ABOUT THE COVER

Piping Plover

In Massachusetts, the Piping Plover (*Charadrius melodus*) is a pale waif of sandy coastal and island beaches that arrives in late March, signaling that spring has really begun. It is one of several small "ringed" plovers sporting a single breast band of black. It has light gray upperparts, a short, stout bill, a black band from eye to eye across its crown, and has distinctive orange legs. Semipalmated Plovers are similar in size but have much darker backs; the rare Snowy Plover is also light colored, but smaller and has dark legs; Wilson's Plovers have conspicuously long, heavy bills. The Piping Plover is the only small plover to show a white rump and upper tail coverts in flight. In winter the crown stripe and neck ring are muted or absent; juveniles resemble winter-plumaged adults.

Two subspecies, the coastal *C. m. melodus*, and interior *C. m. circumcinctus*, have been established, but the validity of these taxonomic designations is disputed by many authorities, and current data support a monomorphic status for the species. Piping Plovers breed along the east coast from the Gulf of Saint Lawrence south to North Carolina, and inland birds breed in Great Plains wetlands and river margins east through the Great Lakes. They winter in the Greater Antilles and along the coast from North Carolina south to Yucatan.

In Massachusetts, the Piping Plover was considered an uncommon and declining breeder, and a common to uncommon migrant. Now there are over 500 pairs, and the population is still increasing according to reports from Monomoy, South Beach, Plum Island, and Coast Guard Beach. Most have departed by mid-September. Fall counts of more than 50-75 birds are quite uncommon, and rarely the species is encountered into early winter. Piping Plovers are seasonally monogamous, but occasional polyandry has been reported. They produce a single brood but may renest if their first nest fails. Along the coast they nest on sandy beaches, often with Least or Common terns. In the interior they nest on alkali flats or sandflats. The Piping Plover call is typically a clear whistled peep-lo. Their nuptial displays include courtship flights by the male over his territory; he utters the long series of pipe-pipe-pipe that gives the species its common name. The male also performs a nest-scraping display accompanied by higher and more rapid piping calls. Piping Plovers are highly territorial, but may nest semi-colonially with nesting territories clumped. Territorial birds utter bec-bec-bec calls as they charge intruders, legs bent, feathers fluffed, with head drawn back into the body, boldly displaying their black neck band. Males may run side by side along mutual territorial boundaries, or face each other, head-bobbing.

Nesting begins in May, with the nest a simple scrape in the sand. The pair lines their nest in a ritualized "stone-tossing", with tails in the air, bodies tilted, flicking bits of shell and tiny pebbles into the nest-scrape. The usual clutch is four highly cryptic brown splotched buff-colored eggs. Both parents develop brood patches and share incubation duties for about four weeks. The chicks are precocial, leaving the nest several hours after

hatching. Several days later the family may move away from the nest area but usually remains in the nesting territory. The parents also share brooding responsibilities. Chicks are capable of sustained flight in 3-4 weeks. They are cryptically colored and respond to adult alarm calls by lying flat and motionless on the sand. Parents guard their brood and will perform injury-feigning distraction displays when potential predators approach. The young may stay with the adults until the fall migration.

Piping Plovers are visually feeding "peck-and-run" foragers. Characteristically they make short, quick runs followed by rapid pecks. They may vibrate an extended foot in wet sand, presumably to stir quiescent invertebrates into motion. They forage alone or in small groups. Their diet consists primarily of marine invertebrates washed ashore, or terrestrial invertebrates on the beach sand or tide rack. Marine worms, crustaceans, insects, and small molluscs are commonly taken.

The Piping Plover population in Massachusetts is experiencing a welcome rebound from a significant overall decline that has resulted in endangered species status in the USA and Canada in the interior, and threatened status elsewhere. The causes of the declines are largely anthropogenic, and include habitat alteration, development, and disruption of breeding by beach vehicular traffic, dogs, and people on the beaches. Predation of eggs and chicks by dogs, foxes, gulls, and crows is a significant factor in limiting population size. Conservation strategies, exemplified by the efforts of the Massachusetts Audubon Society, have included predator control, building exclosure fences around nests, sign-posting, conservation patrols, and closing beaches during breeding season. Although the latter has produced strong negative reaction among some constituencies, such efforts have increasingly proven to be effective. The total world population of Piping Plovers is probably less than 2500 birds, and it appears that without management their survival is problematic. We certainly hope that humans can manage to figure out acceptable ways to share "their" beaches with these beautiful little plovers, so that they can continue to be harbingers of spring. William E. Davis. Jr.

About the Cover Artist

Rob Gough works as a freelance illustrator and graphic designer in Newbury, Massachusetts. His love for drawing has grown alongside his love for nature and a desire to record his observations in the field. Today his artwork appears in a variety of media including environmental education materials, advertisements, and corporate logos. Rob can be reached at Remex Graphex: 978-462-8839 (remex@mediaone.net).

Rob also works full-time for the Massachusetts Audubon Society as the Education Program Coordinator for the Joppa Flats Education Center in Newburyport. He leads natural history field trips along Massachusetts' North Shore, as well as out-of-state and international trips.

The Piping Plover drawing appearing on the cover was created as a T-shirt design and donated to The Nature Conservancy's Endangered Beachnesting Bird Protection Program in southern New Jersey, where Rob was raised. The T-shirts were sold to raise funds to support the protection of the critical breeding habitat needs of these birds.