

# Great Lakes Piping Plovers



Alice Van Zoeren

**What is a Piping Plover?**



Length: 5.25"  
Weight: 11g (.39 oz)  
Wing span: 8"



Length: 7.25"  
Weight: 55g (1.9 oz)  
Wing span: 19"



Length: 10"  
Weight: 77g 2.7 oz)  
Wing span: 17"



Pat and Doris Leary

**What other birds are  
found on the beach?**

# Killdeer



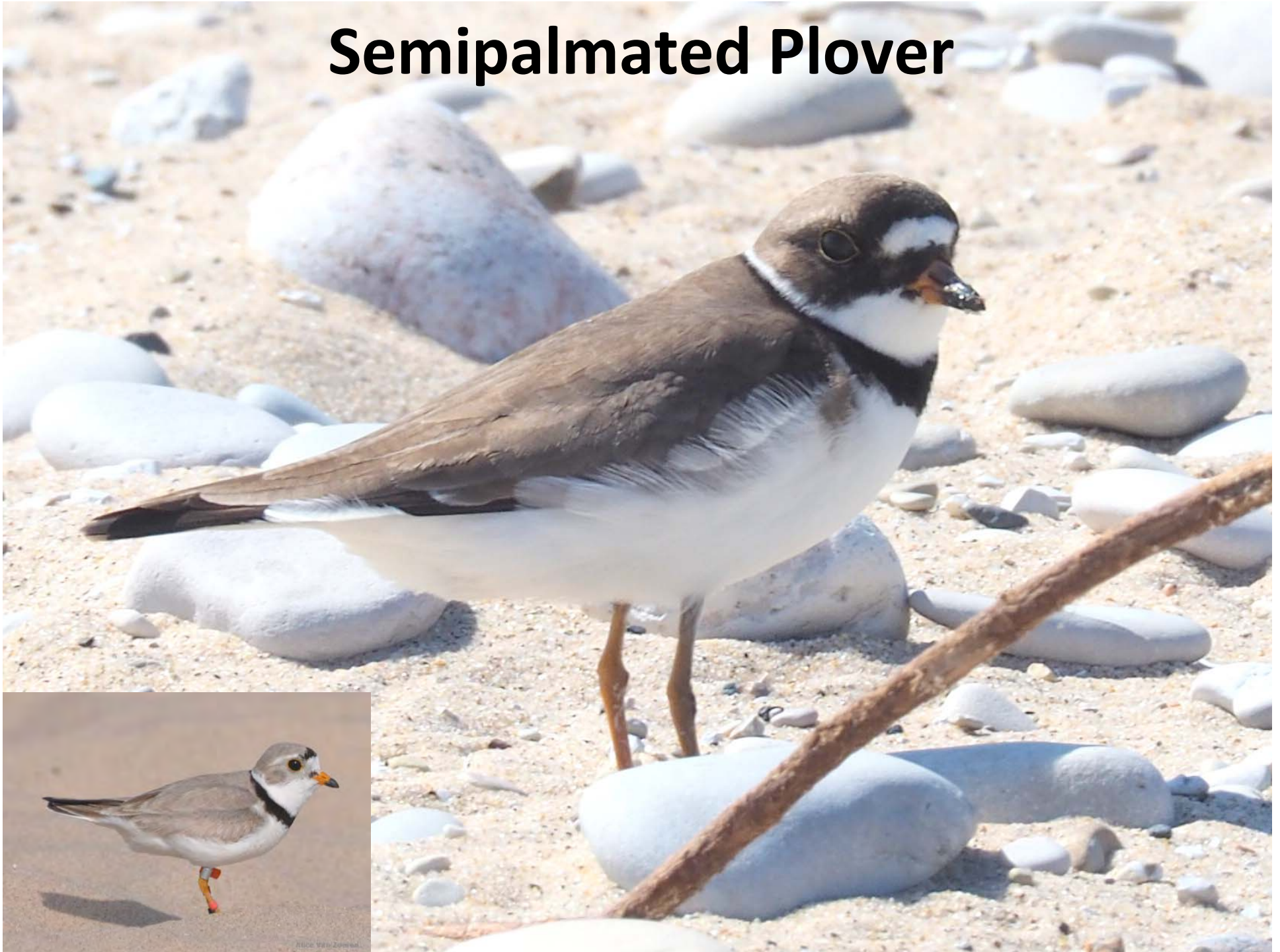
Rice VanZee

# Spotted Sandpiper



Alice Van Zoeren

# Semipalmated Plover





# Sanderling



**Where can one find  
Piping Plovers?**



# Piping Plovers in the Great Lakes

## Historic Distribution



# Piping Plovers in the Great Lakes

Late 1980s



Image NOAA

Image Landsat

Imagery Date: 4/9/2013 lat 44.988681° lon -83.963239° elev 1015 ft eye alt 685.44 mi

Google earth

# Piping Plovers in the Great Lakes

2015

Great Lakes Piping Plover  
Breeding Locations



Image NOAA

Image Landsat

Imagery Date: 4/9/2013 lat 44.988681° lon -83.963239° elev 1015 ft eye alt 685.44 mi

Google earth

**Why are  
Piping Plovers  
Endangered?**

# Reasons for Population Decline – Market Hunting and Collecting





# Reasons for Population Decline – Shoreline Development

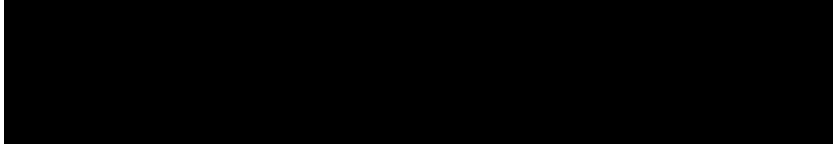
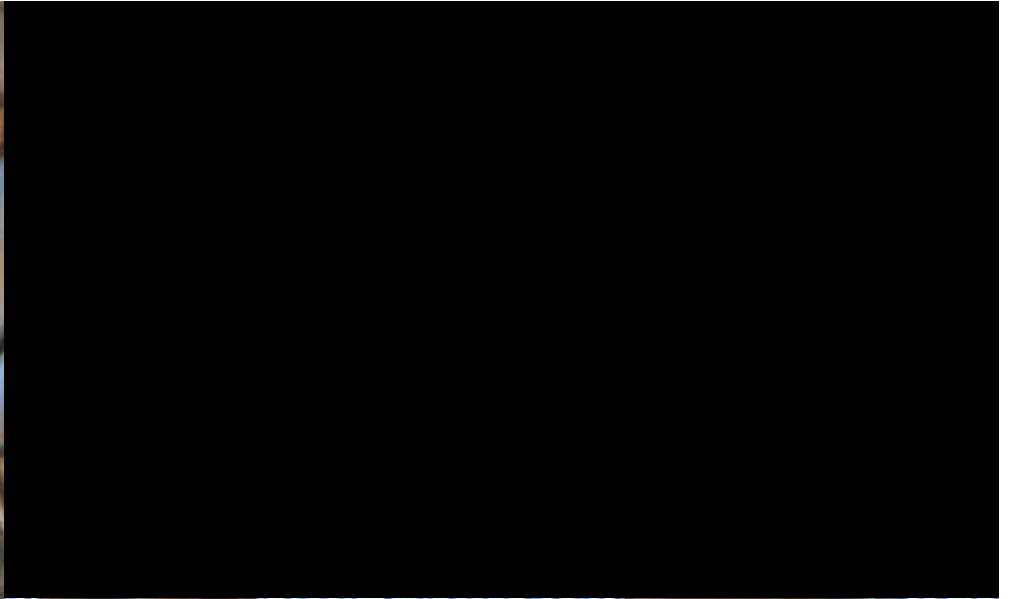


# Reasons for Population Decline – Increased Beach Recreation



# Reasons for Population Decline – Increase in Predator Populations





**What do Piping Plovers  
do during the year?**

# Great Lakes Piping Plover Non-breeding Season 2015-2016 Migration and Wintering Report Locations



# Flight Display



# Territorial Disputes



Alice Van Zoeren

A. Van Zoeren

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Alice Van Zoeren



# Scraping



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# Scrapes



# Tilt Display



# Nests





# Chick Development



1 Day



3 Days



6 Days

# Chick Development



11 Days



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14 Days

# Chick Development



24 Days



30 Days



# Fledging





**44 Days**

# **Piping Plover Recovery Plan**



**U.S. Fish and Wildlife Service – Administers the Endangered Species Act, coordinates partnership efforts**

**Land Management Agencies – Responsible for management of plovers on their lands**



National Park Service



US Forest Service



Michigan, Wisconsin and Illinois Departments of Natural Resources



New York State Department of Environmental Conservation



Canadian Wildlife Service



Ontario Ministry of Natural Resources and Forestry

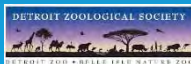


Great Lakes Tribes



USDA Wildlife Services

**Salvage Captive-rearing**



American Zoo and Aquarium Association – Detroit Zoo

**Research**



University of Minnesota



Lake Superior State University

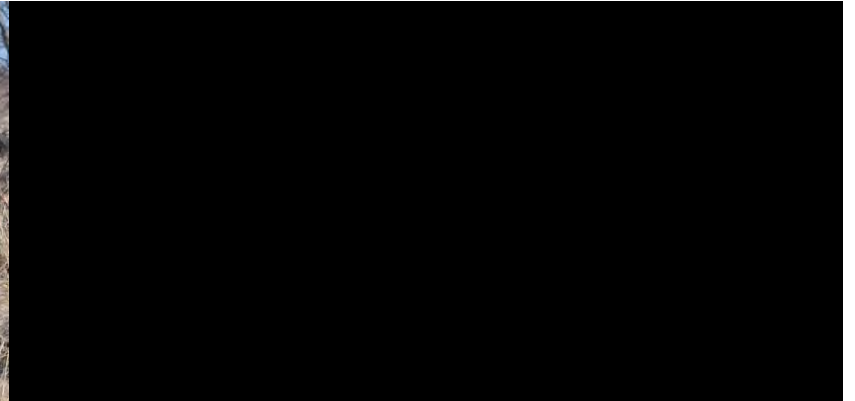


University of Michigan Biological Station

**Additional Land Protection/Monitoring/Support**



Non-governmental Organizations (UP Land Conservancy, TNC, Audubon Society, etc.)

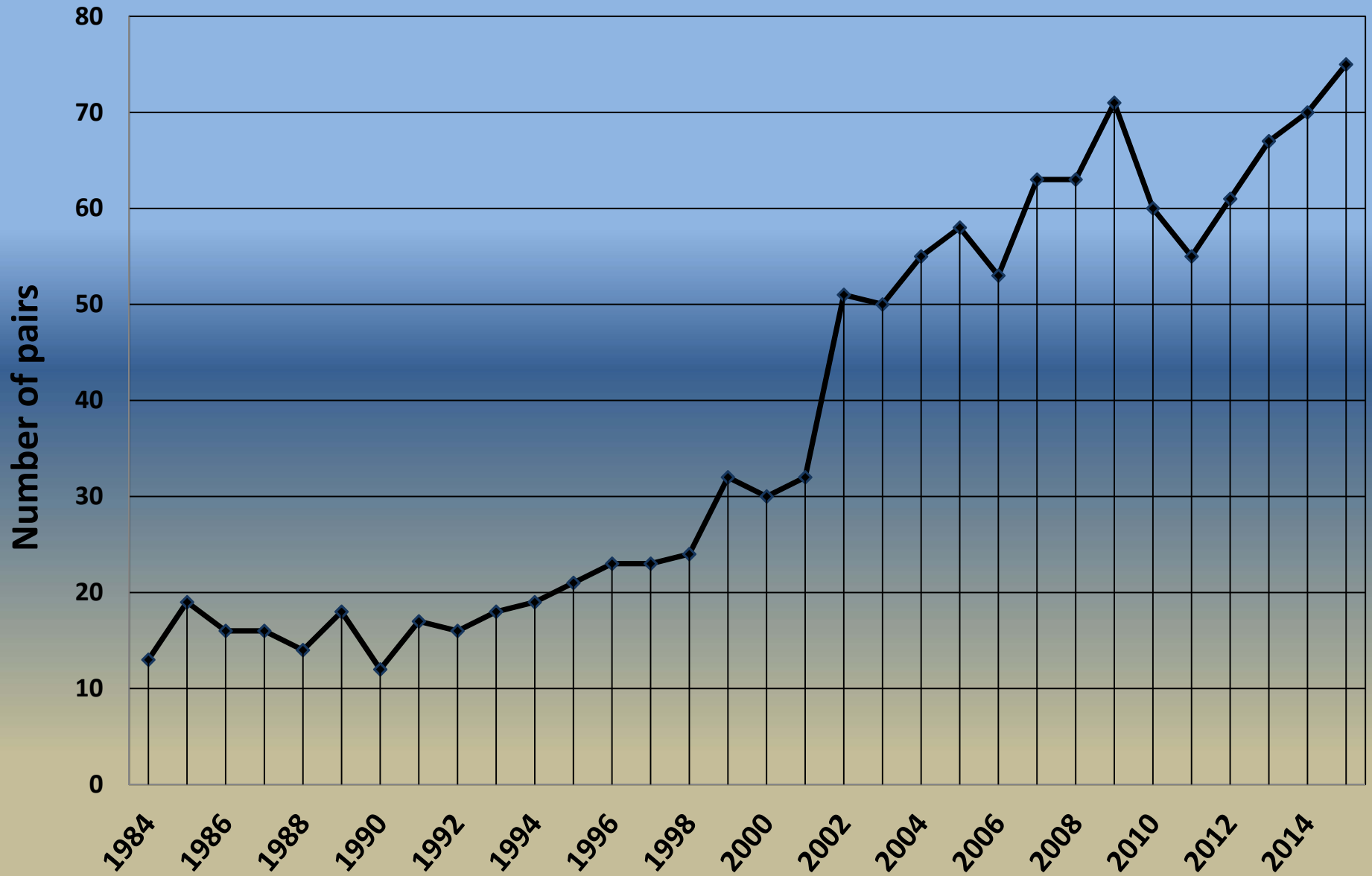


**Volunteers, Interns and Landowners**

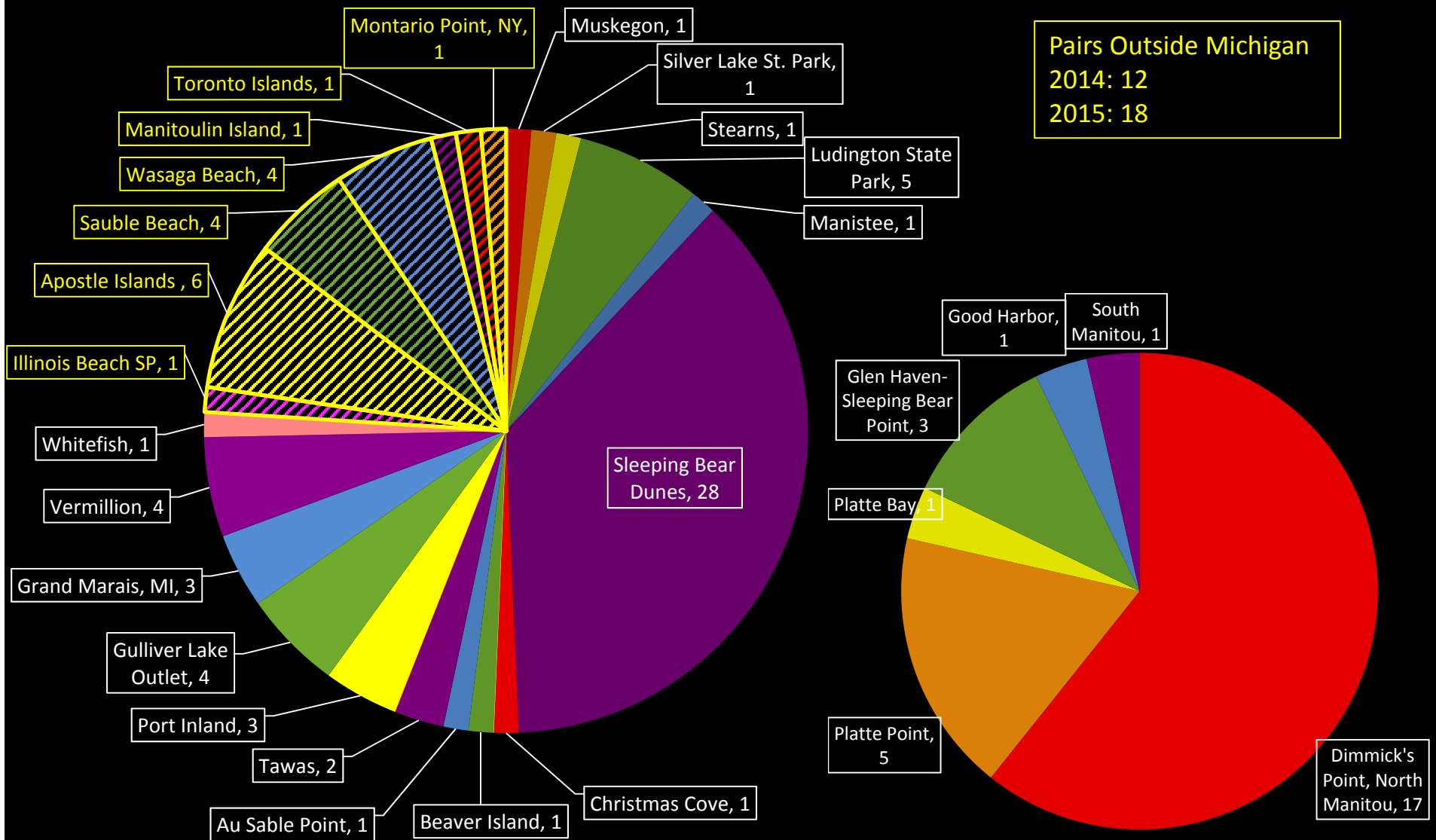
**At least 150 pairs for 5 consecutive years,  
with  
100 of them in Michigan and 50 in other Great Lakes States**



# Great Lakes Piping Plover Population 1984-2015



# Number of Nesting Pairs by Location - 2015



Entire Great Lakes Population

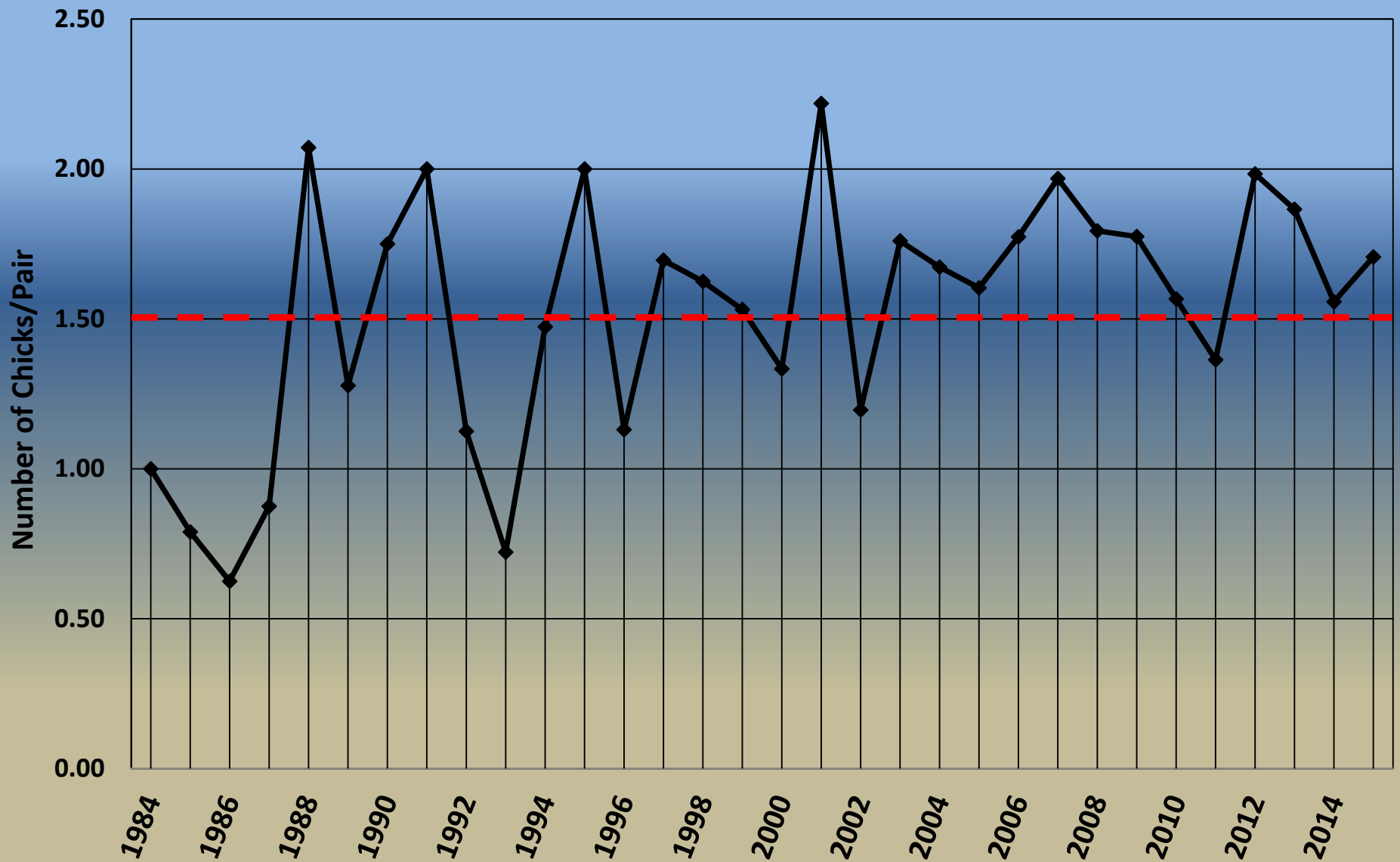
Sleeping Bear Dunes



**A yearly average of 1.5-2.0 fledglings per pair, for 5 years  
and  
10-year projections indicate that the population will be stable,  
or continue to grow.**



# Great Lakes: Average Number of Chicks Fledged/Pair



**Protection and long-term maintenance of essential breeding and wintering habitat are ensured.**



**Genetic diversity within the population is adequate**



**Agreements and funding mechanisms are in place  
for long-term protection and management activities**



A. Van Zoeren

# Helping Piping Plovers



Alice Van Zoeren













# Releasing Captive-reared Chicks



# **Piping Plover Research To Aid Recovery**

# Some important things we've learned by banding Piping Plovers

- Breeding separation of the three Piping Plover Populations
- Mate and nest site fidelity
- Longevity
- Mortality rates and causes
- Wintering locations
- Migration routes
- Dispersal from natal sites
- Critical habitat requirements
- Genetic Diversity in the Population
- Sex ratios at hatching and fledging



# Banding Chicks





# Banding Chicks



Erin Roche



# Banding Chicks



# Banding Chicks



# Banding Adult Plovers - Potter Trap



# Banding Adult Plovers



**...As the  
Plover world  
turns**

**Ob:X,b (aka Rocky)**

**Slow start to success**











**Of,GG:X,Y**

**Migration Speed Record**



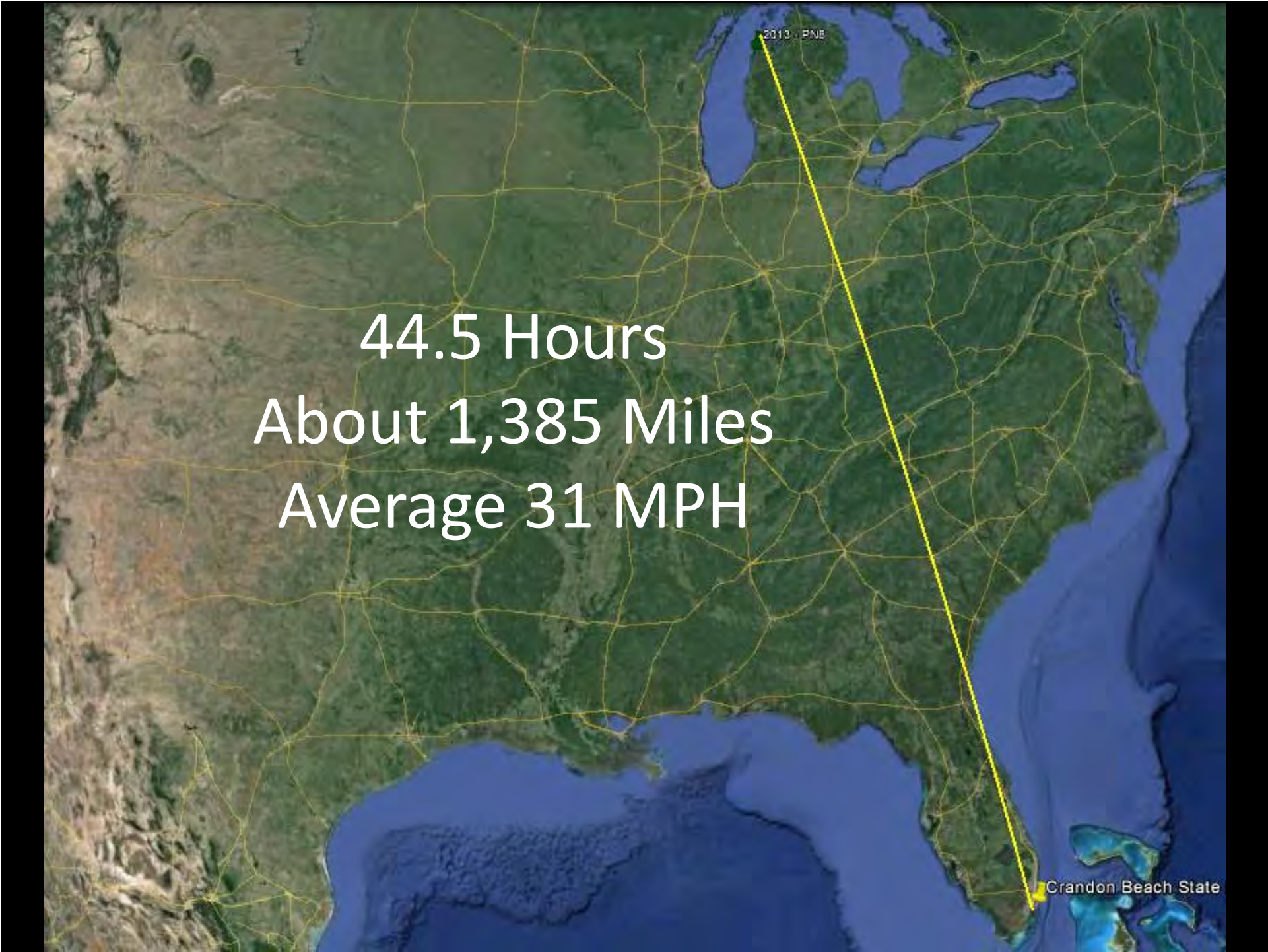
**At Platte River Mouth Sleeping Bear Dunes  
10:15 AM - 7/22/2013**



**At Crandon Beach State Park (near Miami)**

**6:45 AM - 7/24/2013**

Photo by Rangel Diaz



44.5 Hours  
About 1,385 Miles  
Average 31 MPH

2013 PNE

Crandon Beach State

The image shows a satellite-style map of the United States with a yellow dashed line representing a route from PNE in 2013 to Crandon Beach State. The text in the center provides statistics for this route: 44.5 hours, approximately 1,385 miles, and an average speed of 31 MPH. The map shows the coastline and major road networks.

# How you can Help:

- Keep pets on leashes and out of “No Pets” area
- Report any pets off-leash or in restricted areas to NPS staff
- Clean up any garbage left on the beach
- Don’t feed gulls, crows or other wild animals
- Report sightings of Piping Plovers in areas where there aren’t known nests (no plover fencing)
- Volunteer to help monitor Piping Plover nesting activities and survey beaches
- Volunteer to help with Botulism E beach patrols
- To volunteer or report observations call: 231-326-4751
- Report banded plovers on winter range to [plover@umn.edu](mailto:plover@umn.edu)