HISTORY OF THE INTERNATIONAL PIPING PLOVER CENSUS AND PLANS FOR THE 2006 CENSUS

Elise Elliott-Smith and Susan M. Haig

The First Census

- Conducted in 1991
- Focus on distribution
- Particularly on the breeding grounds
- Complete species census’ were rare at the time and still extremely rare today
Subsequent Census’

- Second Census in 1996
- Winter distribution and breeding population estimate
- Snowy Plovers included in the 2001 Winter Census
- Evaluate population trends and recovery progress

2006 Census Goals

- Evaluate long term trends.
- Improve accuracy of population estimates by examining and accounting for detectability.
Census Methods

• Generally the same in 1991, 1996, 2001
• 2 weeks in February
• 2 weeks in June
• All sites known to be occupied or contain habitat in last 5 years
• Count all adults exactly once

Census Methods

• Location
  – Name
  – Coordinates
  – Body of Water

• General habitat type is recorded
  – Mainland, barrier island, spoil island, etc.

• Substrate type is also recorded
  – Sand beach, mudflat, gravel shore, etc.
### 2001 International Piping Plover Census: Summary

<table>
<thead>
<tr>
<th></th>
<th>Winter</th>
<th>Breeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Census period</td>
<td>Jan 29 – Feb 12</td>
<td>June 3-16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Atl U.S. May 26-Jun 3)</td>
</tr>
<tr>
<td>Participants</td>
<td>387</td>
<td>1000+</td>
</tr>
<tr>
<td>Coverage</td>
<td>8 states, PR,</td>
<td>25 states, 9 provinces +</td>
</tr>
<tr>
<td></td>
<td>CU, BH</td>
<td>SPM</td>
</tr>
<tr>
<td>Linear km</td>
<td>3,142+</td>
<td>8,681+</td>
</tr>
<tr>
<td>Census hrs</td>
<td>801+</td>
<td>4,276+</td>
</tr>
<tr>
<td>Survey sites</td>
<td>352</td>
<td>1937</td>
</tr>
<tr>
<td>Sites w/PPL</td>
<td>118 (33% all sites)</td>
<td>776 (40% all sites)</td>
</tr>
<tr>
<td>Total birds</td>
<td>2,389 (40% brd census)</td>
<td>5,938</td>
</tr>
</tbody>
</table>
2001 International Piping Plover Census Participants

Federal agencies (8)
Provincial/State agencies (32)
Academic Institutions (10)
Private Businesses (6)
NGO (18)

**1400+ individuals**

Site Density in Breeding and Winter

Breeding:
- 1-10: 81%
- 11-100: 19%

Winter:
- 1-10: 57%
- 11-100: 41%
- >100: 19%
### Census Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Observers</th>
<th>Breeding Count</th>
<th>Winter Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1,052</td>
<td>5,484</td>
<td>3,451</td>
</tr>
<tr>
<td>1996</td>
<td></td>
<td>5,931</td>
<td>2,515</td>
</tr>
<tr>
<td>2001</td>
<td>1,400+</td>
<td>5,945</td>
<td>2,389</td>
</tr>
</tbody>
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### 2001 International Piping Plover Breeding Census

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Grand Total</td>
<td>5,484</td>
<td>5,931</td>
<td>5,945</td>
</tr>
<tr>
<td>Great Plains/Prairie</td>
<td>3,469</td>
<td>3,286</td>
<td>2,953</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>40</td>
<td>48</td>
<td>72</td>
</tr>
<tr>
<td>Atlantic</td>
<td>1,645</td>
<td>2,597</td>
<td>2,920</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Since 1991</th>
<th>Since 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Total</td>
<td>8.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Great Plains/Prairie</td>
<td>-14.9%</td>
<td>-10.1%</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>80.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Atlantic</td>
<td>77.5%</td>
<td>12.4%</td>
</tr>
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</table>
Wintering Piping Plovers

- Piping Plover winter range is still uncertain.
- Detectability is a major problem.
- There are serious threats in the known winter range.
Summary

- Monumental effort
  - Geographic area
  - Two seasons
  - Number of kilometers
  - Number of hours
  - Number of people involved

Is It Worth It?

- Determine trends in species distribution and abundance.
- Assess progress of recovery efforts toward downlisting and delisting.
- Quantify habitat use in breeding and winter.
- Indicate areas of special concern.
- Provide input data for population models.
2006 Census Planning

• Effort requires that planning begin today.

• Some funds have been secured for planning but we must seek more to
  – Assess detectability
  – Expand winter census into Mexico and Caribbean

• Coordination needs to begin at the regional and local levels.