



FACTORS AFFECTING PIPING PLOVER POPULATIONS

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The Piping Plover (Charadrius melodus) was considered a fairly common bird by Audubon during the mid 1800's. By 1900 the bird was near extinction. This decline was thought to be due to overhunting, a problem which was common to nearly every shorebird species back then. Legislation protecting shorebirds was brought in, and by the 1920's the Piping Plover was starting to make a comeback. About 1950 the Piping Plover started to decline in numbers and has since vanished from much of its former breeding range. This decline has been largely blamed on the activities of man. Destruction and disturbance of eggs, chicks and adults by beach strollers, dune buggies, trail bikes, horseback riders, feral cats and dogs, and sandmining have all been implicated in this decline.

Failure to produce enough young locally can cause the eventual extirpation of Piping Plovers in given areas. However, if the rest of the population is productive, surplus birds raised elsewhere should be able to colonize new areas and re-colonize old ones. The evidence supporting the claim that people have been the major cause of decline is circumstantial at best. In some instances, direct destruction of a nest has been observed (i.e. people stepping or driving on nests). It is also felt that human disturbance can interfere with the incubation of eggs and the feeding of young. On heavily disturbed beaches, it has been shown that incubation of the clutch may be extended a week or more, thus giving the eggs more time to fall victim to other fates. Many birds, however, in heavily disturbed areas become less excitable. Most of the birds on the Cavendish sandspit in P.E.I. National Park can be approached within a couple of meters. Indeed many of the young chicks I observed last summer hardly paid any attention to passing beach strollers. On the little used Blooming Point area, however, chicks might spend hours hiding in the dunes after one person passed by.

Unfortunately, there are many other problems which Piping Plovers must face. High spring tides combined with strong winds can destroy nests by flooding. Last year in P.E.I. National Park a week of such conditions just when the plovers were establishing nests seemed to cause most of the plovers to nest up in the dunes. Every single one of these nests was predated by either raven or fox.

In the National Park last summer predation by raven and fox appeared to be the most significant factor affecting the birds. At Long Point in Ontario where up to 100 pairs of birds used to nest in the late 1920's, none nest today. Few people have ever walked the twenty-five mile long Long Point sandspit, and thus this decline has been largely attributed to predation by gulls and possibly raccoon. Again, however, there is very little hard evidence as to the overall effect of predation on the Piping Plover populations.

Habitat change is another major factor. Piping Plovers thrive in unstable coastal dune systems where washover areas provide good cover for eggs, chicks and adults. Most of man's emphasis has been on stabilizing dune systems. Much money has been spent on dune stabilization all along the eastern seaboard, particularly in the United States. In P.E.I. National Park there have also been a few marram grass planting projects.



These are just a few of the major factors affecting Piping Plover populations. Our understanding of how