). It is often easiest to count them as they come back out, when the adult moves or the parents trade places.
- It is often easiest to locate the Plover family by looking and listening for the adults. If you see an adult sitting on the beach watching intently that's probably where the chicks are. Adults and chicks give frequent contact calls. Listen for a quiet "pip, pip" from the adults.
- Sometimes a brood gets split up and the parents each have some of the chicks—that is OK.
- Some families move a surprising distance along the shore from one day to the next. You may have to look hard to find them.

Fledging

It can be difficult to determine when chicks are able to fly. Piping Plovers of all ages tend to run and walk away from danger and depend on camouflage more often than flight. For that reason we use 23 days old as an average fledge age, standardized across the Great Lakes. What to watch for:

- Flight and tail feathers will be nearly fully developed and the chicks will flap their wings and take short jumps
- Try to check band combinations when determining numbers of fledged chicks if there are other broods in the area

Piping Plover Identification, Traits and Behaviors

Tracks: Plovers run more than they fly so they leave many tracks in areas where they are present.









- **Sounds:** The most basic sound is a single piping note. While doing a flight display they peep 2-4 times/second. The alarm call is a soft whistled "Peep-lo" or "Keep-er". The first note is higher than the second. In a very alarming situation this call may be repeated several times. Another call to listen for is a slow ascending "Poeeeeep".
- **Territorial Disputes** (Photo #1, pg. 12): Both males and females can be involved in territory defense. They puff up their back feathers and charge at each other with lowered heads. Sometimes they even jump on each other and tussle on the beach. There will be a lot of peeping during a dispute.
- **Parallel Walk:** (Photo #2, pg. 12) A form of territory defense. Two plovers, or sometimes more, with adjoining territories walk side-by-side along the territorial boundary. They take turns running ahead, pecking and bobbing.
- **Flight Display** (Photo #3, pg. 12): The male circles over his territory with stiff, deep wing beats peeping constantly. This behavior is more common in the spring before nests are established.
- **Scraping** (Photo #4, pg. 12): The male lies on his chest and kicks backwards with his legs. This is how a plover nest is built. He will usually make many scrapes before the pair chooses one for a nest. While he scrapes he makes a quick, staccato peeping.
- **Tilt Display** (Photo #5, pg. 12): The male lowers his head and fans out his wings and tail, near the prospective nest site, while the female moves under him. Sometimes "goose-stepping" and copulation follow tilt display.
- **Goose-stepping or Tattoo** (Photo #6, pg. 12): The male approaches the female standing very tall with his chest puffed out. He takes very short steps, kicking his feet high in front. If the female doesn't move away, copulation is likely to follow.
- **Copulation** (Photo #7, pg. 12): The male hops onto the female's back and balances there kneading her with his feet. At the proper moment he ducks his tail under hers as he dismounts.
- **Egg laying**: Plovers usually lay one egg every other day until they have a full clutch of 4 (occasionally 3 or 5). They seldom incubate the eggs consistently until the third or fourth egg is laid.
- **Settling on a nest**: As a plover sits down on eggs it makes a distinctive side-to-side motion, then pops up its head and waggles its tail. Watching for this will help you know whether the bird is just lying down in the cobble, or sitting on eggs.
- **Broken wing display:** (Photo #9, pg. 12) When a predator (or a person) approaches too close to a nest or brood, the parents will often do a broken-wing display, fluttering on the ground to lure the intruder away. Perimeter fences help ensure that people stay far enough away not to cause this disturbance.
- **Running to a nest:** A Piping Plover on its way to a nest moves very differently than the run and peck motions of a feeding plover. If you see a plover holding its body in a horizontal position and running quickly and directly, moving only its legs, keep an eye on it. It might be heading to the nest.

FEMALES tend to have lighter and narrower neck-bands and the brow-band usually stops just short of the eyes. Her bill tends to blend from orange to black.







MALES tend to have bolder and wider neck-bands and the brow-band goes all the way to the eyes. The male's bill tends to show more orange and has a cleaner line between the orange and black. The males set up territories and attract females by doing flight displays, and they do most of the scraping.







There are birds in the middle range that are difficult if not impossible to sex by bill and plumage

Color bands

Observing bands is best done with a scope, binoculars, or strong zoom lens on a camera. If you cannot see the bands, DON'T WORRY! Coordinators will regularly check bands, and will let you know the bands for each breeding pair. Never disturb a plover in order to see its bands or determine sex.

All Great Lakes plovers receive a metal USGS band on their upper leg. And a series of colored bands. Broods receive the same band combo; but may be differentiated by numbers on their color bands, or colored dots on their orange bands. Bands are written from the top of left leg to the right leg, with the following codes:



Piping Plover Behaviors



Watching for predators and other threats: If you are alert, plover behavior can clue you in to the presence of a predator. They are usually very aware of threats in their environment. A Piping Plover that detects the presence of an avian predator, such as a falcon, will flatten into the beach (Photo #8, pg. 12). It will turn its head to the side and watch the sky intently. It may give the two note "Pee-too" alarm call, sometimes repeatedly. Disturbed parents will peep steadily, slower than the peeping of territorial defense and breeding. If you note either of these behaviors be very alert. Try to find out what danger they perceive. To eliminate yourself as a possible cause of alarm, move a discrete distance away and continue to monitor the situation.

Crow and Raven

- Predators of eggs and chicks.
- They may walk around the beach with their heads up searching systematically among the rocks and vegetation.

Ring-billed and Herring Gull

- Predators of eggs and chicks.
- Their foraging behavior is similar to that described for Ravens and Crows.











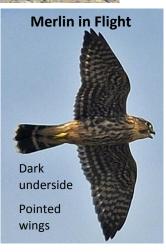
Sharp-shinned Hawk for comparison

Merlin

A small dark falcon. Its wings are long and pointed and its flight is quick and strong. Flies low along the beach when hunting. It is a predator on Piping Plover chicks and adults. The plovers usually react before a volunteer can see anything coming. The Merlin's call is a series of accelerating notes, reminiscent of a Northern Flicker but with a harsher quality.

Mammals

Mammal such as fox, raccoons, minks, and weasels may predate eggs and chicks. Domestic cats and dogs may predate plovers as well, or interrupt their incubating and chick rearing; increasing disturbance.





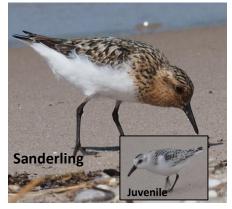
Some Birds of Ontario Shores























When to Contact Coordinators:

- If plovers are threatened in any way:
 - Weak, injured or dead plovers
 - o If you suspect a nest has failed or been abandoned
 - o If you couldn't find one of the adults after 4 hours or by the end of your shift
 - o If you witness predation or notice a persistent predator, such as a Merlin
- If the nest has hatched, or is hatching
- If you find a dead bird or animal on the beach; do not dispose of it yourself
- If habitat has been disturbed or threatened:
 - Digging, mowing, etc.
 - o Raking of beach, harvesting algae or wood
 - Non official vehicles on the beach
 - o Dumping of waste or garbage
 - o Campfires or camping
 - o Vandalism of plover exclosure, perimeter fence, or signage

During volunteer training you will be provided with contact information for your Volunteer Coordinator and local law enforcement. Contact Andrea Gress if you have not received local contact information.

	NI	Discost on the second
	Name	Phone/email
Primary contact		
Volunteer Coordinator:		
Construction of the state of th		
Secondary contacts:		
(contact if your Volunteer		
Coordinator is not available)		
Provincial Coordinator:	Andrea Gress	ontarioplovers@birdscanada.org
(contact if your primary and	Birds Canada	519-586-3531 ext 128
secondary contacts are not		313 300 3331 CM 120
available)		
Law Enforcement:		

Some of your Coordinators use personal cell phones. **Do not share personal information with members of the public.**

Do not speak to the media on behalf of the program. Media requests can be referred to Andrea Gress or your Volunteer Coordinator.