

DESCRIPTION OF RESIDENCE FOR PIPING PLOVER (*Charadrius melodus*, *circumcinctus* and *melodus* subspecies) IN CANADA

Section 33 of the *Species at Risk Act* (SARA) prohibits damaging or destroying the residence of a listed threatened, endangered, or extirpated species. SARA defines residence as: “a dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating” [s.2(1)].

The prohibition comes into effect in different ways depending on the jurisdiction responsible for the species. As a migratory bird protected under the *Migratory Bird Convention Act*, the Piping Plover is under federal jurisdiction. This means the residence prohibition is in effect on all lands on which the species occurs immediately upon its addition to the legal list of species at risk.

The following description of residence for the Piping Plover (*Charadrius melodus* – *circumcinctus* and *melodus* subspecies) was created for the purposes of increasing public awareness and aiding enforcement of the above prohibition. Piping Plovers are known to have one type of residence – a nest.

Species Information:

Common Name – Piping Plover

Scientific Name – *Charadrius melodus* (*circumcinctus* and *melodus* subspecies)

Current COSEWIC Status & Year of Designation – Endangered (2001)

Occurrence in Canada – *circumcinctus* subspecies: Alberta, Saskatchewan, Manitoba (Fig. 1) and Ontario ; *melodus* subspecies: Québec, Newfoundland, New Brunswick, Nova Scotia, Prince Edward Island (Fig. 2)

Rationale for Designation– Predation, habitat loss and human disturbance

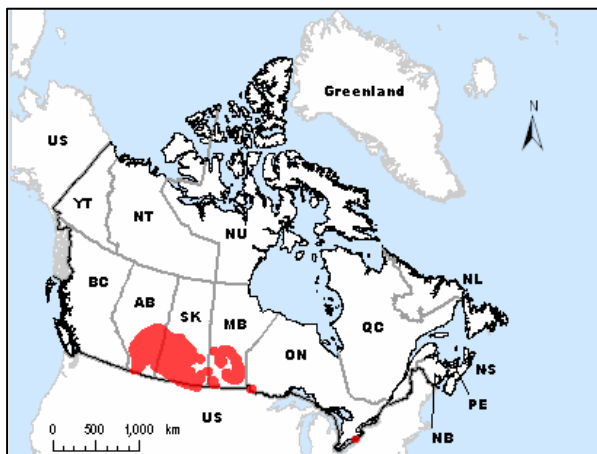


Figure 1. Known distribution of the Piping Plover *circumcinctus* subspecies in Prairie Canada. Although piping plovers have nested in the Great Lakes region of Ontario in the past, they are now considered extirpated from this area. However, the American Great Lakes population is increasing, and it is possible that piping plovers may again nest in the Canadian Great Lakes region.

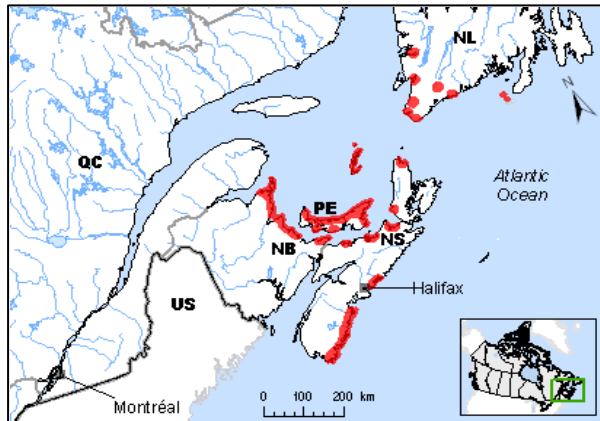


Figure 2. Known distribution of the Piping Plover *melodus* subspecies in Eastern Canada and St. Pierre et Miquelon, France.

1) The Nest

Physical Appearance and Context

The residence of the Piping Plover is defined as the nest. The nest is a small (9-10 cm in diameter and 1-2 cm deep) bowl-shaped depression (a “scrape”), usually lined with small, light-coloured pebbles (Fig. 3)⁴ or shell fragments. Multiple scrapes may be constructed within a breeding territory and it may take several days for the pair to settle on one nest. Nests are rarely, if ever, reused².



Photo by J. Paul Goossen

Figure 3. Typical Piping Plover nest.

The most frequent clutch size is four eggs which are laid in 7 days³. The eggs are pale buff marked with fine splotches of black, brownish-black, or purplish black and measure approximately 32 mm x 24 mm². After hatching, the precocial (mobile within a few hours) young remain in the nest until dry. Chicks make foraging forays away from the nest but return to the nest to be brooded by the adult².



Photo by J. Paul Goossen

Figure 4. Typical Piping Plover breeding habitat at an alkali lake. Note gravel habitat near the middle of picture.

Circumcinctus subspecies: Piping Plovers establish their nests on beaches, islands and sand spits of alkali² (Fig. 4) and freshwater¹ lakes, river sand bars² and occasionally on artificial habitats such as parking lots or dyke roads¹. Wide, sparsely vegetated sand or mixed sand and gravel beaches are preferred. Nests are rarely located in dense alkali areas of beaches². Nests are sometimes found beside small rocks. The annual suitability of the plover's nesting habitat may be unpredictable from year to year

because precipitation and drought influence wetland conditions¹. River and reservoir nesting habitats are affected primarily by the timing and amount of water from mountain snow melt and secondarily by heavy precipitation events and water management operations.

Melodus subspecies: Piping Plovers establish their nests on sand, pebble, gravel and cobble beaches, barrier islands, sandspits or peninsulas found in marine coastal areas. Occupied beaches are generally wide and most often with sparse vegetation. Artificial habitats such as those created by deposition of dredge spoils and gravel parking areas located near coastal zones are occasionally used. Winter storms may create new nesting habitat in previously unsuitable coastal areas.

Function

The function of the nest residence is to provide protection, shelter, and the required conditions for egg laying, incubation, and hatching, as well as brooding hatchlings. Parents and chicks abandon the nest within a day of the last egg hatching and do not use the nest during the remainder of the breeding season. Parents and young may remain within the territory where the nest was built unless disturbed³ or move beyond the territory for other reasons.

Damage and Destruction of the Residence

Damage or destruction to the nest includes loss of access, function and/or structure of the nest. Of concern under SARA are direct and indirect anthropogenic effects on the residence. This includes, but is not limited to, water management (flooding), cattle management (trampling nests), recreational activities (e.g. beach activities, pets, all terrain vehicles or other motorized or non-motorized vehicles), sand mining and extraction, discharge of oil and industrial, cottage and landscape developments or modification activities (beach cleaning, trampling, leveling, or dumping).

Period and Frequency of Occupancy

Piping Plovers normally use nests from early May to late July. Most first clutches are initiated during the first two weeks of May². Nests with eggs in April or August are a rare occurrence. Active nests should be protected annually during 1 May through to 15 August. Piping Plovers normally produce only one brood per year, however re-nesting is possible if the eggs are lost. Adults exhibit high fidelity to breeding sites, regularly returning to previously used habitats in subsequent years. Protection should include nest building, egg laying, incubation, hatching, and immediate post-hatching periods – a total time frame of approximately 40 days.

Additional Information

For more information on the Piping Plover, go to:

http://www.speciesatrisk.gc.ca/search/speciesDetails_e.cfm?SpeciesID=686

and:

http://www.speciesatrisk.gc.ca/search/speciesDetails_e.cfm?SpeciesID=687

For more information on SARA, go to: http://www.sararegistry.gc.ca/default_e.cfm

References

- ¹Goossen, J.P., D.L. Amirault, J. Arndt, R. Bjorge, S. Boates, J. Brazil, S. Brechtel, R. Chiasson, G.N. Corbett, R. Curley, M. Elderkin, S.P. Flemming, W. Harris, L. Heyens, D. Hjertaas, M. Huot, B. Johnson, R. Jones, W. Koonz, P. Laporte, D. McAskill, R.I.G. Morrison, S. Richard, F. Shaffer, C. Stewart, L. Swanson and E. Wiltse. 2002. National Recovery Plan for the Piping Plover (*Charadrius melodus*). National Recovery Plan No. 22. Recovery of Nationally Endangered Wildlife. Ottawa.
- ²Haig, S.M. 1992. Piping Plover. *In* The Birds of North America, No. 2 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.
- ³Murphy, R.K., B.G. Root, P.M. Mayer, J.P. Goossen and K.A. Smith. 1999. A draft protocol for assessing Piping Plover reproductive success on Great Plains alkali lakes. Pages 90-107 *in* K.F. Higgins, M.R. Brashier and C.D. Kruse (eds.), Proceedings, Piping Plovers and Least Terns of the Great Plains and nearby. Brookings: South Dakota State University. 132 pp.
- ⁴Whyte, A.J. 1985. Breeding ecology of the Piping Plover (*Charadrius melodus*) in central Saskatchewan. M.Sc. thesis, University of Saskatchewan, Saskatoon, Saskatchewan. 153 pp.