



## Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife  
1 Rabbit Hill Road, Westborough, MA 01581  
tel: (508) 389-6360, fax: (508) 389-7891  
www.nhesp.org

## Piping Plover *Charadrius melodus*

State Status: **Threatened**  
Federal Status: **Threatened**

**DESCRIPTION:** The Piping Plover is a small, stocky shorebird with pale brownish gray or sandy-colored plumage on its backside, with a white breast, forehead, cheeks, and throat, a black streak on the forecrown extending from eye to eye, and a black breastband which may not always form a complete circle. Its coloration gives it excellent camouflage in sandy areas. The average Piping Plover is 15 to 17 cm (6 to 7 in.) long, with a wingspan of 35 to 40 cm (14 to 16 in.). The tail is white at the base and tip, but dark in the middle. It has yellow-orange legs and its short bill is yellow-orange with a black tip in the summer, but turns completely black during the winter. In general, females have darker bills and lighter plumage than males. The Piping Plover runs in a pattern of brief starts and stops; in flight, it displays a pair of prominent white wing stripes. Its call is a series of piping whistles.

**SIMILAR SPECIES IN MASSACHUSETTS:** The Piping Plover is similar to the Semipalmated Plover (*Charadrius semipalmatus*) in size, shape, and coloration. However, the Semipalmated Plover is a darker brown in color, and has much more black on its head than the Piping Plover. The Semipalmated Plover does not breed in Massachusetts but is present on sandy beaches and intertidal flats from late July to early September during its southward migration.



Illustration by J. Zickefoose, 1986

**RANGE:** During spring and summer, the Atlantic Coast population of Piping Plovers nests from the Newfoundland south to North Carolina. In winter they migrate farther south, from North Carolina to Florida, the Gulf of Mexico, and the Caribbean. Other populations of Piping Plovers nest along rivers on the Northern Great Plains and along the shores of the Great Lakes, migrating to the Gulf of Mexico in the winter.

**HABITAT:** Piping Plovers in Massachusetts nest on sandy coastal beaches and dunes, which are relatively flat and free of vegetation. Piping Plovers often build their nests in a narrow area of land between the high tide line and the foot of the coastal dunes; they also nest in Least Tern colonies. Nesting may also occur on vegetated dunes and in eroded areas behind dunes.

**LIFE CYCLE / BEHAVIOR:** As soon as Piping Plovers return to their breeding grounds in Massachusetts in late March or April, the males begin to set up territories and attract mates. Territorial rivalry between males is very strong; adjacent male Piping Plovers mark off their territories by running side by side down to the waterline. Each bird takes turns, one running forward a few feet, then waiting for the other to do likewise. Nests are usually at least 200 feet apart; the nesting pair will confront any intruding Piping Plover which approaches the nest. Male Piping Plovers also defend feeding territories encompassing beach front adjacent to the nesting territory.

### RANGE MAP AND DISTRIBUTION

Courtship consists of a ritualized display by the male, who flies in ovals or figure-eights around a female, then displays on the ground by bowing his head, dropping his wings, and walking in circles around the female. The male also scrapes shallow depressions in the sand at potential nest sites. The female then chooses one of these nesting sites, usually in a flat, sandy area. The nest itself is a shallow depression which is often lined with shell fragments and small pebbles, which may aid in camouflaging the eggs. Female Piping Plovers typically lay four eggs per clutch, one egg every other day over a week's time. The eggs are sandy gray in color with dark brown or black spots, and all hatch within 4 to 8 hours of each other. Both parents take part in incubating the eggs until they hatch 26-28 days later.

The young chicks leave the nest within hours after hatching and may wander hundreds of meters before they become capable of flight. When threatened by predators or human intruders, the young run or lie motionless on the sand while their parents often pretend to have broken wings in an effort to attract the intruder's attention away from the chicks. Young Piping Plovers are brooded by their parents for 3 to 4 weeks and finally fledge 4 to 5 weeks after hatching, at which time they leave the nesting area.

Piping Plovers feed on marine worms, mollusks, insects, and crustaceans. They forage along the waterline, on mudflats at low tide, and in wrack (seaweed, marsh vegetations and other organic debris deposited by the tides) along the beach. Foraging behavior consists of running a short distance, then staring at the ground with the head tilted to one side, often standing on one foot while vibrating the other foot on the ground, and finally pecking at the food item it has detected in the sand.

Piping Plovers begin to migrate southward between late July and early September, although occasional stragglers remain behind until late October. Adult birds often return to the same nesting area every spring, although they usually change mates from year to year. Young birds may nest anywhere from a few hundred feet to many miles from where they were hatched.

**POPULATION STATUS IN MASSACHUSETTS:**

The Atlantic Coast population of Piping Plovers is listed as Threatened at both the state and federal levels. In 2005, 475 breeding pairs nested at about 100 sites. Massachusetts has the largest breeding population of Piping Plovers along the Atlantic Coast.

*Updated August 2008*