Alberta Conservation Association 2011/12 Project Summary Report

Project Name: Piping Plover Recovery Program

Wildlife Program Manager: Doug Manzer

Project Leader: Lance Engley

Primary ACA staff on project:

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Partnerships

Alberta Sustainable Resource Development Alberta Tourism, Parks and Recreation Co-operating landowners Department of National Defence Ducks Unlimited Canada TD Friends of the Environment Foundation

Key Findings

- Collaborated with other organizations to survey 70 waterbodies as part of the 2011 International Piping Plover Census. The piping plover count in Alberta was down 11% from the previous survey in 2006, although the long-term trend has shown an increase in plover numbers since large-scale recovery efforts began in 2002.
- Completed fencing projects on four lakes to protect breeding habitat from livestock and predators.
- Enhanced over 48 km of shoreline habitat since 2002, with the majority considered key breeding habitat.
- For the first time in 12 years, we did not deliver a widespread predator exclosure program designed to enhance nest success. We are testing if the combined effect of habitat improvements on about 90% of habitat over the past decade, coupled with a 60% increase in population numbers over the same period, will enable a stable population without the need for continuous use of predator exclosures.

Introduction

The piping plover (*Charadrius melodus*) is a small, black and white, stubby-billed *Endangered* shorebird requiring gravel-strewn beaches for nesting and rearing broods. We address threats facing piping plover populations through the enhancement of habitat and the protection of nests. We also conduct annual surveys on core breeding lakes to monitor population numbers and

distribution, and to complement the international census conducted every five years across North America. This year marked the fifth International Piping Plover Census.

In 2011/12, our primary objectives for this program included participating in the 2011 International Piping Plover Census by surveying at least 30 core and historical breeding lakes, completing at least three enhancement projects, and surveying and monitoring breeding habitat. All of these objectives are supported by the *Alberta Piping Plover Recovery Plan 2010 – 2020* (Alberta Piping Plover Recovery Team 2010).

Methods

We conducted adult surveys by walking along select beaches approximately two-thirds of the distance between the water's edge and the inshore vegetation line (Goossen 1990). We recorded and mapped location, number and breeding activity of adult plovers, and we checked all adults for leg bands that allowed us to determine which lake and in what year they were banded. We provided all observations to Alberta Sustainable Resource Development (ASRD) for entry into the Fisheries and Wildlife Management Information System (FWMIS) and the International Piping Plover Census database.

We assessed select shorelines for habitat damage and prioritized enhancement needs according to type, severity and size of damage, likelihood of continued damage, and available mitigation options. We then worked with landowners to mitigate future habitat damage on identified areas and used wildlife-friendly fencing techniques (Paige 2008), where possible.

Results

In 2011/12, Alberta Conservation Association (ACA), ASRD, Alberta Tourism, Parks and Recreation, and the Department of National Defence surveyed 70 waterbodies for piping plovers, with ACA surveying 32 of these. In total, we recorded 244 adults on 24 lakes, and we recorded 10 or more adults on 11 of these lakes. We recorded 30 fewer piping plovers in 2011 than we did in the 2006 International Piping Plover Census, which amounts to a decrease of 11%. This decrease may be due, in part, to an extremely wet spring and summer. Many parts of Alberta experienced one of the wettest years on record, which flooded many key nesting beaches and limited available nesting habitat on several others. While this population count appears to be lower than the count of 274 birds from the 2006 survey, the long-term trend has shown a moderate increase; the count in 2011 was 83 birds higher than the 2001 International Piping Plover Census (Figure 1).



Figure 1. Piping plover counts in Alberta since 2001, with large scale recovery efforts beginning in 2002. Survey effort is comparable from year-to-year, with the exception of international census years, 2001, 2006 and 2011 where survey coverage was more extensive.

We recorded 10 birds previously banded in Alberta or other jurisdictions and determined banding year and lake of origin for two of these birds. We also recorded three birds banded in Louisiana, Alabama and Mississippi as part of a project dealing with the major oil spill that occurred in the Gulf of Mexico in 2010.

We surveyed habitat on 70 lakes and recorded contact with 34 landowners during the piping plover breeding season. We completed permanent fencing projects on Clark and McLaren lakes, one non-wildlife-friendly fencing removal project on Handhills Lake, and one temporary fencing project on each of Clark and Piper lakes. We also repeated an annual vegetation reduction project through livestock grazing on Little Fish Lake. These improvements enhanced over 7 km of shoreline habitat (Figure 2). Since 2002, this project has enhanced over 48 km of shoreline habitat with the majority of key piping plover habitat being protected or enhanced.



Figure 2. Kilometres of shoreline enhanced through temporary and permanent projects from 2002 - 2011.

Conclusions

This year is the first time since 1999 that we did not deliver a widespread predator exclosure program. There is a recognition that we cannot continue to place predator exclosures over piping plover nests in perpetuity, and we will have to determine if the population has recovered enough to survive without direct intervention. We are hopeful that the combined effect of habitat improvements on about 90% of the piping plover habitat over the past decade, coupled with a 60% increase in piping plover populations in Alberta over the same period, has created a stable population without the need for continuous productivity enhancements through the use of predator exclosures.

Communications

- Distributed annual plover newsletter to landowners and cottagers.
- Provided an update on our work to the federal Prairie Piping Plover Recovery Team.

Literature Cited

- Alberta Piping Plover Recovery Team. 2010. Alberta piping plover recovery plan, 2010 2020. Alberta Sustainable Resource Development, Fish and Wildlife Division, Alberta Species at Risk Recovery Plan No. 18, Edmonton, Alberta. 28 pp.
- Goossen, J.P. 1990. Prairie piping plover conservation: second annual report (1989). Unpublished report, Canadian Wildlife Service, Edmonton, Alberta. 20 pp.
- Paige, C. 2008. A landowner's guide to wildlife friendly fences. Landowner/Wildlife Resource Program, Montana Fish, Wildlife and Parks, Helena, Montana, USA. 44 pp.



Photos (3):

Alberta Conservation Association staff member, Amanda Rezansoff, putting up electric fence to protect piping plover habitat from cattle. (Photo: Stefanie van Huystee)



Alberta Conservation Association staff member, Dan Sturgess, conducting a piping plover survey. (Photo: Lance Engley)



A piping plover. (Photo: Gordon Court)