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## Data from the 2006 International Piping Plover Census

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U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service

## **Data from the 2006 International Piping Plover Census**

**Data Series 426**



# **Data from the 2006 International Piping Plover Census**

By Elise Elliott-Smith and Susan M. Haig, U.S. Geological Survey, and Brandi M. Powers, U.S. Bureau of Land Management.

Data Series 426

**U.S. Department of the Interior**  
**U.S. Geological Survey**



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**U.S. Geological Survey**  
Suzette M. Kimball, Acting Director

U.S. Geological Survey, Reston, Virginia: 2009

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## Conversion Factors

<b>Multiply</b>	<b>By</b>	<b>To obtain</b>
kilometer (km)	0.6214	mile (mi)

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# Data from the 2006 International Piping Plover Census

By Elise Elliott-Smith and Susan M. Haig, U.S. Geological Survey, and Brandi M. Powers, U.S. Bureau of Land Management.

## Abstract

This report presents the results of the 2006 International Census of Piping Plovers (*Charadrius melodus*). Two sets of tabular data are reported: one for distribution and abundance of wintering Piping Plovers, the other for distribution and abundance of breeding Piping Plovers. The winter census resulted in the observation of 3,884 Piping Plovers at 546 sites. The breeding census resulted in the observation of 8,092 adult Piping Plovers at 1,925 sites. An appendix provides census reports for each location surveyed. This report was prepared to meet an immediate need of the U.S. Fish and Wildlife Service for census data for Piping Plovers.

## Introduction

In 2006, a comprehensive survey of Piping Plovers was conducted for the fourth time in 15 years across the shorebird's winter and breeding ranges in the United States, Canada, France (islands near Canada), Mexico, and the Caribbean. This type of census has occurred at 5-year intervals since 1991 to provide the data to assess Piping Plover population status and distribution. Management agencies use the information to assess progress toward recovery goals for this shorebird. These assessments occur because of designations of either threatened or endangered for populations of Piping Plovers in the United States and Canada.

This report was prepared to meet an immediate need of the U.S. Fish and Wildlife Service for census data for Piping Plovers.

## Methods

The 2006 International Piping Plover Census was conducted using similar and compatible methods to those used during 1991, 1996, and 2001 (Haig and Plissner, 1993; Plissner and Haig, 2000; Haig and others, 2005). The census was facilitated by the International Piping Plover Coordination Group, which is comprised of leaders or representatives of Piping Plover recovery teams in Canada and the United States. The census was led by a census coordinator (Elise Elliott-Smith, U.S. Geological Survey). Individual surveys were organized with the assistance of State, Provincial, island, and regional coordinators.

The winter census was conducted prior to the breeding census so that only birds capable of being present in the subsequent breeding census were counted. January 23 through February 6, 2006 was designated as the time period for the winter census. June 3 through 16 was designated as the time period for the breeding census for the U.S. Plains, Canadian Prairies, Great Lakes, and Atlantic Canada. June 1 through 9, 2006 was the time period for the breeding census for the U.S. Atlantic Coast in Massachusetts because this was the designated interval for an already established survey called an annual index count.

It was important to conduct each of the censuses during short time intervals to minimize recounting birds if they moved among areas. Dates also were selected based on similarity to previous census dates. An additional factor when in coastal areas was selection of winter census dates that would coincide with a period of daytime high tides, particularly on the Texas coast.

Some data collected outside the designated time interval were accepted for the winter census in order to document use in regions where Piping Plovers were rare. Because the breeding census provides a population estimate for the species, deviations from the established time periods for this census were rare. Actual dates of surveys for each location are presented in appendix 1.

## 2 2006 International Piping Plover Census Data

General guidance was given to surveyors to increase the likelihood of Piping Plover detection. Participants were advised to conduct surveys when the weather was favorable because visibility may be reduced in inclement weather for multiple reasons. When tides were involved, surveyors were advised to make their surveys at high tide because birds can be concentrated under these conditions and habitat tends to be easier to cover.

All States and Provinces except Massachusetts, New York, and two sites in Rhode Island followed the census protocol in 2006. Surveyors reported counts for a single survey and reported Piping Plover pairs as the sum of those birds actually seen together and single adults observed at a nest or with young. Massachusetts, New York, and Rhode Island reported numbers according to protocols for their annual window count, which included data from multiple surveys at some sites and inferences about pairs based on known nests. Specifically, if a nest was detected at a site, a pair was recorded as present even if no birds were seen. Aside from these States, all other census data were considered comparable across the species range.

The categories of data collected during the 2006 censuses were similar to prior census years. Information recorded included the number of birds, location, weather, tidal stage, approximate length of shoreline covered, presence or absence of leg-bands and any band combinations, and surveyor. Breeding pairs were calculated for each site by adding the

number of pairs observed to the number of individuals with chicks or nests. Surveyors also commented on habitat types surveyed and used by Piping Plovers.

This effort is called a census because of the breadth of the distribution and abundance of the species that is covered. In a strict definition, census means complete count based on prior knowledge of entire occurrence and distribution. The breeding census is as close to a complete census as will be found for any wildlife species. The authors are aware that the exact number of Piping Plovers is problematic in the winter census and that people miss birds during the survey for a variety of reasons stated in the report. However, the historical precedence for designation of the effort as a census led the authors to continue to use that term.

## Results

A grand total 3,884 Piping Plovers were recorded during the winter census. Birds were observed at 546 sites (table 1). Expanded coverage outside the United States led to the discovery of a large population of Piping Plovers in the Bahamas (417 birds or 10.7 percent of the winter total). A grand total of 8,092 adult Piping Plovers were recorded during the breeding census at 1,925 sites (table 2). Site-specific information is provided for each survey (appendix 1).

**Table 1.** Distribution and abundance of wintering Piping Plovers, 2006.

[Sites surveyed, Kilometers surveyed, and Participants: Numbers reported serve as minimum estimates. Not all censusers included this information. na, not applicable]

State/ country	Number of Piping Plovers	Percentage of all birds censused	Sites surveyed	Kilometers surveyed	Participants	Coordinator
Virginia	1	0	21	194	20	R. Boettcher
North Carolina	84	2.2	39	344	28	S. Cameron
South Carolina	100	2.6	42	257	34	M. Bimbi, F. Sanders
Georgia	212	5.5	13	160	65	B. Winn
Florida	454	11.7	186	1,224	298	P. Kelly, B. Brooks, M. Knight
Atlantic <sup>1</sup>	133	3.4	69	384	na	na
Gulf <sup>1</sup>	321	8.3	117	840	na	na
Alabama	29	0.7	5	19	9	R. Clay
Mississippi	78	2	20	154	25	N. Winstead
Louisiana	226	5.8	25	205	11	E. Baka
Texas	2,090	53.8	78	1,500	100	P. Glass, R. Cobb, L. Gustafson
Mexico	76	2	5	89	2	A. Banda
Bahamas	417	10.7	66	128	21	S. Maddock, C. Wardle
Cuba	89	2.3	22	124	5	F. Shaffer, P. Rodriguez
Other Caribbean Islands	28	0.7	24	166	27	Multiple coordinators
Grand total	3,884	100	546	4,564	645	

<sup>1</sup>Regional subtotals within Florida.

**Table 2.** Census effort and coverage for the 2006 International Piping Plover breeding census.

[Sites surveyed, Kilometers surveyed, and Participants: Numbers reported serve as minimum estimates. Not all censusers included this information. na, not applicable; nr, information was not reported]

State/province	Adults	Percent of grand total	Percent of region	Breeding pairs	Sites surveyed	Linear kilometers surveyed	Participants	Coordinator
Northern Great Plains/Prairies	4,662	57.6	na	1,879	933	5,538	319	na
Prairie Canada	1,703	21.0	36.5	666	376	2,358	212	P. Goossen
Alberta	274	3.4	5.8	114	71	454	32	D. Prescott
Saskatchewan	1,420	17.5	30.4	548	255	1,822	158	P. Hjertaas
Manitoba	8	0.1	0.2	4	46	71	22	K. Porteous
Ontario (Lake of the Woods)	1	0	0	0	4	11	na	L. Heyens, B. Campbell
U.S. Northern Great Plains	2,959	36.6	63.5	1,213	557	3,180	107	K. Kreil, A. Ryba
Minnesota	4	0	0.1	2	6	12	7	K. Haws
Montana	130	1.6	2.8	46	74	599	21	L. Hanebury
Montana (Missouri River) <sup>1</sup>	23	0.3	0.5	9	11	5	na	na
North Dakota	1,508	18.6	32.3	646	261	1,599	38	K. Kreil, A. Ryba
North Dakota (Missouri River) <sup>1</sup>	702	8.7	15.1	282	114	364	na	na
South Dakota	375	4.6	8.0	171	93	232	11	C. Aron
South Dakota (Missouri River) <sup>1</sup>	350	4.3	7.5	153	74	113	na	na
Nebraska	909	11.2	19.5	341	117	711	26	J. Jorgenson
Nebraska (Missouri River)	191	2.4	4.1	73	30	15	na	na
Missouri River (MT, ND, SD, NE) <sup>1</sup>	1,266	15.6	27.2	517	229	497	40	K. Cruse, G. Pavelka
Iowa	9	0.1	0.2	4	2	3	1	D. Howell
Kansas	4	0	0.1	2	1	1	2	D. Mulhern
Colorado	20	0.2	0.4	8	3	23	1	S. McClean, D. Nelson
Great Lakes	110	1.4	na	49	118	421	91	na
Canada (Ontario)	1	0	0.9	0	40	148	43	L. Heyens/B. Campbell
United States	109	1.4	99.1	49	78	273	48	J. Dingleline
Michigan	101	1.3	91.8	45	55	214	37	J. Dingleline
Wisconsin	8	0.1	7.2	4	8	30	nr	S. Matteson
MN/IL/IN/OH/PA/NY	0	0	0	0	9	52	13	J. Dingleline, K. Haws
Atlantic	3,320	41.0	na	1,588	874	1,937	320	na
St. Pierre and Miquelon (France)	8	0.1	0.2	4	4	17	3	R. Etcheberry
Atlantic Canada	457	5.7	13.8	206	330	788	142	D. Amirault-Langlais
Newfoundland	48	0.6	1.4	22	75	106	18	I. Schmelzer, P. Harris
Quebec	63	0.8	1.9	22	15	124	33	F. Shaffer
Prince Edward Island	93	1.1	2.8	44	80	198	18	T. MacDonald, J. Wadell
New Brunswick	166	2.1	5.0	79	63	228	35	J. Stewart
Nova Scotia	87	1.1	2.6	39	97	132	38	J. McKnight
U.S. Atlantic	2,855	35.4	86.0	1,378	540	1,132	175	A. Hecht
Maine	71	0.9	2.1	34	35	56	17	J. Jones
New Hampshire	6	0.1	0.2	3	7	6	1	K. Murphy
Massachusetts	935	11.6	28.2	465	167	nr	nr	S. Melvin
Rhode Island	137	1.7	4.1	63	23	34	6	W. Edwards
Connecticut	68	0.8	2.0	36	32	30	9	J. Victoria
New York	852	10.5	25.7	422	155	337	62	M. Gibbons
New Jersey	209	2.6	6.3	84	55	126	25	D. Jenkins
Delaware	18	0.2	0.5	9	12	29	2	M. Bailey
Maryland	167	2.1	5.0	64	1	20	nr	J. Kumer
Virginia	305	3.8	9.2	157	24	156	24	R. Boettcher
North Carolina	87	1.1	2.6	41	29	338	29	S. Cameron
<b>Totals</b>								
U.S.	5,923	73.2	na	2,640	1,175	4,585	330	na
Canada	2,161	26.7	na	872	746	3,294	397	na
France	8	0.1	na	4	4	17	3	na
<b>Grand total</b>	<b>8,092</b>	<b>na</b>	<b>na</b>	<b>3,516</b>	<b>1,925</b>	<b>7,896</b>	<b>730</b>	<b>na</b>

<sup>1</sup>Regional subtotals within a given State. Missouri River results by State are included in State results.

## Summary

This report presents the results of 2006 International censuses of breeding and wintering Piping Plovers. These two censuses were conducted over 12,400 kilometers of coastal, bay, river, lake, and other shoreline habitats at 2,470 sites, by more than 1,300 observers. January 23 through February 6 was designated as the time period for the winter census. June 3 through 16 was designated as the time period for the breeding census for the U.S. Plains, Canadian Prairies, Great Lakes, and Atlantic Canada. June 1 through 9, 2006 was the time period for the breeding census for the U.S. Atlantic Coast (Massachusetts). The winter census resulted in the observation of 3,884 Piping Plovers at 546 sites. The breeding census resulted in the observation of 8,092 adult Piping Plovers at 1,925 sites. Two tables in the report present location-specific information about numbers of plovers observed and survey-area metrics.

## Acknowledgments

Appreciation is extended to all those who supported the census. The U.S. Army Corps of Engineers, U.S. Geological Survey Forest and Rangeland Ecosystem Science Center (USGS FRESC), U.S. Fish and Wildlife Service (USFWS) provided financial support. Multiple partners provided support for coordination and implementation of on-the-ground surveys in individual states and provinces and in particular we would like to thank the Canadian Wildlife Service for assistance in Canada and on the winter grounds. The International Piping Plover Coordination Group was instrumental in the planning and implementation of the census. Current members of this group are Susan Haig, USGS FRESC; Diane Amirault-Langlais, Canadian Wildlife Service; Wendy Brown, USFWS; Jack Dingledine, USFWS; Paul Goossen, Canadian Wildlife Service; Anne Hecht, USFWS; and Patricia Kelly, USFWS.

In addition to current members, Karen Kreil and Adam Ryba, both USFWS worked as U.S. Northern Great Plains Coordinators during the planning and implementation of the census. The coordination group assisted in recruitment and assignment of state and provincial coordinators, and helped ensure that completed data sheets were submitted. In addition, the census would not have been possible without on-the-ground coordination of state, provincial, regional, and island coordinators. These included Federal, State, and non-governmental personnel who recruited surveyors, distributed census materials, and collated data. Cheron Ferland provided guidance and assistance throughout the planning phase of the 2006 census. Thousands of people actually conducted the surveys. The volume of data that went into this report was extraordinary and several students assisted with entering data and developing tabular summaries, including Emma Garner, Ben Ramirez, and Jana Ricken.

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# Appendix 1

## State/Provincial Summaries

Following are detailed accounts of the 2006 International Piping Plover Census for each state, province, island or island group. Accounts include a narrative prepared by the state, provincial, island, regional, or census coordinator assessing the success of the census in their area. At the bottom of each narrative is a small table with Piping Plover numbers for each census year. Each narrative is followed by a map of sites surveyed and a detailed table which includes information on each and every site surveyed during the census. Winter Census results are presented first, followed by results from each population censused on the breeding grounds. Furthermore, presentation of results generally starts with the northeast most state/province and ends in the southwest.

Since we conducted a detectability study during the 2006 Breeding Census, this information is also included in the state/provincial accounts. For provinces and states that participated in the detectability study there is a table at the end of the narrative with the name of each site included in the detectability study and a tally of how many birds were counted during the first and second surveys. It should be noted that for states/provinces that participated in the detectability study, the “high count” for each site is included in the detailed site tables following each map.



## Key to 2006 Database Variables

Results tabulated in this report represent a portion of data collected during the 2006 census. Listed below are explanations for the variables presented. Other variable were collected but there was no room to include all information in these table. For information on other variables collected, please refer to the data sheets (Appendices C and D). Contact Susan Haig, Forest and Rangeland Ecosystem Science Center, Corvallis, OR 97331; susan\_haig@usgs.gov for additional information.

### Universal Variables:

**Map #** - Reference for associated map

**Br Pairs** – Breeding pairs = Sum (paired individuals plus single birds with nest or young)

**Total Adults** – Sum (unpaired birds seen + 2\*pairs)

**Km** – Kilometers surveyed

**Site Description** –Habitat description where surveying occurred (see “Site Desc. Variables”)

**PIPL Habitat** – Habitat description where birds were observed (see ”Site Desc. Variables”)

**1991 Census** – Was site surveyed in 1991?

**1996 Census** – Was site surveyed in 1996?

**2001 Census** – Was site surveyed in 2001?

**Owner** – Site ownership

**PIPL** – Piping Plover

**SNPL** – Snowy Plover

**WIPL** – Snowy Plover

### Site Ownership Variables:

**c** – County

**f** – Federal

**m** – Municipal

**n.r.** – Not reported

**p** – Private

**s(p)** – State(Provincial)

**t** – Tribal

## Site Description Variables:

Winter Habitat Variables	
<b>Water Body:</b>	
I	Ocean
II.	Protected Bay, Harbor Cove, Lagoon
III.	Gulf of Mexico
IV.	Ocean Inlet
V.	Other
<b>Shoreline:</b>	
A.	Mainland
B.	Barrier Island
C.	Spoil Island
D.	Bar
E.	Other Island
F.	Washover Area
G.	Other
<b>Substrate:</b>	
1.	Sand Beach
2.	Sand Spit
3.	Sand Flat
4.	Sand Bar
5.	Salt Flat
6.	Gravel Shore
7.	Oyster Reef
8.	Mudflat
9.	Vegetation (Algal) Mat
10.	Vegetated Shoreline
11.	Other

Breeding Habitat Variables	
<b>Water Body:</b>	
I	Ocean
II.	Protected Bay, Harbor Cove, Lagoon
III.	River
IV.	Alkali Lake/Pond
V.	Natural Freshwater Lake
VI.	Reservoir
VII.	Industrial Pond
VIII.	Other
<b>Shoreline:</b>	
A.	Mainland
B.	Barrier Beach
C.	Barrier Island

<b>Shoreline Con't:</b>	
D.	Protected Shore
E.	Spoil Island
F.	River Bar
G.	Other Island
H.	Dry Lake Bed
I.	Other
<b>Substrate:</b>	
1.	Sand Beach
2.	Sand Spit
3.	Sand Dune
4.	Overwash/Overwash Fan
5.	Sand Bar
6.	Silt
7.	Gravel Shore
8.	Gravel Bar
9.	Gravel Pit
10.	Alkali Mudflat
11.	Coastal Mudflat
12.	Vegetated Shoreline
13.	Vegetated Bar
14.	Vegetated Flats
15.	Other
<b>Substrate (U.S. Atlantic Coast):</b>	
1.	Sand Beach
2.	Sand Spit
3.	Sand Dune
4.	Overwash/Overwash Fan
5.	Blow-out/Hollow/Swale
6.	Sand Bar
7.	Silt
8.	Gravel Shore
9.	Gravel Bar
10.	Gravel Pit
11.	Alkali Mudflat
12.	Coastal Mudflat
13.	Vegetated Shoreline
14.	Vegetated Bar
15.	Vegetated Flats
16.	Other

# **The 2006 International Piping Plover Winter Census in Virginia**

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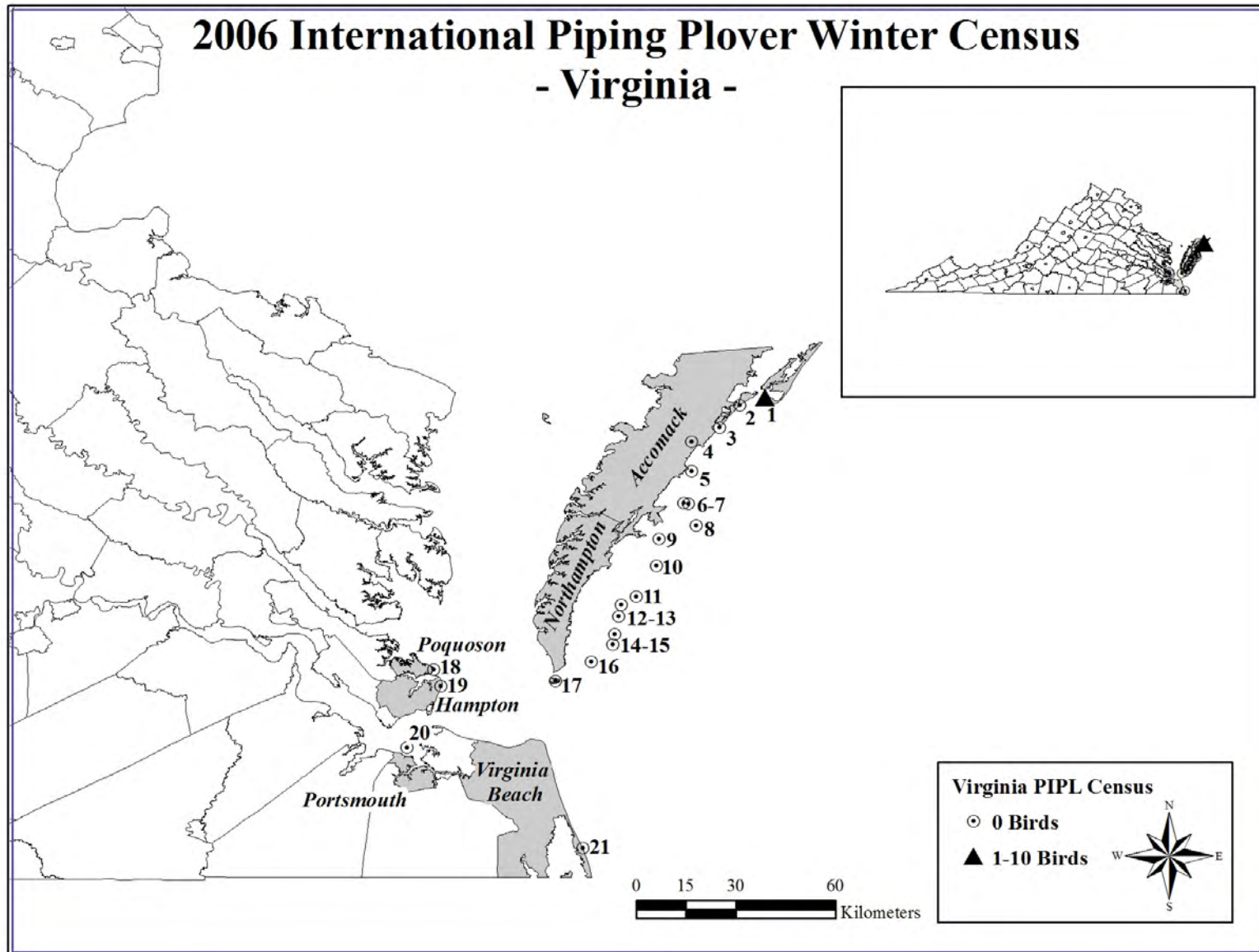
This was the first year that Virginia participated in the Winter Census, since the winter range for this species is thought to be south of Virginia. During the winter of 2006, 20 observers surveyed a total of 21 beaches. Most of the same beaches surveyed during the Breeding Census were covered during the 2006 Winter Census. However, only one Piping Plover was observed, confirming that Virginia beaches are not used extensively by this species in the winter. Interestingly, the one Piping Plover sighted was observed at the northernmost site surveyed.

## **Comparison of Census Numbers**

Species	1991	1996	2001	2006
Piping Plover	-	-	-	1
Snowy Plover	-	-	-	n.a.
Wilson's Plover	-	-	-	0

*Summarized by E. Elliott-Smith*

# **2006 International Piping Plover Winter Census - Virginia -**



## The 2006 International Piping Plover Winter Census in Virginia

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Accomack	Assateague Island, Chincoteague NWR portion	1	1/25	1	26.7	I II IV B 1 3	II B 8	No	No	No	f
Accomack	Assawoman Island	3	1/23	0	5.4	I IV B 1 3 8 10		No	No	No	f
Accomack	Dawson Shoals	7	1/24	0	0.7	I IV E 1 4		No	No	No	p
Accomack	Metompkin Island	4	1/28	0	11.0	I II IV B 1 3 8 11		No	No	No	f
Accomack	North Cedar Island	5	1/24	0	10.1	I II IV 1 3 8 11		No	No	No	f
						I II IV B D 1 3 4					
Accomack	Parramore Island	8	1/27	0	14.3	8 10		No	No	No	f
Accomack	South Cedar Island	6	1/24	0	4.4	I II IV B 3 8 11		No	No	No	f/p
Accomack	Wallops Island	2	1/23	0	5.2	I B 1 3 8		No	No	No	f
Hampton	Grandview Beach	19	1/30	0	1.6	II G 1 2 8 11		No	No	No	m
Northampton	Cobb Island	11	2/03	0	9.5	I IV B 1 3 10 11		No	No	No	p
Northampton	Fisherman Island	17	1/27	0	8.4	I II IV B 1 3 8		No	No	No	f
Northampton	Hog Island	10	1/27	0	14.7	I IV B 1 3		No	No	No	p
Northampton	Little Cobb Island	12	2/03	0	1.0	I II IV B 1 3		No	No	No	p
Northampton	Myrtle Island <sup>1</sup>	15	2/10	0	3.7	I II IV B 1 3 8 11		No	No	No	p
Northampton	Sandy Island	9	1/27	0	1.2	II E 1 3 8 11		No	No	No	p
Northampton	Ship Shoal Island <sup>1</sup>	14	2/10	0	4.6	I IV B 1 3 8		No	No	No	p
Northampton	Smith Island <sup>1</sup>	16	2/10	0	12.5	I IV B 1 3 8 11		No	No	No	p
						I II IV B D 1 3 4					
Northampton	Wreck Island	13	2/03	0	8.2	8 11		No	No	No	s(p)
Poquoson	Plum Tree Island NWR	18	2/02	0	3.8	II G 1 4 8 10		No	No	No	f
Portsmouth	Craney Island	20	1/26	0	30.0	V G 1 3		No	No	No	f
Virginia Beach	Back Bay NWR & False Cape State Park	21	1/24	0	16.9	I B 1		No	No	No	s(p)/f
<b>Total</b>				<b>1</b>	<b>193.8</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

## The 2006 International Wilson's Plover Winter Census in Virginia

COUNTY	SITE NAME	MAP#	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Accomack	Assateague Island, Chincoteague NWR portion		1/25	0	26.7	I II IV B 1 3		No	No	No	f
Accomack	Assawoman Island		1/23	0	5.4	I IV B 1 3 8 10		No	No	No	f
Accomack	Dawson Shoals		1/24	0	0.7	I IV E 1 4		No	No	No	p
Accomack	Metompkin Island		1/28	0	11.0	I II IV B 1 3 8 11		No	No	No	f
Accomack	North Cedar Island		1/24	0	10.1	I II IV 1 3 8 11		No	No	No	f
						I II IV B D 1 3 4					
Accomack	Parramore Island		1/27	0	14.3	8 10		No	No	No	f
Accomack	South Cedar Island		1/24	0	4.4	I II IV B 3 8 11		No	No	No	f/p
Accomack	Wallops Island		1/23	0	5.2	I B 1 3 8		No	No	No	f
Hampton	Grandview Beach		1/30	0	1.6	II G 1 2 8 11		No	No	No	m
Northampton	Cobb Island		2/03	0	9.5	I IV B 1 3 10 11		No	No	No	p
Northampton	Fisherman Island		1/27	0	8.4	I II IV B 1 3 8		No	No	No	f
Northampton	Hog Island		1/27	0	14.7	I IV B 1 3		No	No	No	p
Northampton	Little Cobb Island		2/03	0	1.0	I II IV B 1 3		No	No	No	p
Northampton	Myrtle Island <sup>1</sup>		2/10	0	3.7	I II IV B 1 3 8 11		No	No	No	p
Northampton	Sandy Island		1/27	0	1.2	II E 1 3 8 11		No	No	No	p
Northampton	Ship Shoal Island <sup>1</sup>		2/10	0	4.6	I IV B 1 3 8		No	No	No	p
Northampton	Smith Island <sup>1</sup>		2/10	0	12.5	I IV B 1 3 8 11		No	No	No	p
						I II IV B D 1 3 4					
Northampton	Wreck Island		2/03	0	8.2	8 11		No	No	No	s(p)
Poquoson	Plum Tree Island NWR		2/02	0	3.8	II G 1 4 8 10		No	No	No	f
Portsmouth	Craney Island		1/26	0	30.0	V G 1 3		No	No	No	f
Virginia Beach	Back Bay NWR & False Cape State Park		1/24	0	16.9	I B 1		No	No	No	s(p)/f
<b>Total</b>				<b>0</b>	<b>193.8</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

# The 2006 International Piping Plover Winter Census in North Carolina

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The 2006 International Piping Plover Census in North Carolina was largely complete with most known sites and suitable habitats surveyed. We had a fairly experienced crew of 28 people and covered almost all suitable habitats and slightly more habitat than in 2001. This year's count of 84 birds is only slightly lower than the 2001 count of 87 birds and considerably higher than 1996 and 1991 counts of 50 and 21 birds respectively. We had very similar coverage this year as compared to 2001 although slightly fewer people participated in the count.

Overall we had favorable weather during the census window although there were a couple of days with very strong winds. Winter storms and snow can drastically reduce the number of plovers in North Carolina, however, 2006 was a mild winter, so numbers were not likely impacted. While we tried to avoid counting during high winds, a few sites were surveyed during these conditions. Because of this, it is possible that a few birds were missed at these sites. Clam Shoal was censused one day after the census window due to unfavorable weather during the window. Browns Island, a small barrier island just north of Onslow Beach, was surveyed nine days after the census window. As part of a bombing range on Camp Lejeune, Browns Island is in a restricted area and access is extremely limited.

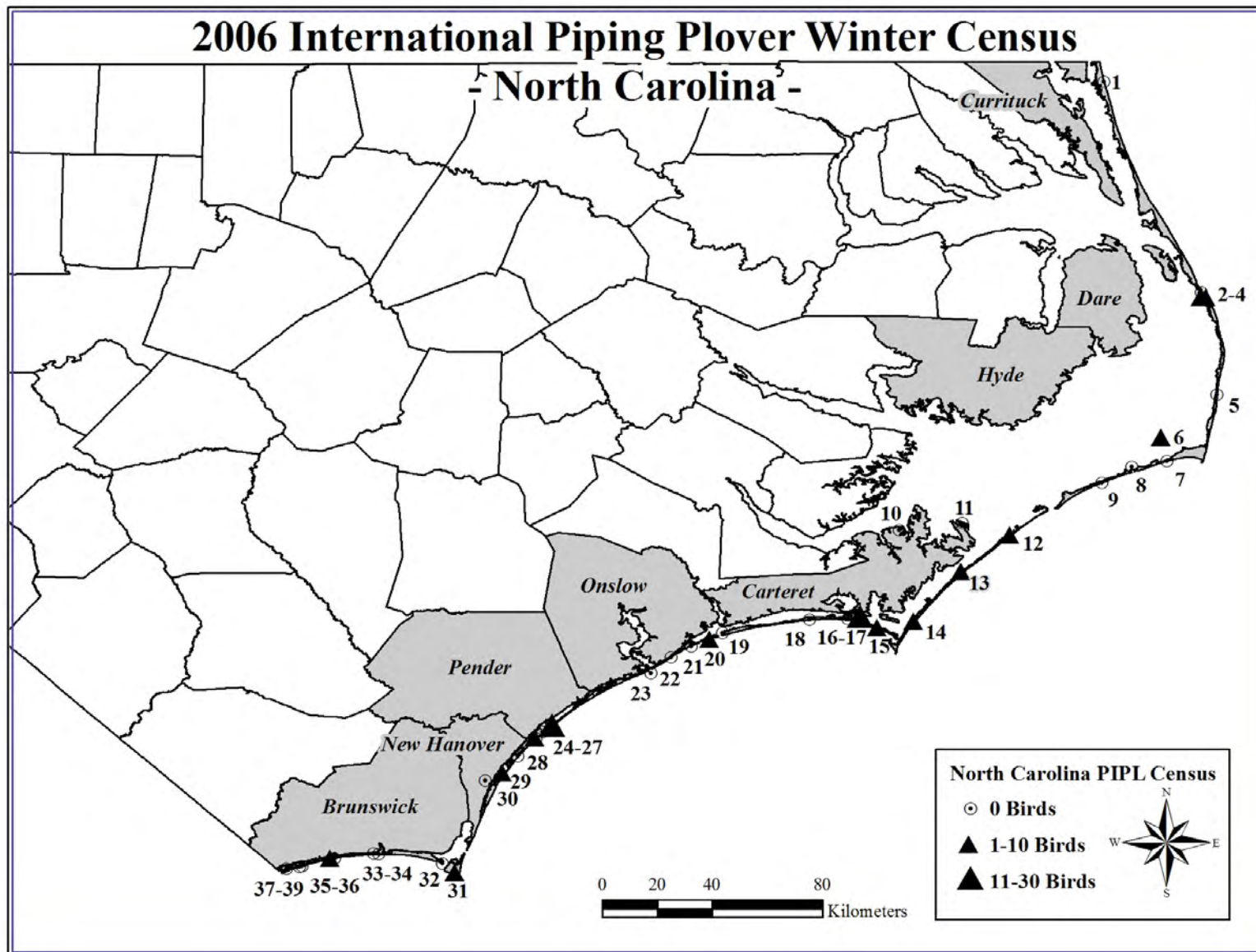
Approximately four miles along the east end of Cedar Island were missed as they were inaccessible by foot. We consider this suitable

habitat although we don't have many records of Piping Plovers using this area. There is also the possibility that Piping Plovers might be using narrow sand/mud-flats behind barrier islands or other inaccessible areas within the sounds. Many miles of narrow developed ocean facing beach were not surveyed. We very rarely see Piping Plovers in these areas and don't consider it suitable habitat. Additional sites to check are natural and dredge islands near Ocracoke Inlet including Bigfoot Island, North Rock Island and Casey Island. Depending on tides during surveys at Cape Lookout, it might be worth checking New Dump Island and New Drum Inlet shoals.

The surveys at Oregon Inlet (N. end Pea Island, Oregon Inlet islands, S. end Bodie Island) were affected by a research study being conducted by Virginia Tech. Oregon Inlet sites were being visited daily by Virginia Tech researchers and radio tagged birds followed. As a result we knew how many birds there would be and where they would be. This is the first year that Basnight Island Complex was visited and we may have missed birds at this site if it had not been for the Virginia Tech study.

## Comparison of Census Numbers

Species	1991	1996	2001	2006
Piping Plover	21	50	87	84
Snowy Plover	n.a.	n.a.	n.a.	n.a.
Wilson's Plover	n.r.	n.r.	n.r.	1



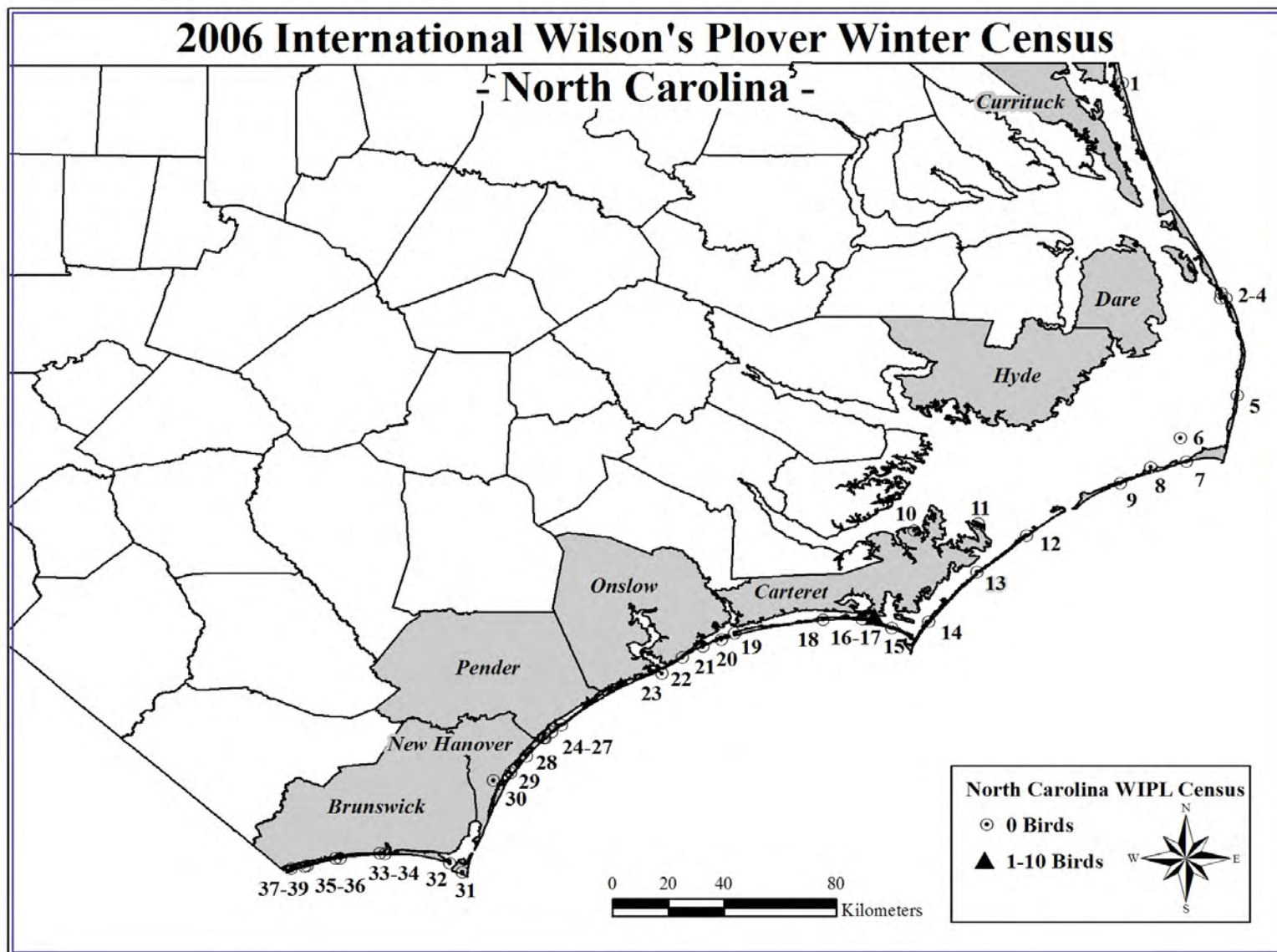


## The 2006 International Piping Plover Winter Census in North Carolina

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Brunswick	Bald Head Island to S end of Ft. Fisher	31	2/01	3	19.4	I V B 1 4 8	IV B 8	Yes	Yes	Yes	s/p
Brunswick	Fort Caswell; E end Oak Island	32	2/01	0	2.4	I IV B 1		Yes	Yes	Yes	p
Brunswick	Holden Beach; E end (Lockwood Folly's Inlet)	34	2/01	0	1.6	I IV B 1 3		Yes	Yes	Yes	p
Brunswick	Holden Beach; W end (Shallotte Inlet)	35	1/30	0	1.6	I II IV B 1 3 8 11		Yes	Yes	Yes	p
Brunswick	Long Beach; W end Oak Island	33	2/01	0	1.6	I IV B 1		Yes	Yes	Yes	p
Brunswick	Ocean Isle Beach; E end	36	1/30	4	1.6	I II IV B 1 2 3 8	IV B 2	Yes	Yes	Yes	p
Brunswick	Ocean Isle Beach; W end	37	1/30	0	1.6	I IV B 1 3		Yes	Yes	Yes	p
Brunswick	Sunset Beach, W end and Bird Island	39	1/30	0	3.2	I B F 1 3		Yes	Yes	Yes	s/p
Brunswick	Sunset Beach, E end (Tubbs Inlet)	38	1/30	0	2.4	I II IV B 1 3 4 8		Yes	Yes	Yes	p
Carteret	Bogue Banks (including inlet and multiple beaches)	18	1/27	0	12.9	I IV B 1 2 3 8		Yes	Yes	Yes	s/m
Carteret	Cape Lookout N.S.; Middle Core Banks and Ophella Island	12	1/27	4	4.8	I II IV B 1 3 4 8	II B 8	Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; Morgan Island	13	2/01	0	1.2	II C 1 8		No	Yes	Yes	f
Carteret	Cape Lookout N.S.; N Core Banks (Portsmouth Island)	10	1/25	3	29.0	I IV B 1 2 3 8 9	IV B 1	Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; S Core Banks	14	1/26	1	40.3	I II IV B 1 2 3 8	II B 8	Yes	Yes	Yes	f
Carteret	Cedar Island	11	2/02	0	6.5	V A 1 9		Yes	Yes	Yes	f/p
Carteret	Fort Macon SP	17	2/01	0	3.2	I II IV B 1 2 3		Yes	Yes	Yes	s(p)
Carteret	Rachel Carson Estuarine Research Reserve (Bird Shoal)	16	2/01	18	3.2	IV E 1 2 3 7 8 9	IV E 1 2 3 8	Yes	Yes	Yes	s(p)
Carteret	Cape Lookout N.S., Shackleford Banks	15	2/01	9	14.5	I II IV B 1 3 4 8	I B 1	Yes	Yes	Yes	f
Carteret/ Onslow	Bogue Inlet Shoals	19	2/01	0	1.2	IV E 3		No	No	Yes	s/p
Currituck	Currituck National Wildlife Refuge	1	1/30	0	17.7	I G 1		Yes	Yes	Yes	s(p)
Dare						I IV B F 1 2 3 8					
Dare	Cape Hatteras N. S.; Rodanthe to Buxton	5	1/23	0	40.0	10		No	No	No	f
Dare	Clam Shoal	6	2/07	4	4.0	V E 3 9	V E 3 9	No	Yes	Yes	f
Dare	Cape Hatteras N.S.; Bodie Island	2	1/23	0	8.5	I IV B F 1 2 3 8 10		Yes	Yes	Yes	f
Dare	Oregon Inlet and multiple islands	3	1/23	5	4.8	II C E 1 3 8	V E 3	No	No	Yes	s/p
Dare	Pea Island National Wildlife Refuge	4	1/23	6	2.0	I IV B 1 3	I B 1	Yes	Yes	Yes	f
Dare						I IV V B F 1 2 3 10					
Dare	Cape Hatteras N.S.; Cape Point to Hatteras Inlet	7	1/24	0	25.8	10		Yes	Yes	Yes	f
Dare/Hyde	Dot Island and ferry channel island	8	1/24	0	1.6	IV C 1 3 8		Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Winter Census in North Carolina (Continued)

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Hyde	Cape Hatteras N.S.; Ocracoke Island	9	1/25	0	27.4	I IV V B 1 2 3 8 10		Yes	Yes	Yes	f
New Hanover	Carolina Beach State Park	30	1/25	0	2.4	I IV B D 1 4		Yes	Yes	Yes	p
New Hanover	Figure Eight Island and Wrightsville Beach	28	1/25	0	6.5	IV B 1 4 8		No	Yes	Yes	m
New Hanover	Masonboro Inlet	29	1/25	3	15.7	I II IV B E G 1 3 4 8	II F 8	Yes	Yes	Yes	f
Onslow	Brown's Island, Camp Lejeune (U.S. Marine Corps Base)	21	2/15	0	5.7	I IV B 1 3		No	Yes	No	f
Onslow	Hammocks Beach State Park, Bear Island	20	2/01	9	6.4	I B 1 2 3	I B 1	Yes	Yes	Yes	s(p)
Onslow	N Topsail Beach; New River Inlet	23	1/28	0	0.8	I IV B F 1 3		Yes	Yes	Yes	s/m
Onslow	Onslow Beach, Camp Lejeune (U.S. Marine Corps Base)	22	1/01	0	11.3	I IV B 1 3 8		No	No	Yes	f
Pender	Hutaff Island	26	1/25	0	4.8	I IV B 1		No	Yes	Yes	p
Pender	Lea Island	25	1/25	0	1.9	I IV B 1 3		No	Yes	Yes	s/p
Pender	Rich Inlet Shoals	27	1/25	2	1.6	IV D 3	IV D 3	No	No	No	s(p)
Pender	S Topsail Beach; New Topsail Inlet	24	1/25	13	2.4	IV B D 1 2 3 8	IV D 8	Yes	Yes	Yes	s(p)
<b>Total</b>				<b>84</b>	<b>343.7</b>						



## The 2006 International Wilson's Plover Winter Census in North Carolina

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Brunswick	Bald Head Island to S end of Ft. Fisher	31	2/01	0	19.4	I V B 1 4 8		Yes	Yes	Yes	s/p
Brunswick	Fort Caswell; E end Oak Island	32	2/01	0	2.4	I IV B 1		Yes	Yes	Yes	p
Brunswick	Holden Beach; E end (Lockwood Folly's Inlet)	34	2/01	0	1.6	I IV B 1 3		Yes	Yes	Yes	p
Brunswick	Holden Beach; W end (Shallotte Inlet)	35	1/30	0	1.6	I II IV B 1 3 8 11		Yes	Yes	Yes	p
Brunswick	Long Beach; W end Oak Island	33	2/01	0	1.6	I IV B 1		Yes	Yes	Yes	p
Brunswick	Ocean Isle Beach; E end	36	1/30	0	1.6	I II IV B 1 2 3 8		Yes	Yes	Yes	p
Brunswick	Ocean Isle Beach; W end	37	1/30	0	1.6	I IV B 1 3		Yes	Yes	Yes	p
Brunswick	Sunset Beach, W end and Bird Island	39	1/30	0	3.2	I B F 1 3		Yes	Yes	Yes	s/p
Brunswick	Sunset Beach, E end (Tubbs Inlet)	38	1/30	0	2.4	I II IV B 1 3 4 8		Yes	Yes	Yes	p
Carteret	Bogue Banks (including inlet and multiple beaches)	18	1/27	0	12.9	I IV B 1 2 3 8		Yes	Yes	Yes	s/m
Carteret	Cape Lookout N.S.; Middle Core Banks and Ophella Island	12	1/27	0	4.8	I II IV B 1 3 4 8		Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; Morgan Island	13	2/01	0	1.2	II C 1 8		No	Yes	Yes	f
Carteret	Cape Lookout N.S.; N Core Banks (Portsmouth Island)	10	1/25	0	29.0	I IV B 1 2 3 8 9		Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; S Core Banks	14	1/26	0	40.3	I II IV B 1 2 3 8		Yes	Yes	Yes	f
Carteret	Cedar Island	11	2/02	0	6.5	V A 1 9		Yes	Yes	Yes	f/p
Carteret	Fort Macon SP	17	2/01	0	3.2	I II IV B 1 2 3		Yes	Yes	Yes	s(p)
Carteret	Rachel Carson Estuarine Research Reserve (Bird Shoal)	16	2/01	1	3.2	IV E 1 2 3 7 8 9	IV E 8	Yes	Yes	Yes	s(p)
Carteret	Cape Lookout N.S., Shackleford Banks	15	2/01	0	14.5	I II IV B 1 3 4 8		Yes	Yes	Yes	f
Carteret/ Onslow	Bogue Inlet Shoals	19	2/01	0	1.2	IV E 3		No	No	Yes	s/p
Currituck	Currituck National Wildlife Refuge	1	1/30	0	17.7	I G 1		Yes	Yes	Yes	s(p)
Dare	Cape Hatteras N.S.; Rodanthe to Buxton	5	1/23	0	40.0	I IV B F 1 2 3 8 10		No	No	No	f
Dare	Clam Shoal	6	2/07	0	4.0	V E 3 9		No	Yes	Yes	f
Dare	Cape Hatteras N.S.; Bodie Island	2	1/23	0	8.5	I IV B F 1 2 3 8 10		Yes	Yes	Yes	f
Dare	Oregon Inlet and multiple islands	3	1/23	0	4.8	II C E 1 3 8		No	No	Yes	s/p
Dare	Pea Island National Wildlife Refuge	4	1/23	0	2.0	I IV B 1 3		Yes	Yes	Yes	f
Dare	Cape Hatteras N.S.; Cape Point to Hatteras Inlet	7	1/24	0	25.8	I IV V B F 1 2 3 10		Yes	Yes	Yes	f
Dare/Hyde	Dot Island and ferry channel island	8	1/24	0	1.6	IV C 1 3 8		Yes	Yes	Yes	s(p)

**The 2006 International Wilson's Plover Winter Census in North Carolina  
(Continued)**

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Hyde	Cape Hatteras N.S.; Ocracoke Island	9	1/25	0	27.4	I IV V B 1 2 3 8 10		Yes	Yes	Yes	f
New Hanover	Carolina Beach State Park	30	1/25	0	2.4	I IV B D 1 4		Yes	Yes	Yes	p
New Hanover	Figure Eight Island and Wrightsville Beach	28	1/25	0	6.5	IV B 1 4 8		No	Yes	Yes	m
New Hanover	Masonboro Inlet	29	1/25	0	15.7	I II IV B E G 1 3 4 8		Yes	Yes	Yes	f
Onslow	Brown's Island, Camp Lejeune (U.S. Marine Corps Base)	21	2/15	0	5.7	I IV B 1 3		No	Yes	No	f
Onslow	Hammocks Beach State Park, Bear Island	20	2/01	0	6.4	I B 1 2 3		Yes	Yes	Yes	s(p)
Onslow	N Topsail Beach; New River Inlet	23	1/28	0	0.8	I IV B F 1 3		Yes	Yes	Yes	s/m
Onslow	Onslow Beach, Camp Lejeune (U.S. Marine Corps Base)	22	1/01	0	11.3	I IV B 1 3 8		No	No	Yes	f
Pender	Hutaff Island	26	1/25	0	4.8	I IV B 1		No	Yes	Yes	p
Pender	Lea Island	25	1/25	0	1.9	I IV B 1 3		No	Yes	Yes	s/p
Pender	Rich Inlet Shoals	27	1/25	0	1.6	IV D 3		No	No	No	s(p)
Pender	S Topsail Beach; New Topsail Inlet	24	1/25	0	2.4	IV B D 1 2 3 8		Yes	Yes	Yes	s(p)
<b>Total</b>				<b>1</b>	<b>343.7</b>						

# **The 2006 International Piping Plover Winter Census in South Carolina**

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Forty-two sites were surveyed during the 2006 International Census in South Carolina. Ten sites were added since the 2001 Census in order to cover more potential Piping Plover wintering habitat. Sixteen sites (38%) contained Piping Plovers.

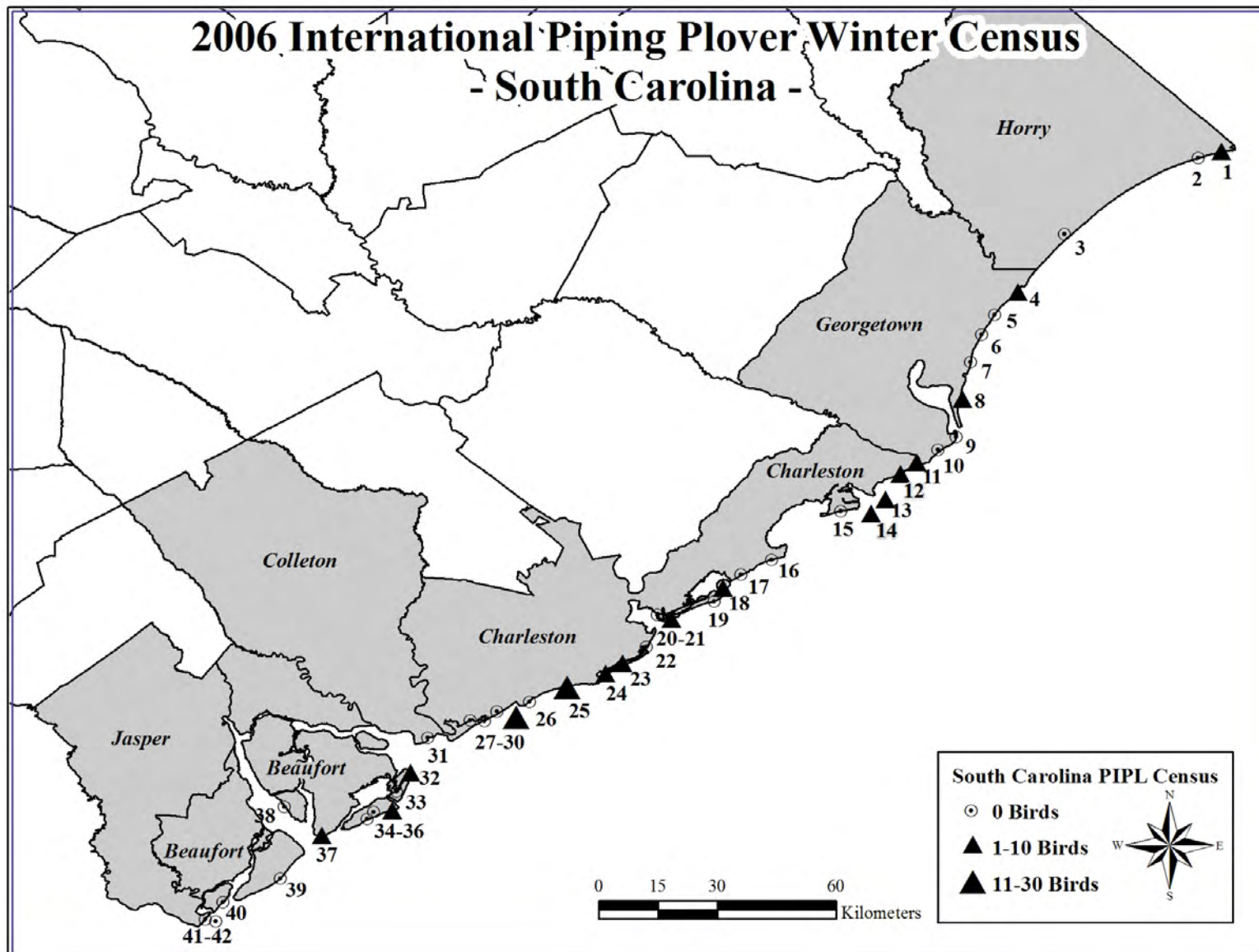
One hundred adults were counted between 23 January and 6 February. Both the 2001 and the 1996 Census detected 78 birds. It should be noted that volunteer effort and the percent of habitat covered increased for the 2006 census; therefore more birds were detected.

The top 2 sites for the 2006 Census were Deveaux Bank (N = 28) and Kiawah Island (N = 20) in Charleston County. Deveaux Bank continues to be the most important wintering site based on numbers of birds, but both sites provide essential habitat for migrating and wintering Piping Plovers.

*Summarized by M. Bimbi*

**Comparison of Census Numbers**

Species	1991	1996	2001	2006
Piping Plover	51	78	78	100
Snowy Plover	n.a.	n.a.	n.a.	n.a.
Wilson's Plover	n.r.	n.r.	n.r.	30



## The 2006 International Piping Plover Winter Census in South Carolina

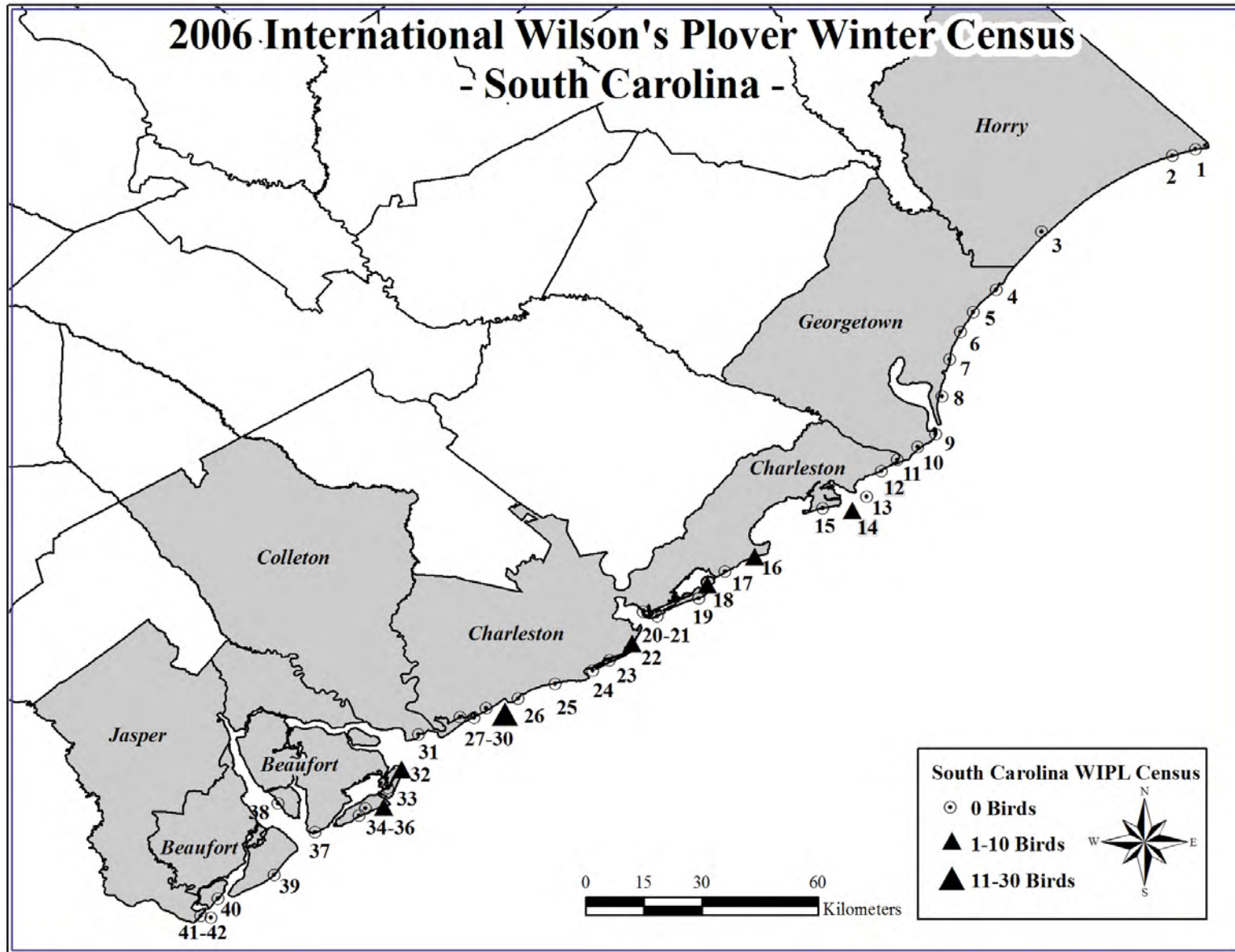
COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Beaufort	Bay Point Island to Fripp Inlet	37	2/01	1	18.9	I IV B D 1 2 4	I B 1	Yes	Yes	Yes	p
Beaufort	Daufuskie Island	40	2/01	0	6.2	I IV B D 1 2 4		Yes	Yes	Yes	p
Beaufort	Fripp Island	34	2/04	1	1.6	I B 1 2	I B 2	Yes	Yes	Yes	p
Beaufort	Harbor Island	32	2/04	6	1.2	I E 1	I E 1	Yes	Yes	Yes	p
Beaufort	Hilton Head Island & Joyner Bank	39	2/01	0	26.6	I IV B D 1 2 4		Yes	Yes	Yes	p
Beaufort	Hunting Island	33	1/26	0	9.7	I II B 1 4		Yes	Yes	Yes	f
Beaufort	Pritchards Island, North Beach	35	2/19	0	0.4	I IV B 1		Yes	Yes	No	s(p)
Beaufort	Pritchards to Little Capers Islands	36	2/06	0	9.2	I B 1		Yes	Yes	No	p
Beaufort	St. Phillips Island	38	2/01	0	2.2	I IV B D 1 2 4		No	Yes	No	p
Charleston	Bird Key Stono	24	2/01	3	0.8	II IV B 1 3 8	IV B 1	Yes	Yes	Yes	s(p)
Charleston	Botany Bay Plantation and Island	28	2/02	0	6.0	I IV A 1		Yes	Yes	No	p
Charleston	Bulls Island (Cape Romain NWR)	16	2/03	0	9.7	I B 1		Yes	Yes	Yes	f
Charleston	Cape Island	13	2/03	1	8.0	I II IV B 1 2 3	II B 1	Yes	Yes	Yes	f
Charleston	Capers Island	17	1/30	0	3.0	I IV B 1		Yes	Yes	Yes	s(p)
Charleston	Deveaux Bank	27	2/02	28	5.7	I II D E F 1 2 3	I II D E 2 3	Yes	Yes	Yes	s(p)
Charleston	Deweese Island	18	1/30	2	4.4	I B 1 3	I B 1 3	No	No	Yes	s/p
Charleston	Edingsville	29	2/02	0	1.0	I A 1		No	No	No	p
Charleston	Folly Beach	23	2/05	1	4.0	I IV B 1	IV B 1	No	No	No	m/c
Charleston	Isle of Palms	19	2/05	0	8.0	I IV B 1		No	No	Yes	p
Charleston	Kiawah Island	25	2/01	20	5.7	II IV B 1 2 3	II IV B 1 2 3 8	No	Yes	Yes	p
Charleston	Lighthouse Island	14	2/03	7	4.0	I IV B 1 3	IV B 3	Yes	No	Yes	f
Charleston	Morris Island	22	2/03	0	1.6	I IV D E 1 2		No	No	No	p
Charleston	Murphy Island	12	1/31	5	7.1	I IV B 1 4	IV B 1	No	No	Yes	f
Charleston	Pitt St. Causeway	20	1/27	0	0.5	II A 2		No	No	No	m
Charleston	Raccoon Key	15	2/01	0	7.0	I II B 1 2		Yes	No	Yes	f
Charleston	Seabrook Island	26	1/30	0	5.7	I IV B 1		No	No	Yes	p
Charleston	Sullivan's Island	21	1/24	2	9.0	I B D 1 4	I D 1	Yes	Yes	No	m
Colleton	Edisto Beach State Park	30	2/02	0	1.6	I IV B 1		No	Yes	No	s(p)
Colleton	Pine Island and Otter Island	31	2/03	0	9.4	I B 1 10		No	Yes	Yes	s(p)
Georgetown	Cedar Island	11	1/29	5	3.1	I IV B 1 3 4	I 4	No	No	No	s(p)
Georgetown	Debidue Beach	7	1/23	0	6.3	I IV A 1		No	No	Yes	p



## The 2006 International Piping Plover Winter Census in South Carolina (Continued)

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Georgetown	Huntington Beach	4	1/30	7	4.8	I IV B D 1 3 4	I II IV B D 1 3	Yes	Yes	Yes	p
Georgetown	Litchfield Beach	5	1/24	0	6.3	I IV A 1		Yes	No	Yes	p
Georgetown	North Island	8	1/30	8	12.9	IV B 1 2 3	II IV B 1 2 3	Yes	Yes	Yes	s(p)
Georgetown	Pawleys Island	6	2/02	0	6.0	I IV B 1 4		No	No	Yes	p
Georgetown	Sand Island	9	1/25	0	4.0	I IV B 1 2 3 4		Yes	Yes	Yes	s(p)
Georgetown	South Island	10	1/25	0	5.5	I IV B 1 2 3 4		Yes	Yes	Yes	s(p)
Horry	Cherry Grove	2	2/04	0	20.2	I A B 1		No	No	No	s/p
Horry	Myrtle Beach State Park	3	1/24	0	1.6	I A 1		No	No	No	s(p)
Horry	Waites Island	1	1/31	3	4.0	I B 1 2	I B 1	No	No	Yes	p
Jasper	Turtle Island	42	2/02	0	3.5	I B 1 10		No	No	No	s(p)
Jasper	Tomkins Island	41	2/02	0	0.5	I B 1 10		No	No	No	s(p)
<b>Total</b>				<b>100</b>	<b>256.6</b>						

# 2006 International Wilson's Plover Winter Census - South Carolina -



## The 2006 International Wilson's Plover Winter Census in South Carolina

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Beaufort	Bay Point Island to Fripp Inlet	37	2/01	0	18.9	I IV B D 1 2 4		Yes	Yes	Yes	p
Beaufort	Daufuskie Island	40	2/01	0	6.2	I IV B D 1 2 4		Yes	Yes	Yes	p
Beaufort	Fripp Island	34	2/04	2	1.6	I B 1 2	I B 2	Yes	Yes	Yes	p
Beaufort	Harbor Island	32	2/04	5	1.2	I E 1	I E 1	Yes	Yes	Yes	p
Beaufort	Hilton Head Island & Joyner Bank	39	2/01	0	26.6	I IV B D 1 2 4		Yes	Yes	Yes	p
Beaufort	Hunting Island	33	1/26	0	9.7	I II B 1 4		Yes	Yes	Yes	f
Beaufort	Pritchards Island, North Beach	35	2/19	0	0.4	I IV B 1		Yes	Yes	No	s(p)
Beaufort	Pritchards to Little Capers Islands	36	2/06	0	9.2	I B 1		Yes	Yes	No	p
Beaufort	St. Phillips Island	38	2/01	0	2.2	I IV B D 1 2 4		No	Yes	No	p
Charleston	Bird Key Stono	24	2/01	0	0.8	II IV B 1 3 8	IV B 1	Yes	Yes	Yes	s(p)
Charleston	Botany Bay Plantation and Island	28	2/02	0	6.0	I IV A 1		Yes	Yes	No	p
Charleston	Bulls Island (Cape Romain NWR)	16	2/03	4	9.7	I B 1	I B 1	Yes	Yes	Yes	f
Charleston	Cape Island	13	2/03	0	8.0	I II IV B 1 2 3		Yes	Yes	Yes	f
Charleston	Capers Island	17	1/30	0	3.0	I IV B 1		Yes	Yes	Yes	s(p)
Charleston	Deveaux Bank	27	2/02	11	5.7	I II D E F 1 2 3		Yes	Yes	Yes	s(p)
Charleston	Dewees Island	18	1/30	2	4.4	I B 1 3	I B 3	No	No	Yes	s/p
Charleston	Edingsville	29	2/02	0	1.0	I A 1		No	No	No	p
Charleston	Folly Beach	23	2/05	0	4.0	I IV B 1		No	No	No	m/c
Charleston	Isle of Palms	19	2/05	0	8.0	I IV B 1		No	No	Yes	p
Charleston	Kiawah Island	25	2/01	0	5.7	II IV B 1 2 3		No	Yes	Yes	p
Charleston	Lighthouse Island	14	2/03	5	4.0	I IV B 1 3	IV B 1	Yes	No	Yes	f
Charleston	Morris Island	22	2/03	1	1.6	I IV D E 1 2	IV D 2	No	No	No	p
Charleston	Murphy Island	12	1/31	0	7.1	I IV B 1 4		No	No	Yes	f
Charleston	Pitt St. Causeway	20	1/27	0	0.5	II A 2		No	No	No	m
Charleston	Raccoon Key	15	2/01	0	7.0	I II B 1 2		Yes	No	Yes	f
Charleston	Seabrook Island	26	1/30	0	5.7	I IV B 1		No	No	Yes	p
Charleston	Sullivan's Island	21	1/24	0	9.0	I B D 1 4		Yes	Yes	No	m
Colleton	Edisto Beach State Park	30	2/02	0	1.6	I IV B 1		No	Yes	No	s(p)
Colleton	Pine Island and Otter Island	31	2/03	0	9.4	I B 1 10		No	Yes	Yes	s(p)
Georgetown	Cedar Island	11	1/29	0	3.1	I IV B 1 3 4		No	No	No	s(p)
Georgetown	Debidue Beach	7	1/23	0	6.3	I IV A 1		No	No	Yes	p
Georgetown	Huntington Beach	4	1/30	0	4.8	I IV B D 1 3 4		Yes	Yes	Yes	p

**The 2006 International Wilson's Plover Winter Census in North Carolina  
(Continued)**

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Georgetown	Litchfield Beach	5	1/24	0	6.3	I IV A 1		Yes	No	Yes	p
Georgetown	North Island	8	1/30	0	12.9	IV B 1 2 3		Yes	Yes	Yes	s(p)
Georgetown	Pawleys Island	6	2/02	0	6.0	I IV B 1 4		No	No	Yes	p
Georgetown	Sand Island	9	1/25	0	4.0	I IV B 1 2 3 4		Yes	Yes	Yes	s(p)
Georgetown	South Island	10	1/25	0	5.5	I IV B 1 2 3 4		Yes	Yes	Yes	s(p)
Horry	Cherry Grove	2	2/04	0	20.2	I A B 1		No	No	No	s/p
Horry	Myrtle Beach State Park	3	1/24	0	1.6	I A 1		No	No	No	s(p)
Horry	Waites Island	1	1/31	0	4.0	I B 1 2		No	No	Yes	p
Jasper	Turtle Island	42	2/02	0	3.5	I B 1 10		No	No	No	s(p)
Jasper	Tomkins Island	41	2/02	0	0.5	I B 1 10		No	No	No	s(p)
<b>Total</b>				<b>30</b>	<b>256.6</b>						

# **The 2006 International Piping Plover Winter Census in Georgia**

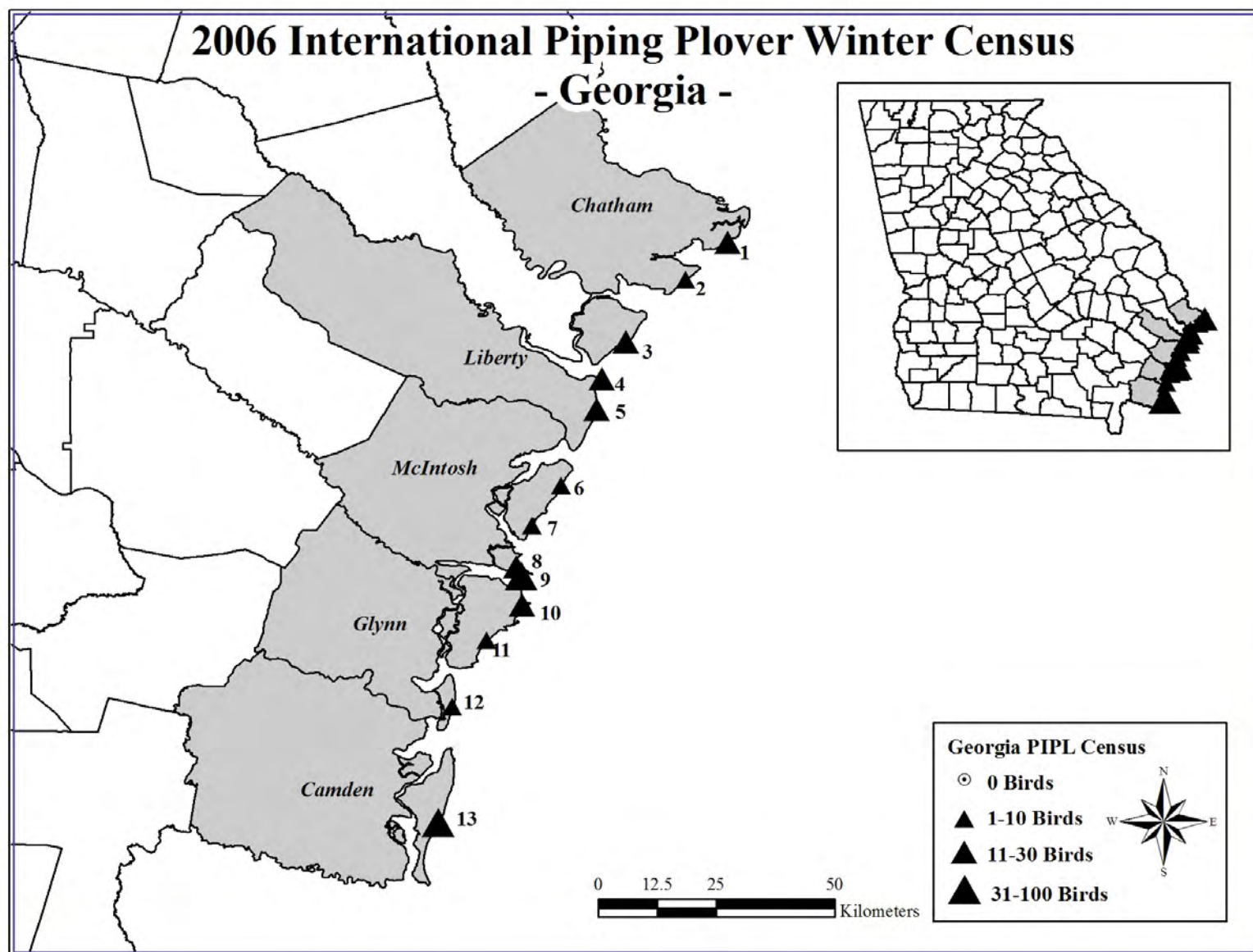
Brad Winn  
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As in years past, our survey was completed in one day with a target window of 2 hours on either side of high tide, for the entire 100 miles of barrier island beach. The weather was good and we were able to get boats to all of the most remote parts of our coast, including the alluvial emergent bars in the Altamaha River and St. Catherine's Sound. We had about 65 trained volunteers and government employees working with us.

We found more Piping Plovers than on any other survey effort with a total of 212 counted. The areas holding the largest number of plovers has been consistent over the years, with the beaches of Altamaha River Delta and Cumberland Island national Seashore supporting the most birds.

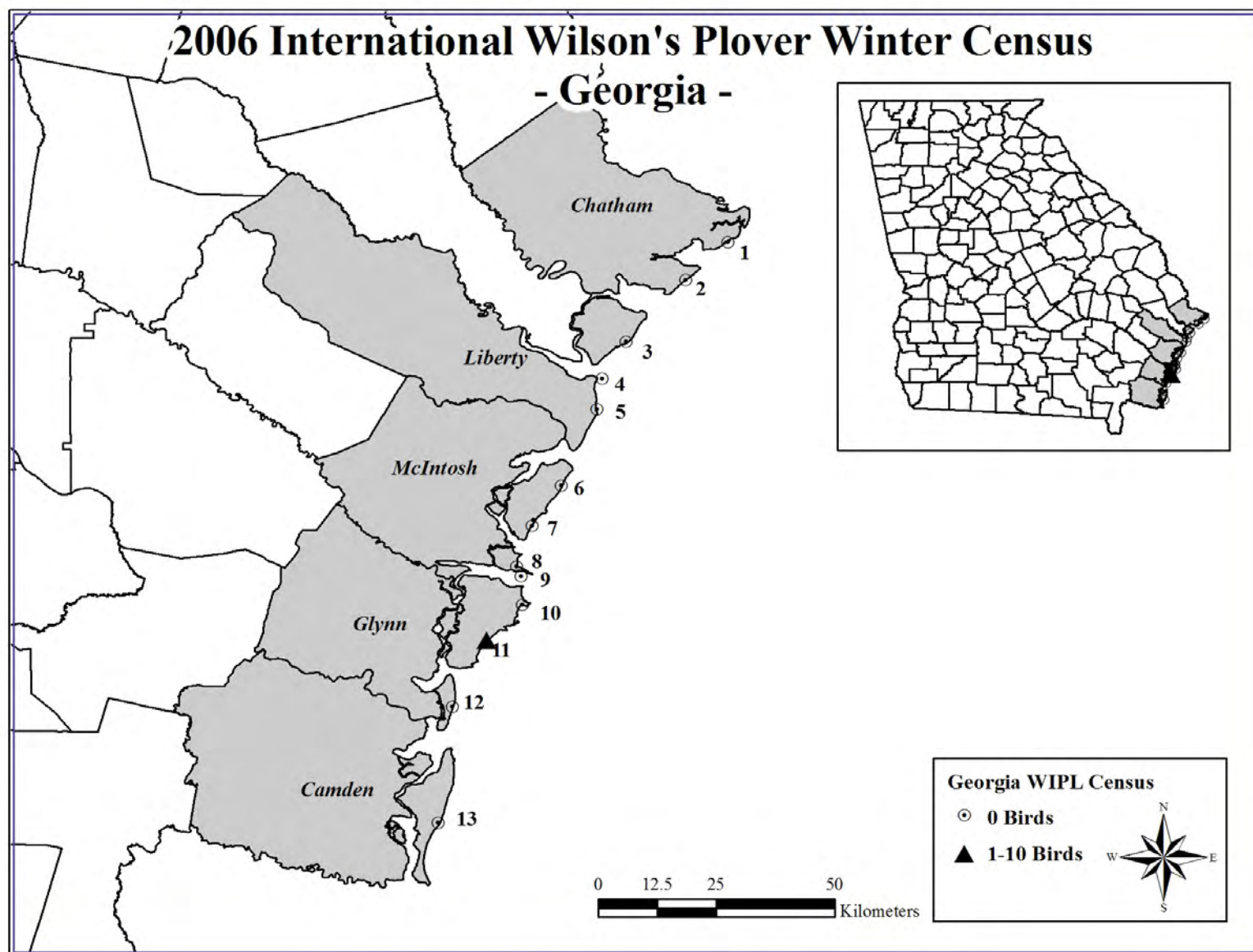
## **Comparison of Census Numbers**

Species	1991	1996	2001	2006
Piping Plover	37	124	111	212
Snowy Plover	n.a.	n.a.	n.a.	n.a.
Wilson's Plover	n.r.	n.r.	n.r.	2



## The 2006 International Piping Plover Winter Census in Georgia

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Camden	Cumberland Island National Seashore	13	2/03	41	28.9	I B 1	I B 1	Yes	Yes	Yes	f
Chatham	Little Tybee Island	1	2/03	13	8.9	I B 1	I B 1	Yes	Yes	Yes	s(p)
Chatham	Ossabaw Island	3	2/03	15	17.7	I B 1	I B 1	Yes	Yes	Yes	s(p)
Chatham	Wassaw NWR	2	2/03	4	11.7	I B 1	I B 1	Yes	Yes	Yes	f
Glynn	Jekyll Island	12	2/03	4	11.6	I B 1	I B 1	Yes	Yes	Yes	s(p)
Glynn	Little Egg Island sandbar	9	2/03	36	9.1	I B D 1 4	I B D 1 4	Yes	Yes	Yes	s(p)
Glynn	Little St. Simons Island	10	2/03	26	10.7	I B 1 3	I B 1 3	Yes	Yes	Yes	p
Glynn	Sea Island	11	2/03	8	9.0	I B 1	I B 1	Yes	Yes	Yes	p
Liberty	St. Catherine's Island	5	2/03	14	18.3	I B 1	I B 1	Yes	Yes	Yes	p
Liberty	St. Catherine's Island sandbar	4	2/03	16	1.6	I B D 1 3 4	I D 4	Yes	Yes	Yes	s(p)
McIntosh	Blackbeard Island NWR	6	2/03	5	14.2	I B 1	I B 1	Yes	Yes	Yes	f
McIntosh	Sapelo Island	7	2/03	1	9.7	I B 1	I B 1	Yes	Yes	Yes	s(p)
McIntosh	Wolf Island NWR	8	2/03	29	9.1	I B D 1 4	I B D 1 4	Yes	Yes	Yes	f
<b>Total</b>				<b>212</b>	<b>160.4</b>						





## The 2006 International Wilson's Plover Winter Census in Georgia

COUNTY	SITE NAME	MAP#	DATE	TOTAL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Camden	Cumberland Island National Seashore	13	2/03	0	28.9	I B 1		Yes	Yes	Yes	f
Chatham	Little Tybee Island	1	2/03	0	8.9	I B 1	I B 1	Yes	Yes	Yes	s(p)
Chatham	Ossabaw Island	3	2/03	0	17.7	I B 1		Yes	Yes	Yes	s(p)
Chatham	Wassaw NWR	2	2/03	0	11.7	I B 1		Yes	Yes	Yes	f
Glynn	Jekyll Island	12	2/03	0	11.6	I B 1		Yes	Yes	Yes	s(p)
Glynn	Little Egg Island sandbar	9	2/03	0	9.1	I B D 1 4		Yes	Yes	Yes	s(p)
Glynn	Little St. Simons Island	10	2/03	0	10.7	I B 1 3		Yes	Yes	Yes	p
Glynn	Sea Island	11	2/03	2	9.0	I B 1	I B 1	Yes	Yes	Yes	p
Liberty	St. Catherine's Island	5	2/03	0	18.3	I B 1		Yes	Yes	Yes	p
Liberty	St. Catherine's Island sandbar	4	2/03	0	1.6	I B D 1 3 4		Yes	Yes	Yes	s(p)
McIntosh	Blackbeard Island NWR	6	2/03	0	14.2	I B 1		Yes	Yes	Yes	f
McIntosh	Sapelo Island	7	2/03	0	9.7	I B 1		Yes	Yes	Yes	s(p)
McIntosh	Wolf Island NWR	8	2/03	0	9.1	I B D 1 4		Yes	Yes	Yes	f
<b>Total</b>				<b>2</b>	<b>160.4</b>						

# The 2006 International Piping Plover Winter Census in Florida

The 2006 Census was coordinated by three individuals from the U. S. Fish and Wildlife Service, who split the Florida coast into three Census regions. The first region, northwest Florida, spans the beaches from the Alabama border to the east end of Jefferson County. The second region, north Florida, includes Gulf coast counties southeast of the panhandle region to the south end of Manatee County and from the Georgia border to south end of Brevard County. The third region, southern Florida, includes all the remaining counties in Florida south to Key West National Wildlife Refuge. The total number of Piping Plovers estimated during the 2006 Census of Florida was 454, with 321 reported on the Gulf coast and 133 on the Atlantic Coast. Additionally, 312 Snowy Plovers and 394 Wilson's Plovers were sighted on Florida beaches during the 2006 Census.

## Comparison of Census Numbers

Species	1991	1996	2001	2006
Piping Plover	551	375	416	454*
Snowy Plover	n.r.	n.r.	311	312
Wilson's Plover	n.r.	n.r.	n.r.	394

\* Datasheets from two sites were lost; surveyors estimated that they saw 40 Piping Plovers and this number is included in the 2006 total. We have no data on Wilson's or Snowy Plovers for either site.

## Northwest Florida (panhandle)

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Seventy five participants including Federal, State, and County agencies, Audubon Chapters, and private citizen volunteers surveyed along approximately 592 km of shoreline within 9 northwest Florida counties and one Alabama county from Baldwin County (see the Alabama state table), Alabama east to Jefferson County, Florida on the Gulf of Mexico coastline. Surveyors focused on Gulf of Mexico beaches as well as bayside habitats paralleling the Gulf beaches. When accessible, interior bayside flats were surveyed.

Surveyors documented 111 Piping Plovers in northwest Florida habitats between January 26, and January 28, 2006. We conducted the majority of surveys on January 27, 2006 to reduce the possibility of double counting. The total number of Piping Plovers reported in northwest Florida along the Gulf Coast this year (111) is comparable to numbers recorded in 1991 (117) and 1996 (106) and up from 2001 (53). Given a considerable increase in areas covered and survey effort compared to previous Census years, few new sites reported Piping Plovers. Two specific locations documenting Piping Plovers that were "new to us" this Census were: bayside habitat between the town of Carrabelle to Turkey Point in Franklin County and an interior marsh flat on the bayside of Dog Island.

Census coverage of suitable habitat in northwest Florida was relatively comprehensive this year and covered most of the Florida coastline including bayside habitat that appeared large

and therefore obvious and more accessible. Additional surveys should focus on less accessible bayside and marsh flats within all the northwest Florida bays and bayous. Generally these areas are difficult to survey due to shallow waters as well as limited accessibility from land.

The 2001 Census added Snowy Plovers as a targeted species. Northwest Florida counties reported 207 Snowy Plovers in 2001. This Census reports 175 Snowy Plovers. Wilson's Plovers were added to the survey this year with only 11 documented in northwestern Florida counties.

## **North Florida**

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One hundred and two participants including Federal, State, and County agencies, Audubon Chapters, and other volunteers conducted surveys at 66 sites and observed approximately 225 Piping Plovers, 20 Snowy Plovers, and 194 Wilson's Plovers. Thirty nine surveys were conducted in 8 counties on the northern Gulf Coast of Florida from Taylor to Manatee County. Ninety six Piping Plovers were recorded during these surveys and 40 Piping Plovers were estimated from two sites with missing datasheets (see below). Additionally, 20 Snowy Plovers and 76 Wilson's Plovers were observed on the northern Gulf Coast. On the northern Atlantic Coast, we surveyed 27 sites in 7 counties from Nassau to Brevard County. No Snowy Plovers were found on Atlantic beaches, but we counted a total of 89 Piping Plovers and 118 Wilson's Plovers.

All sites were surveyed except for Merritt Island NWR in Brevard County (10.0km) on the Atlantic coast and Caledesi Island on the Gulf Coast. Anclote Bar and Three Rooker Island were surveyed, however the datasheets were lost. The two surveyors that covered these sites clearly recall seeing Piping Plovers at both sites and provided an estimate of Piping Plovers seen which we have included in our total. Three Rooker Bar has had the largest number of individuals at one location in past surveys. A survey one month after the Census (March 6) documented 36 individuals. This site has consistently had a large number of individuals (30-80). So our estimate of 30 birds for the Census may be a bit conservative.

There appears to be about a similar number of Piping Plovers documented in North Florida compared to previous years, and possibly more than from past surveys with the large number of Piping Plovers documented in Volusia County at Ponce Inlet and in Levy County at Cedar Key.

The North Florida Atlantic Coast survey was conducted on 2/3/06 and was a blustery/rainy day and may have affected surveys in Brevard County.

The North Florida Gulf Coast survey was conducted on 1/27/06, which was also a blustery/rainy day and may have affected counts in the Pasco/Pinellas County area.

Sites surveyed in past years that had higher numbers of individuals include in 2006:

- Nassau County (Atlantic), Little Tiger Island had 20 Piping Plovers in 2006 and 9 in 2001.
- Volusia County (Atlantic), New Smyrna Beach and Ponce de Leon Inlet had 42 in 2006 and 0 in 2001.
- Levy County (Gulf), Cedar Key area had 7 in 2006 and 0 in 2001. However, more

habitat was surveyed in the 2006 survey than in past surveys.

## **South Florida**

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One hundred and twenty-one participants including Federal, State, and County agencies, Audubon Chapters, and other volunteers surveyed 86 sites along approximately 249 miles of shoreline in 11 south Florida coastal counties from Sarasota County south to Collier County on the Gulf Coast and Indian River County south to Monroe County along the Atlantic Coast. A total of 118 Piping Plovers (74 Gulf and 44 Atlantic) were counted in south Florida between January 23, 2006, and February 6, 2006; however, the majority of the surveys were conducted on January 27th on the Gulf Coast and February 3rd on the Atlantic Coast. Additionally, 117 Snowy Plovers (all on the Gulf Coast) were recorded. Wilson's Plovers were added to the survey this year, and 187 (162 on the Gulf Coast and 25 on the Atlantic Coast) were observed.

The total number of Piping Plovers counted in south Florida along the Gulf Coast this year (74) was comparable to numbers recorded in 1991 (67) and 1996 (76) and up from 2001 (50). In 1991, Piping Plovers were located at the Charlotte Beach State Recreation Area, Marco Island, North Captiva Island, Fort Myers Beach, and Midnight Pass. In 1996, they were observed at Sand Dollar and Big Marco Pass Critical Wildlife Area, Big Marco Pass Shoals, and Fort Myers Beach. In 2001, they were only

observed at Little Estero Lagoon and Marco Island/Big Marco Pass Shoals. This year they were recorded along the Charlotte County Barrier Islands, Little Estero Lagoon Critical Wildlife Area (called "Estero Island" in the table), North Captiva Island, Cayo Costa Island, Marco Island/Big Marco Pass Shoals, and Keywadeen Island. Concentrations of Piping Plovers along the Gulf Coast included 49 at Marco Island/Big Marco Pass Shoals and 10 each at Little Estero Lagoon Critical Wildlife Area and North Captiva Island.

The total number of Piping Plovers observed in south Florida along the Atlantic Coast (44) was similar to the 1991 census results (46) but was higher than the 1996 results (15) and lower than the 2001 results (67). In 1991, Piping Plovers were located at St. Lucie Inlet, Carl Ross Key, Boca Grande Key, and Ohio Key. In 1996, they were recorded at St. Lucie Inlet, Boca Grande, and Ohio Key. In 2001, they were observed at St. Lucie Inlet Sailfish Point, Crandon Park, and Woman Key. This year they were only recorded at Boca Grande Key and Crandon Park. A total of 38 of the 44 Piping Plovers observed on the Atlantic Coast were located at Crandon Park.

Census coverage in suitable habitat in south Florida was relatively comprehensive this year and covered most of the south Florida coastline, but there were some areas where surveys were not conducted that should be included in the 2011 census. Surveys were not conducted from south of Hobe Sound National Wildlife Refuge to the Palm Beach County line or in Jonathan Dickinson State Park in Martin County because habitat was considered to be marginal; however, there was an unconfirmed historical report of a Piping Plover using inland habitat at Jonathan Dickinson. In Palm Beach County, Peanut Island Park was not surveyed due to problems with accessibility but should be included in future surveys because of a previous report that Piping Plovers had used the area. The area from

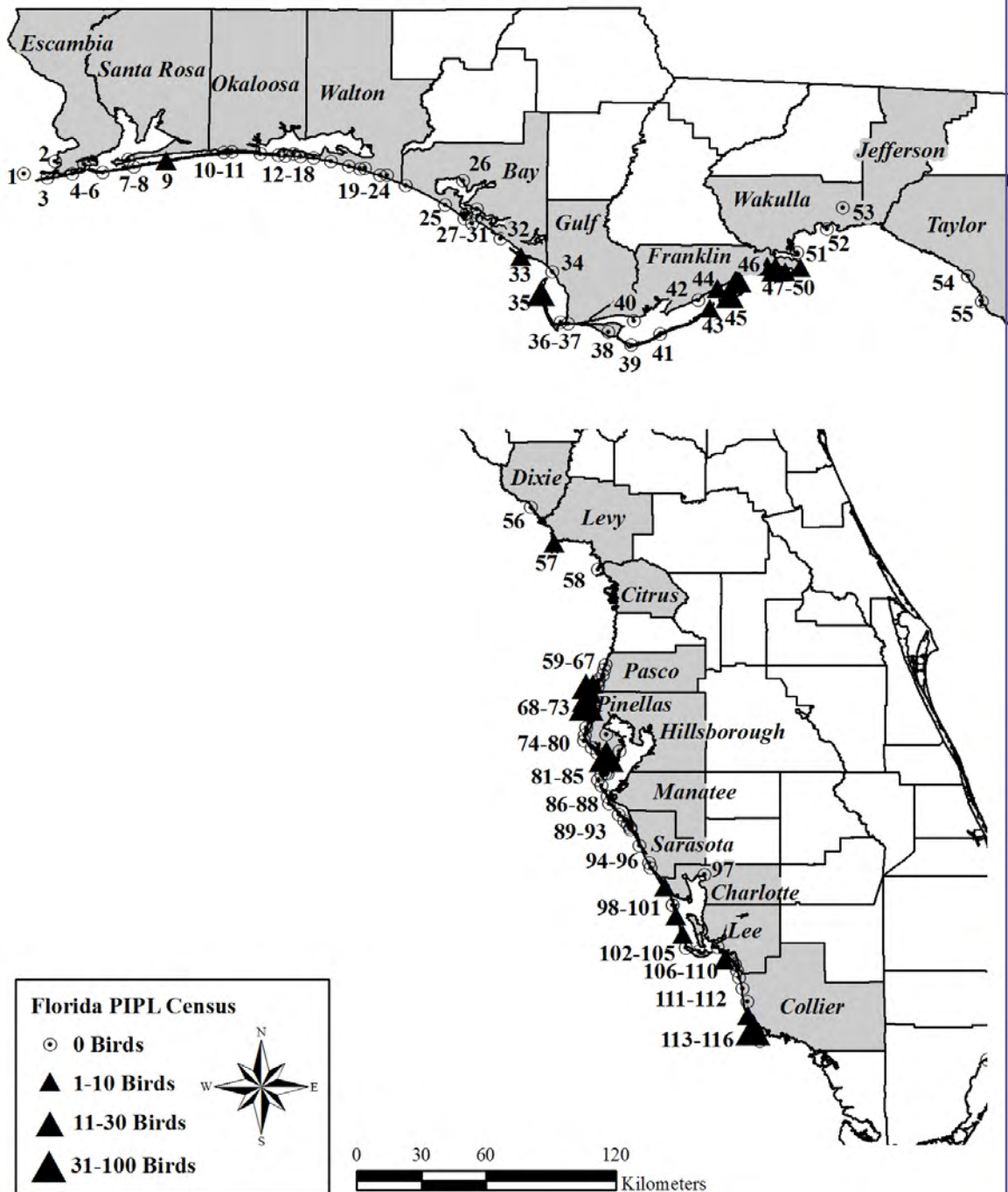
Matheson Hammock County Park south to Cutler in Dade County was not surveyed this year due to accessibility issues. No one was able to survey Carl Ross and Sandy Keys, Lake Ingram and Snake Bight (Flamingo) in Monroe County or other areas in the Everglades due to personnel time constraints and accessibility. Weather conditions prohibited censusing the Marquesas Keys.

Along the Gulf Coast, areas that were not censused this year that should be surveyed in 2011 include suitable habitat in the Ten Thousand Islands area in Collier County, Skimmer Island in Lee County, and Lemon Bay in Charlotte County. Attempts were made this year, but mechanical problems prevented censusing the Ten Thousand Islands area and windy conditions cancelled the Lemon Bay survey. Additionally, the area from Turtle Beach to Midnight Pass on Casey Key, Little Sarasota Bay, and suitable habitat within the Intercoastal Waterway in Sarasota County should be included in future censuses. Aerial photographs should be assessed to identify tidal preserve areas and un-vegetated flats that may provide suitable habitat not specifically associated with coastal beaches.

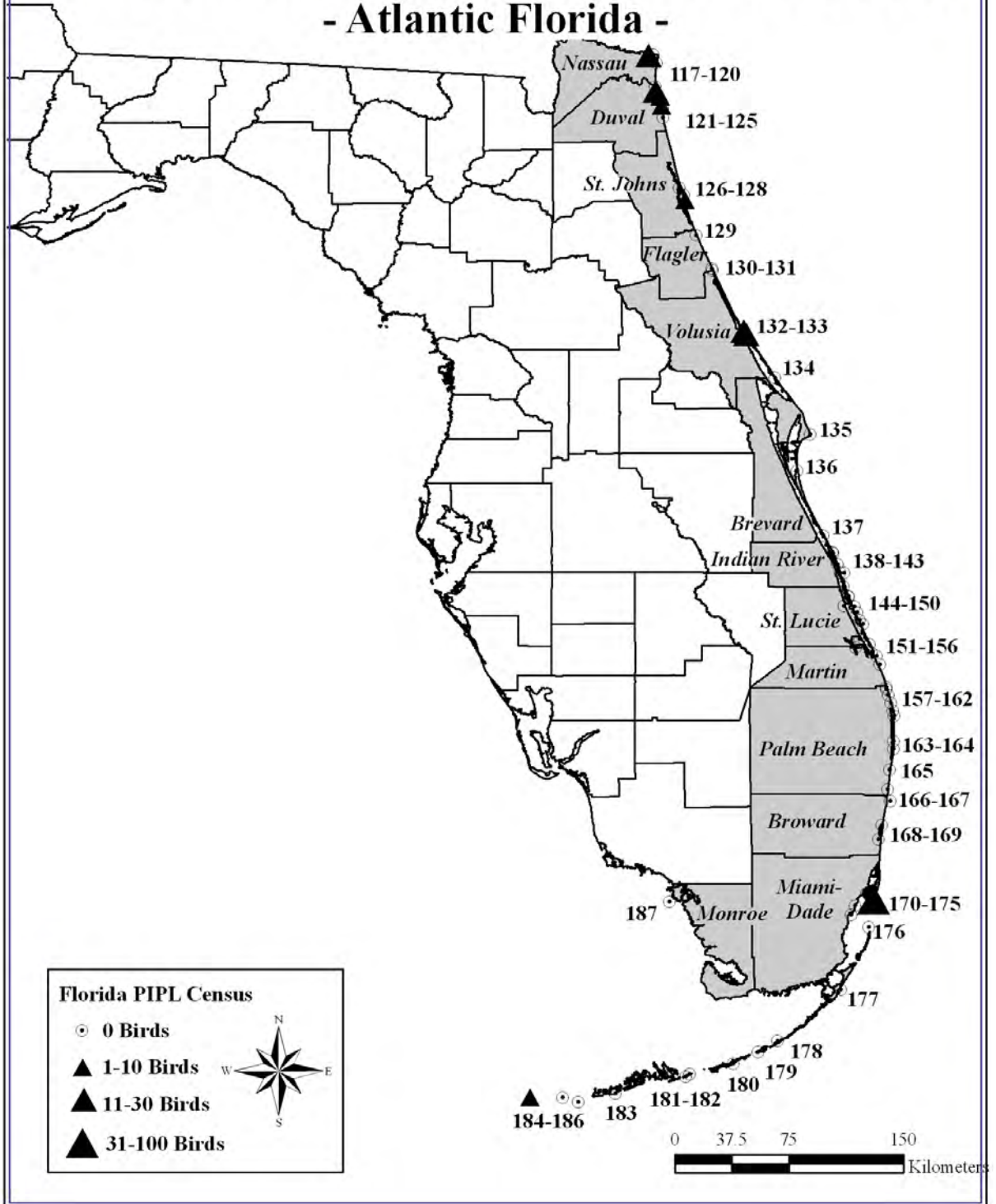
The results from this year's census may have been affected by weather conditions. The two dates when most of the surveys were conducted had high winds, and the date selected for the Atlantic Coast census experienced strong thunderstorm activity during the afternoon in addition to strong winds. Even though total numbers of Piping Plovers observed this year were comparable to results obtained in 2001, it was expected that this number would have been larger because substantially more suitable habitat was surveyed this year than in 2001. Whether this indicates a decline in the total number of Piping Plovers wintering in south Florida or is the result of poor weather conditions during the survey period or some other factor is unknown.

Because accessibility seems to be a primary limitation in surveying several important areas of Florida, especially in the southwest corner of the state in and around the Everglades area and along numerous chains of offshore islands, it may be worth considering the feasibility of using other survey methods, such as aerial surveys. The AirCam is a silent, slow-flying, open-cockpit, twin-engine plane that was developed for National Geographic wildlife studies in Africa and has been modified to conduct right whale surveys and photography in Florida. This plane may have direct application to other wildlife studies in the state, including plover surveys.

## 2006 International Piping Plover Winter Census - Gulf Florida -



## 2006 International Piping Plover Winter Census - Atlantic Florida -



## The 2006 International Piping Plover Winter Census in Florida

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Bay	Camp Helen to Sunny Side Beach	24	1/27	0	9.7	II III A 1		No	No	Yes	p
Bay	Crooked Island East	32	1/27	8	10.8	II III B 1 2 3 8	III B 3	Yes	Yes	Yes	f
Bay	Crooked Island West	33	1/27	0	10.5	II III B 1 2 3 8 10		Yes	Yes	Yes	f
Bay	Grand Lagoon - Bay Point, Alligator Point	28	1/27	0	0.4	II A 2 8 9		Yes	No	Yes	p
Bay	Marifarms, West Bay, P.C. Florida	26	1/26	0	0.8	II A 3 8 10		No	No	Yes	s(p)
Bay	Panama City Beach (S Arnold Rd to Lookout Street)	25	1/27	0	16.1	III A 1 11		No	No	Yes	s(p)
Bay	Shell Island	29	1/27	0	6.0	III B 1		Yes	Yes	Yes	
Bay	St. Andrew Bay - Davis Pt. to Redfish Pt.	31	1/27	0	2.6	III A 3 8		No	No	No	f
Bay	St. Andrews State Recreation Area	27	1/27	0	2.4	II III A 1 4		Yes	Unk	Yes	s(p)
Bay	West Beach Drive	30	1/27	0	2.4	II A 1 8		No	No	Yes	s(p)
Bay/Gulf	From Tyndall AFB to Port St. Joe (Highland View)	34	1/27	0	19.4	II III A 1		No	No	No	
Bay/Walton	From Camp Helen SP to Deer Lake SP	23	1/28	0	8.1	II III A 1		No	No	yes	s/p
Brevard	Cape Canaveral Air Force Station	135	2/7	0	20.8	I B 1		Yes	Yes	Yes	f
Brevard	Patrick Air Force Base	136	2/7	0	11.8	I B 1		No	No	No	f
Brevard/ Indian River	Sebastian Inlet State Park	137	2/3	0	5.2	I II IV B D 1 3 8		No	No	No	s(p)
Brevard/ Volusia	Canaveral National Seashore	134	2/6	0	38.7	I II B 1 8 10		Yes	Yes	Yes	f
Broward	Broward County Northern Link to Hillsboro Inlet	167	2/5	0	5.6	I B 1		Yes	No	No	m/p
Broward	Hugh Taylor Birch State Park	168	2/1	0	0.4	II B 8		No	No	No	s(p)
Broward	John U. Lloyd Beach S.P.	169	2/3	0	3.6	I A 1		No	No	Yes	s(p)
Charlotte	Barrier Island	98	1/27	3	14.4	II III B 1 2 10	III B 1	Yes	No	No	s(p)
Charlotte	Charlotte Harbor (east side)	97	1/27	0	0.4	II D 4 9		No	No	No	s(p)
Charlotte	Gasparilla Island	99	1/28	0	4.0	III B 1		Yes	No	No	s(p)
Citrus	Florida Barge Canal spoil islands	58	2/6	0	16.1	III C 6		No	No	Yes	s(p)
Collier	Big Marco Pass Shoal	114	1/27	49	3.2	II III B 1 2 8	III B 2	Yes	Yes	Yes	s(p)
Collier	Cape Romano	116	1/27	0	1.6	III E 1 8		No	No	No	s(p)
Collier	Caxambas Island	115	1/27	0	0.8	III E 4		No	No	No	s(p)
Collier	Clam Pass County Park	111	1/27	0	6.0	III A 1		No	No	No	f
Collier	Delnor - Wiggins Pass State Park	110	1/27	0	2.0	III B D 1		No	No	No	s(p)
Collier	Keewaydin Island	113	1/26	1	10.8	III B 1 2	III B 2	No	No	No	s/p
Collier	Naples Pier	112	1/27	0	4.0	III A 1		No	No	No	p



## The 2006 International Piping Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Dixie	Shired Island- Lower Suwanee NWR	56	1/27	0	2.0	III A 1		No	No	No	f
Duval	Atlantic Beach	125	2/3	0	4.0	I A 1		No	Yes	Yes	s(p)
Duval	Bird Islands - Nassau Sound - N. Lt. Talbot Island	121	2/3	15	2.4	IV B E 2 4	2	Yes	Yes	Yes	s/m
Duval	Kathryn Abby Hanna Park	123	1/3	0	2.0	I IV A 1		Yes	Yes	Yes	f/c
Duval	Little Talbot Island State Park	122	2/3	5	6.5	I B 1 3 9 10	I B 1 3	Yes	Yes	Yes	s(p)
Duval	Ward's Bank (Huguenot Park)	124	2/3	6	2.8	I II IV B D 1 2 3 4 8	II G 8	Yes	Yes	Yes	s/m
Escambia	Big Lagoon State Park	1	1/27	0	1.6	II A 1 2 10		No	No	Yes	s(p)
Escambia	Fort Pickens Gulf Islands N.S.	6	1/27	0	11.3	II III V B 1 8 10		Yes	Yes	Yes	f
Escambia	Naval Air Station Pensacola, FL	5	1/27	0	6.5	II IV A 1 3 4 8		No	No	Yes	f
Escambia	Pensacola Beach to Range Point	8	1/27	0	6.5	II III B		No	No	Yes	p
Escambia	Perdido Key Gulf Islands N.S.	4	1/27	0	11.3	II III V B 1 8 10		No	Yes	Yes	f
Escambia	Perdido Key State Park	3	1/27	0	2.6	III B 1		No	Yes	Yes	s(p)
Escambia	Santa Rosa Gulf Islands N.S.	9	1/27	5	11.3	II III B 1 3 8 10	II B 8	No	No	Yes	f
Escambia	Tarkiln Bayou Preserve State Park	2	1/27	0	6.5	II A 1 2 4 10		No	No	No	s(p)
Flagler	Gamble Rogers Memorial SRA	130	2/3	0		I B 1		No	No	No	s(p)
Flagler	Marineland to Washington Oaks State Park	129	2/3	0	1.3	I B 1		Yes	Yes	No	s(p)
Franklin	Alligator Pt.	49	1/27	6	6.5	II III G 1	III F 1	Yes	No	Yes	p
Franklin	Bald Pt. State Park	50	1/27	4	4.8	II III A D 1 4 7 8	II D 7	No	Yes	Yes	s(p)
Franklin	Carrabelle to Turkey Point	44	1/27	1	19.4	III A 3		Yes	Yes	Yes	p
Franklin	Dog Island	45	1/27	14	24.2	II III B F 1 2 8 11	II B 8 10 11	Yes	No	Yes	p
Franklin	East Point to Carrabella	42	1/27	0	21.0	II A 1 3		Yes	Yes	Yes	s(p)/p
Franklin	Gulf Cnty Line to Green Point	40	1/27	0	16.1	III A 8 11		No	No	Yes	p
Franklin	John S. Phipps Preserve (West end of Peninsula)	48	1/27	17	4.8	III G 1 11	III G 1	Yes	Yes	Yes	p
Franklin	Lanark Reef	46	1/27	22	6.5	II III B 1 2 3 4 8 10	II III B 1 2 3 4 8 10	Yes	Yes	Yes	s/p
Franklin	Little St. George Island	39	1/27	0	14.5	III B 1 11		Yes	Yes	Yes	s(p)
Franklin	St. George Island From Govt. Cut to State Park	41	1/27	0	14.5	II III B 1 3 4 7 8		No	No	No	p
Franklin	St. George Island State Park	43	1/27	4	25.8	II B 4		Yes	Yes	Yes	s(p)
Franklin	St. Vincent Island	38	1/27	0	37.0	II III B 1 7 8		Yes	Yes	Yes	f

## The 2006 International Piping Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Franklin	Turkey Point to St. Teresa Beach	47	1/27	4	6.5	III A 3		No	No	Yes	p
Gulf	Indian Pass to Cape San Blas and Stump Hole	37	1/27	0	9.7	n.r.		Yes	No	Yes	n.r.
Gulf	SE St. Joe Bay Shoreline	36	1/27	0	8.1	n.r.		Yes	Yes	Yes	n.r.
Gulf	St. Joe Peninsula SP	35	1/27	26	25.8	n.r.		Yes	Yes	Yes	n.r.
Hillsborough	Egmont Key NWR & State Park	85	1/27	0	8.1	III B 1		Yes	Yes	Yes	f/p
Indian River	Indian River Co. beaches	141	2/3	0	9.7	I B 1		No	Yes	No	s/m/p
Indian River	Round Island Conservation Area	143	2/2	0	1.6	V B 8		No	No	No	c
Indian River	Round Island Park	142	2/2	0	7.3	I B 1		No	No	No	s(p)
Indian River	Tracking Station Access to Barber Bridge	140	2/3	0	2.8	I B 1		Yes	No	No	m
Indian River	Tracking Station Park N to Wabasso Beach	139	2/6	0	9.7	I B 1		No	No	No	s(p)
Indian River	Wabasso Beach to Turtle Trail	138	2/3	0	1.6	I B 1		No	No	No	m
Lee	Big Hickory Island	108	1/28	0	0.8	III B 1		No	No	No	s/c/p
Lee	Bonita & Barefoot Beaches	109	1/27	0	9.7	III B 1		No	No	No	s(p)
Lee	Captiva Island	103	1/27	0	8.1	III B 1		Yes	Yes	No	p
Lee	Cayo Costa	101	1/27	1	12.3	II III B 1 2 3	II B 3	Yes	No	Yes	s/p
Lee	Estero Island	106	1/28	10	12.1	II III B D 1 8	II D 8	No	No	Yes	s(p)
Lee	Gasparilla Island	100	1/27	0	7.3	III B 1		No	No	No	s/p
Lee	Lovers Key State Park	107	1/27	0	4.5	II III B D 1 4 8		No	No	No	s(p)
Lee	N. Captiva Island	102	1/30	10	5.5	II III B 1 3 8 11	II B 1 3 8	Yes	Yes	No	s/p
Lee	San Carlos Bay Flats	105	2/2	0	0.8	V A 5		No	No	No	c
Lee	Sanibel Island	104	1/27	0	6.5	III B 1		Yes	Yes	Yes	s(p)
Levy	Cedar Key Area	57	1/31	7	16.1	III C D E 1 2 7	III D E 1 2	Yes	No	No	f/s/p
Manatee	Anna Maria Island	87	1/27	0	8.1	III B 1		Yes	Yes	Yes	s/p
Manatee	Longboat Key	88	1/27	0	3.2	III B 1		No	No	No	m/p
Manatee	Passage Key NWR	86	1/27	0	0.4	B 1 2 4		Yes	Yes	Yes	f
Martin	Hobe Sound NWR	156	1/27	0	4.0	I B 1		No	Yes	Yes	f
Martin	Hutchinson Island	153	1/27	0	12.0	I IV B 1 10		No	No	No	m/c/s
Martin	St. Lucie Inlet	154	1/27	0	1.6	I D 4		No	Yes	Yes	s(p)
Martin	St. Lucie Inlet sandbars	152	2/3	0	3.2	IV 4		No	No	No	s(p)
Martin	St. Lucie Inlet State Park	155	1/27	0	5.6	I IV B 1		Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Martin	W shore of Indian River Near Jensen Beach	151	1/27	0	1.6	II A 3		No	No	No	s(p)
Miami-Dade	Bill Baggs State Park lighthouse to Crandon Park	172	2/3	0	3.9	I B 1		No	No	Yes	s(p)
Miami-Dade	Biscayne National Park	176	2/1	0	2.4	I B D 1 4 10		No	Yes	No	f
Miami-Dade	Crandon Park Beach	171	1/31	38	0.8	I B 1 3	I B 1 3	Yes	No	Yes	c
Miami-Dade	Derring Estate and Chicken Key	175	2/3	0	3.2	II C 6 10		No	No	No	s(p)
Miami-Dade	Matheson Hammock	174	2/3	0	0.4	II A 10		No	No	No	c
Miami-Dade	Rickenbacker Causeway Shoreline	170	2/3	0	0.4	II C G 6		No	No	Yes	c
Miami-Dade	Virginia Key Critical Wildlife Area	173	2/3	0	2.8	II B		Yes	Yes	Yes	c
Monroe	Bahia Honda State Park	182	2/4	0	4.8	I E 1		Yes	Yes	Yes	s(p)
Monroe	Boca Chica Beach	183	2/2	0	1.1	I E 1		No	No	No	f
Monroe	Boca Grande Key	186	2/3	6	2.3	I II E F 1 3 9	I E 3	Yes	Yes	Yes	f
Monroe	Curry Hammock State Park	180	2/3	0	0.4	I G 11		No	No	No	s(p)
Monroe	Fort Taylor Historic State Park	184	2/3	0	0.4	I E 6		No	No	No	s(p)
Monroe	John D. Pennekamp state Park/ Carysfort Yacht Club	177	3/2	0	30	I B C 6 10		No	Yes	Yes	s(p)
Monroe	Long Key State Park	179	2/4	0	0.8	I G 1		No	Yes	No	s(p)
Monroe	Lower Matecumbe	178	2/4	0	1.1	I E 1		No	No	No	p
Monroe	Ohio Key	181	2/4	0	0.3	I II IV E 1 5 9		Yes	Yes	Yes	f
Monroe	Pavilion Key	187	1/27	0	2.4	III A 1		No	No	No	s(p)
Monroe	Women Key	185	2/3	0	2.1	I E 1		No	Yes	Yes	s(p)
Nassau	Amelia Island Recreation Area	120	2/3	0	1.6	I B 1 3 9 10		Yes	No	Yes	s(p)
Nassau	Fernandina Beach	119	2/3	0	4.7	I B 1		No	No	No	m
Nassau	Fort Clinch State Park	117	2/3	0	11.3	I A 1 10		Yes	No	Yes	s(p)
Nassau	Little Tiger Island	118	2/3	20	0.4	V E 1	V E 1	No	No	Yes	p
Okaloosa	Destin	14	1/27	0	4.8	III B 1		Yes	No	Yes	p
Okaloosa	East Okaloosa County Shoreline	16	1/27	0	3.5	III B 1		No	No	No	p
Okaloosa	East Pass to Norreigo Point	13	1/27	0	1.6	II IV B 2		Yes	No	Yes	s(p)/p
Okaloosa	Eglin Pkwy to Destin Bridge, Okaloosa Island	12	1/27	0	9.7	III B 1		No	Yes	Yes	f/p/c
Okaloosa	Henderson Beach State Park	15	1/27	0	2	III B 1		No	No	Yes	s(p)
Okaloosa/ Santa Rosa	Santa Rosa Island (W to Navarre Beach SP)	10	1/27	0	10.5	III B 1 3 4 10		No	Yes	Yes	f

## The 2006 International Piping Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Okaloosa/ Santa Rosa	Santa Rosa Sound (Inter-coastal waterway)	11	1/26	0	32.3	V A B C D 1 3 4 10		Yes	No	Yes	f/s
Palm Beach	Lantana Park to Atlantic Dunes Park	165	2/3	0	14.5	I A B 1		No	No	No	s/m/p
Palm Beach	Highland Beach	166	2/3	0	6.5	I B 1		No	No	No	s/m/p
Palm Beach	Juno Beach Park to MacArthur State Park	160	2/3	0	6.9	I A 1		No	No	No	m/p
Palm Beach	Jupiter Beach to Juno Beach Park	159	2/3	0	5.6	I IV A 1		No	No	No	m/p
Palm Beach	Jupiter sound, Jupiter inlet, Loxahatchee River	158	1/27	0	9.7	II IV A B D 1 2 3 4		Yes	No	No	s(p)
Palm Beach	Lake Worth Beach Pier to Lantana Park	164	2/2	0	3.5	I B 1		No	No	No	m
Palm Beach	MacArthur Beach State Park	161	2/3	0	2.6	I B 1		Yes	Yes	Yes	s(p)
Palm Beach	MacArthur Beach State Park to Palm Beach Shores	162	2/3	0	4.5	I IV B 1		No	No	No	s/m
Palm Beach	Southern Blvd. South to Lake Worth Beach	163	2/2	0	6.8	I B 1		No	No	No	m
Palm Beach/ Martin	Jupiter Island - Jupiter Inlet through Blowing Rocks Preserve	157	2/4	0	4.8	I II IV B 1		No	Yes	No	c
Pasco	Anclote Gulf Park	67	1/27	0	0.4	III A 3 8		No	No	No	c
Pasco	Anclote Key sandbar <sup>1</sup>	64	1/27	10	0.8	III B 1 2		Yes	Yes	Yes	s(p)
Pasco	Anclote Key State Park	66	1/27	13	2.4	III B 1 2		Yes	Yes	Yes	s(p)
Pasco	Brasher Park	61	1/27	0	0.4	III A 8		No	No	No	m
Pasco	Green Key	62	1/27	0	0.2	III A 1		No	Yes	Yes	c
Pasco	Gulf Harbors Beach	63	1/27	0	0.2	III A 1		No	Yes	Yes	p
Pasco	Hudson Beach	59	1/27	0	0.3	III A 8		No	No	No	s(p)
Pasco	Sand Bay	65	1/27	0	0.4	III A 3 8		No	Yes	Yes	s(p)
Pasco	Werner-Boyce Salt Springs State Park	60	1/27	0	0.8	III G 11		No	No	No	s(p)
Pinellas	Dunedin Causeway (to Honeymoon Island)	73	1/26	0	0.8	V G 1		Yes	Yes	Yes	m
Pinellas	Ft. DeSoto County Park, E beach	83	1/27	0	1.6	III B 1 4 8		Yes	Yes	No	c
Pinellas	Ft. DeSoto County Park, NW Beach	82	1/27	0	1.5	III B 1		Yes	Yes	Yes	c
Pinellas	Ft. DeSoto County Park, SW Beach	84	1/27	0	1.6	III B 1		No	No	No	c
Pinellas	Honeymoon Island SRA (N end of island)	70	1/23	35	8.1	III B 2	III B 2	Yes	Yes	Yes	s(p)
Pinellas	Honeymoon Island State Park, Bird Observation Area	72	1/26	3	0	III V D 8	I D 8	Yes	Yes	No	f
Pinellas	Honeymoon Island State Park, Pet Beach	71	1/26	0	0.8	III 1		Yes	Yes	No	f

## The 2006 International Piping Plover Winter Census in Florida (Continued)

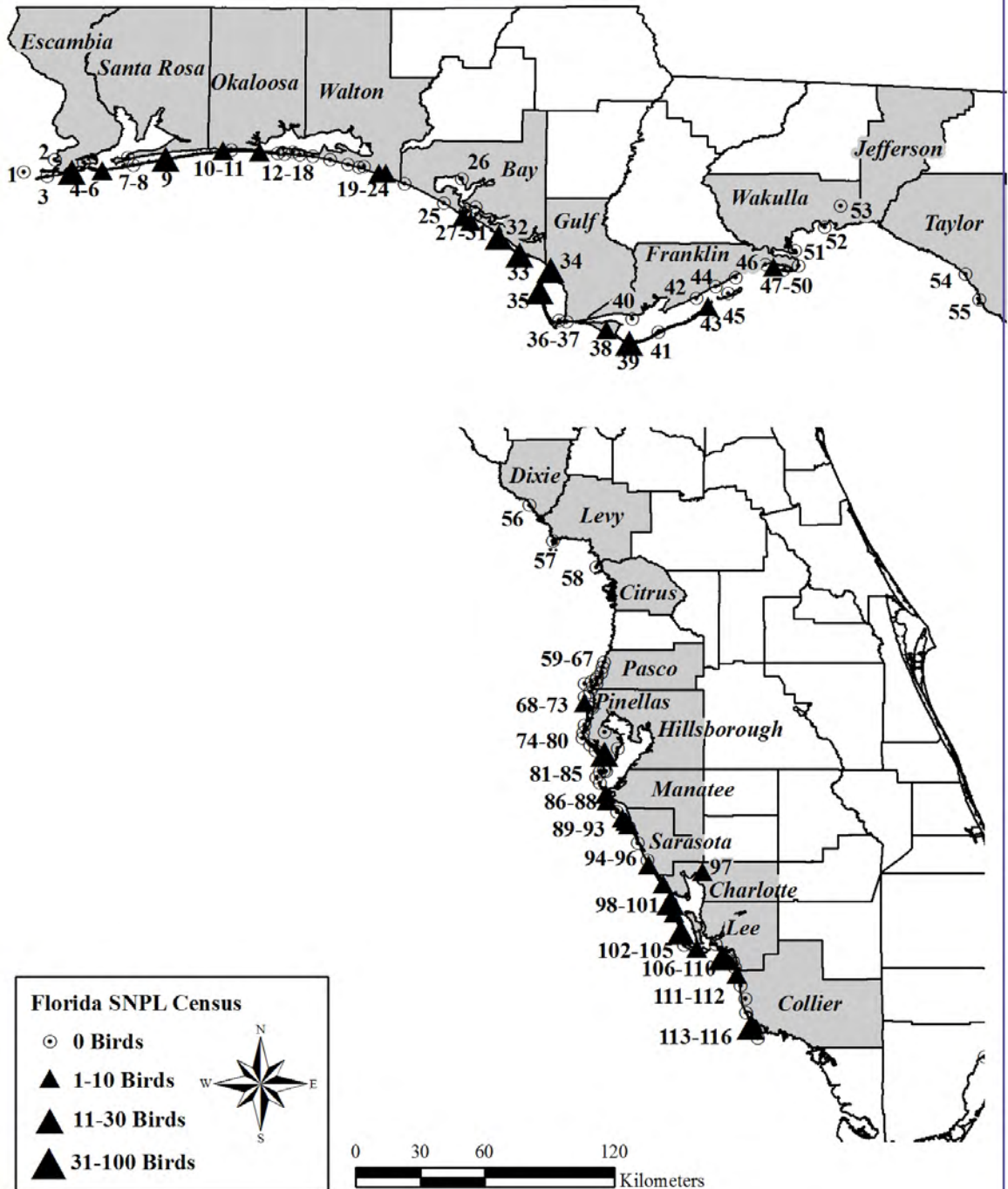
COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Pinellas	Howard County Park	68	1/27	4	3.2	III C G 1 8	1 8	Yes	Yes	Yes	c
Pinellas	Indian Rocks Beach	76	1/28	0	4	III A 1		No	No	No	m
Pinellas	Madeira Beach/Redington Beach/North Redington Beach	78	1/27	0	6.5	III B 1 1 1		No	No	No	m
Pinellas	North Clearwater beach	75	2/5	0	3.2	III A 1		Yes	Yes	Yes	m
Pinellas	Sandy Park to Bellair Beach Morgan Dr. Park	74	1/27	0	4.8	III B 1		Yes	No	No	m
Pinellas	Shell Key	81	1/27	34	13.7	III B 1 3 4 8 10	III B 3	No	Yes	Yes	s(p)
Pinellas	St. Petersburg- North shore park area	79	1/27	0	0.8	II A 1 3		No	No	No	m
Pinellas	Three Rooker Bar <sup>1</sup>	69	1/27	30	4	III B 1 2		Yes	Yes	Yes	
Pinellas	Treasure Island	80	1/27	0	3.5	III B 1		No	No	No	m
Pinellas	Walsingham Road South to 173 AVE	77	1/27	0	7.3	III B 1 1 1		No	No	No	m
Santa Rosa	Naval Live Oaks Gulf Islands N.S.	7	1/27	0	6.9	II A 1 4 8		No	No	Yes	f
Sarasota	Casey Key beach	94	1/31	0	11.3	III B 1		No	Yes	No	s(p)
Sarasota	Caspersen Beach	95	1/27	0	6.5	III B 1		Yes	Yes	No	s(p)
Sarasota	Longboat Key	89	1/27	0	6.8	III B 1		No	No	No	m/p
Sarasota	North Lido Beach	90	1/27	0	4	III B 1		Yes	No	No	c
Sarasota	Siesta Key, Turtle Beach to Point of Rocks	93	1/28	0	2.4	III B 1		No	No	No	p
Sarasota	Siesta Key, N end to Point of Rocks	92	1/27	0	5.2	III A B F 1 4		Yes	No	No	c
Sarasota	South Lido Beach	91	1/27	0	2.4	II III B 1		Yes	No	No	
Sarasota/ Charlotte	Manasota Beach	96	1/27	0	6.5	III B 1		No	No	Yes	c
St. Johns	Anastasia State Recreation Area	127	2/3	0	8.1	I II IV B 1 8		Yes	Yes	Yes	s(p)
St. Johns	Porpoise Point (Vilano Point)	126	2/3	0	1.6	IV A 1		No	Yes	Yes	p
St. Johns	St. Augustine Beach (Matanzas Inlet)	128	2/4	1	16.9		IV B 1	No	Yes	No	f/c
St. Lucie	Avalon State Park	145	2/3	0	1.6	I A 1		No	No	No	m
St. Lucie	Fort Pierce Inlet State Park	146	2/3	0	0.8	I A 1		Yes	Yes	Yes	s(p)
St. Lucie	Fort Pierce Inlet State Park to Avalon State Park	144	2/3	0	5.6	I A 1		Yes	Yes	Yes	c
St. Lucie	S Hutchinson Island, Fredrick Douglas Park to Inlet	147	2/3	0	6.5	I B 1		Yes	Yes	No	s(p)
St. Lucie	S Hutchinson Island, Little Mud Creek N to Fredrick Douglass Park	148	2/3	0	3.7	I B 1		Yes	Yes	No	m/c

## The 2006 International Piping Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
St. Lucie	S Hutchinson Island, Little Mud Creek S to the narrows	149	2/3	0	6.5	I B 1		Yes	Yes	No	p
St. Lucie	S Hutchinson Island, S end	150	2/3	0	6.6	I B 1		Yes	Yes	No	s(p)
Taylor	Adam's Beach	54	1/27	0	0.8	III A 7 8		No	No	No	c
Taylor	Hagen's Cove	55	1/27	0	4	II III A 1 3 8 I IV B C D 1 3 4		No	No	Yes	s(p)
Volusia	Disappearing Island	132	2/2	25	0.8	8	IV D 4 8	No	No	No	s(p)/c
Volusia	New Smyrna Beach	133	2/3	17	4	I IV B 1 9	I IV B 1 9	Yes	Yes	Yes	c
Volusia	North Peninsula SRA	131	2/3	0	4.8	I B 1		Yes	Yes	Yes	s(p)
Wakulla	Mashes Is County Park	51	1/27	0	0.8	III E 1 3 8		No	Yes	Yes	c
Wakulla	St. Marks National Wildlife Refuge - Impoundments	53	1/26	0	23.5	V A 8		No	No	No	f
Wakulla/ Jefferson	Apalachee Bay & Oyster Bay	52	1/26	0	11.6	II III A D E 2 3 7 8 10		No	No	No	f/p/c
Walton	Camp Creek Inlet to E end Grayton Beach State Park	22	1/26	0	27.4	III A 1		No	No	Yes	s(p)
Walton	Deer Lake State Park	21	1/27	0	1.6	III A 1		No	No	No	s(p)
Walton	E end Topsail Hill State Preserve to W end Grayton Beach State Park	19	1/27	0	10	III V A 1 1 1		No	No	Yes	p
Walton	Grayton Beach State Park	20	1/27	0	6.1	III A 1		No	No	No	s(p)
Walton	Topsail Hill Preserve State Park	18	1/27	0	5.2	III A 1		No	No	Yes	s(p)
Walton	West Walton County Shoreline	17	1/27	0	8.1	III B 1		No	No	Yes	p/c
<b>Total</b>				<b>454</b>	<b>1223.9</b>						

<sup>1</sup> datasheets from these sites were lost; number of Piping Plovers was estimated by surveyor but no data on wilson's or Snowy Plovers.

## 2006 International Snowy Plover Winter Census - Gulf Florida -



## The 2006 International Snowy Plover Winter Census in Florida

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Bay	Camp Helen to Sunny Side Beach	24	1/27	0	9.7	II III A 1		No	No	Yes	p
Bay	Crooked Island East	32	1/27	28	10.8	II III B 1 2 3 8	III B 3	Yes	Yes	Yes	f
Bay	Crooked Island West	33	1/27	20	10.5	II III B 1 2 3 8 10	III B 3 8	Yes	Yes	Yes	f
Bay	Grand Lagoon - Bay Point, Alligator Point	28	1/27	0	0.4	II A 2 8 9		Yes	No	Yes	p
Bay	Marifarms, West Bay, P.C. Florida	26	1/26	0	0.8	II A 3 8 10		No	No	Yes	s(p)
Bay	Panama City Beach (S Arnold Rd to Lookout Street)	25	1/27	0	16.1	III A 1 11		No	No	Yes	s(p)
Bay	Shell Island	29	1/27	4	6.0	III B 1	III B 1	Yes	Yes	Yes	
Bay	St. Andrew Bay - Davis Pt. to Redfish Pt.	31	1/27	0	2.6	III A 3 8	III A 1	No	No	No	f
Bay	St. Andrews State Recreation Area	27	1/27	3	2.4	II III A 1 4		Yes	Unk	Yes	s(p)
Bay	West Beach Drive	30	1/27	0	2.4	II A 1 8		No	No	Yes	s(p)
Bay/Gulf	From Tyndall AFB to Port St. Joe (Highland View)	34	1/27	12	19.4	II III A 1		No	No	No	
Bay/Walton	From Camp Helen SP to Deer Lake SP	23	1/28	2	8.1	II III A 1	III A 1	No	No	yes	s/p
Brevard	Cape Canaveral Air Force Station		2/7	0	20.8	I B 1		Yes	Yes	Yes	f
Brevard	Patrick Air Force Base		2/7	0	11.8	I B 1		No	No	No	f
Brevard/ Indian River	Sebastian Inlet State Park		2/3	0	5.2	I II IV B D 1 3 8		No	No	No	s(p)
Brevard/ Volusia	Canaveral National Seashore		2/6	0	38.7	I II B 1 8 10		Yes	Yes	Yes	f
Broward	Broward County Northern Link to Hillsboro Inlet		2/5	0	5.6	I B 1		Yes	No	No	m/p
Broward	Hugh Taylor Birch State Park		2/1	0	0.4	II B 8		No	No	No	s(p)
Broward	John U. Lloyd Beach S.P.		2/3	0	3.6	I A 1		No	No	Yes	s(p)
Charlotte	Barrier Island	98	1/27	2	14.4	II III B 1 2 10	III B 1	Yes	No	No	s(p)
Charlotte	Charlotte Harbor (east side)	97	1/27	4	0.4	II D 4 9	II D 4	No	No	No	s(p)
Charlotte	Gasparilla Island	99	1/28	24	4.0	III B 1	III B 1	Yes	No	No	s(p)
Citrus	Florida Barge Canal spoil islands	58	2/6	0	16.1	III C 6		No	No	Yes	s(p)
Collier	Big Marco Pass Shoal	114	1/27	20	3.2	II III B 1 2 8	III B 2	Yes	Yes	Yes	s(p)
Collier	Cape Romano	116	1/27	0	1.6	III E 1 8		No	No	No	s(p)
Collier	Caxambas Island	115	1/27	0	0.8	III E 4		No	No	No	s(p)
Collier	Clam Pass County Park	111	1/27	0	6.0	III A 1		No	No	No	f
Collier	Delnor - Wiggins Pass State Park	110	1/27	5	2.0	III B D 1	III B 1	No	No	No	s(p)
Collier	Keewaydin Island	113	1/26	0	10.8	III B 1 2		No	No	No	s/p
Collier	Naples Pier	112	1/27	0	4.0	III A 1		No	No	No	p



## The 2006 International Snowy Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Dixie	Shired Island- Lower Suwanee NWR	56	1/27	0	2.0	III A 1		No	No	No	f
Duval	Atlantic Beach		2/3	0	4.0	I A 1		No	Yes	Yes	s(p)
Duval	Bird Islands - Nassau Sound - N. Lt. Talbot Island		2/3	0	2.4	IV B E 2 4		Yes	Yes	Yes	s/m
Duval	Kathryn Abby Hanna Park		1/3	0	2.0	I IV A 1		Yes	Yes	Yes	f/c
Duval	Little Talbot Island State Park		2/3	0	6.5	I B 1 3 9 10		Yes	Yes	Yes	s(p)
Duval	Ward's Bank (Huguenot Park)		2/3	0	2.8	I II IV B D 1 2 3 4 8		Yes	Yes	Yes	s/m
Escambia	Big Lagoon State Park	1	1/27	0	1.6	II A 1 2 10		No	No	Yes	s(p)
Escambia	Fort Pickens Gulf Islands N.S.	6	1/27	10	11.3	II III V B 1 8 10	II B 1	Yes	Yes	Yes	f
Escambia	Naval Air Station Pensacola, FL	5	1/27	0	6.5	II IV A 1 3 4 8		No	No	Yes	f
Escambia	Pensacola Beach to Range Point	8	1/27	0	6.5	II III B		No	No	Yes	p
Escambia	Perdido Key Gulf Islands N.S.	4	1/27	14	11.3	II III V B 1 8 10	III B 1	No	Yes	Yes	f
Escambia	Perdido Key State Park	3	1/27	0	2.6	III B 1		No	Yes	Yes	s(p)
Escambia	Santa Rosa Gulf Islands N.S.	9	1/27	15	11.3	II III B 1 3 8 10	II B 8	No	No	Yes	f
Escambia	Tarkiln Bayou Preserve State Park	2	1/27	0	6.5	II A 1 2 4 10		No	No	No	s(p)
Flagler	Gamble Rogers Memorial SRA		2/3	0		I B 1		No	No	No	s(p)
Flagler	Marineland to Washington Oaks State Park		2/3	0	1.3	I B 1		Yes	Yes	No	s(p)
Franklin	Alligator Pt.	49	1/27	0	6.5	II III G 1		Yes	No	Yes	p
Franklin	Bald Pt. State Park	50	1/27	0	4.8	II III A D 1 4 7 8		No	Yes	Yes	s(p)
Franklin	Carrabelle to Turkey Point	44	1/27	0	19.4	III A 3 II III B F 1 2 8		Yes	Yes	Yes	p
Franklin	Dog Island	45	1/27	0	24.2	11		Yes	No	Yes	p
Franklin	East Point to Carrabella	42	1/27	0	21.0	II A 1 3		Yes	Yes	Yes	s(p)/p
Franklin	Gulf Cnty Line to Green Point	40	1/27	0	16.1	III A 8 11		No	No	Yes	p
Franklin	John S. Phipps Preserve (West end of Peninsula)	48	1/27	7	4.8	III G 1 11 II III B 1 2 3 4 8 10	III G 1	Yes	Yes	Yes	p
Franklin	Lanark Reef	46	1/27	0	6.5	10		Yes	Yes	Yes	s/p
Franklin	Little St. George Island	39	1/27	14	14.5	III B 1 11		Yes	Yes	Yes	s(p)
Franklin	St. George Island From Govt. Cut to State Park	41	1/27	0	14.5	II III B 1 3 4 7 8		No	No	No	p
Franklin	St. George Island State Park	43	1/27	2	25.8	II B 4		Yes	Yes	Yes	s(p)
Franklin	St. Vincent Island	38	1/27	9	37.0	II III B 1 7 8	III B 1	Yes	Yes	Yes	f

## The 2006 International Snowy Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Franklin	Turkey Point to St. Teresa Beach	47	1/27	0	6.5	III A 3		No	No	Yes	p
Gulf	Indian Pass to Cape San Blas and Stump Hole	37	1/27	0	9.7	n.r.		Yes	No	Yes	n.r.
Gulf	SE St. Joe Bay Shoreline	36	1/27	0	8.1	n.r.		Yes	Yes	Yes	n.r.
Gulf	St. Joe Peninsula SP	35	1/27	14	25.8	n.r.		Yes	Yes	Yes	n.r.
Hillsborough	Egmont Key NWR & State Park	85	1/27	0	8.1	III B 1		Yes	Yes	Yes	f/p
Indian River	Indian River Co. beaches		2/3	0	9.7	I B 1		No	Yes	No	s/m/p
Indian River	Round Island Conservation Area		2/2	0	1.6	V B 8		No	No	No	c
Indian River	Round Island Park		2/2	0	7.3	I B 1		No	No	No	s(p)
Indian River	Tracking Station Access to Barber Bridge		2/3	0	2.8	I B 1		Yes	No	No	m
Indian River	Tracking Station Park N to Wabasso Beach		2/6	0	9.7	I B 1		No	No	No	s(p)
Indian River	Wabasso Beach to Turtle Trail		2/3	0	1.6	I B 1		No	No	No	m
Lee	Big Hickory Island	108	1/28	0	0.8	III B 1		No	No	No	s/c/p
Lee	Bonita & Barefoot Beaches	109	1/27	0	9.7	III B 1		No	No	No	s(p)
Lee	Captiva Island	103	1/27	0	8.1	III B 1		Yes	Yes	No	p
Lee	Cayo Costa	101	1/27	6	12.3	II III B 1 2 3	II B 1 3	Yes	No	Yes	s/p
Lee	Estero Island	106	1/28	16	12.1	II III B D 1 8	III D 1	No	No	Yes	s(p)
Lee	Gasparilla Island	100	1/27	0	7.3	III B 1		No	No	No	s/p
Lee	Lovers Key State Park	107	1/27	0	4.5	II III B D 1 4 8		No	No	No	s(p)
Lee	N. Captiva Island	102	1/30	14	5.5	II III B 1 3 8 11	III B 1 3	Yes	Yes	No	s/p
Lee	San Carlos Bay Flats	105	2/2	0	0.8	V A 5		No	No	No	c
Lee	Sanibel Island	104	1/27	8	6.5	III B 1	III B 1	Yes	Yes	Yes	s(p)
Levy	Cedar Key Area	57	1/31	0	16.1	III C D E 1 2 7		Yes	No	No	f/s/p
Manatee	Anna Maria Island	87	1/27	2	8.1	III B 1	III B 1	Yes	Yes	Yes	s/p
Manatee	Longboat Key	88	1/27	3	3.2	III B 1		No	No	No	m/p
Manatee	Passage Key NWR	86	1/27	0	0.4	B 1 2 4		Yes	Yes	Yes	f
Martin	Hobe Sound NWR		1/27	0	4.0	I B 1		No	Yes	Yes	f
Martin	Hutchinson Island		1/27	0	12.0	I IV B 1 10		No	No	No	m/c/s
Martin	St. Lucie Inlet		1/27	0	1.6	I D 4		No	Yes	Yes	s(p)
Martin	St. Lucie Inlet sandbars		2/3	0	3.2	IV 4		No	No	No	s(p)
Martin	St. Lucie Inlet State Park		1/27	0	5.6	I IV B 1		Yes	Yes	Yes	s(p)

## The 2006 International Snowy Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Martin	W shore of Indian River Near Jensen Beach		1/27	0	1.6	II A 3		No	No	No	s(p)
Miami-Dade	Bill Baggs State Park lighthouse to Crandon Park		2/3	0	3.9	I B 1		No	No	Yes	s(p)
Miami-Dade	Biscayne National Park		2/1	0	2.4	I B D 1 4 10		No	Yes	No	f
Miami-Dade	Crandon Park Beach		1/31	0	0.8	I B 1 3		Yes	No	Yes	c
Miami-Dade	Derring Estate and Chicken Key		2/3	0	3.2	II C 6 10		No	No	No	s(p)
Miami-Dade	Matheson Hammock		2/3	0	0.4	II A 10		No	No	No	c
Miami-Dade	Rickenbacker Causeway Shoreline		2/3	0	0.4	II C G 6		No	No	Yes	c
Miami-Dade	Virginia Key Critical Wildlife Area		2/3	0	2.8	II B		Yes	Yes	Yes	c
Monroe	Bahia Honda State Park		2/4	0	4.8	I E 1		Yes	Yes	Yes	s(p)
Monroe	Boca Chica Beach		2/2	0	1.1	I E 1		No	No	No	f
Monroe	Boca Grande Key		2/3	0	2.3	I II E F 1 3 9		Yes	Yes	Yes	f
Monroe	Curry Hammock State Park		2/3	0	0.4	I G 11		No	No	No	s(p)
Monroe	Fort Taylor Historic State Park		2/3	0	0.4	I E 6		No	No	No	s(p)
Monroe	John D. Pennekamp state Park/ Carysfort Yacht Club		3/2	0	30	I B C 6 10		No	Yes	Yes	s(p)
Monroe	Long Key State Park		2/4	0	0.8	I G 1		No	Yes	No	s(p)
Monroe	Lower Matecumbe		2/4	0	1.1	I E 1		No	No	No	p
Monroe	Ohio Key		2/4	0	0.3	I II IV E 1 5 9		Yes	Yes	Yes	f
Monroe	Pavilion Key		1/27	0	2.4	III A 1		No	No	No	s(p)
Monroe	Women Key		2/3	0	2.1	I E 1		No	Yes	Yes	s(p)
Nassau	Amelia Island Recreation Area		2/3	0	1.6	I B 1 3 9 10		Yes	No	Yes	s(p)
Nassau	Fernandina Beach		2/3	0	4.7	I B 1		No	No	No	m
Nassau	Fort Clinch State Park		2/3	0	11.3	I A 1 10		Yes	No	Yes	s(p)
Nassau	Little Tiger Island		2/3	0	0.4	V E 1		No	No	Yes	p
Okaloosa	Destin	14	1/27	0	4.8	III B 1		Yes	No	Yes	p
Okaloosa	East Okaloosa County Shoreline	16	1/27	0	3.5	III B 1		No	No	No	p
Okaloosa	East Pass to Norreigo Point	13	1/27	0	1.6	II IV B 2		Yes	No	Yes	s(p)/p
Okaloosa	Eglin Pkwy to Destin Bridge, Okaloosa Island	12	1/27	10	9.7	III B 1	III B 1	No	Yes	Yes	f/p/c
Okaloosa	Henderson Beach State Park	15	1/27	0	2	III B 1		No	No	Yes	s(p)
Okaloosa/ Santa Rosa	Santa Rosa Island (W to Navarre Beach SP)	10	1/27	1	10.5	III B 1 3 4 10	III B 1	No	Yes	Yes	f

## The 2006 International Snowy Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Okaloosa/ Santa Rosa	Santa Rosa Sound (Inter-coastal waterway)	11	1/26	0	32.3	V A B C D 1 3 4 10		Yes	No	Yes	f/s
Palm Beach	Gulf Stream Park to Atlantic Dunes Park		2/3	0	4.8	I B 1		No	No	No	s/m/p
Palm Beach	Highland Beach		2/3	0	6.5	I B 1		No	No	No	s/m/p
Palm Beach	Juno Beach Park to MacArthur State Park		2/3	0	6.9	I A 1		No	No	No	m/p
Palm Beach	Jupiter Beach to Juno Beach Park		2/3	0	5.6	I IV A 1		No	No	No	m/p
						II IV A B D 1 2 3					
Palm Beach	Jupiter sound, Jupiter inlet, Loxahatchee River		1/27	0	9.7	4		Yes	No	No	s(p)
Palm Beach	Lake Worth Beach Pier to Lantana Park		2/2	0	3.5	I B 1		No	No	No	m
Palm Beach	MacArthur Beach State Park		2/3	0	2.6	I B 1		Yes	Yes	Yes	s(p)
Palm Beach	MacArthur Beach State Park to Palm Beach Shores		2/3	0	4.5	I IV B 1		No	No	No	s/m
Palm Beach	Southern Blvd. South to Lake Worth Beach		2/2	0	6.8	I B 1		No	No	No	m
Palm Beach/ Martin	Jupiter Island - Jupiter Inlet through Blowing Rocks Preserve		2/4	0	4.8	I II IV B 1		No	Yes	No	c
Pasco	Anclote Gulf Park	67	1/27	0	0.4	III A 3 8		No	No	No	c
Pasco	Anclote Key sandbar <sup>1</sup>	64	1/27	0	0.8	III B 1 2		Yes	Yes	Yes	s(p)
Pasco	Anclote Key State Park	66	1/27	0	2.4	III B 1 2		Yes	Yes	Yes	s(p)
Pasco	Brasher Park	61	1/27	0	0.4	III A 8		No	No	No	m
Pasco	Green Key	62	1/27	0	0.2	III A 1		No	Yes	Yes	c
Pasco	Gulf Harbors Beach	63	1/27	0	0.2	III A 1		No	Yes	Yes	p
Pasco	Hudson Beach	59	1/27	0	0.3	III A 8		No	No	No	s(p)
Pasco	Sand Bay	65	1/27	0	0.4	III A 3 8		No	Yes	Yes	s(p)
Pasco	Werner-Boyce Salt Springs State Park	60	1/27	0	0.8	III G 11		No	No	No	s(p)
Pinellas	Dunedin Causeway (to Honeymoon Island)	73	1/26	0	0.8	V G 1		Yes	Yes	Yes	m
Pinellas	Ft. DeSoto County Park, E beach	83	1/27	0	1.6	III B 1 4 8		Yes	Yes	No	c
Pinellas	Ft. DeSoto County Park, NW Beach	82	1/27	0	1.5	III B 1		Yes	Yes	Yes	c
Pinellas	Ft. DeSoto County Park, SW Beach	84	1/27	0	1.6	III B 1		No	No	No	c
Pinellas	Honeymoon Island SRA (N end of island)	70	1/23	2	8.1	III B 2	III B 2	Yes	Yes	Yes	s(p)
	Honeymoon Island State Park, Bird Observation Area	72	1/26	0	0	III V D 8	I D 8	Yes	Yes	No	f
Pinellas	Honeymoon Island State Park, Pet Beach	71	1/26	0	0.8	III 1		Yes	Yes	No	f

## The 2006 International Snowy Plover Winter Census in Florida (Continued)

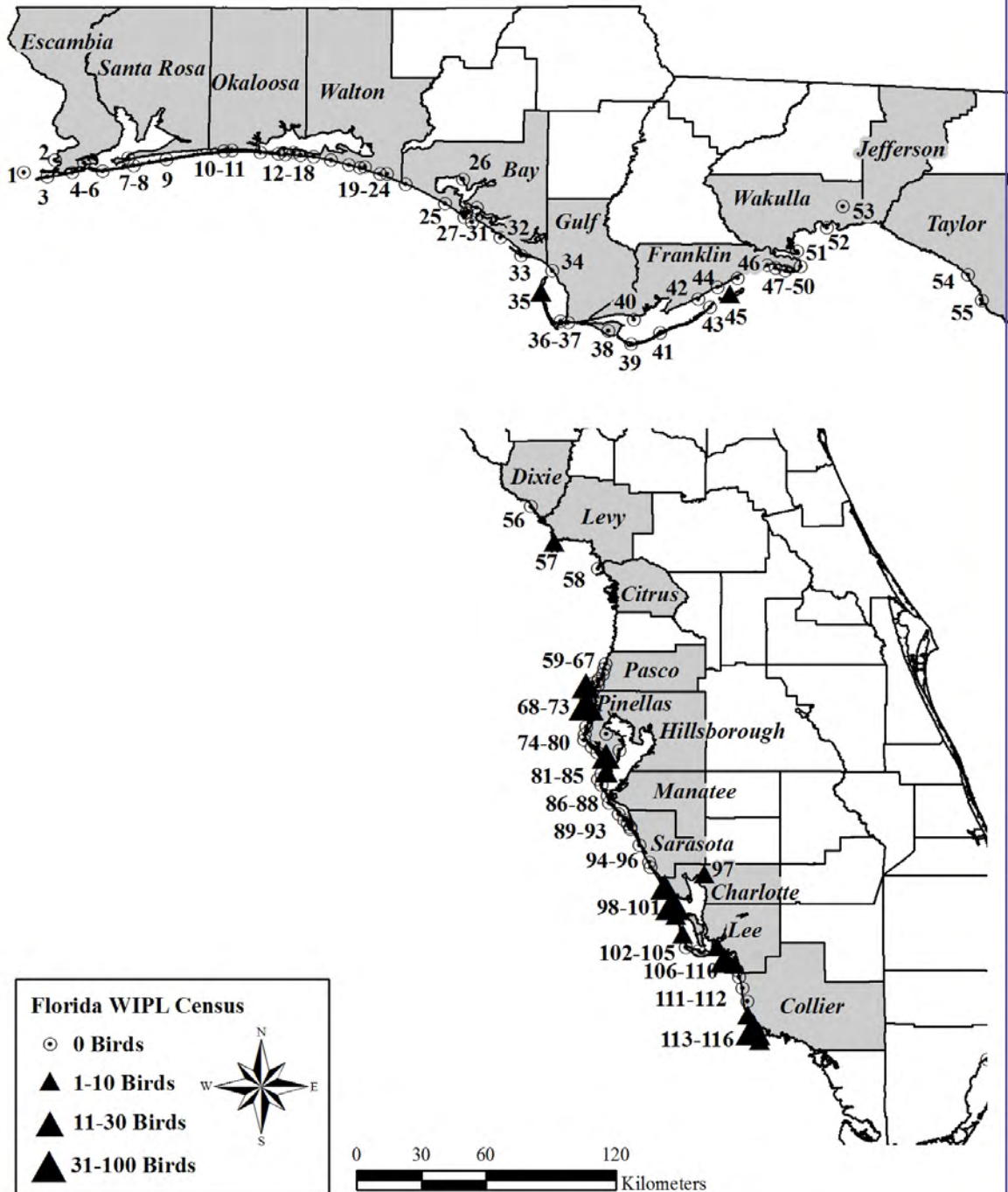
COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Pinellas	Howard County Park	68	1/27	0	3.2	III C G 1 8	1 8	Yes	Yes	Yes	c
Pinellas	Indian Rocks Beach	76	1/28	0	4	III A 1		No	No	No	m
Pinellas	Madeira Beach/Redington Beach/North Redington Beach	78	1/27	0	6.5	III B 1 1 1		No	No	No	m
Pinellas	North Clearwater beach	75	2/5	0	3.2	III A 1		Yes	Yes	Yes	m
Pinellas	Sandy Park to Bellair Beach Morgan Dr. Park	74	1/27	0	4.8	III B 1		Yes	No	No	m
Pinellas	Shell Key	81	1/27	13	13.7	III B 1 3 4 8 10	III B 3	No	Yes	Yes	s(p)
Pinellas	St. Petersburg- North shore park area	79	1/27	0	0.8	II A 1 3		No	No	No	m
Pinellas	Three Rooker Bar <sup>1</sup>	69	1/27	0	4	III B 1 2		Yes	Yes	Yes	
Pinellas	Treasure Island	80	1/27	0	3.5	III B 1		No	No	No	m
Pinellas	Walsingham Road South to 173 AVE	77	1/27	0	7.3	III B 1 1 1		No	No	No	m
Santa Rosa	Naval Live Oaks Gulf Islands N.S.	7	1/27	0	6.9	II A 1 4 8		No	No	Yes	f
Sarasota	Casey Key beach	94	1/31	0	11.3	III B 1		No	Yes	No	s(p)
Sarasota	Caspersen Beach	95	1/27	0	6.5	III B 1		Yes	Yes	No	s(p)
Sarasota	Longboat Key	89	1/27	0	6.8	III B 1		No	No	No	m/p
Sarasota	North Lido Beach	90	1/27	7	4	III B 1	III B 1	Yes	No	No	c
Sarasota	Siesta Key, Turtle Beach to Point of Rocks	93	1/28	0	2.4	III B 1		No	No	No	p
Sarasota	Siesta Key, N end to Point of Rocks	92	1/27	4	5.2	III A B F 1 4	III B 1	Yes	No	No	c
Sarasota	South Lido Beach	91	1/27	2	2.4	II III B 1	III B 1	Yes	No	No	
Sarasota/ Charlotte	Manasota Beach	96	1/27	5	6.5	III B 1	III B 1	No	No	Yes	c
St. Johns	Anastasia State Recreation Area		2/3	0	8.1	I II IV B 1 8		Yes	Yes	Yes	s(p)
St. Johns	Porpoise Point (Vilano Point)		2/3	0	1.6	IV A 1		No	Yes	Yes	p
St. Johns	St. Augustine Beach (Matanzas Inlet)		2/4	0	16.9	IV B 1		No	Yes	No	f/c
St. Lucie	Avalon State Park		2/3	0	1.6	I A 1		No	No	No	m
St. Lucie	Fort Pierce Inlet State Park		2/3	0	0.8	I A 1		Yes	Yes	Yes	s(p)
St. Lucie	Fort Pierce Inlet State Park to Avalon State Park		2/3	0	5.6	I A 1		Yes	Yes	Yes	c
St. Lucie	S Hutchinson Island, Fredrick Douglas Park to Inlet		2/3	0	6.5	I B 1		Yes	Yes	No	s(p)
St. Lucie	S Hutchinson Island, Little Mud Creek N to Fredrick Douglass Park		2/3	0	3.7	I B 1		Yes	Yes	No	m/c

## The 2006 International Snowy Plover Winter Census in Florida (Continued)

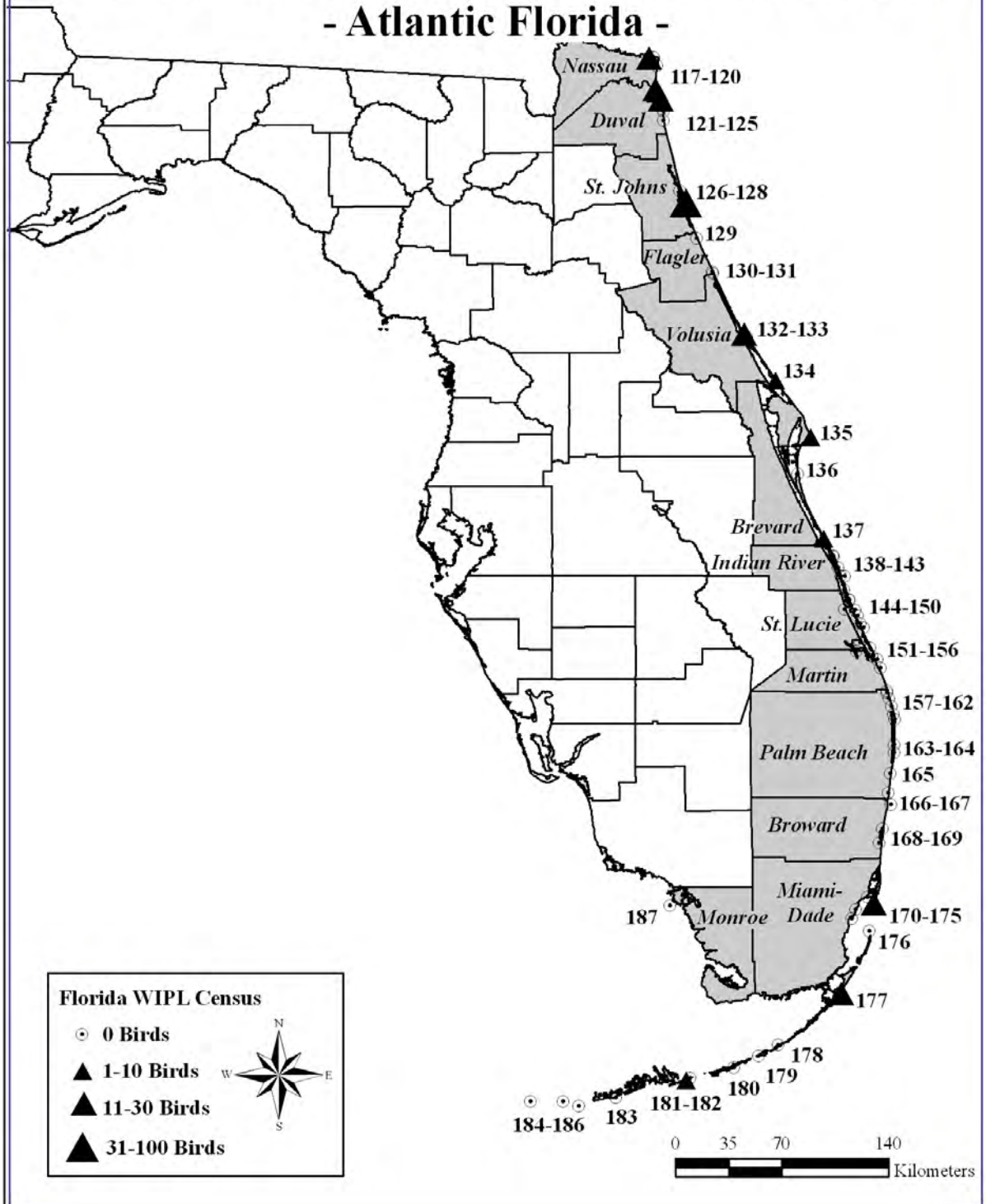
COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
St. Lucie	S Hutchinson Island, Little Mud Creek S to the narrows		2/3	0	6.5	I B 1		Yes	Yes	No	p
St. Lucie	S Hutchinson Island, S end		2/3	0	6.6	I B 1		Yes	Yes	No	s(p)
Taylor	Adam's Beach	54	1/27	0	0.8	III A 7 8		No	No	No	c
Taylor	Hagen's Cove	55	1/27	0	4	II III A 1 3 8		No	No	Yes	s(p)
Volusia	Disappearing Island		2/2	0	0.8	I IV B C D 1 3 4 8		No	No	No	s(p)/c
Volusia	New Smyrna Beach		2/3	0	4	I IV B 1 9		Yes	Yes	Yes	c
Volusia	North Peninsula SRA		2/3	0	4.8	I B 1		Yes	Yes	Yes	s(p)
Wakulla	Mashes Is County Park	51	1/27	0	0.8	III E 1 3 8		No	Yes	Yes	c
Wakulla	St. Marks National Wildlife Refuge - Impoundments	53	1/26	0	23.5	V A 8		No	No	No	f
Wakulla/Jefferson	Apalachee Bay & Oyster Bay	52	1/26	0	11.6	II III A D E 2 3 7 8 10		No	No	No	f/p/c
Walton	Camp Creek Inlet to E end Grayton Beach State Park	22	1/26	10	27.4	III A 1	III A 1	No	No	Yes	s(p)
Walton	Deer Lake State Park	21	1/27	0	1.6	III A 1		No	No	No	s(p)
Walton	E end Topsail Hill State Preserve to W end Grayton Beach State Park	19	1/27	0	10	III V A 1 1 1		No	No	Yes	p
Walton	Grayton Beach State Park	20	1/27	0	6.1	III A 1		No	No	No	s(p)
Walton	Topsail Hill Preserve State Park	18	1/27	0	5.2	III A 1		No	No	Yes	s(p)
Walton	West Walton County Shoreline	17	1/27	0	8.1	III B 1		No	No	Yes	p/c
<b>Total</b>				<b>312</b>	<b>1223.9</b>						

<sup>1</sup> datasheets from these sites were lost; number of Piping Plovers was estimated by surveyor but no data on wilson's or Snowy Plovers.

## 2006 International Wilson's Plover Winter Census - Gulf Florida -



## 2006 International Wilson's Plover Winter Census - Atlantic Florida -





## The 2006 International Wilson's Plover Winter Census in Florida

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Bay	Camp Helen to Sunny Side Beach	24	1/27	0	9.7	II III A 1		No	No	Yes	p
Bay	Crooked Island East	32	1/27	0	10.8	II III B 1 2 3 8		Yes	Yes	Yes	f
Bay	Crooked Island West	33	1/27	0	10.5	II III B 1 2 3 8 10		Yes	Yes	Yes	f
Bay	Grand Lagoon - Bay Point, Alligator Point	28	1/27	0	0.4	II A 2 8 9		Yes	No	Yes	p
Bay	Marifarms, West Bay, P.C. Florida	26	1/26	0	0.8	II A 3 8 10		No	No	Yes	s(p)
Bay	Panama City Beach (S Arnold Rd to Lookout Street)	25	1/27	0	16.1	III A 1 11		No	No	Yes	s(p)
Bay	Shell Island	29	1/27	0	6.0	III B 1		Yes	Yes	Yes	
Bay	St. Andrew Bay - Davis Pt. to Redfish Pt.	31	1/27	0	2.6	III A 3 8		No	No	No	f
Bay	St. Andrews State Recreation Area	27	1/27	0	2.4	II III A 1 4		Yes	Unk	Yes	s(p)
Bay	West Beach Drive	30	1/27	0	2.4	II A 1 8		No	No	Yes	s(p)
Bay/Gulf	From Tyndall AFB to Port St. Joe (Highland View)	34	1/27	0	19.4	II III A 1		No	No	No	
Bay/Walton	From Camp Helen SP to Deer Lake SP	23	1/28	0	8.1	II III A 1		No	No	yes	s/p
Brevard	Cape Canaveral Air Force Station	135	2/7	8	20.8	I B 1	I B 1	Yes	Yes	Yes	f
Brevard	Patrick Air Force Base	136	2/7	0	11.8	I B 1		No	No	No	f
Brevard/ Indian River	Sebastian Inlet State Park	137	2/3	5	5.2	I II IV B D 1 3 8	II B 8	No	No	No	s(p)
Brevard/ Volusia	Canaveral National Seashore	134	2/6	6	38.7	I II B 1 8 10	I B 1	Yes	Yes	Yes	f
Broward	Broward County Northern Link to Hillsboro Inlet	167	2/5	0	5.6	I B 1		Yes	No	No	m/p
Broward	Hugh Taylor Birch State Park	168	2/1	0	0.4	II B 8		No	No	No	s(p)
Broward	John U. Lloyd Beach S.P.	169	2/3	0	3.6	I A 1		No	No	Yes	s(p)
Charlotte	Barrier Island	98	1/27	14	14.4	II III B 1 2 10	III B 1 10	Yes	No	No	s(p)
Charlotte	Charlotte Harbor (east side)	97	1/27	1	0.4	II D 4 9	II D 4	No	No	No	s(p)
Charlotte	Gasparilla Island	99	1/28	36	4.0	III B 1	III B 1	Yes	No	No	s(p)
Citrus	Florida Barge Canal spoil islands	58	2/6	0	16.1	III C 6		No	No	Yes	s(p)
Collier	Big Marco Pass Shoal	114	1/27	55	3.2	II III B 1 2 8	III B 2	Yes	Yes	Yes	s(p)
Collier	Cape Romano	116	1/27	8	1.6	III E 1 8	III E 1	No	No	No	s(p)
Collier	Caxambas Island	115	1/27	2	0.8	III E 4	III E 4	No	No	No	s(p)
Collier	Clam Pass County Park	111	1/27	0	6.0	III A 1		No	No	No	f
Collier	Delnor - Wiggins Pass State Park	110	1/27	0	2.0	III B D 1		No	No	No	s(p)
Collier	Keewaydin Island	113	1/26	3	10.8	III B 1 2	III B 2	No	No	No	s/p
Collier	Naples Pier	112	1/27	0	4.0	III A 1		No	No	No	p

# The 2006 International Wilson's Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Dixie	Shired Island- Lower Suwanee NWR	56	1/27	0	2.0	III A 1		No	No	No	f
Duval	Atlantic Beach	125	2/3	0	4.0	I A 1		No	Yes	Yes	s(p)
Duval	Bird Islands - Nassau Sound - N. Lt. Talbot Island	121	2/3	2	2.4	IV B E 2 4		Yes	Yes	Yes	s/m
Duval	Kathryn Abby Hanna Park	123	1/3	0	2.0	I IV A 1		Yes	Yes	Yes	f/c
Duval	Little Talbot Island State Park	122	2/3	13	6.5	I B 1 3 9 10	I B 3 10	Yes	Yes	Yes	s(p)
Duval	Ward's Bank (Huguenot Park)	124	2/3	0	2.8	I II IV B D 1 2 3 4 8		Yes	Yes	Yes	s/m
Escambia	Big Lagoon State Park	1	1/27	0	1.6	II A 1 2 10		No	No	Yes	s(p)
Escambia	Fort Pickens Gulf Islands N.S.	6	1/27	0	11.3	II III V B 1 8 10		Yes	Yes	Yes	f
Escambia	Naval Air Station Pensacola, FL	5	1/27	0	6.5	II IV A 1 3 4 8		No	No	Yes	f
Escambia	Pensacola Beach to Range Point	8	1/27	0	6.5	II III B		No	No	Yes	p
Escambia	Perdido Key Gulf Islands N.S.	4	1/27	0	11.3	II III V B 1 8 10		No	Yes	Yes	f
Escambia	Perdido Key State Park	3	1/27	0	2.6	III B 1		No	Yes	Yes	s(p)
Escambia	Santa Rosa Gulf Islands N.S.	9	1/27	0	11.3	II III B 1 3 8 10		No	No	Yes	f
Escambia	Tarkiln Bayou Preserve State Park	2	1/27	0	6.5	II A 1 2 4 10		No	No	No	s(p)
Flagler	Gamble Rogers Memorial SRA	130	2/3	0		I B 1		No	No	No	s(p)
Flagler	Marineland to Washington Oaks State Park	129	2/3	0	1.3	I B 1		Yes	Yes	No	s(p)
Franklin	Alligator Pt.	49	1/27	0	6.5	II III G 1		Yes	No	Yes	p
Franklin	Bald Pt. State Park	50	1/27	0	4.8	II III A D 1 4 7 8		No	Yes	Yes	s(p)
Franklin	Carrabelle to Turkey Point	44	1/27	0	19.4	III A 3		Yes	Yes	Yes	p
Franklin	Dog Island	45	1/27	1	24.2	II III B F 1 2 8 11	0	Yes	No	Yes	p
Franklin	East Point to Carrabella	42	1/27	0	21.0	II A 1 3		Yes	Yes	Yes	s(p)/p
Franklin	Gulf Cnty Line to Green Point	40	1/27	0	16.1	III A 8 11		No	No	Yes	p
Franklin	John S. Phipps Preserve (West end of Peninsula)	48	1/27	0	4.8	III G 1 11 II III B 1 2 3 4 8		Yes	Yes	Yes	p
Franklin	Lanark Reef	46	1/27	0	6.5	10		Yes	Yes	Yes	s/p
Franklin	Little St. George Island	39	1/27	0	14.5	III B 1 11		Yes	Yes	Yes	s(p)
Franklin	St. George Island From Govt. Cut to State Park	41	1/27	0	14.5	II III B 1 3 4 7 8		No	No	No	p
Franklin	St. George Island State Park	43	1/27	0	25.8	II B 4		Yes	Yes	Yes	s(p)
Franklin	St. Vincent Island	38	1/27	0	37.0	II III B 1 7 8	0	Yes	Yes	Yes	f

**The 2006 International piping wilson's Winter Census in Florida  
(Continued)**

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Franklin	Turkey Point to St. Teresa Beach	47	1/27	0	6.5	III A 3		No	No	Yes	p
Gulf	Indian Pass to Cape San Blas and Stump Hole	37	1/27	0	9.7	n.r.		Yes	No	Yes	n.r.
Gulf	SE St. Joe Bay Shoreline	36	1/27	0	8.1	n.r.		Yes	Yes	Yes	n.r.
Gulf	St. Joe Peninsula SP	35	1/27	10	25.8	n.r.		Yes	Yes	Yes	n.r.
Hillsborough	Egmont Key NWR & State Park	85	1/27	0	8.1	III B 1		Yes	Yes	Yes	f/p
Indian River	Indian River Co. beaches	141	2/3	0	9.7	I B 1		No	Yes	No	s/m/p
Indian River	Round Island Conservation Area	143	2/2	0	1.6	V B 8		No	No	No	c
Indian River	Round Island Park	142	2/2	0	7.3	I B 1		No	No	No	s(p)
Indian River	Tracking Station Access to Barber Bridge	140	2/3	0	2.8	I B 1		Yes	No	No	m
Indian River	Tracking Station Park N to Wabasso Beach	139	2/6	0	9.7	I B 1		No	No	No	s(p)
Indian River	Wabasso Beach to Turtle Trail	138	2/3	0	1.6	I B 1		No	No	No	m
Lee	Big Hickory Island	108	1/28	10	0.8	III B 1	III B 1	No	No	No	s/c/p
Lee	Bonita & Barefoot Beaches	109	1/27	0	9.7	III B 1		No	No	No	s(p)
Lee	Captiva Island	103	1/27	0	8.1	III B 1		Yes	Yes	No	p
Lee	Cayo Costa	101	1/27	9	12.3	II III B 1 2 3	II B 2	Yes	No	Yes	s/p
Lee	Estero Island	106	1/28	20	12.1	II III B D 1 8	III D 1	No	No	Yes	s(p)
Lee	Gasparilla Island	100	1/27	0	7.3	III B 1		No	No	No	s/p
Lee	Lovers Key State Park	107	1/27	0	4.5	II III B D 1 4 8		No	No	No	s(p)
Lee	N. Captiva Island	102	1/30	5	5.5	II III B 1 3 8 11	III B 3	Yes	Yes	No	s/p
Lee	San Carlos Bay Flats	105	2/2	1	0.8	V A 5	V A 5	No	No	No	c
Lee	Sanibel Island	104	1/27	0	6.5	III B 1		Yes	Yes	Yes	s(p)
Levy	Cedar Key Area	57	1/31	2	16.1	III C D E 1 2 7	III D 2	Yes	No	No	f/s/p
Manatee	Anna Maria Island	87	1/27	0	8.1	III B 1		Yes	Yes	Yes	s/p
Manatee	Longboat Key	88	1/27	0	3.2	III B 1		No	No	No	m/p
Manatee	Passage Key NWR	86	1/27	0	0.4	B 1 2 4		Yes	Yes	Yes	f
Martin	Hobe Sound NWR	156	1/27	0	4.0	I B 1		No	Yes	Yes	f
Martin	Hutchinson Island	153	1/27	0	12.0	I IV B 1 10		No	No	No	m/c/s
Martin	St. Lucie Inlet	154	1/27	0	1.6	I D 4		No	Yes	Yes	s(p)
Martin	St. Lucie Inlet sandbars	152	2/3	0	3.2	IV 4		No	No	No	s(p)
Martin	St. Lucie Inlet State Park	155	1/27	0	5.6	I IV B 1		Yes	Yes	Yes	s(p)

## The 2006 International Wilson's Plover Winter Census in Florida (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Martin	W shore of Indian River Near Jensen Beach	151	1/27	0	1.6	II A 3		No	No	No	s(p)
Martin	W shore of Indian River Near Jensen Beach	151	1/27	0	1.6	II A 3		No	No	No	s(p)
Miami-Dade	Bill Baggs State Park lighthouse to Crandon Park	172	2/3	0	3.9	I B 1		No	No	Yes	s(p)
Miami-Dade	Biscayne National Park	176	2/1	0	2.4	I B D 1 4 10		No	Yes	No	f
Miami-Dade	Crandon Park Beach	171	1/31	11	0.8	I B 1 3	I B 1 3	Yes	No	Yes	c
Miami-Dade	Derring Estate and Chicken Key	175	2/3	0	3.2	II C 6 10		No	No	No	s(p)
Miami-Dade	Matheson Hammock	174	2/3	0	0.4	II A 10		No	No	No	c
Miami-Dade	Rickenbacker Causeway Shoreline	170	2/3	0	0.4	II C G 6		No	No	Yes	c
Miami-Dade	Virginia Key Critical Wildlife Area	173	2/3	0	2.8	II B		Yes	Yes	Yes	c
Monroe	Bahia Honda State Park	182	2/4	1	4.8	I E 1	I F 1	Yes	Yes	Yes	s(p)
Monroe	Boca Chica Beach	183	2/2	0	1.1	I E 1		No	No	No	f
Monroe	Boca Grande Key	186	2/3	0	2.3	I II E F 1 3 9		Yes	Yes	Yes	f
Monroe	Curry Hammock State Park	180	2/3	0	0.4	I G 11		No	No	No	s(p)
Monroe	Fort Taylor Historic State Park	184	2/3	0	0.4	I E 6		No	No	No	s(p)
Monroe	John D. Pennekamp state Park/ Carysfort Yacht Club	177	3/2	13	30	I B C 6 10		No	Yes	Yes	s(p)
Monroe	Long Key State Park	179	2/4	0	0.8	I G 1		No	Yes	No	s(p)
Monroe	Lower Matecumbe	178	2/4	0	1.1	I E 1		No	No	No	p
Monroe	Ohio Key	181	2/4	0	0.3	I II IV E 1 5 9		Yes	Yes	Yes	f
Monroe	Pavilion Key	187	1/27	0	2.4	III A 1		No	No	No	s(p)
Monroe	Women Key	185	2/3	0	2.1	I E 1		No	Yes	Yes	s(p)
Nassau	Amelia Island Recreation Area	120	2/3	11	1.6	I B 1 3 9 10		Yes	No	Yes	s(p)
Nassau	Fernandina Beach	119	2/3	0	4.7	I B 1		No	No	No	m
Nassau	Fort Clinch State Park	117	2/3	0	11.3	I A 1 10		Yes	No	Yes	s(p)
Nassau	Little Tiger Island	118	2/3	16	0.4	V E 1	V E 1	No	No	Yes	p
Okaloosa	Destin	14	1/27	0	4.8	III B 1		Yes	No	Yes	p
Okaloosa	East Okaloosa County Shoreline	16	1/27	0	3.5	III B 1		No	No	No	p
Okaloosa	East Pass to Norreigo Point	13	1/27	0	1.6	II IV B 2		Yes	No	Yes	s(p)/p
Okaloosa	Eglin Pkwy to Destin Bridge, Okaloosa Island	12	1/27	0	9.7	III B 1		No	Yes	Yes	f/p/c
Okaloosa	Henderson Beach State Park	15	1/27	0	2	III B 1		No	No	Yes	s(p)
Okaloosa/ Santa Rosa	Santa Rosa Island (W to Navarre Beach SP)	10	1/27	0	10.5	III B 1 3 4 10		No	Yes	Yes	f

**The 2006 International Wilson's Plover Winter Census in Florida  
(Continued)**

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Okaloosa/Santa Rosa	Santa Rosa Sound (Inter-coastal waterway)	11	1/26	0	32.3	V A B C D 1 3 4 10		Yes	No	Yes	f/s
Palm Beach	Gulf Stream Park to Atlantic Dunes Park	165	2/3	0	4.8	I B 1		No	No	No	s/m/p
Palm Beach	Highland Beach	166	2/3	0	6.5	I B 1		No	No	No	s/m/p
Palm Beach	Juno Beach Park to MacArthur State Park	160	2/3	0	6.9	I A 1		No	No	No	m/p
Palm Beach	Jupiter Beach to Juno Beach Park	159	2/3	0	5.6	I IV A 1		No	No	No	m/p
Palm Beach	Jupiter sound, Jupiter inlet, Loxahatchee River	158	1/27	0	9.7	II IV A B D 1 2 3 4		Yes	No	No	s(p)
Palm Beach	Lake Worth Beach Pier to Lantana Park	164	2/2	0	3.5	I B 1		No	No	No	m
Palm Beach	MacArthur Beach State Park	161	2/3	0	2.6	I B 1		Yes	Yes	Yes	s(p)
Palm Beach	MacArthur Beach State Park to Palm Beach Shores	162	2/3	0	4.5	I IV B 1		No	No	No	s/m
Palm Beach	Southern Blvd. South to Lake Worth Beach	163	2/2	0	6.8	I B 1		No	No	No	m
Palm Beach/Martin	Jupiter Island - Jupiter Inlet through Blowing Rocks Preserve	157	2/4	0	4.8	I II IV B 1		No	Yes	No	c
Pasco	Anclote Gulf Park	67	1/27	0	0.4	III A 3 8		No	No	No	c
Pasco	Anclote Key sandbar <sup>1</sup>	64	1/27	0	0.8	III B 1 2		Yes	Yes	Yes	s(p)
Pasco	Anclote Key State Park	66	1/27	20	2.4	III B 1 2		Yes	Yes	Yes	s(p)
Pasco	Brasher Park	61	1/27	0	0.4	III A 8		No	No	No	m
Pasco	Green Key	62	1/27	0	0.2	III A 1		No	Yes	Yes	c
Pasco	Gulf Harbors Beach	63	1/27	0	0.2	III A 1		No	Yes	Yes	p
Pasco	Hudson Beach	59	1/27	0	0.3	III A 8		No	No	No	s(p)
Pasco	Sand Bay	65	1/27	0	0.4	III A 3 8		No	Yes	Yes	s(p)
Pasco	Werner-Boyce Salt Springs State Park	60	1/27	0	0.8	III G 11		No	No	No	s(p)
Pinellas	Dunedin Causeway (to Honeymoon Island)	73	1/26	0	0.8	V G 1		Yes	Yes	Yes	m
Pinellas	Ft. DeSoto County Park, E beach	83	1/27	1	1.6	III B 1 4 8	III B 4	Yes	Yes	No	c
Pinellas	Ft. DeSoto County Park, NW Beach	82	1/27	1	1.5	III B 1	III B 1	Yes	Yes	Yes	c
Pinellas	Ft. DeSoto County Park, SW Beach	84	1/27	0	1.6	III B 1		No	No	No	c
Pinellas	Honeymoon Island SRA (N end of island)	70	1/23	38	8.1	III B 2	III B 2	Yes	Yes	Yes	s(p)
Pinellas	Honeymoon Island State Park, Bird Observation Area	72	1/26	0	0	III V D 8	I D 8	Yes	Yes	No	f
Pinellas	Honeymoon Island State Park, Pet Beach	71	1/26	0	0.8	III 1		Yes	Yes	No	f

**The 2006 International Wilson's Plover Winter Census in Florida  
(Continued)**

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Pinellas	Howard County Park	68	1/27	0	3.2	III C G 1 8	1 8	Yes	Yes	Yes	c
Pinellas	Indian Rocks Beach	76	1/28	0	4	III A 1		No	No	No	m
Pinellas	Madeira Beach/Redington Beach/North Redington Beach	78	1/27	0	6.5	III B 1 1 1		No	No	No	m
Pinellas	North Clearwater beach	75	2/5	0	3.2	III A 1		Yes	Yes	Yes	m
Pinellas	Sandy Park to Bellair Beach Morgan Dr. Park	74	1/27	0	4.8	III B 1		Yes	No	No	m
Pinellas	Shell Key	81	1/27	14	13.7	III B 1 3 4 8 10	III B 3 8	No	Yes	Yes	s(p)
Pinellas	St. Petersburg- North shore park area	79	1/27	0	0.8	II A 1 3		No	No	No	m
Pinellas	Three Rooker Bar <sup>1</sup>	69	1/27	0	4	III B 1 2		Yes	Yes	Yes	
Pinellas	Treasure Island	80	1/27	0	3.5	III B 1		No	No	No	m
Pinellas	Walsingham Road South to 173 AVE	77	1/27	0	7.3	III B 1 1 1		No	No	No	m
Santa Rosa	Naval Live Oaks Gulf Islands N.S.	7	1/27	0	6.9	II A 1 4 8		No	No	Yes	f
Sarasota	Casey Key beach	94	1/31	0	11.3	III B 1		No	Yes	No	s(p)
Sarasota	Caspersen Beach	95	1/27	0	6.5	III B 1		Yes	Yes	No	s(p)
Sarasota	Longboat Key	89	1/27	0	6.8	III B 1		No	No	No	m/p
Sarasota	North Lido Beach	90	1/27	0	4	III B 1		Yes	No	No	c
Sarasota	Siesta Key, Turtle Beach to Point of Rocks	93	1/28	0	2.4	III B 1		No	No	No	p
Sarasota	Siesta Key, N end to Point of Rocks	92	1/27	0	5.2	III A B F 1 4		Yes	No	No	c
Sarasota	South Lido Beach	91	1/27	0	2.4	II III B 1		Yes	No	No	
Sarasota/ Charlotte	Manasota Beach	96	1/27	0	6.5	III B 1		No	No	Yes	c
St. Johns	Anastasia State Recreation Area	127	2/3	0	8.1	I II IV B 1 8		Yes	Yes	Yes	s(p)
St. Johns	Porpoise Point (Vilano Point)	126	2/3	0	1.6	IV A 1		No	Yes	Yes	p
St. Johns	St. Augustine Beach (Matanzas Inlet)	128	2/4	32	16.9	IV B 1	IV B 1	No	Yes	No	f/c
St. Lucie	Avalon State Park	145	2/3	0	1.6	I A 1		No	No	No	m
St. Lucie	Fort Pierce Inlet State Park	146	2/3	0	0.8	I A 1		Yes	Yes	Yes	s(p)
St. Lucie	Fort Pierce Inlet State Park to Avalon State Park	144	2/3	0	5.6	I A 1		Yes	Yes	Yes	c
St. Lucie	S Hutchinson Island, Fredrick Douglas Park to Inlet	147	2/3	0	6.5	I B 1		Yes	Yes	No	s(p)
St. Lucie	S Hutchinson Island, Little Mud Creek N to Fredrick Douglass Park	148	2/3	0	3.7	I B 1		Yes	Yes	No	m/c

# **The 2006 International Wilson's Plover Winter Census in Florida (Continued)**

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
St. Lucie	S Hutchinson Island, Little Mud Creek S to the narrows	149	2/3	0	6.5	I B 1		Yes	Yes	No	p
St. Lucie	S Hutchinson Island, S end	150	2/3	0	6.6	I B 1		Yes	Yes	No	s(p)
Taylor	Adam's Beach	54	1/27	0	0.8	III A 7 8		No	No	No	c
Taylor	Hagen's Cove	55	1/27	0	4	II III A 1 3 8 I IV B C D 1 3 4		No	No	Yes	s(p)
Volusia	Disappearing Island	132	2/2	25	0.8	8	IV D 4 8	No	No	No	s(p)/c
Volusia	New Smyrna Beach	133	2/3	0	4	I IV B 1 9		Yes	Yes	Yes	c
Volusia	North Peninsula SRA	131	2/3	0	4.8	I B 1		Yes	Yes	Yes	s(p)
Wakulla	Mashes Is County Park	51	1/27	0	0.8	III E 1 3 8		No	Yes	Yes	c
Wakulla	St. Marks National Wildlife Refuge - Impoundments	53	1/26	0	23.5	V A 8		No	No	No	f
Wakulla/ Jefferson	Apalachee Bay & Oyster Bay	52	1/26	0	11.6	II III A D E 2 3 7 8 10		No	No	No	f/p/c
Walton	Camp Creek Inlet to E end Grayton Beach State Park	22	1/26	0	27.4	III A 1		No	No	Yes	s(p)
Walton	Deer Lake State Park	21	1/27	0	1.6	III A 1		No	No	No	s(p)
Walton	E end Topsail Hill State Preserve to W end Grayton Beach State Park	19	1/27	0	10	III V A 1 1 1		No	No	Yes	p
Walton	Grayton Beach State Park	20	1/27	0	6.1	III A 1		No	No	No	s(p)
Walton	Topsail Hill Preserve State Park	18	1/27	0	5.2	III A 1		No	No	Yes	s(p)
Walton	West Walton County Shoreline	17	1/27	0	8.1	III B 1		No	No	Yes	p/c
<b>Total</b>				<b>394</b>	<b>1223.9</b>						

<sup>1</sup> datasheets from these sites were lost; number of Piping Plovers was estimated by surveyor but no data on wilson's or Snowy Plovers.

# **The 2006 International Piping Plover Winter Census in Alabama**

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A total of 9 surveyors surveyed 5 sites as part of the 2006 Census in Alabama. The prime sites for Piping Plovers wintering in Alabama are Little Dauphin Island and Pelican Island. Both sites were surveyed during the 2006 census with 29 Piping Plovers observed. From previous surveys on the birds in coastal Alabama, this is a typical “good” number of birds for Alabama. On a given winter’s day in Alabama you may find 20 to 40 Piping Plovers.

Only one survey was conducted in Baldwin County near the Florida border (by surveyors from Florida). Though other areas in Baldwin County were not surveyed in 2006, this has little effect, if any, on the total number of birds for Alabama. There are no barrier islands in Baldwin County and the Gulf beach is high impact with virtually no flats to speak of. The occasional Piping Plover is observed at the western tip of the Fort Morgan peninsula, but this is likely a bird that has made the short flight across the mouth of Mobile Bay traveling from the more favorable Mobile County sites of Little Dauphin Island and Pelican Island.

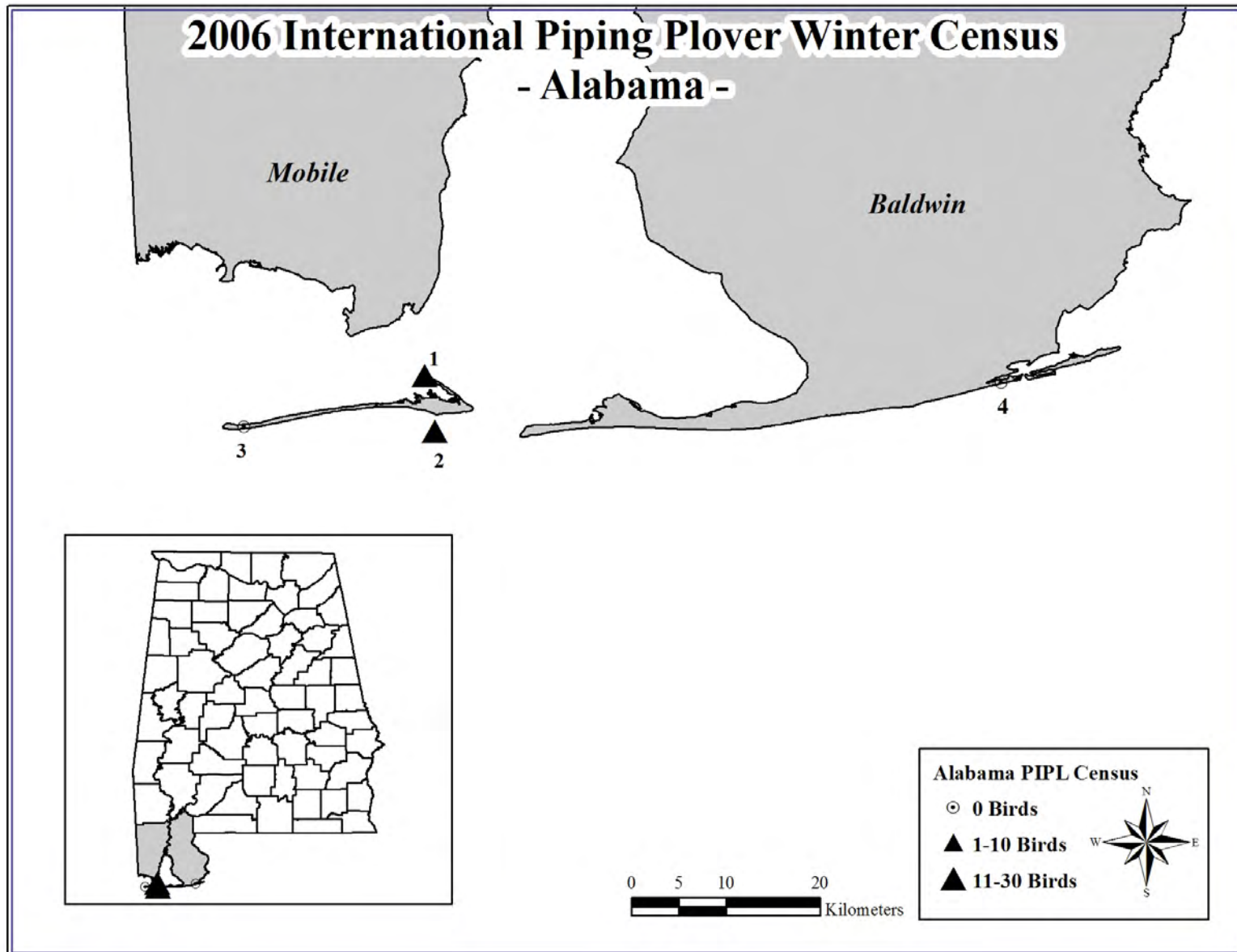
The coast of Mobile County was impacted greatly by Hurricane Katrina in August 2005. Destructive for man, Katrina had little negative impact for wintering shorebirds. In fact, the hurricane may have actually improved sites for this group of birds. Shorelines were flattened

creating more tidally flooded areas particularly on Pelican Island. The Piping Plover site on Little Dauphin Island which has seen a buildup of sand over its tidal flats may have benefited from the hurricane as well.

## **Comparison of Census Numbers**

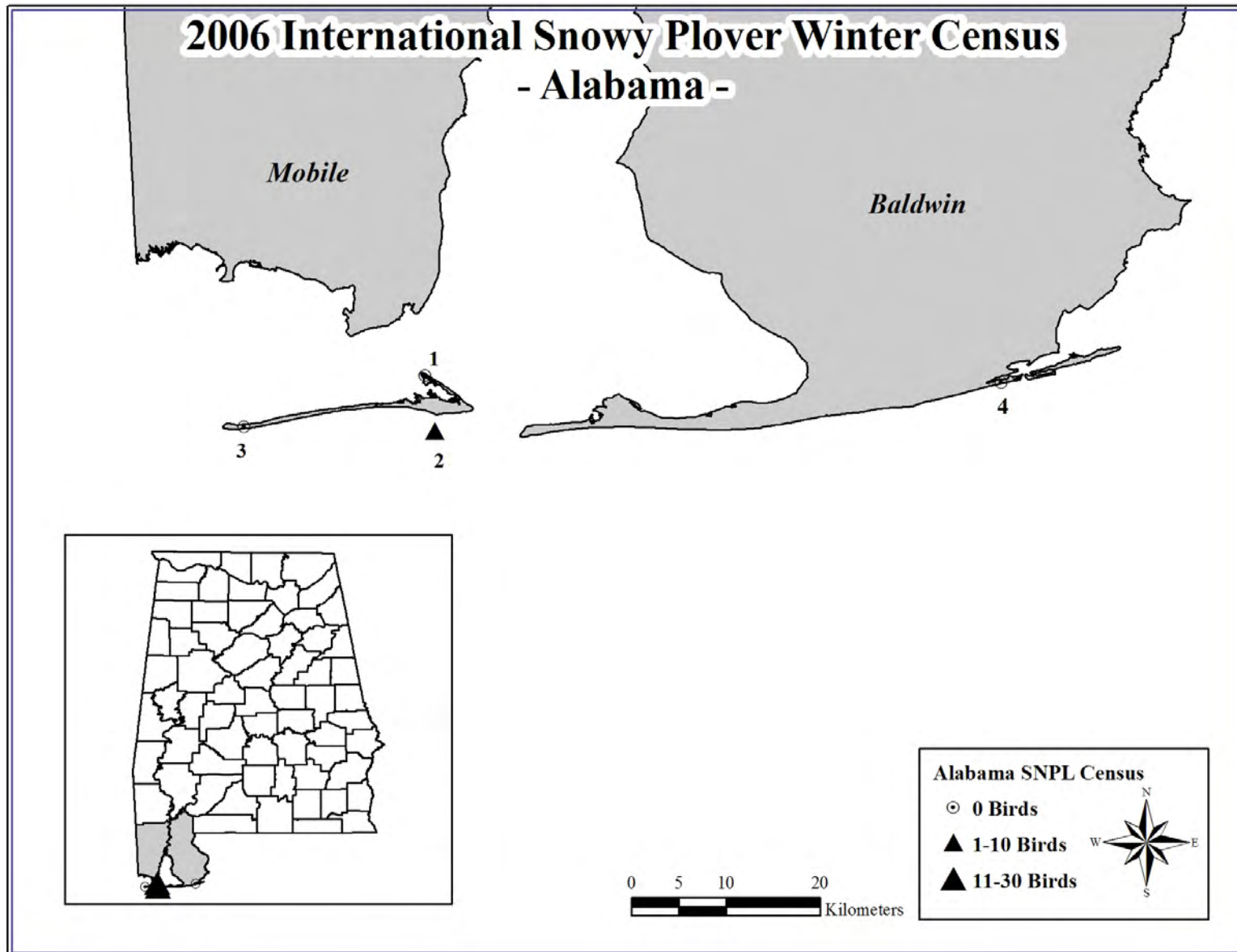
Species	1991	1996	2001	2006
Piping Plover	12	31	30	29
Snowy Plover	n.r.	n.r.	0	6
Wilson’s Plover	n.r.	n.r.	n.r.	0





## The 2006 International Piping Plover Winter Census in Alabama

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Baldwin	Perdido Pass, AL east to FL line	4	1/27	0	3.2	I II III IV A D E 1 2 3		No	No	No	s/p
Mobile	Dauphin Island, west end	3	2/05	0	7.6	II III V A 3		No	Yes	Yes	p
Mobile	Little Dauphin Island	1	2/05	13	1.6	III B 3 8	III B 3 8	Yes	Yes	Yes	f
Mobile	Pelican Island	2	2/05	16	9.7	III B 1 3 4 8	III B 1 3	Yes	Yes	Yes	s(p)
<b>Total</b>				<b>29</b>	<b>18.9</b>						



### The 2006 International Snowy Plover Winter Census in Alabama

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Baldwin	Perdido Pass, AL east to FL line	4	1/27	0	3.2	I II III IV A D E 1 2 3		No	No	No	s/p
Mobile	Dauphin Island, west end	3	2/05	0	7.6	II III V A 3		No	Yes	Yes	p
Mobile	Little Dauphin Island	1	2/05	0	1.6	III B 3 8		Yes	Yes	Yes	f
Mobile	Pelican Island	2	2/05	6	9.7	III B 1 3 4 8	III B 3	Yes	Yes	Yes	s(p)
<b>Total</b>				<b>6</b>	<b>18.9</b>						

### The 2006 International Wilson's Plover Winter Census in Alabama

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Baldwin	Perdido Pass, AL east to FL line		1/27	0	3.2	I II III IV A D E 1 2 3		No	No	No	s/p
Mobile	Dauphin Island, west end		2/05	0	7.6	II III V A 3		No	Yes	Yes	p
Mobile	Little Dauphin Island		2/05	0	1.6	III B 3 8		Yes	Yes	Yes	f
Mobile	Pelican Island		2/05	0	9.7	III B 1 3 4 8		Yes	Yes	Yes	s(p)
<b>Total</b>				<b>0</b>	<b>18.9</b>						

# The 2006 International Piping Plover Winter Census in Mississippi

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Twenty-five people censused 20 sites between 25 January and 6 February. Participants included local bird watchers and biologists from 3 governmental agencies and Mississippi State University. Seventy-eight Piping Plovers, 36 Snowy Plovers and zero Wilson's Plovers were observed. Most birds (58 piping and 33 Snowy Plovers) were observed on the barrier islands on 6 February.

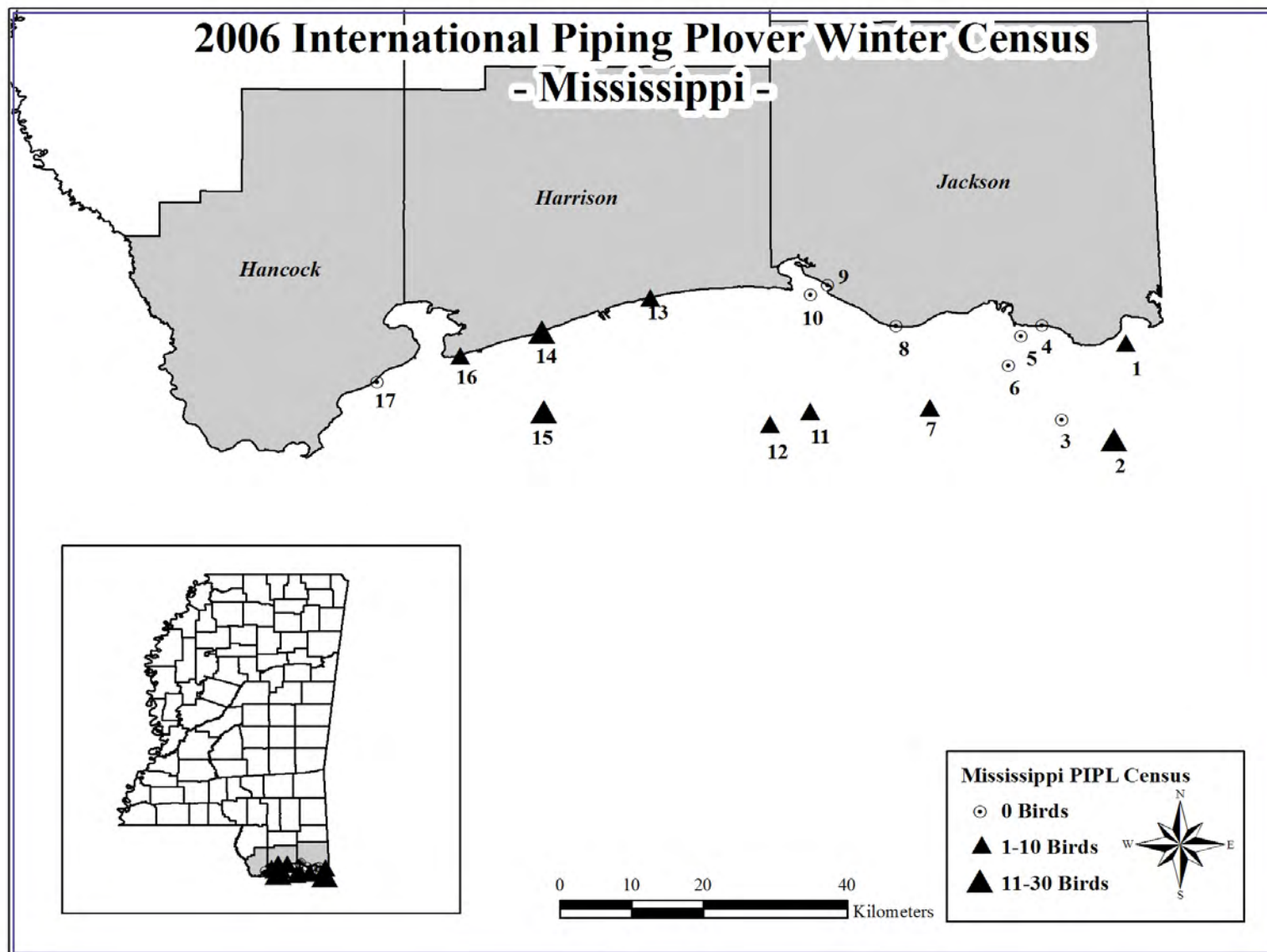
Most areas with suitable habitat were censused. The mainland beach from Broadwater Beach Marina to Point Cadet in Biloxi and Greenwood Island in Pascagoula were not censused due to inclement weather and access problems relating to Hurricane Katrina cleanup. Portions of the mainland beach at Belle Fontaine and between Gulfport Harbor and Broadwater Beach Marina in Biloxi were missed because of Katrina cleanup as well. The western half of Cat Island was not censused because of access and time constraints. Broadwater Beach Marina to Point Cadet has not had birds in previous censuses, and Greenwood Island has not been censused in previous censuses. However, these areas along with the other missed mainland beaches should be censused in the future because they have apparently suitable habitat. The western half of Cat Island should be censused in the future if time allows, although most of the suitable habitat is on the eastern half of the island.

More plovers were observed during this census than in previous censuses. Fifty-nine Piping Plovers were observed in 1991, 27 in 1996 and 18 in 2001. Thirteen Snowy Plovers were observed in 2001. I believe our results adequately represent the population in Mississippi because most areas were censused, and almost all areas were thoroughly searched on foot.

Most areas used by Piping Plovers in Mississippi are protected as part of Gulf Islands National Seashore. The National Park Service removed most of the storm-related debris from the barrier islands prior to the census, so Katrina debris was not a serious problem on the islands. NOAA has a website ([http://www.ncddc.noaa.gov/Katrina/Before\\_After%20Katrina/BarrierIslands](http://www.ncddc.noaa.gov/Katrina/Before_After%20Katrina/BarrierIslands)) with before and after Katrina imagery of the barrier islands. All islands experienced some land loss, especially sandy flats along the tips. Some sandy flats were still available, and many birds were observed in this habitat type. Also, many vegetated areas on the islands converted to sandy habitat after Katrina. Although the mainland beaches do not have the same official protected status as the islands, they have relatively little human disturbance during the winter months and most were posted off limits after Katrina. Many mainland beaches have eroded and are littered with storm debris. Efforts are underway to remove debris and beach renourishment is planned. Post-Katrina development may influence future habitat suitability, however development of beach habitat may not be pronounced.

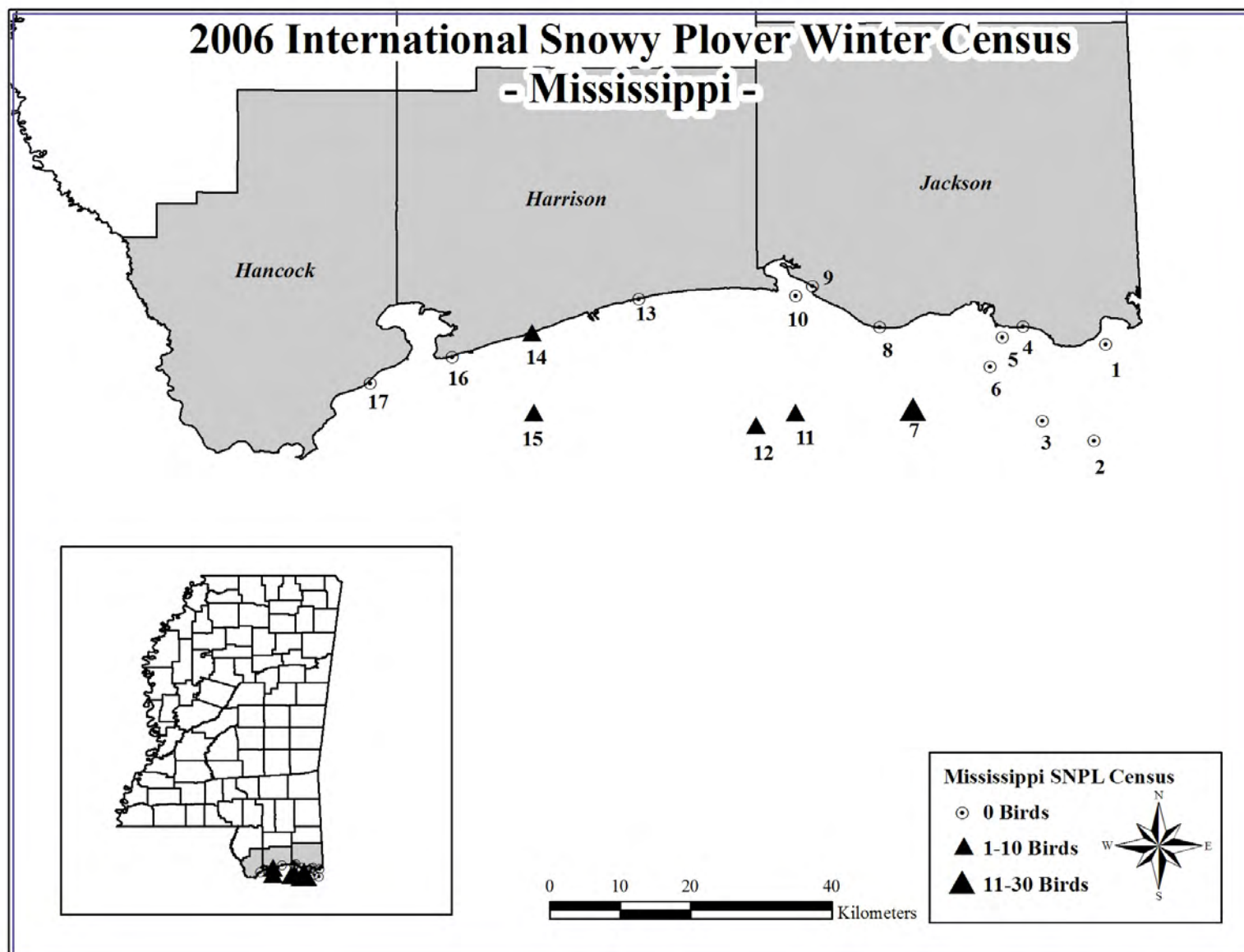
## Comparison of Census Numbers

Species	1991	1996	2001	2006
Piping Plover	59	27	18	78
Snowy Plover	n.r.	n.r.	13	36
Wilson's Plover	n.r.	n.r.	n.r.	0



## The 2006 International Piping Plover Winter Census in Mississippi

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Hancock	Clermont Harbor (Waveland and Bay St. Louis Piers)	17	1/27	0	16.1	III V A 1 3 8		Yes	Yes	Yes	m/c
Harrison	Cat Island	15	2/01	19	6.0	III B 1 3 8	III B 3	Yes	Yes	No	f/p
Harrison	Deer Island	10	2/01	0	3.7	V E 1 3		Yes	Yes	No	s(p)
Harrison	East Ship Island	11	2/01	7	4.2	III V B 1 3	III B 1	Yes	Yes	Yes	s(p)
Harrison	Gulfport Harbor to Beauvoir Rd.	13	2/02	1	12.9	V A 1 8	V A 1	No	No	No	c
Harrison	Gulport Harbor to Pass Christian Harbor	14	1/27	15	11.3	III V A 1 3	V A 3	No	Yes	Yes	s(p)
Harrison	Pass Christian Harbor to Henderson Point	16	2/06	2	2.4	III V A 1 3	V A 3	No	Yes	Yes	s(p)
Harrison	West Ship Island	12	2/01	4	13.2	III B 1	V B 3	Yes	Yes	Yes	s(p)
Jackson	Belle Fountaine Beach	8	1/27	0	1.2	III V A G 1		No	No	No	c
Jackson	Grand Bay National Estuarine Research Reserve	1	1/27	2	3.0	II V A F 3 5	V F 3	No	No	No	f
Jackson	Horn Island	7	2/01	9	49.5	III V B 1 3	II III B 1	Yes	Yes	Yes	f
Jackson	Ocean Springs Beaches	9	1/27	0	4.8	III A 1		Yes	Yes	Yes	m
Jackson	Pascagoula Beach	4	1/27	0	3.2	II III V A 1 8 10		Yes	Yes	No	m/p
Jackson	Petit Bois Island	2	2/01	19	12.4	III B 1 2 3	III B 3	Yes	Yes	Yes	f
Jackson	Round Island	6	1/27	0	3.0	V B 1		Yes	Yes	Yes	f
Jackson	Sand Island	3	2/01	0	2.0	V C 1 3		No	No	No	f
Jackson	Singing River Island	5	1/27	0	5.0	V C 1 3		No	Yes	Yes	s(p)
<b>Total</b>				<b>78</b>	<b>154.0</b>						





## The 2006 International Snowy Plover Winter Census in Mississippi

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Hancock	Clermont Harbor (Waveland and Bay St. Louis Piers)	17	1/27	0	16.1	III V A 1 3 8		Yes	Yes	Yes	m/c
Harrison	Cat Island	15	2/01	3	6.0	III B 1 3 8	III B 3	Yes	Yes	No	f/p
Harrison	Deer Island	10	2/01	0	3.7	V E 1 3		Yes	Yes	No	s(p)
Harrison	East Ship Island	11	2/01	3	4.2	III V B 1 3	V B 3	Yes	Yes	Yes	s(p)
Harrison	Gulfport Harbor to Beauvoir Rd.	13	2/02	0	12.9	V A 1 8		No	No	No	c
Harrison	Gulport Harbor to Pass Christian Harbor	14	1/27	3	11.3	III V A 1 3	V A 1	No	Yes	Yes	s(p)
Harrison	Pass Christian Harbor to Henderson Point	16	2/06	0	2.4	III V A 1 3		No	Yes	Yes	s(p)
Harrison	West Ship Island	12	2/01	1	13.2	III B 1	V B 3	Yes	Yes	Yes	s(p)
Jackson	Belle Fountaine Beach	8	1/27	0	1.2	III V A G 1		No	No	No	c
Jackson	Grand Bay National Estuarine Research Reserve	1	1/27	0	3.0	II V A F 3 5		No	No	No	f
Jackson	Horn Island	7	2/01	26	49.5	III V B 1 3	III B 1	Yes	Yes	Yes	f
Jackson	Ocean Springs Beaches	9	1/27	0	4.8	III A 1		Yes	Yes	Yes	m
Jackson	Pascagoula Beach	4	1/27	0	3.2	II III V A 1 8 10		Yes	Yes	No	m/p
Jackson	Petit Bois Island	2	2/01	0	12.4	III B 1 2 3		Yes	Yes	Yes	f
Jackson	Round Island	6	1/27	0	3.0	V B 1		Yes	Yes	Yes	f
Jackson	Sand Island	3	2/01	0	2.0	V C 1 3		No	No	No	f
Jackson	Singing River Island	5	1/27	0	5.0	V C 1 3		No	Yes	Yes	s(p)
<b>Total</b>				<b>36</b>	<b>154.0</b>						

## The 2006 International Wilson's Plover Winter Census in Mississippi

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Hancock	Clermont Harbor (Waveland and Bay St. Louis Piers)		1/27	0	16.1	III V A 1 3 8		Yes	Yes	Yes	m/c
Harrison	Cat Island		2/01	0	6.0	III B 1 3 8		Yes	Yes	No	f/p
Harrison	Deer Island		2/01	0	3.7	V E 1 3		Yes	Yes	No	s(p)
Harrison	East Ship Island		2/01	0	4.2	III V B 1 3		Yes	Yes	Yes	s(p)
Harrison	Gulfport Harbor to Beauvoir Rd.		2/02	0	12.9	V A 1 8		No	No	No	c
Harrison	Gulport Harbor to Pass Christian Harbor		1/27	0	11.3	III V A 1 3		No	Yes	Yes	s(p)
Harrison	Pass Christian Harbor to Henderson Point		2/06	0	2.4	III V A 1 3		No	Yes	Yes	s(p)
Harrison	West Ship Island		2/01	0	13.2	III B 1		Yes	Yes	Yes	s(p)
Jackson	Belle Fontaine Beach		1/27	0	1.2	III V A G 1		No	No	No	c
Jackson	Grand Bay National Estuarine Research Reserve		1/27	0	3.0	II V A F 3 5		No	No	No	f
Jackson	Horn Island		2/01	0	49.5	III V B 1 3		Yes	Yes	Yes	f
Jackson	Ocean Springs Beaches		1/27	0	4.8	III A 1		Yes	Yes	Yes	m
Jackson	Pascagoula Beach		1/27	0	3.2	II III V A 1 8 10		Yes	Yes	No	m/p
Jackson	Petit Bois Island		2/01	0	12.4	III B 1 2 3		Yes	Yes	Yes	f
Jackson	Round Island		1/27	0	3.0	V B 1		Yes	Yes	Yes	f
Jackson	Sand Island		2/01	0	2.0	V C 1 3		No	No	No	f
Jackson	Singing River Island		1/27	0	5.0	V C 1 3		No	Yes	Yes	s(p)
<b>Total</b>				<b>0</b>	<b>154.0</b>						

# The 2006 International Piping Plover Winter Census in Louisiana

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Eleven observers participated in the coast-wide census, compared to 23 in 2001, 36 in 1991 and 30 in 1996. Roughly 5 parties participated during the 2006 census window. The number of kilometers of coastline covered was approximately the same as in 2001 (201.7 km), although no actual mileage was recorded by the observers. It was a major challenge to organize the search parties due to the destruction of the Louisiana coastline by Hurricanes Katrina and Rita. Many would be survey participants were unable to assist with the efforts. All federal and state agency staff were directed to hurricane related issues. In spite of the Hurricanes the 2006 census by all accounts was a major success.

Numbers of Piping Plovers was nearly half of those from 2001, down to 226 birds in 2006 as compared to 511 in 2001. These numbers can be viewed confidently as all sites surveyed in 2001 were surveyed in 2006. An unnamed spoil island in LaFourche Parish that contained over 100 Piping Plovers in 2001 was lost during Hurricane Katrina and substantially affected the number of Piping Plovers detected.

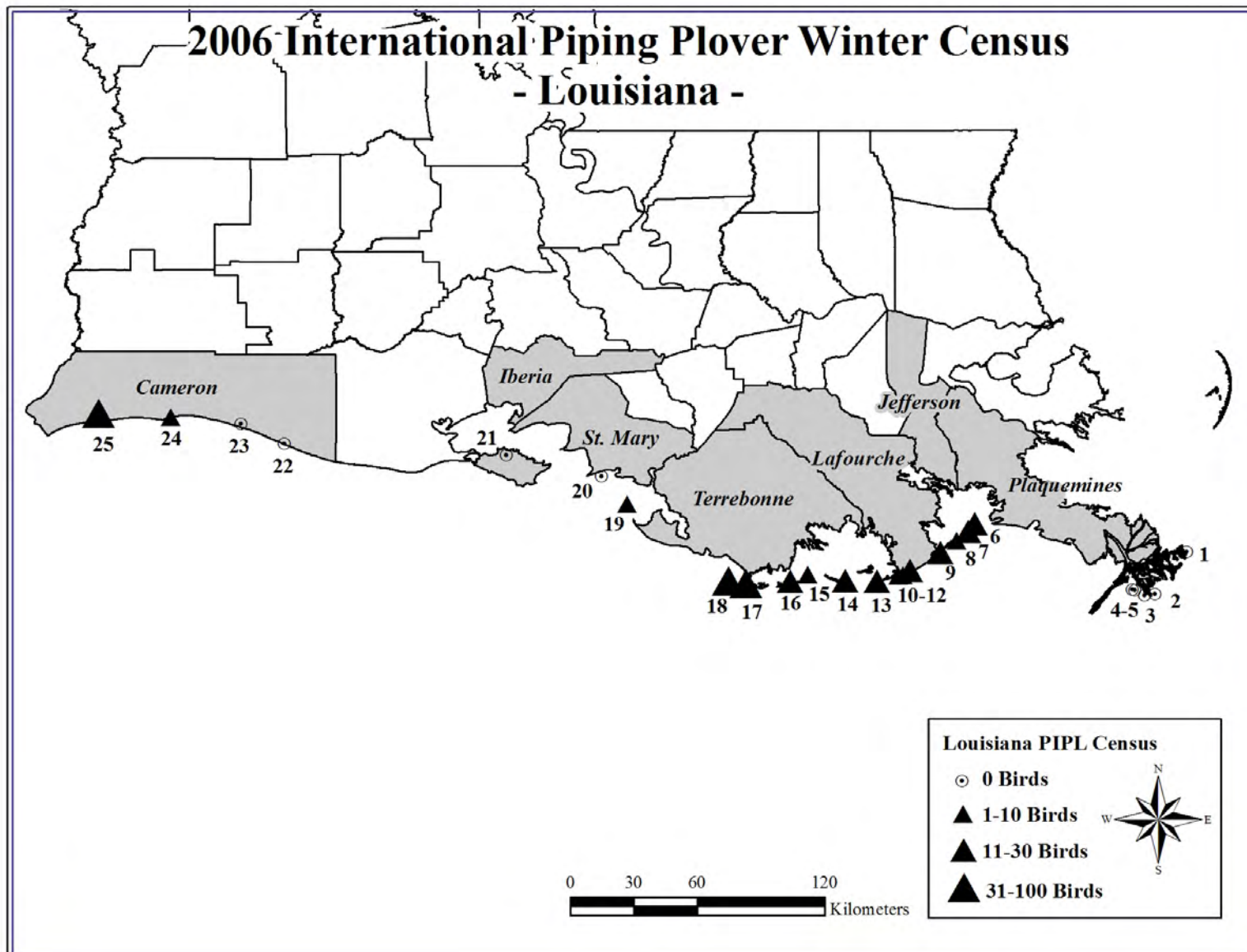
The Chandeleur Islands were not surveyed in 2006 due to logistical problems in reaching the islands. Ariel photography was used prior to the census and suggested that very little plover habitat remained after Hurricane Katrina. Over

flights of the island chain in June 2006 revealed several large cuts throughout the islands and little to no beach tidal interface. It is unlikely that any Piping Plovers utilized these islands during the winter census period. During future censuses, a concerted effort should be made to survey the islands.

Although all previous Piping Plover census sites were surveyed for Piping Plovers during 2006 no effort was made (with the exception of Marsh Island Refuge) to detect new wintering sites. Although Hurricanes Katrina and Rita destroyed many coastal islands, it is just as likely a newly emergent bare sand island was formed where Piping Plovers may have concentrated (as was the case with the unnamed island in LaFourche Parish). It is important during future censuses that an effort is made to locate new suitable Piping Plover wintering habitat.

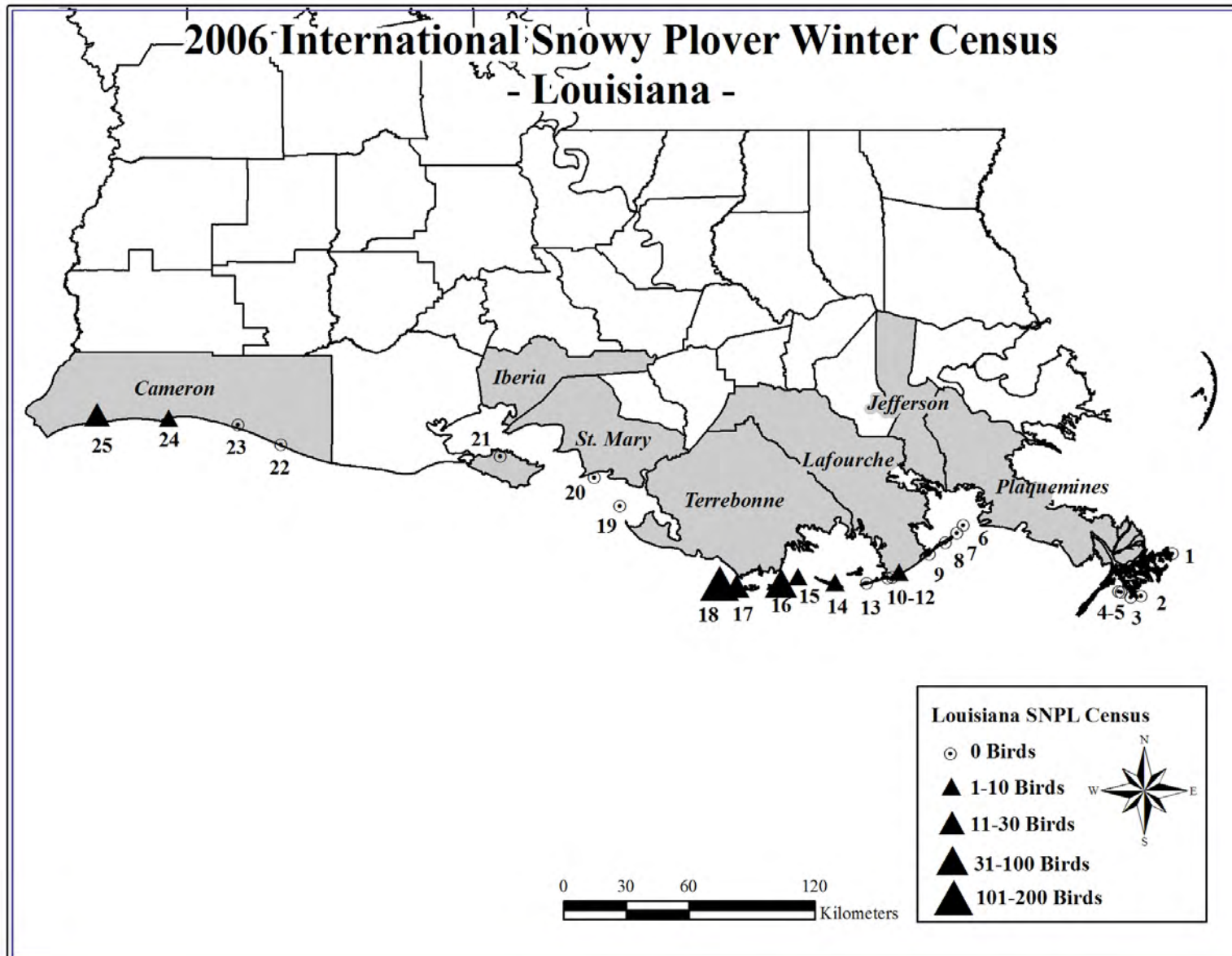
## Comparison of Census Numbers

Species	1991	1996	2001	2006
Piping Plover	750	420	511	226
Snowy Plover	n.r.	n.r.	36	207
Wilson's Plover	n.r.	n.r.	n.r.	63



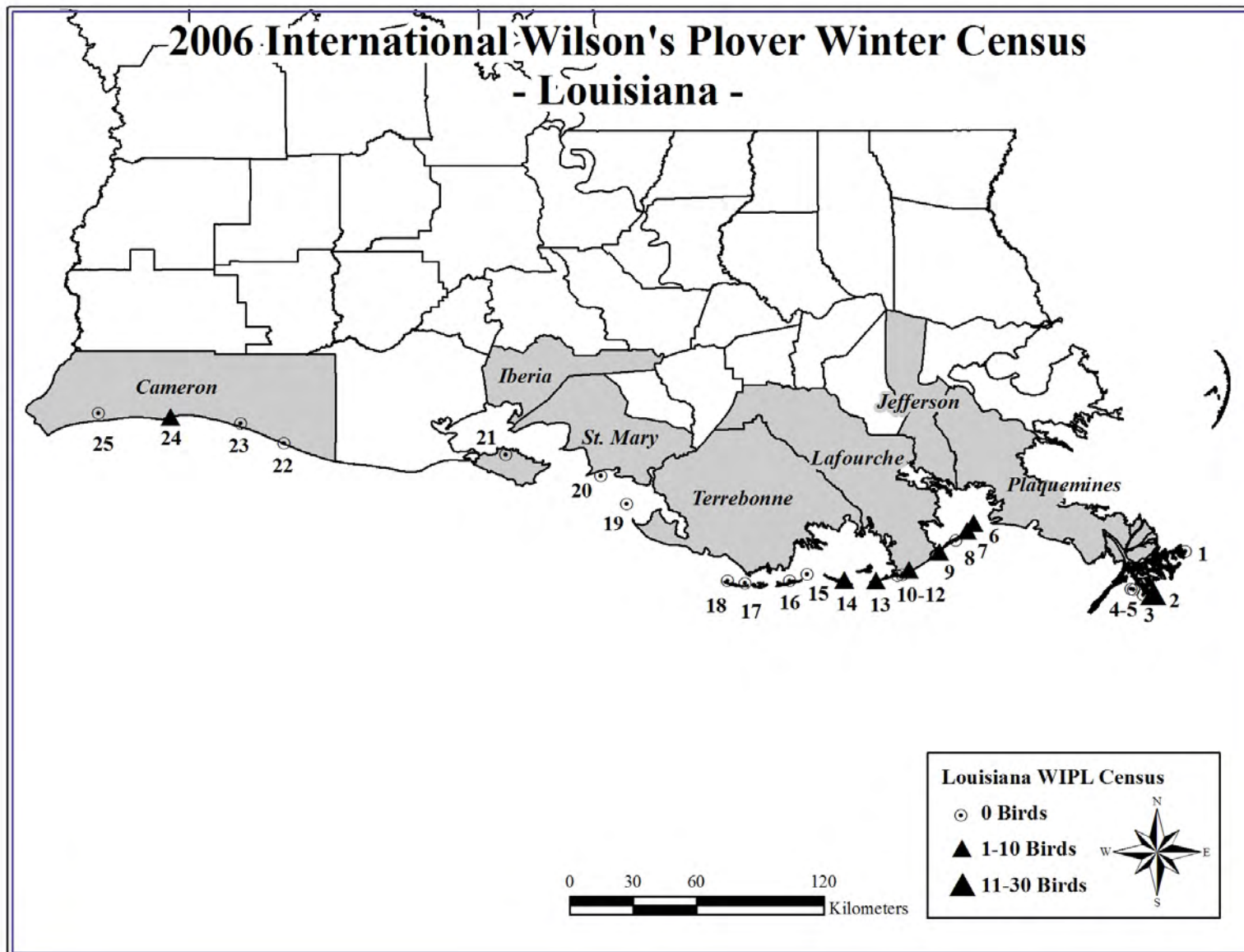
## The 2006 International Piping Plover Winter Census in Louisiana

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cameron	East Jetty to Rutherford Beach	24	n.r.	3	22.6	III A 1	III A 1	Yes	Yes	Yes	s(p)
Cameron	East side of Mermentau Ship Channel	23	2/03	0	0.4	III A 2,4,8		Yes	No	Yes	p
Cameron	Rockefeller Refuge, west	22	n.r.	0	16.9	III A 1		Yes	Yes	Yes	s(p)
Cameron	Smith Bayou to West Jetty	25	2/04	35	53.2	III A 1	III A F 1	Yes	Yes	Yes	s(p)
Iberia	Marsh Island Refuge	21	1/30	0	12.9	II E 7 11		Yes	Yes	No	s(p)
Jefferson	Elmers Island	9	1/31	15	11.3	III A 1 3 8 10	III A 1	Yes	Yes	Yes	p
Jefferson	Grand Isle	8	2/01	2	8.0	III B 1	III B 1	Yes	Yes	Yes	m
Jefferson	West Grand Terre Island	7	1/24	11	4.8	III B 1 10	III B 1	No	Yes	Yes	p
Lafourche	Belle Pass, west	12	1/24	1	4.8	III A 1 8 10	III A 1	No	Yes	Yes	s(p)
Lafourche	East Timbalier Island	13	1/23	14	4.0	III B 1 2 10	III B 1	Yes	No	Yes	p
Lafourche	Fourchon Beach, east	10	1/25	19	1.6	III A 1 8 10	III A 8	Yes	Yes	Yes	p
Lafourche	Fourchon Beach, west	11	2/01	2	4.8	III A 1	III A 1	Yes	Yes	Yes	p
Plaquemines	East Grand Terre Island	6	1/24	11	0.8	III B 1 2 8 10	III B 2	No	Yes	Yes	p
Plaquemines	Pass A L'outre	1	2/06	0	0.8	III D 4		No	No	Yes	s(p)
Plaquemines	South Pass, east (Pass A L'outre WMA)	2	2/05	0	0.8	III E 1		No	Yes	Yes	s(p)
Plaquemines	South Pass, west #1 (Pass A L'outre WMA)	4	2/06	0	0.4	III B 1		No	No	Yes	s(p)
Plaquemines	South Pass, west #2 (Pass A L'outre WMA)	3	2/06	0	0.8	III C E 1		No	Yes	Yes	s(p)
Plaquemines	South Pass, west #3 (Pass A L'outre WMA)	5	2/06	0	0.8	III B E 1		No	No	Yes	s(p)
St. Mary	Atchafalaya Delta	19	2/03	6	10.4	III C 3	III C 3	Yes	Yes	Yes	s(p)
St. Mary	Wax Lake Delta	20	2/06	0	2.3	III G 11		No	Yes	Yes	s(p)
Terrebonne	Raccoon Island (Last Island)	18	n.r.	39	2.4	III B 1	III B 1	Yes	Yes	Yes	s(p)
Terrebonne	Trinity Island/East Island	16	n.r.	16	16.1	III B 1	III B 1	Yes	Yes	Yes	s(p)
Terrebonne	Whiskey Island (Central Isles Dernieres)	17	n.r.	31	9.7	III B 1	III B 1	No	Yes	Yes	s(p)
Terrebonne	Wine Island	15	1/23	4	0.4	III B 1 3	III B 3	No	No	Yes	s(p)
Terrebonne/ Lafourche	West Timbalier Island	14	n.r.	17	12.9	III B 1	III B 1 8	Yes	Yes	Yes	s(p)
<b>Total</b>				<b>226</b>	<b>204.8</b>						



## The 2006 International Snowy Plover Winter Census in Louisiana

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cameron	East Jetty to Rutherford Beach	24	n.r.	9	22.6	III A 1	III A 1	Yes	Yes	Yes	s(p)
Cameron	East side of Mermentau Ship Channel	23	2/03	0	0.4	III A 2,4,8		Yes	No	Yes	p
Cameron	Rockefeller Refuge, west	22	n.r.	0	16.9	III A 1		Yes	Yes	Yes	s(p)
Cameron	Smith Bayou to West Jetty	25	2/04	16	53.2	III A 1	III A F 1	Yes	Yes	Yes	s(p)
Iberia	Marsh Island Refuge	21	1/30	0	12.9	II E 7 11		Yes	Yes	No	s(p)
Jefferson	Elmers Island	9	1/31	0	11.3	III A 1 3 8 10		Yes	Yes	Yes	p
Jefferson	Grand Isle	8	2/01	0	8.0	III B 1		Yes	Yes	Yes	m
Jefferson	West Grand Terre Island	7	1/24	0	4.8	III B 1 10		No	Yes	Yes	p
Lafourche	Belle Pass, west	12	1/24	0	4.8	III A 1 8 10		No	Yes	Yes	s(p)
Lafourche	East Timbalier Island	13	1/23	0	4.0	III B 1 2 10		Yes	No	Yes	p
Lafourche	Fourchon Beach, east	10	1/25	6	1.6	III A 1 8 10		Yes	Yes	Yes	p
Lafourche	Fourchon Beach, west	11	2/01	0	4.8	III A 1		Yes	Yes	Yes	p
Plaquemines	East Grand Terre Island	6	1/24	0	0.8	III B 1 2 8 10		No	Yes	Yes	p
Plaquemines	Pass A L'outré	1	2/06	0	0.8	III D 4		No	No	Yes	s(p)
Plaquemines	South Pass, east (Pass A L'outré WMA)	2	2/05	0	0.8	III E 1		No	Yes	Yes	s(p)
Plaquemines	South Pass, west #1 (Pass A L'outré WMA)	4	2/06	0	0.4	III B 1		No	No	Yes	s(p)
Plaquemines	South Pass, west #2 (Pass A L'outré WMA)	3	2/06	0	0.8	III C E 1		No	Yes	Yes	s(p)
Plaquemines	South Pass, west #3 (Pass A L'outré WMA)	5	2/06	0	0.8	III B E 1		No	No	Yes	s(p)
St. Mary	Atchafalaya Delta	19	2/03	0	10.4	III C 3		Yes	Yes	Yes	s(p)
St. Mary	Wax Lake Delta	20	2/06	0	2.3	III G 11		No	Yes	Yes	s(p)
Terrebonne	Raccoon Island (Last Island)	18	n.r.	108	2.4	III B 1	III B 1	Yes	Yes	Yes	s(p)
Terrebonne	Trinity Island/East Island	16	n.r.	39	16.1	III B 1	III B 1	Yes	Yes	Yes	s(p)
Terrebonne	Whiskey Island (Central Isles Dernieres)	17	n.r.	23	9.7	III B 1	III B 1	No	Yes	Yes	s(p)
Terrebonne	Wine Island	15	1/23	3	0.4	III B 1 3	III B 3	No	No	Yes	s(p)
Terrebonne/ Lafourche	West Timbalier Island	14	n.r.	3	12.9	III B 1	III B 1	Yes	Yes	Yes	s(p)
<b>Total</b>				<b>207</b>	<b>204.8</b>						





## The 2006 International Wilson's Plover Winter Census in Louisiana

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cameron	East Jetty to Rutherford Beach	24	n.r.	2	22.6	III A 1	III A 1	Yes	Yes	Yes	s(p)
Cameron	East side of Mermentau Ship Channel	23	2/03	0	0.4	III A 2,4,8		Yes	No	Yes	p
Cameron	Rockefeller Refuge, west	22	n.r.	0	16.9	III A 1		Yes	Yes	Yes	s(p)
Cameron	Smith Bayou to West Jetty	25	2/04	0	53.2	III A 1		Yes	Yes	Yes	s(p)
Iberia	Marsh Island Refuge	21	1/30	0	12.9	II E 7 11		Yes	Yes	No	s(p)
Jefferson	Elmers Island	9	1/31	1	11.3	III A 1 3 8 10	III A 1	Yes	Yes	Yes	p
Jefferson	Grand Isle	8	2/01	0	8.0	III B 1		Yes	Yes	Yes	m
Jefferson	West Grand Terre Island	7	1/24	10	4.8	III B 1 10	III B 1	No	Yes	Yes	p
Lafourche	Belle Pass, west	12	1/24	0	4.8	III A 1 8 10		No	Yes	Yes	s(p)
Lafourche	East Timbalier Island	13	1/23	7	4.0	III B 1 2 10	III B 1	Yes	No	Yes	p
Lafourche	Fourchon Beach, east	10	1/25	1	1.6	III A 1 8 10	III A 8	Yes	Yes	Yes	p
Lafourche	Fourchon Beach, west	11	2/01	0	4.8	III A 1		Yes	Yes	Yes	p
Plaquemines	East Grand Terre Island	6	1/24	7	0.8	III B 1 2 8 10	III B 1	No	Yes	Yes	p
Plaquemines	Pass A L'outre	1	2/06	0	0.8	III D 4		No	No	Yes	s(p)
Plaquemines	South Pass, east (Pass A L'outre WMA)	2	2/05	30	0.8	III E 1	III E 1	No	Yes	Yes	s(p)
Plaquemines	South Pass, west #1 (Pass A L'outre WMA)	4	2/06	0	0.4	III B 1		No	No	Yes	s(p)
Plaquemines	South Pass, west #2 (Pass A L'outre WMA)	3	2/06	0	0.8	III C E 1		No	Yes	Yes	s(p)
Plaquemines	South Pass, west #3 (Pass A L'outre WMA)	5	2/06	0	0.8	III B E 1		No	No	Yes	s(p)
St. Mary	Atchafalaya Delta	19	2/03	0	10.4	III C 3		Yes	Yes	Yes	s(p)
St. Mary	Wax Lake Delta	20	2/06	0	3.2	III G 11		No	Yes	Yes	s(p)
Terrebonne	Raccoon Island (Last Island)	18	n.r.	0	2.4	III B 1		Yes	Yes	Yes	s(p)
Terrebonne	Trinity Island/East Island	16	n.r.	0	16.1	III B 1		Yes	Yes	Yes	s(p)
Terrebonne	Whiskey Island (Central Isles Dernieres)	17	n.r.	0	9.7	III B 1		No	Yes	Yes	s(p)
Terrebonne	Wine Island	15	1/23	0	0.4	III B 1 3		No	No	Yes	s(p)
Terrebonne/ Lafourche	West Timbalier Island	14	n.r.	5	12.9	III B 1		Yes	Yes	Yes	s(p)
<b>Total</b>				<b>63</b>	<b>204.8</b>						

# The 2006 International Piping Plover Winter Census in Texas

As in 2001, the Texas coast was split into three Census regions. The upper Texas coast covers habitat from the Louisiana border to Matagorda County. The central Texas coast includes Calhoun to Kenedy Counties. The third region, lower Texas, includes the remaining two counties, Willacy and Cameron. The total number of Piping Plovers estimated during the 2006 Census of Texas was. Additionally, Snowy Plovers and Wilson's Plovers were sighted on Texas beaches during the 2006 Census.

## Comparison of Census Numbers

Species	1991	1996	2001	2006
Piping Plover	1,904	1,333	1,042	2,090
Snowy Plover	n.r.	n.r.	690	1,340
Wilson's Plover	n.r.	n.r.	n.r.	85

## Upper Texas

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The upper Texas Coast was surveyed by total of 36 participants including Federal and State employees and many volunteers from non-governmental organizations. Our Piping Plover count was particularly high in 2006, with 551 birds observed compared to 120 in 2001. Snowy Plover numbers were also high, with 231

observed during the 2006 Census compared to 147 in 2001. Additionally, we recorded 17 Wilson's Plovers.

Weather was fair during the Census window, however, it was not better than during the 2001 Census window. In 2006, we had an extremely long period of sustained low winter tides. Such low tides are not ideal for surveying since it is difficult to cover the extensive habitat exposed during low tides.

An effort was made to survey some areas that had not been covered in previous Census'. However, this increased coverage does not seem to have been responsible for the increase in numbers, as "new" areas accounted for only one Piping Plover (.002% of total). Our high numbers are attributable mainly to unusually large congregations of birds at known aggregation points (i.e. 275 Piping Plovers at Bolivar Flats and 70 at San Luis Pass)

## Central Texas

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U.S. Fish and Wildlife Service  
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Between 23 January and 4 February, 2006, a count of wintering piping, snowy and Wilson's Plovers was undertaken along the central portion of the Texas coast as part of the 4<sup>th</sup> International Piping Plover Winter Census. The central Texas coast region, for purposes of this census, extended from the Matagorda-Calhoun County line on the north to the middle of the Land Cut in the Laguna Madre (Kenedy County) in the south. This portion of the Texas coast encompasses 4 major bays: San Antonio, Aransas, Corpus Christi and the Upper Laguna Madre, along with several secondary and tertiary bays.

Approximately 1,127 km (700 miles) of the Central coast; including bay shorelines, the margins of bay islands and the Gulf of Mexico beach, were surveyed by 57 participants over the course of the two week window. The surveys were conducted using foot travel, all-terrain vehicles, trucks, boats and airboats.

A total of 1,080 Piping Plovers, 956 Snowy Plovers and 66 Wilson's Plovers were counted in the central Texas coast region. This 2006 count of Piping Plovers exceeded the results of the previous 3 surveys (1991, 1996 and 2001) in this region. Snowy Plover numbers on the Central coast in 2006 were higher than the total count for the entire Texas coast from the 2001 census (the first year that this species was assessed). Wilson's Plovers were included in this international effort for the first time in 2006, so comparisons with previous years are not possible.

Surveys for the 3 species were undertaken at most of the important Piping Plover sites known for this region of the Texas coast. The Gulf beach of the central Texas coast was thoroughly surveyed producing a count of 97 birds. Many of the sites within the bay systems where Piping Plovers were found in previous surveys had birds in 2006, although there were a few cases where the plovers were within the same bay systems but on different areas of exposed seagrass beds than was true in previous years. In two locations plovers congregated along inlet shores; across from the north and from the south ends of Matagorda Island. This northern inlet was also where the majority of Wilson's Plovers were observed. Piping Plovers were located in large groups on the bay shore mud and sand flats of San Jose, Mustang and North Padre Islands, as well as on emergent seagrass beds, mud flats and oyster reefs within the Aransas and Corpus Christi Bay systems. A very large concentration of piping and Snowy Plovers was found foraging on exposed flats and seagrasses in two small lagoons in the Espiritu Santo Bay

between northern Matagorda Island and the mainland. This comprised the first survey of this particular area and was made possible through use of an airboat since no other craft was capable of traversing the extremely shallow water in these small embayments.

The mainland bay shores along the central Texas coast did not host many Piping Plovers this year. A small group of Piping Plovers was found near the mouth of St. Charles Bay and another group along the shore of Pt. O'Connor, but other than one or two elsewhere, this species was found on habitats in the more eastern portions of the bays or on the bay shore of the barrier islands, away from the mainland. In contrast, some Snowy Plovers were located on mainland habitats around the perimeter of Nueces Bay, in areas from which they have previously been documented nesting. A small group of Wilson's Plovers were observed on the Copano Bay shore near the town of Bayside.

The areas not covered in the 2006 census included the Laguna Madre margin of North Padre Island south of the Land Cut, Baffin Bay's shoreline, the northern bay shore of San Jose Island, Mission Bay, the north/northeastern shoreline of Copano Bay, and the mainland shoreline of San Antonio Bay. Lack of coverage was primarily due to inability to access these areas. The Laguna Madre shore at the southern end of North Padre Island is so shallow that an airboat is required to get close enough to view birds yet is so remote that carrying adequate fuel is a limitation to making the long distance round trip. Previous surveys of Baffin Bay's edges have not yielded many plovers and with the access problems and the anticipated low payoff, a decision was made not to survey this area. The northern end of San Jose Island went uncounted because the airboat used to survey the southern bay shore did not have the fuel capacity to make the entire round trip. Surveying the mainland shores on the north and northeastern sides of Copano Bay and

Mission Bay would have required an airboat but one was not available. There is no history of plover use in this area, although survey coverage of this area has never been good. Finally, the mainland shores of San Antonio Bay were not surveyed since these shorelines do not constitute good plover habitat.

The 2006 census was a fairly thorough survey effort for Piping Plovers in the central Texas coast region. Two components of the census effort probably contributed to the high numbers of plovers found this year: 1) an effort was made to census any given bay system, from Gulf beach to mainland shore, including bay islands' shorelines, in one day, in order to reduce the chance of repeat counts of birds, and 2) airboats were used to access large areas of the bay shorelines of Matagorda, San Jose, Mustang and North Padre Islands, as well as one secondary bay system that was not counted in past surveys. The survey efforts on Matagorda Island, and in Aransas, Redfish, Nueces, and Corpus Christi Bays and the Upper Laguna Madre were the most comprehensive of the 4 censuses to date. The use of airboats significantly increased the areal extent of survey coverage. It is interesting to note that the numbers of plovers located within this region this year most closely resembles the numbers found in 1991, the only other census in which airboats were used.

It is unknown whether any particular circumstance affected the higher numbers of piping and Snowy Plovers found within the Central Texas coast region this year. Speculation has arisen that some plovers may have shifted to the Texas coast after the 2005 hurricane damage to Louisiana's Chandeleur Islands, however it is not clear whether these birds would move any further south/west than the upper Texas coast. The high numbers of piping and Snowy Plovers found this year on the central coast is assumed to be a result of the extent of survey coverage. Weather conditions

during the two-week census window were fairly mild without strong, wet storms. This enhanced survey coverage within the bays since boats and airboats were not grounded by poor weather. The low water levels that are typical of Texas bay systems in winter were at play, indeed the January 2006 tides were extremely low. These low water levels exposed large areas of mud and sand flats, seagrass beds and shell reefs, increasing the amount and distribution of available habitat. The low water also increased the difficulty of reaching much of this habitat, however census participants reported covering most of the areas to which they were assigned. As was true in previous censuses, plovers were generally found in groups as opposed to scattered individuals, except along the Gulf beach. Numbers of Piping Plovers found along stretches of the Gulf beach in 2006 did not compare with the high numbers found in some other years, but the presence of plovers on the Gulf beach tends to vary on a day-to-day basis depending on the wind-driven water levels on the bay shorelines. Large numbers of Piping Plovers were found foraging with mixed flocks of other shorebirds, including Snowy Plovers. In fact, several areas with high concentrations of Piping Plovers also supported large numbers of Snowy Plovers. Wilson's Plovers were not abundant on the Central Texas coast during this January survey effort and it is assumed that this species was wintering further south and had not yet begun its northward migration at the time the census was carried out.

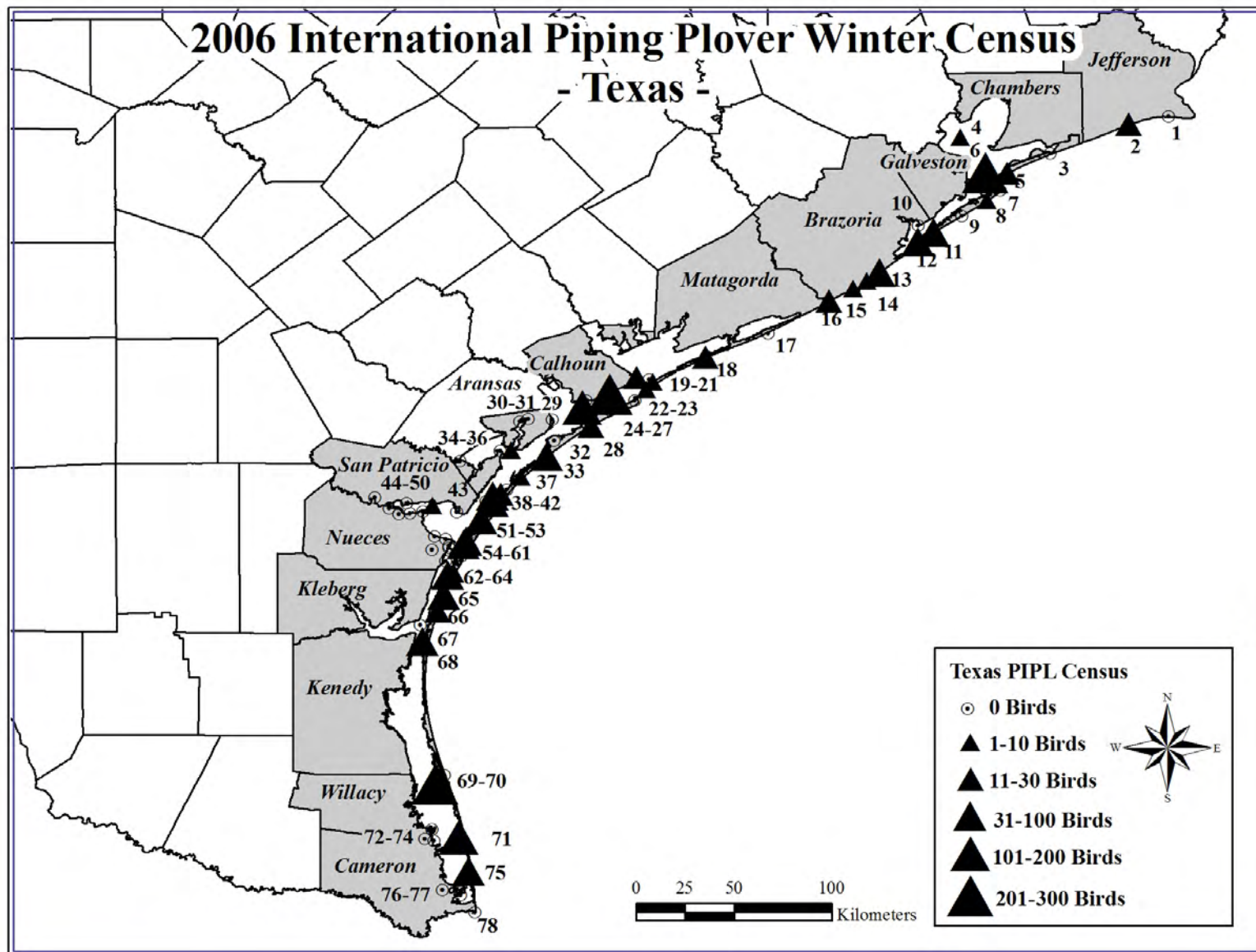
## **Lower Texas**

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The 2006 Census of the lower Texas coast was accomplished by 7 participants from U.S. Fish and Wildlife Service, The Nature Conservancy and the Canadian Wildlife Service. South Padre Island and Boca Chica Beach were surveyed in addition to mainland sites, primarily on refuge lands.

In general, weather did not seem to be a problem in 2006. However, 2006 Census numbers were a bit lower than 2001 (i.e., 459 Piping Plovers on South Padre Island in 2006 compared to 603 birds in 2001). There was some confusion regarding survey results from South Padre island because two teams surveyed similar areas on different days. Hence, our estimate for South Padre Island may be conservative. In future efforts, it would be preferable to assemble a large group of surveyors and attempt to cover South Padre Island in a single day.

*Summarized by E. Elliott-Smith*



## The 2006 International Piping Plover Winter Census in Texas

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Aransas	Aransas Bay, Goose Island	36	1/25	8	6.5	II G 7 10	II F 7	No	No	No	f
Aransas	Copano Bay, Bayside (Aransas River Delta)	35	1/25	0	29.5	II A C 8		No	No	No	p
Aransas	Copano Bay, E shore	34	2/26	0	161.3	II C 8		No	No	No	f
Aransas	E Blackjack (Aransas NWR Complex)	29	1/26	0	9.7	II A 7 8		No	No	No	s(p)
Aransas	Redfish Bay (N of causeway from Aransas Pass to Port)	40	1/25	42	30.2	II A C D E 7 8 9 11	II D E 8	No	No	No	p
Aransas	Redfish Bay (S of causeway from Aransas Pass to Port)	41	1/25	0	9.3	II A C D 1 2 4 7 8		No	No	No	s(p)
Aransas	San Jose Island bayside	38	1/25	0	41.9	II B C 7 8		Yes	Yes	Yes	s/p
Aransas	San Jose Island bayside (N Pass)	39	1/25	25	1.6	II B 3	II B 3	No	No	No	s(p)
Aransas	San Jose Island (Gulf side)	37	1/25	10	12.9	III B 1	III B 1	Yes	Yes	Yes	s(p)
Aransas	Tatton Unit (Aransas NWR Complex)	30	1/26	0	11.3	II A 3 8 10		Yes	Yes	Yes	f
Aransas/ Calhoun	W Blackjack (Aransas NWR Complex)	31	1/26	0	17.7	II A 8		No	No	No	s(p)
Brazoria	Follets Island	13	2/01	82	19.4	III B 1	III B 1	Yes	Yes	Yes	s
Brazoria	Quintana Beach to Bryan Beach State Park	14	1/24	7	11.3	II III B 1	III B 1	Yes	Yes	Yes	s
Brazoria	West Bay Mooring Area BU Site	10	1/27	0	1.6	II C 8		No	No	No	s(p)
Brazoria	Wolf Island	15	2/09	7	8.1	II III E 1	III E 1	Yes	Yes	Yes	s
Calhoun	Cedar Bayou, Matagorda Island NWR (Gulf Beach Route)	33	1/26	84	9.1	III B 1	III B 1	Yes	Yes	Yes	f
Calhoun	Matagorda Island NWR Beach (J-Hook and N Western Marsh)	27	1/26	0	24.2	II III B 1 3 9 10		Yes	Yes	Yes	f
Calhoun	Matagorda Island Inner Levee System	22	1/26	0	11.9	II B 5 8 9 II B 1 2 4 6 7 8		Yes	Yes	No	f
Calhoun	Matagorda Island NWR Bayside	32	1/26	0	82.6	10		Yes	Yes	Yes	f
Calhoun	Matagorda Island NWR Gulf Beach	28	1/26	29	40.3	III B 1	III B 1	Yes	Yes	Yes	f
Calhoun	Port O'Conner Shoreline	19	1/23	15	0.8	II V A 1 8	II V A 1 8	Yes	No	Yes	s/m/c
Calhoun	Shoalwater Bay	24	1/26	175	11.3	II C 1 3 8 10 11	II C 8 11	No	No	No	s(p)
Calhoun	The Lagoon/Blackberry Island	26	1/31	252	21.0	II C D 4 8 10 II A 1 2 3 4 5 7 8	II D 4	No	No	No	s(p)
Calhoun	Welder Flats Coastal Preserve (CTX6)	25	1/26	0	24.2	10		No	No	Yes	p
Cameron	Bahia Grande	77	2/06	0	16.1	II A 3		No	Yes	Yes	f

## The 2006 International Piping Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cameron	Brownville Ship Channel Spoil Cells	76	2/06	0	8.4	V G 2		Yes	Yes	Yes	f
Cameron	Buena Vista Ranch	74	2/03	0	12.0	II A 3 8		Yes	Yes	Yes	p
Cameron	Laguna Atascosa NWR Bayside Drive	73	2/03	0	9.0	V G 8 10		Yes	Yes	Yes	f
Cameron	South Bay/Boca Chica Beach	78	2/03	0	16.1	II III A 1 7 8		Yes	Yes	Yes	s/p
Cameron	South Padre Island, middle of Laguna Madre Side	71	1/31	159	18.0			Yes	Yes	Yes	f
Cameron	South Padre Island, S end on Laguna Madre Side	75	1/30	64	20.0			Yes	Yes	Yes	f
Cameron	Unit 5, (Horse Island Cove) Laguna Atascosa NWR	72	2/03	0	7.9	II A 3 8		No	Yes	Yes	f
Chambers	Mid Bay	4	2/02	1	1.6	II C 2	II C 2	No	No	No	c
Galveston	Big Reef; Galveston Island	7	2/02	0	2.6	II III V B 1 3		Yes	Yes	Yes	m
Galveston	Bolivar Flats	6	1/21	275	3.1	III B 1 8	III B 8	Yes	Yes	Yes	s/p
Galveston	Galveston Island Beaches; end of seawall to Galveston Island State Park	9	2/02	0	9.7	III B 1		Yes	Yes	Yes	s/m
Galveston	Galveston Island Beaches; E beach to end of seawall	8	2/02	3	16.1	III B 1	III B 1	Yes	Yes	Yes	s(p)
Galveston	Galveston Island Beaches; Galveston Island State Park to San Luis Pass	11	2/02	41	14.5	III B 1	III B 1	Yes	Yes	Yes	s(p)
Galveston	High Island to Bolivar Flats	5	1/21	11	48.4	III B 1	III B 1	Yes	Yes	Yes	p
Galveston	Rollover Pass Flats	3	2/03	0	0.8	II B 3 4 7		Yes	No	No	p
Galveston	San Luis Pass; Galveston Island	12	2/02	70	6.5	II III V B 1 2 3 4	II III B 1 4	Yes	Yes	Yes	s(p)
Jefferson	McFaddin NWR to High Island	2	2/02	0	10.0	III A 1 8		Yes	Yes	Yes	s
Jefferson	McFaddin NWR to Sabine Pass	1	2/03	11	42.7	III A 1	III A 1	Yes	Yes	Yes	s
Kenedy	Padre Island National Seashore, S bayside	69	1/31	0	8.1	V B F 3 5 8 9 10		No	No	No	f
Kleberg	Nighthawk Bay	64	1/30	50	3.7	II B G 3 9 10	II B F 9	Yes	Yes	Yes	f/s
Kleberg	Padre Island National Seashore, Gulf beach (closed area)	65	1/30	31	9.0	III B 1	III B 1	No	Yes	Yes	f
Kleberg/ Kenedy	Padre Island National Seashore (Bird Island basin to landcut)	68	1/30	82	48.4	II B 1 3 8 9	II B 3 8 9	No	No	No	f
Kleberg/ Kenedy	Upper Laguna Madre (Bird Island basin to the landcut)	67	1/31	0	100.0	II C G 8		No	No	No	s(p)
Willacy	Padre Island National Seashore, Gulf beach (CTX7)	66	1/30	17	96.8	III B 1	III B 1	Yes	Yes	Yes	f

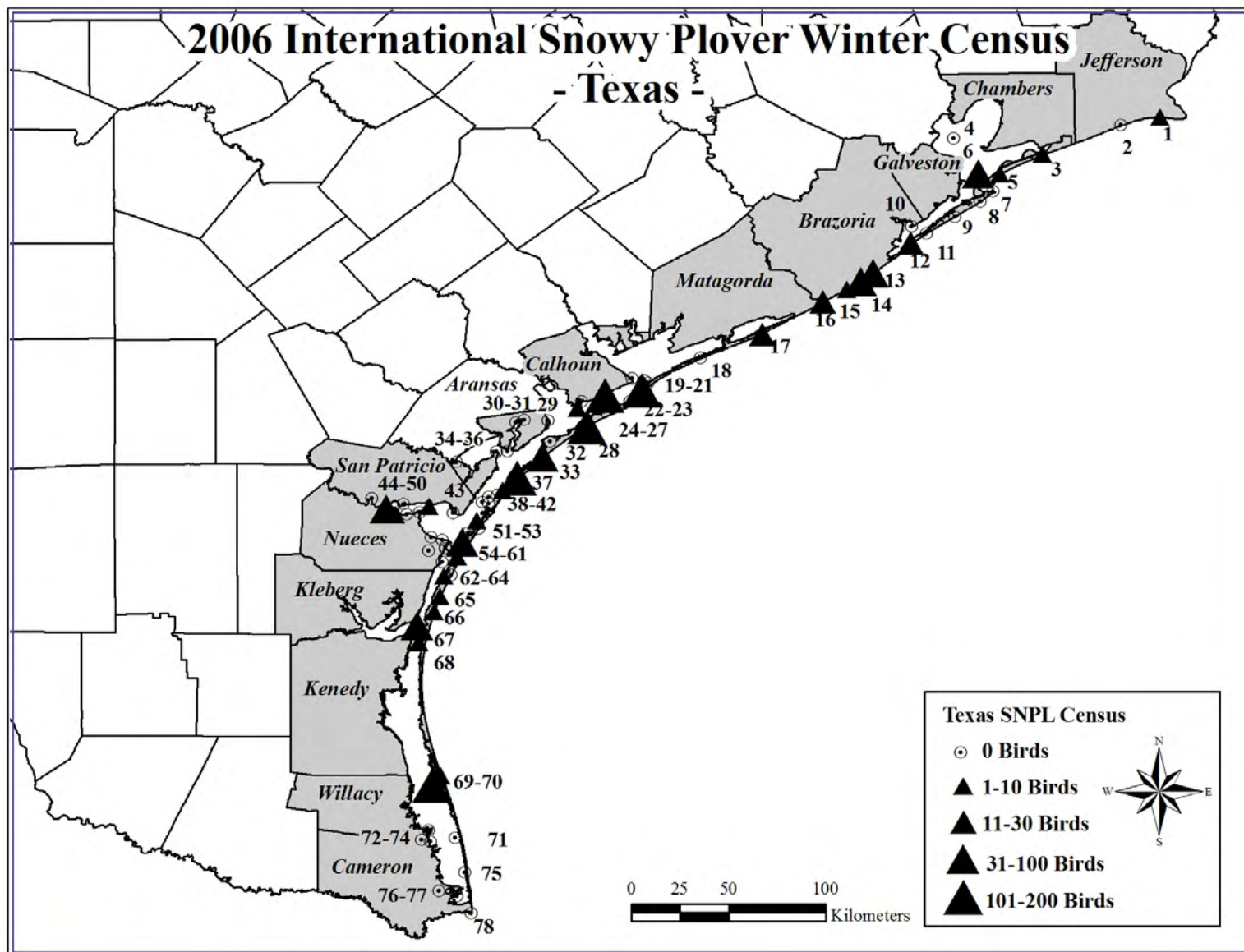


## The 2006 International Piping Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Matagorda	Decros Point	23	2/15	10	12.6	II III B 1	II III B 1	Yes	No	Yes	s/p
Matagorda	Matagorda Peninsula, bayside and Colorado River Delta	21	2/03	7	64.5	II A B D F G 1 2	I F 8	Yes	Yes	Yes	s(p)
Matagorda	Matagorda Peninsula, E	17	1/31	0	36.6	II III G 1 8		Yes	Yes	Yes	s(p)
Matagorda	Matagorda Peninsula, W	18	2/03	11		III B 1	III B 1	Yes	Yes	Yes	s(p)
Matagorda	Sargent Beach	16	1/31	25	10.5	II III A 1 8	II A 8	Yes	Yes	Yes	s(p)
Matagorda	Sundown Island (Matagorda Bay) (CTX26)	20	1/25	0	2.4	II C 1		No	No	Yes	f
Nueces	Corpus Christi Ship Channel Inner Harbor	48	1/26	0	2.4	II A G 1		No	No	No	p
Nueces	Laguna Madre, upper (GIWW north of JFK Causeway) (CTX20)	60	1/26	0	2.4	II A 4 8 10		Yes	Yes	Yes	m/p
Nueces	Mollie Beattie	61	1/25	0	5.8	V F 3 7 8 9 10		Yes	Yes	Yes	s(p)
Nueces	Mustang Island - Francine Cohn Preserve (mid bayside)	53	1/26	0	2.9	II B C 5 8		Yes	Yes	Yes	s(p)
Nueces	Mustang Island - N end, N bayside, Pelican and Shamrock Islands	51	1/26	34	40.3	II B C 3 8 9 11	III B C 3 8 9 11	Yes	Yes	Yes	s(p)
Nueces	Mustang Island - Port A to Packery (gulf side)	52	1/26	0	12.1	III B 1		Yes	Yes	Yes	p
Nueces	Mustang Island State Park (S bayside and Fish Pass)	54	1/26	76	6.5	II B 1 3 8 9 10 11	II B 11	No	Yes	Yes	s(p)
Nueces	Oso Bay shoreline, between Mud Bridge and rail road tracks	58	1/26	0	2.0	IV A 8		Yes	Yes	Yes	s(p)
Nueces	Oso Bay, upper (Mud Bridge) (CTX22)	56	1/26	0	12.7	II A C 4 8		Yes	Yes	Yes	f
Nueces	Port of Corpus Christi property S of Nueces River	45	1/26	0	4.8	V G 3 5 8 9		No	No	No	p
Nueces	Redfish Bay (NE part)	42	1/25	52	25.8	II E 2 7 8 11	III E 2 7 8 11	Yes	Yes	Yes	s(p)
Nueces	Rincon Channel mudflats	49	1/26	0	1.0	II A 3 8		No	No	Yes	unk
Nueces	S side of JFK Causeway and Flour Bluff/Laguna Madre Shoreline	59	1/30	0	4.8	II A 3 8 9		Yes	Yes	Yes	s/p
Nueces	Upper Laguna Madre/S end of Corpus Christi Bay	55	1/26	84	33.9	II C D G 3 8 9	II D G 3 8	Yes	Yes	Yes	s(p)
Nueces	Ward Island (CTX21)	57	1/26	0	2.6	II C 8 9		Yes	No	Yes	m
Nueces/ Kleberg	Packery to PINS	63	1/31	3	10.2	III B 1	III B 1	Yes	Yes	Yes	f/s

**The 2006 International Piping Plover Winter Census in Texas  
(Continued)**

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Nueces/ Kleberg	Upper Laguna Madre (islands between S Bird Island and Pita Island Channel) (CTX10A)	62	1/30	0	40.3	II A C D G 3 8		Yes	Yes	Yes	s(p)
San Patricio	Indian Point and Sunset Lake (CTX23)	50	1/26	1	3.2	II V G 1 1 1	III F 1	Yes	Yes	Yes	m
San Patricio	La Quinta Channel Islands	43	1/26	0	10.5	II C 1 1		Yes	Yes	Yes	s(p)
San Patricio	White's Point	47	1/26	0	4.8	V A 8		No	Yes	Yes	p
San Patricio/ Nueces	Nueces Delta (near Allison waste water treatment plant discharge) (CTX25)	44	1/26	0	4.8	V A 8 9		No	No	Yes	p
Nueces	Tule Lake (E of White's Point, Nueces Delta mitigation site) (CTX24)	46	1/26	0	1.6	V A 8 9		No	Yes	Yes	m
Willacy	South Padre Island, N end flats by Port Mansfield Channel	70	2/3	236	10.6	II B 9	II B 9	Yes	Yes	Yes	s(p)
<b>Total</b>				<b>2090</b>	<b>1499.9</b>						



## The 2006 International Snowy Plover Winter Census in Texas

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Aransas	Aransas Bay, Goose Island	36	1/25	0	6.5	II G 7 10		No	No	No	f
Aransas	Copano Bay, Bayside (Aransas River Delta)	35	1/25	0	29.5	II A C 8		No	No	No	p
Aransas	Copano Bay, E shore	34	2/26	0	161.3	II C 8		No	No	No	f
Aransas	E Blackjack (Aransas NWR Complex)	29	1/26	0	9.7	II A 7 8		No	No	No	s(p)
Aransas	Redfish Bay (N of causeway from Aransas Pass to Port)	40	1/25	0	30.2	II A C D E 7 8 9 11		No	No	No	p
Aransas	Redfish Bay (S of causeway from Aransas Pass to Port)	41	1/25	0	9.3	II A C D 1 2 4 7 8		No	No	No	s(p)
Aransas	San Jose Island bayside	38	1/25	3	41.9	II B C 7 8	III B 7	Yes	Yes	Yes	s/p
Aransas	San Jose Island bayside (N Pass)	39	1/25	0	1.6	II B 3		No	No	No	s(p)
Aransas	San Jose Island (Gulf side)	37	1/25	175	12.9	III B 1	III B 1	Yes	Yes	Yes	s(p)
Aransas	Tatton Unit (Aransas NWR Complex)	30	1/26	0	11.3	II A 3 8 10		Yes	Yes	Yes	f
Aransas/Calhoun	W Blackjack (Aransas NWR Complex)	31	1/26	0	17.7	II A 8		No	No	No	s(p)
Brazoria	Follets Island	13	2/01	40	19.4	III B 1	III B 1	Yes	Yes	Yes	s
Brazoria	Quintana Beach to Bryan Beach State Park	14	1/24	56	11.3	II III B 1	III B 1	Yes	Yes	Yes	s
Brazoria	West Bay Mooring Area BU Site	10	1/27	0	1.6	II C 8		No	No	No	s(p)
Brazoria	Wolf Island	15	2/09	1	8.1	II III E 1		Yes	Yes	Yes	s
Calhoun	Cedar Bayou, Matagorda Island NWR (Gulf Beach Route)	33	1/26	90	9.1	III B 1	III B 1	Yes	Yes	Yes	f
Calhoun	Matagorda Island NWR Beach (J-Hook and N Western Marsh)	27	1/26	0	24.2	II III B 1 3 9 10		Yes	Yes	Yes	f
Calhoun	Matagorda Island Inner Levee System	22	1/26	0	11.9	II B 5 8 9		Yes	Yes	No	f
Calhoun	Matagorda Island NWR Bayside	32	1/26	0	82.6	II B 1 2 4 6 7 8 10		Yes	Yes	Yes	f
Calhoun	Matagorda Island NWR Gulf Beach	28	1/26	159	40.3	III B 1	III B 1	Yes	Yes	Yes	f
Calhoun	Port O'Conner Shoreline	19	1/23	0	0.8	II V A 1 8		Yes	No	Yes	s/m/c
Calhoun	Shoalwater Bay	24	1/26	1	11.3	II C 1 3 8 10 11	II C 8 11	No	No	No	s(p)
Calhoun	The Lagoon/Blackberry Island	26	1/31	200	21.0	II C D 4 8 10	II D 4	No	No	No	s(p)
Calhoun	Welder Flats Coastal Preserve (CTX6)	25	1/26	0	24.2	II A 1 2 3 4 5 7 8 10		No	No	Yes	p
Cameron	Bahia Grande	77	2/06	0	16.1	II A 3		No	Yes	Yes	f

## The 2006 International Snowy Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cameron	Brownville Ship Channel Spoil Cells	76	2/06	0	8.4	V G 2		Yes	Yes	Yes	f
Cameron	Buena Vista Ranch	74	2/03	0	12.0	II A 3 8		Yes	Yes	Yes	p
Cameron	Laguna Atascosa NWR Bayside Drive	73	2/03	0	9.0	V G 8 10		Yes	Yes	Yes	f
Cameron	South Bay/Boca Chica Beach	78	2/03	0	16.1	II III A 1 7 8		Yes	Yes	Yes	s/p
Cameron	South Padre Island, middle of Laguna Madre Side	71	1/31	0 <sup>1</sup>	18.0			Yes	Yes	Yes	f
Cameron	South Padre Island, S end on Laguna Madre Side	75	1/30	0 <sup>1</sup>	20.0			Yes	Yes	Yes	f
Cameron	Unit 5, (Horse Island Cove) Laguna Atascosa NWR	72	2/03	0	7.9	II A 3 8		No	Yes	Yes	f
Chambers	Mid Bay	4	2/02	0	1.6	II C 2		No	No	No	c
Galveston	Big Reef; Galveston Island	7	2/02	0	2.6	II III V B 1 3		Yes	Yes	Yes	m
Galveston	Bolivar Flats	6	1/21	72	3.1	III B 1 8	III B 8	Yes	Yes	Yes	s/p
Galveston	Galveston Island Beaches; end of seawall to Galveston Island State Park	9	2/02	0	9.7	III B 1		Yes	Yes	Yes	s/m
Galveston	Galveston Island Beaches; E beach to end of seawall	8	2/02	0	16.1	III B 1		Yes	Yes	Yes	s(p)
Galveston	Galveston Island Beaches; Galveston Island State Park to San Luis Pass	11	2/02	6	14.5	III B 1		Yes	Yes	Yes	s(p)
Galveston	High Island to Bolivar Flats	5	1/21	1	48.4	III B 1	III B 1	Yes	Yes	Yes	p
Galveston	Rollover Pass Flats	3	2/03	5	0.8	II B 3 4 7	II B 4	Yes	No	No	p
Galveston	San Luis Pass; Galveston Island	12	2/02	12	6.5	II III V B 1 2 3 4	II III B 1 4	Yes	Yes	Yes	s(p)
Jefferson	McFaddin NWR to High Island	2	2/02	0	10.0	III A 1 8		Yes	Yes	Yes	s
Jefferson	McFaddin NWR to Sabine Pass	1	2/03	4	42.7	III A 1	III A 1	Yes	Yes	Yes	s
Kenedy	Padre Island National Seashore, S bayside	69	1/31	2	8.1	V B F 3 5 8 9 10	V F 3 8 9	No	No	No	f
Kleberg	Nighthawk Bay	64	1/30	10	3.7	II B G 3 9 10	II B F 9	Yes	Yes	Yes	f/s
Kleberg	Padre Island National Seashore, Gulf beach (closed area)	65	1/30	2	9.0	III B 1	III B 1	No	Yes	Yes	f
Kleberg/ Kenedy	Padre Island National Seashore (Bird Island basin to landcut)	68	1/30	1	48.4	II B 1 3 8 9	II B 8	No	No	No	f
Kleberg/ Kenedy	Upper Laguna Madre (Bird Island basin to the landcut)	67	1/31	45	100.0	II C G 8	III C 8	No	No	No	s(p)
Willacy	Padre Island National Seashore, Gulf beach (CTX7)	66	1/30	9	96.8	III B 1	III B 1	Yes	Yes	Yes	f

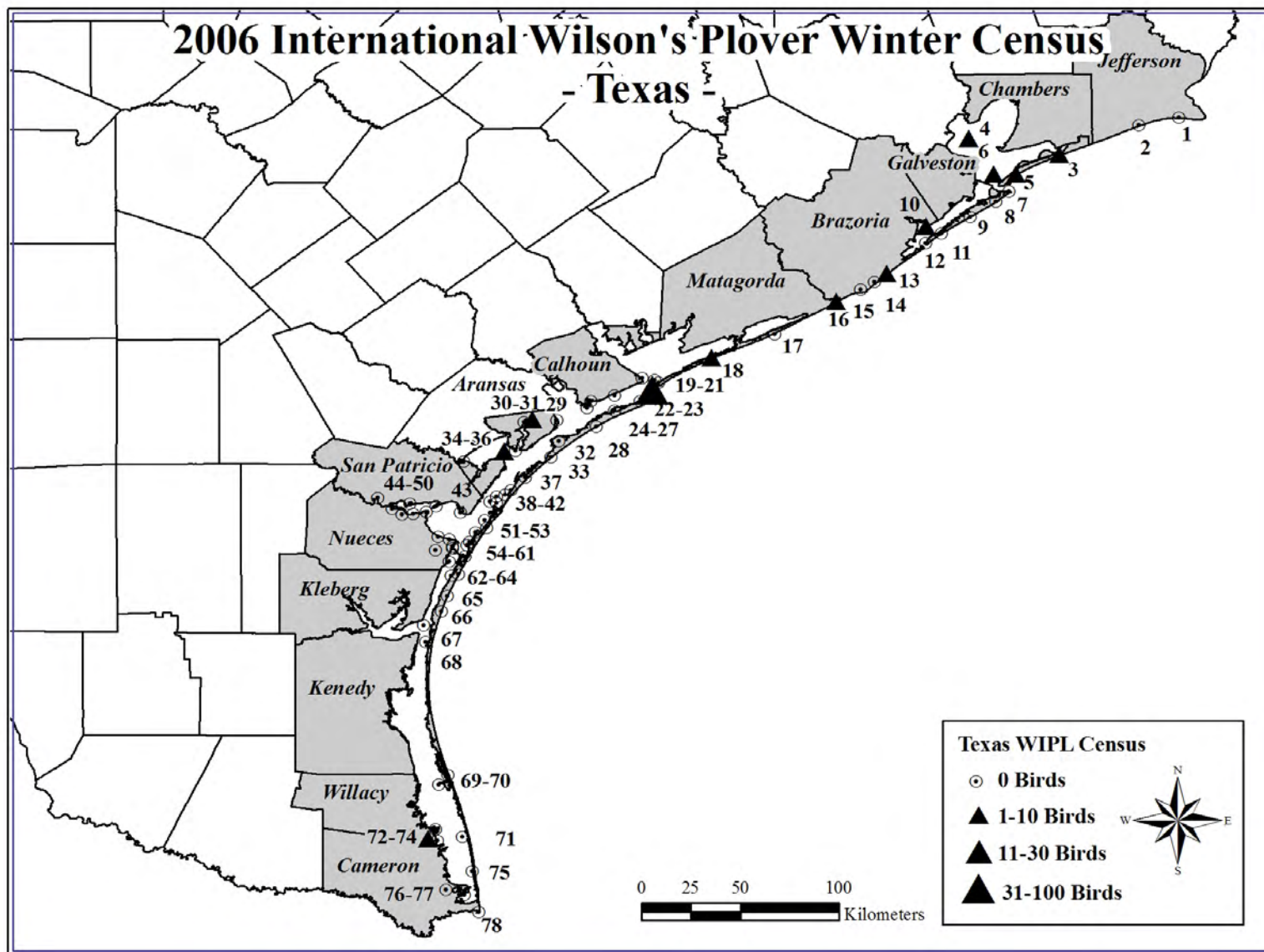
## The 2006 International Snowy Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Matagorda	Decros Point	23	2/15	133	12.6	II III B 1	II III B 1	Yes	No	Yes	s/p
Matagorda	Matagorda Peninsula, bayside and Colorado River Delta	21	2/03	0	64.5	II A B D F G 1 2 3 5 7 8 10		Yes	Yes	Yes	s(p)
Matagorda	Matagorda Peninsula, E	17	1/31	20	36.6	II III G 1 8	III F 1	Yes	Yes	Yes	s(p)
Matagorda	Matagorda Peninsula, W	18	2/03	0		III B 1		Yes	Yes	Yes	s(p)
Matagorda	Sargent Beach	16	1/31	13	10.5	II III A 1 8	II A 8	Yes	Yes	Yes	s(p)
Matagorda	Sundown Island (Matagorda Bay) (CTX26)	20	1/25	0	2.4	II C 1		No	No	Yes	f
Nueces	Corpus Christi Ship Channel Inner Harbor	48	1/26	0	2.4	II A G 1		No	No	No	p
Nueces	Laguna Madre, upper (GIWW north of JFK Causeway) (CTX20)	60	1/26	0	2.4	II A 4 8 10		Yes	Yes	Yes	m/p
Nueces	Mollie Beattie	61	1/25	4	5.8	V F 3 7 8 9 10	V F 3 8	Yes	Yes	Yes	s(p)
Nueces	Mustang Island - Francine Cohn Preserve (mid bayside)	53	1/26	0	2.9	II B C 5 8		Yes	Yes	Yes	s(p)
Nueces	Mustang Island - N end, N bayside, Pelican and Shamrock Islands	51	1/26	9	40.3	II B C 3 8 9 11		Yes	Yes	Yes	s(p)
Nueces	Mustang Island - Port A to Packery (gulf side)	52	1/26	0	12.1	III B 1		Yes	Yes	Yes	p
Nueces	Mustang Island State Park (S bayside and Fish Pass)	54	1/26	33	6.5	II B 1 3 8 9 10 11	II B 1	No	Yes	Yes	s(p)
Nueces	Oso Bay shoreline, between Mud Bridge and rail road tracks	58	1/26	0	2.0	IV A 8		Yes	Yes	Yes	s(p)
Nueces	Oso Bay, upper (Mud Bridge) (CTX22)	56	1/26	0	12.7	II A C 4 8		Yes	Yes	Yes	f
Nueces	Port of Corpus Christi property S of Nueces River	45	1/26	65	4.8	V G 3 5 8 9	V F 3 5 8 9	No	No	No	p
Nueces	Redfish Bay (NE part)	42	1/25	0	25.8	II E 2 7 8 11		Yes	Yes	Yes	s(p)
Nueces	Rincon Channel mudflats	49	1/26	0	1.0	II A 3 8		No	No	Yes	unk
Nueces	S side of JFK Causeway and Flour Bluff/Laguna Madre Shoreline	59	1/30	0	4.8	II A 3 8 9		Yes	Yes	Yes	s/p
Nueces	Upper Laguna Madre/S end of Corpus Christi Bay	55	1/26	4	33.9	II C D G 3 8 9	II D 3 8	Yes	Yes	Yes	s(p)
Nueces	Ward Island (CTX21)	57	1/26	0	2.6	II C 8 9		Yes	No	Yes	m
Nueces/ Kleberg	Packery to PINS	63	1/31	0	10.2	III B 1		Yes	Yes	Yes	f/s

## The 2006 International Snowy Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Nueces/ Kleberg	Upper Laguna Madre (islands between S Bird Island and Pita Island Channel) (CTX10A)	62	1/30	0	40.3	II A C D G 3 8	III V F 1	Yes	Yes	Yes	s(p)
San Patricio	Indian Point and Sunset Lake (CTX23)	50	1/26	9	3.2	II V G 1 11	11	Yes	Yes	Yes	m
San Patricio	La Quinta Channel Islands	43	1/26	0	10.5	II C 11		Yes	Yes	Yes	s(p)
San Patricio	White's Point	47	1/26	0	4.8	V A 8		No	Yes	Yes	p
San Patricio/ Nueces	Nueces Delta (near Allison waste water treatment plant discharge) (CTX25)	44	1/26	0	4.8	V A 8 9		No	No	Yes	p
Nueces	Tule Lake (E of White's Point, Nueces Delta mitigation site) (CTX24)	46	1/26	2	1.6	V A 8 9	V A 8	No	Yes	Yes	m
Willacy	South Padre Island, N end flats by Port Mansfield Channel	70	2/4	154	10.6	II B 9	II B 9	Yes	Yes	Yes	s(p)
<b>Total</b>				<b>1340</b>	<b>1499.9</b>						

<sup>1</sup> We only received data on Piping Plovers seen at these sites so do not have information about Snowy Plover numbers





## The 2006 International Wilson's Plover Winter Census in Texas

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Aransas	Aransas Bay, Goose Island	36	1/25	0	6.5	II G 7 10		No	No	No	f
Aransas	Copano Bay, Bayside (Aransas River Delta)	35	1/25	5	29.5	II A C 8		No	No	No	p
Aransas	Copano Bay, E shore	34	2/26	0	161.3	II C 8		No	No	No	f
Aransas	E Blackjack (Aransas NWR Complex)	29	1/26	0	9.7	II A 7 8		No	No	No	s(p)
Aransas	Redfish Bay (N of causeway from Aransas Pass to Port)	40	1/25	0	30.2	II A C D E 7 8 9 11		No	No	No	p
Aransas	Redfish Bay (S of causeway from Aransas Pass to Port)	41	1/25	0	9.3	II A C D 1 2 4 7 8		No	No	No	s(p)
Aransas	San Jose Island bayside	38	1/25	0	41.9	II B C 7 8		Yes	Yes	Yes	s/p
Aransas	San Jose Island bayside (N Pass)	39	1/25	0	1.6	II B 3		No	No	No	s(p)
Aransas	San Jose Island (Gulf side)	37	1/25	0	12.9	III B 1		Yes	Yes	Yes	s(p)
Aransas	Tatton Unit (Aransas NWR Complex)	30	1/26	0	11.3	II A 3 8 10		Yes	Yes	Yes	f
Aransas/ Calhoun	W Blackjack (Aransas NWR Complex)	31	1/26	1	17.7	II A 8	II A 8	No	No	No	s(p)
Brazoria	Follets Island	13	2/01	4	19.4	III B 1	III B 1	Yes	Yes	Yes	s
Brazoria	Quintana Beach to Bryan Beach State Park	14	1/24	0	11.3	II III B 1		Yes	Yes	Yes	s
Brazoria	West Bay Mooring Area BU Site	10	1/27	1	1.6	II C 8	II C 8	No	No	No	s(p)
Brazoria	Wolf Island	15	2/09	0	8.1	II III E 1		Yes	Yes	Yes	s
Calhoun	Cedar Bayou, Matagorda Island NWR (Gulf Beach Route)	33	1/26	0	9.1	III B 1		Yes	Yes	Yes	f
Calhoun	Matagorda Island NWR Beach (J-Hook and N Western Marsh)	27	1/26	0	24.2	II III B 1 3 9 10		Yes	Yes	Yes	f
Calhoun	Matagorda Island Inner Levee System	22	1/26	0	11.9	II B 5 8 9 II B 1 2 4 6 7 8		Yes	Yes	No	f
Calhoun	Matagorda Island NWR Bayside	32	1/26	0	82.6	10		Yes	Yes	Yes	f
Calhoun	Matagorda Island NWR Gulf Beach	28	1/26	0	40.3	III B 1		Yes	Yes	Yes	f
Calhoun	Port O'Conner Shoreline	19	1/23	0	0.8	II V A 1 8		Yes	No	Yes	s/m/c
Calhoun	Shoalwater Bay	24	1/26	0	11.3	II C 1 3 8 10 11		No	No	No	s(p)
Calhoun	The Lagoon/Blackberry Island	26	1/31	0	21.0	II C D 4 8 10 II A 1 2 3 4 5 7 8		No	No	No	s(p)
Calhoun	Welder Flats Coastal Preserve (CTX6)	25	1/26	0	24.2	10		No	No	Yes	p
Cameron	Bahia Grande	77	2/06	0	16.1	II A 3		No	Yes	Yes	f

## The 2006 International Wilson's Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cameron	Brownville Ship Channel Spoil Cells	76	2/06	0	8.4	V G 2		Yes	Yes	Yes	f
Cameron	Buena Vista Ranch	74	2/03	0	12.0	II A 3 8		Yes	Yes	Yes	p
Cameron	Laguna Atascosa NWR Bayside Drive	73	2/03	1	9.0	V G 8 10	V F 8	Yes	Yes	Yes	f
Cameron	South Bay/Boca Chica Beach	78	2/03	0	16.1	II III A 1 7 8		Yes	Yes	Yes	s/p
Cameron	South Padre Island, middle of Laguna Madre Side	71	1/31	0 <sup>1</sup>	18.0			Yes	Yes	Yes	f
Cameron	South Padre Island, S end on Laguna Madre Side	75	1/30	0 <sup>1</sup>	20.0			Yes	Yes	Yes	f
Cameron	Unit 5, (Horse Island Cove) Laguna Atascosa NWR	72	2/03	0	7.9	II A 3 8		No	Yes	Yes	f
Chambers	Mid Bay	4	2/02	1	1.6	II C 2	II C 2	No	No	No	c
Galveston	Big Reef; Galveston Island	7	2/02	0	2.6	II III V B 1 3		Yes	Yes	Yes	m
Galveston	Bolivar Flats	6	1/21	4	3.1	III B 1 8		Yes	Yes	Yes	s/p
Galveston	Galveston Island Beaches; end of seawall to Galveston Island State Park	9	2/02	0	9.7	III B 1		Yes	Yes	Yes	s/m
Galveston	Galveston Island Beaches; E beach to end of seawall	8	2/02	0	16.1	III B 1		Yes	Yes	Yes	s(p)
Galveston	Galveston Island Beaches; Galveston Island State Park to San Luis Pass	11	2/02	0	14.5	III B 1		Yes	Yes	Yes	s(p)
Galveston	High Island to Bolivar Flats	5	1/21	1	48.4	III B 1	III B 1	Yes	Yes	Yes	p
Galveston	Rollover Pass Flats	3	2/03	1	0.8	II B 3 4 7	II B 4	Yes	No	No	p
Galveston	San Luis Pass; Galveston Island	12	2/02	0	6.5	II III V B 1 2 3 4		Yes	Yes	Yes	s(p)
Jefferson	McFaddin NWR to High Island	2	2/02	0	10.0	III A 1 8		Yes	Yes	Yes	s
Jefferson	McFaddin NWR to Sabine Pass	1	2/03	0	42.7	III A 1		Yes	Yes	Yes	s
Kenedy	Padre Island National Seashore, S bayside	69	1/31	0	8.1	V B F 3 5 8 9 10		No	No	No	f
Kleberg	Nighthawk Bay	64	1/30	0	3.7	II B G 3 9 10		Yes	Yes	Yes	f/s
Kleberg	Padre Island National Seashore, Gulf beach (closed area)	65	1/30	0	9.0	III B 1		No	Yes	Yes	f
Kleberg/ Kenedy	Padre Island National Seashore (Bird Island basin to landcut)	68	1/30	0	48.4	II B 1 3 8 9		No	No	No	f
Kleberg/ Kenedy	Upper Laguna Madre (Bird Island basin to the landcut)	67	1/31	0	100.0	II C G 8		No	No	No	s(p)
Willacy	Padre Island National Seashore, Gulf beach (CTX7)	66	1/30	0	96.8	III B 1		Yes	Yes	Yes	f

## The 2006 International Wilson's Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Matagorda	Decros Point	23	2/15	60	12.6	II III B 1	II B 1	Yes	No	Yes	s/p
Matagorda	Matagorda Peninsula, bayside and Colorado River Delta	21	2/03	0	64.5	II A B D F G 1 2		Yes	Yes	Yes	s(p)
Matagorda	Matagorda Peninsula, E	17	1/31	0	36.6	II III G 1 8		Yes	Yes	Yes	s(p)
Matagorda	Matagorda Peninsula, W	18	2/03	5		III B 1	III B 1	Yes	Yes	Yes	s(p)
Matagorda	Sargent Beach	16	1/31	1	10.5	II III A 1 8	II A 8	Yes	Yes	Yes	s(p)
Matagorda	Sundown Island (Matagorda Bay) (CTX26)	20	1/25	0	2.4	II C 1		No	No	Yes	f
Nueces	Corpus Christi Ship Channel Inner Harbor	48	1/26	0	2.4	II A G 1		No	No	No	p
Nueces	Laguna Madre, upper (GIWW north of JFK Causeway) (CTX20)	60	1/26	0	2.4	II A 4 8 10		Yes	Yes	Yes	m/p
Nueces	Mollie Beattie	61	1/25	0	5.8	V F 3 7 8 9 10		Yes	Yes	Yes	s(p)
Nueces	Mustang Island - Francine Cohn Preserve (mid bayside)	53	1/26	0	2.9	II B C 5 8		Yes	Yes	Yes	s(p)
Nueces	Mustang Island - N end, N bayside, Pelican and Shamrock Islands	51	1/26	0	40.3	II B C 3 8 9 11		Yes	Yes	Yes	s(p)
Nueces	Mustang Island - Port A to Packery (gulf side)	52	1/26	0	12.1	III B 1		Yes	Yes	Yes	p
Nueces	Mustang Island State Park (S bayside and Fish Pass)	54	1/26	0	6.5	II B 1 3 8 9 10 11		No	Yes	Yes	s(p)
Nueces	Oso Bay shoreline, between Mud Bridge and rail road tracks	58	1/26	0	2.0	IV A 8		Yes	Yes	Yes	s(p)
Nueces	Oso Bay, upper (Mud Bridge) (CTX22)	56	1/26	0	12.7	II A C 4 8		Yes	Yes	Yes	f
Nueces	Port of Corpus Christi property S of Nueces River	45	1/26	0	4.8	V G 3 5 8 9		No	No	No	p
Nueces	Redfish Bay (NE part)	42	1/25	0	25.8	II E 2 7 8 11		Yes	Yes	Yes	s(p)
Nueces	Rincon Channel mudflats	49	1/26	0	1.0	II A 3 8		No	No	Yes	unk
Nueces	S side of JFK Causeway and Flour Bluff/Laguna Madre Shoreline	59	1/30	0	4.8	II A 3 8 9		Yes	Yes	Yes	s/p
Nueces	Upper Laguna Madre/S end of Corpus Christi Bay	55	1/26	0	33.9	II C D G 3 8 9		Yes	Yes	Yes	s(p)
Nueces	Ward Island (CTX21)	57	1/26	0	2.6	II C 8 9		Yes	No	Yes	m
Nueces/ Kleberg	Packery to PINS	63	1/31	0	10.2	III B 1		Yes	Yes	Yes	f/s

## The 2006 International Wilson's Plover Winter Census in Texas (Continued)

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Nueces/ Kleberg	Upper Laguna Madre (islands between S Bird Island and Pita Island Channel) (CTX10A)	62	1/30	0	40.3	II A C D G 3 8		Yes	Yes	Yes	s(p)
San Patricio	Indian Point and Sunset Lake (CTX23)	50	1/26	0	3.2	II V G 1 1 1		Yes	Yes	Yes	m
San Patricio	La Quinta Channel Islands	43	1/26	0	10.5	II C 1 1		Yes	Yes	Yes	s(p)
San Patricio	White's Point	47	1/26	0	4.8	V A 8		No	Yes	Yes	p
San Patricio/ Nueces	Nueces Delta (near Allison waste water treatment plant discharge) (CTX25)	44	1/26	0	4.8	V A 8 9		No	No	Yes	p
Nueces	Tule Lake (E of White's Point, Nueces Delta mitigation site) (CTX24)	46	1/26	0	1.6	V A 8 9		No	Yes	Yes	m
Willacy	South Padre Island, N end flats by Port Mansfield Channel	70	2/3	0	10.6	II B 9		Yes	Yes	Yes	s(p)
<b>Total</b>				<b>85</b>	<b>1499.9</b>						

<sup>1</sup>We only received data on Piping Plovers seen at these sites so do not have information about Wilson's Plover numbers

## **2006 Censo Internacional de Chorlo Pico Corto en México**

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Las censos llevados a cabo muestran que el área de distribución del Piping Plover en el Golfo de Mexico y la Laguna Madre de Tamaulipas se evaluó de manera parcial, pero los censos realizados en las áreas evaluadas se llevaron a cabo de la manera mas efectiva posible.

Los resultados obtenidos de dichas evaluaciones son los siguientes:

Total de salidas: 6  
Total de observaciones de Piping Plovers: 76  
Total de observaciones de Snowy Plovers: 119  
Total de observaciones de Wilson's Plovers: 0

Se evaluaron 10 km de costa en la "Playa Bagdad Norte", 15 km de costa en la "Playa Bagdad Sur", y 24 km de costa en la "Barra de Boca Ciega (al Sur del Mezquital)", cubriendo los hábitat de playa de arena y las áreas de descanso 30-40 m retirado de la orilla del agua. Se evaluó también la arena en la laguna en una extensión de 15 km.

Se evaluaron alrededor de 15 km de la parte interna (islas de barrera) de los planicies de Boca ciega del lado Norte y Sur, cubriendo los distintos hábitat de estos importantes planicies. Los resultados obtenidos de dichas evaluaciones 17 observaciones de Piping Plovers en el norte y 17 en el sur. Porque las censos llevados en dos días, es posible que éstos sean repiten observaciones.

El porcentaje evaluado del área del Golfo de México frente a la Laguna Madre en Tamaulipas fue de un 45 % aproximadamente. Restando por evaluar un 55 % hacia el sur del canal de Boca Ciega hasta el Río Soto la Marina. Esto debido a la falta de los recursos para operación (ATVs).

El área evaluada en el lado interno de las islas de barrera frente a la Laguna Madre fue aproximadamente de un 10 %, restando por evaluar un 90 % principalmente por la falta de ATVs que nos impidió, en un inicio, el acceso a las áreas internas de la barra arenosa en la laguna, a diferencia de la costa del golfo que en gran parte el traslado se realizó en pick-up y una ATV (cuando estuvo disponible). Más sin embargo cabe mencionar que la parte evaluada en los planicies en el área de Boca Ciega es una de las más importantes en la distribución invernal del Piping Plover en la Laguna Madre.

Con seguridad la próxima evaluación cubrirá la superficie total de la costa del Golfo de Mexico hasta el río Soto la Marina y la parte interna de la barra arenosa en la Laguna Madre.

## **The 2006 International Piping Plover Winter Census in Mexico**

The surveys we conducted give only a partial illustration of the distribution of the Piping Plover in the Gulf of Mexico and the Laguna Madre of Tamaulipas, but the surveys were carried out in the most effective way possible given the resources available.

The results obtained from the surveys are the following:

Total sites: 6  
Total observations of Piping Plovers: 76  
Total observations of Snowy Plovers: 119  
Total observations of Wilson's Plovers: 0

As part of the 2006 Census we surveyed 10 km of coastline at “Playa Bagdad Norte”, 15 km at “Playa Bagdad Sur”, 25 km at “Playa Bagdad (Mezquital Norte)”, and 24 km at “Barra de Boca Ciega (Mezquital al Sur)”.

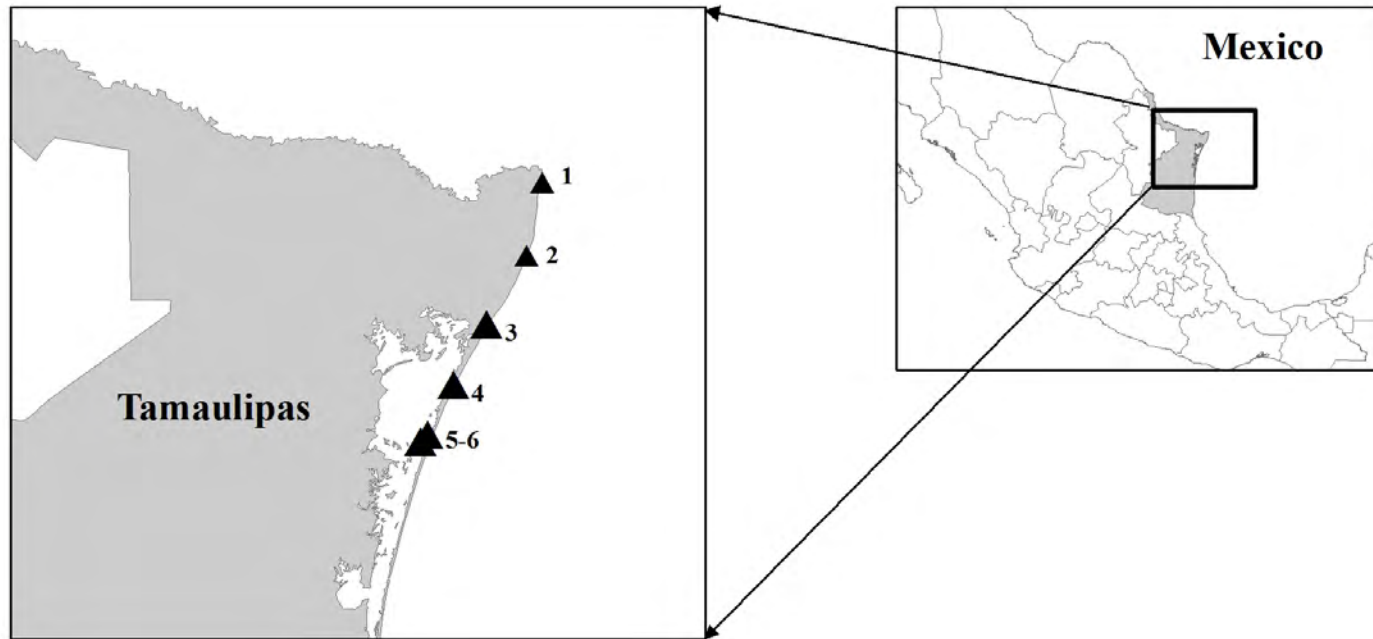
At all of these sites we covered the sandy beach habitat from the shoreline to 30-40 m inland from the waters edge. We also surveyed approximately 15 km of flats on the north and south Laguna Madre side of the split in the “Barra de Boca” bar. On each side of the split we counted 17 Piping Plovers, but because the surveys were conducted on separate days, it is possible that they are repeat observations.

Overall, in the Laguna Madre region of Tamaulipas, we covered approximately 45% of the outer beach (Gulf of Mexico) habitat. The remaining habitat which we were unable to cover (due to lack of ATV’s) includes areas south of Boca Ciega to Río Soto la Marina.

The area surveyed on the Laguna Madre side of the barrier islands was approximately 10% of the total habitat. The remaining 90% was not surveyed, also due largely to lack of ATV’s. However, the portion of the flats surveyed (at “Barra de Boca Ciega”) is one of the most important sites for wintering Piping Plover in the Laguna Madre.

With additional resources, the next census should include the entire coast of the Gulf of Mexico and Laguna Madre side from Playa Bagdad to Río Soto la Marina.

## 2006 International Piping Plover Winter Census - Mexico -



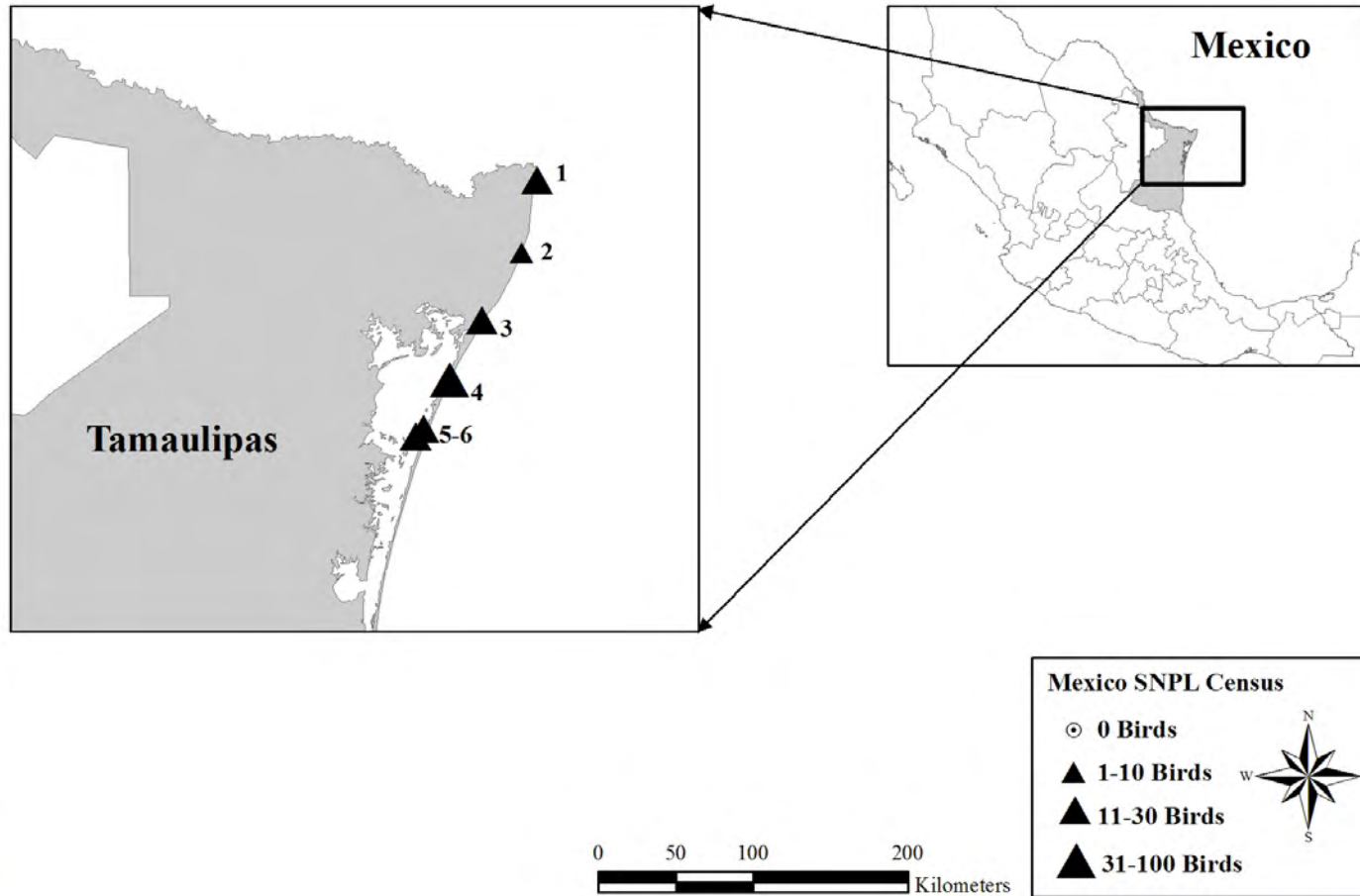
## The 2006 International Piping Plover Winter Census in Mexico

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Tamaulipas	Barra Boca Ciega al Norte <sup>1</sup>	5	2/25	17	8.0	III B 4 8	III B 4 8	Yes	Yes	No	f
Tamaulipas	Barra Boca Ciega al Sur <sup>1</sup>	6	2/24	17	7.0	III B 4 8	III B 8	Yes	Yes	No	f
Tamaulipas	Playa Bagdad al Norte	1	2/02	3	10.0	III B 4	III B 4	No	No	No	f
Tamaulipas	Playa Bagdad al Sur	2	2/03	1	15.0	III B 4	III B 4	No	No	No	f
Tamaulipas	Puerto El Mezquital al Norte <sup>1</sup>	3	2/16	19	25.0	III B 4	III B 4	No	No	No	f
Tamaulipas	Puerto El Mezquital al Sur <sup>1</sup>	4	2/23	19	24.0	III B 4 8	III B 4 8	Yes	No	No	f
<b>Total</b>				<b>76</b>	<b>89.0</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.



## 2006 International Snowy Plover Winter Census - Mexico -



### The 2006 International Snowy Plover Winter Census in Mexico

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Tamaulipas	Barra Boca Ciega al Norte <sup>1</sup>	5	2/25	19	8.0	III B 4 8	III B 4 8	Yes	Yes	No	f
Tamaulipas	Barra Boca Ciega al Sur <sup>1</sup>	6	2/24	12	7.0	III B 4 8	III B 8	Yes	Yes	No	f
Tamaulipas	Playa Bagdad al Norte	1	2/02	30	10.0	III B 4	III B 4	No	No	No	f
Tamaulipas	Playa Bagdad al Sur	2	2/03	2	15.0	III B 4	III B 4	No	No	No	f
Tamaulipas	Puerto El Mezquital al Norte <sup>1</sup>	3	2/16	20	25.0	III B 4	III B 4	No	No	No	f
Tamaulipas	Puerto El Mezquital al Sur <sup>1</sup>	4	2/23	36	24.0	III B 4 8	III B 4	Yes	No	No	f
<b>Total</b>				<b>119</b>	<b>89.0</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

### The 2006 International Wilson's Plover Winter Census in Mexico

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Tamaulipas	Barra Boca Ciega al Norte <sup>1</sup>	5	2/25	0	8.0	III B 4 8		Yes	Yes	No	f
Tamaulipas	Barra Boca Ciega al Sur <sup>1</sup>	6	2/24	0	7.0	III B 4 8		Yes	Yes	No	f
Tamaulipas	Playa Bagdad al Norte	1	2/02	0	10.0	III B 4		No	No	No	f
Tamaulipas	Playa Bagdad al Sur	2	2/03	0	15.0	III B 4		No	No	No	f
Tamaulipas	Puerto El Mezquital al Norte <sup>1</sup>	3	2/16	0	25.0	III B 4		No	No	No	f
Tamaulipas	Puerto El Mezquital al Sur <sup>1</sup>	4	2/23	0	24.0	III B 4 8		Yes	No	No	f
<b>Total</b>				<b>0</b>	<b>89.0</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

# **The 2006 International Piping Plover Winter Census in the Bahamas**

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The 2006 International Winter Census effort in the Bahamas was carried out between January 23, 2006, and February 6, 2006, at 50 sites. In addition, 12 sites were surveyed outside the census window but during winter (January or February) and 4 sites were surveyed in early spring (March). In total, 66 sites were surveyed by 21 observers. In addition, trainings for participants on Piping Plover survey and band identification skills were conducted in Freeport, New Providence, and Great Inagua.

Four hundred and seventeen Piping Plovers were observed during the 66 site visits. However, 17 of the total were observed during three site visits in March, 2006, and accordingly may represent migrants rather than wintering birds. These observations are included in the total because of the significance of all Piping Plover observations in the Bahamas.

Over 50% of the surveyed sites had Piping Plovers. Locations with high counts include 68 Piping Plovers at Staniard Creek, 43 at North Cargil Creek, and 38 at Mars Bay, all on Andros; 26 at Pelican Point on Grand Bahama;

24 near Sea Way Drive on Great Exuma; 19 at Conch Cay off Long Island; and 23 at South Beach on New Providence. In addition, a single individual was observed on Great Inagua, the southernmost large island in the Bahamas. Two banded Piping Plovers were reported: one individual at Discovery Bay Beach, Grand Bahama, and another west of Pelican Point on Grand Bahama. The breeding population is confirmed from the Great Lakes for one and suspected for the second. It is unknown how many of the observed Piping Plovers were scanned for the presence of color bands.

Compared to previous Census', we greatly increased our survey effort in the Bahamas. In previous years, reports from the Bahamas have been few and are often incidental. Hence, the 417 Piping Plovers observed in 2006 is much higher than previous counts but is not reflective of an increase in the wintering population. In 2001, our record of Piping Plovers from the Bahamas was only 35 birds; 25 birds were observed in 1996, and 29 in 1991.

The Bahamas represents a unique challenge for the International Census. With over 600 islands and cays, potential habitat is located over a very large area. In remote areas, there can be considerable difficulties in accessing potential habitat due to very limited transportation options and the associated high financial cost. As a result of logistical difficulties and limited coverage, there is insufficient data to determine what areas of Piping Plover habitat were missed in the 2006 census and the results are very likely an underestimate of the actual population. Nevertheless, the relatively large number of Piping Plovers observed in 2006 suggests the Bahamas is an important wintering area. In addition, based on local knowledge of habitat conditions, it is likely that additional habitat exists that has yet to be evaluated for the presence of Piping Plovers.

To understand the true importance of the Bahamas to wintering Piping Plovers, additional survey efforts are necessary. Future efforts should consider locating and accessing habitat that is similar to locations where Piping Plovers were observed during the 2006 census. Large sandflats should be one priority habitat type. An example is Conch Cay, which at low tide has over a mile of intertidal flats with small interspersed channels. Similar areas should be identified using charts and aerial photography to determine future survey sites. However, accessing the areas may be very difficult in certain instances, requiring travel by boat or float plane.

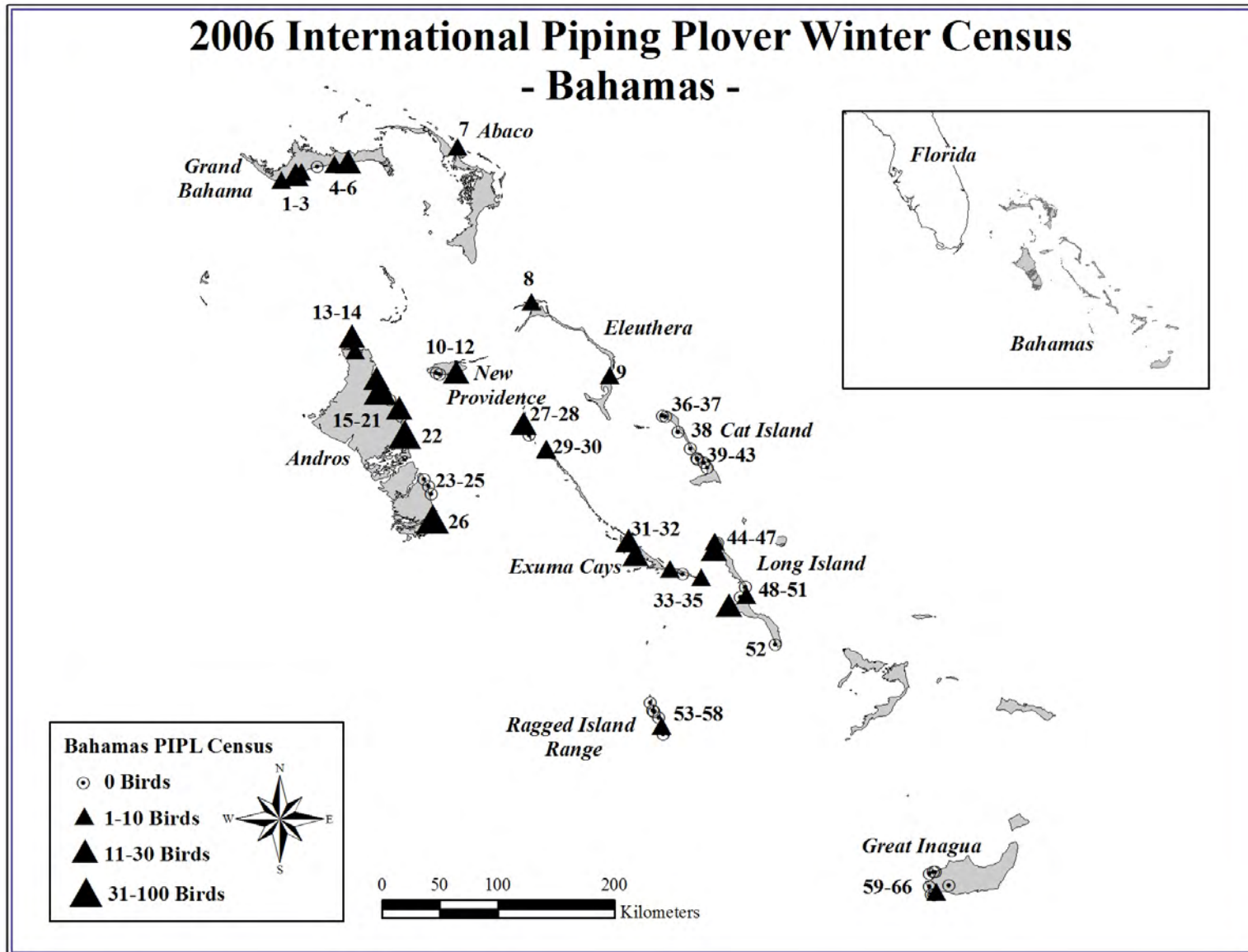
Another challenging habitat type to census will be island beaches. One example of high quality habitat is South Beach on New Providence, which had extensive intertidal flats next to the beach. Similar areas with large intertidal feeding habitat should not be that difficult to locate quickly using aerial reconnaissance; such habitat should also be high priority for surveying in future efforts. Surprisingly, there were relatively large numbers of Piping Plovers concentrated in some areas with much less expansive intertidal habitat. Thus, it may not always be possible to distinguish between low and high priority beaches based on the width of sand flats.

Care should be exercised in trying to compare habitat quality between the Bahamas and other areas of the wintering range. For example, many beach habitats located a large distance from inlets or overwash fans on the Atlantic Coast of the United States would be considered low quality due to the lack of Piping Plovers. However, similar beach habitats in the Bahamas may contain moderate or relatively large numbers of Piping Plovers. Additional surveys are necessary to understand the distribution and habitat use of Piping Plovers in the Bahamas.

It is difficult to assess threats to Piping Plovers in the Bahamas due to limited information. In some locations, habitat loss from development and human disturbance are potential threats. For example, at Discovery Beach on Grand Bahama, there was construction activity in the upland area immediately adjoining the beach where 22 Piping Plovers were observed. However, there are other areas that are remote and appear at the current time to have limited potential for high density development.

The 2006 Census was an important step forward in our knowledge of Piping Plover distribution on the wintering grounds. In only 66 surveys, 417 Piping Plovers were observed, and certain sites had relatively large numbers. Thus, the results are very promising. However, an accurate assessment of the conservation status of Piping Plovers in the Bahamas is not yet possible based on available information. It would be prudent to undertake additional, coordinated survey efforts. Providing additional support and funding to local Bahamians to undertake survey and management efforts would be very helpful in advancing conservation efforts.

## 2006 International Piping Plover Winter Census - Bahamas -



## The 2006 International Piping Plover Winter Census in the Bahamas

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Abaco	Green Turtle Cay	7	2/1	9	1.0	II B 3	II B 3	No	No	Yes	f
Andros	Andros Town	20	1/27	11	0.8	I A 1 3 10	I E 3	No	No	No	f
Andros	Blanket Sound	16	1/28	6	0.8	I A 3 4 8 10	I A 8	No	No	No	f
Andros	Calabash Bay	19	1/28	0	0.4	I A 1 8 10		No	No	No	f
Andros	Congo Town	23	2/3	0	0.8	I A 1 10		No	No	No	f
Andros	Flats N of Staniard Creek <sup>1</sup>	15	1/9	18	1.6			No	No	No	n.r.
Andros	Joulter's Cays <sup>1</sup>	13	1/10	14	1.6			No	No	No	n.r.
Andros	Kemps Bay	24	2/3	0	0.8	I A 1 3 4		No	No	No	n.r.
Andros	Lowe's Sound Mangrove Flats <sup>1</sup>	14	1/10	3	1.6			No	No	No	n.r.
Andros	Mars Bay	26	2/3	38	0.8	I A D 3 4 10	I A 3	No	No	No	f
Andros	North Cargil Creek	22	1/27	43	0.8	I A 1 3 8 10	I A 8	No	No	No	f
Andros	Small Hope Bay	18	1/28	0	0.8	I A 3 4 8 10		No	No	No	n.r.
Andros	Staniard Creek	17	1/29	68	1.2	II IV A B E 1	II E 3	No	No	No	f
Andros	Summerset Creek	21	1/27	0	0.4	I A 3 10		No	No	No	f
Andros	The Coppice at Duncan Point	25	2/3	0	0.4	I A 1 10		No	No	No	f
Cat Island	Fernandez Bay	40	1/31	0	1.1	I II 1 10 11		No	No	No	n.r.
Cat Island	New Bight Beach - From T to Primary School	42	1/31	0	0.8	I E 1		No	No	No	n.r.
Cat Island	New Bight Harbor	41	1/31	0	0.6	II E 1 10		No	No	No	n.r.
Cat Island	NW Most Beach Orange Creek Point	36	1/30	0	3.3	I E 1 11		No	No	No	n.r.
Cat Island	Orange Creek, SE End	37	1/30	0	1.4	I II E 1 2 3 10 11		No	No	No	n.r.
Cat Island	Pigeon Key	38	1/30	0	5.5	I E 1 11		No	No	No	n.r.
Cat Island	Pilot Harbor, New Bight	43	1/29	0	1.1	n.r.		No	No	No	n.r.
Cat Island	Port House	39	1/29	0	2.0	II E 1 3 4 11		No	No	No	n.r.
Eleuthera	Spanish Wells	8	1/28	6	6.0	II E 1 3 4 10	II E 3	No	No	No	n.r.
Eleuthera	Winding Bay, Eleuthera	9	2/6	1	5.8	I E 1	I F 1	No	No	No	f
Exuma Cays	Careen Beach, Warderick Wells Cay <sup>1</sup>	29	3/14	3	1.6	II E 1	II E 1	No	No	No	s(p)
Exuma Cays	Exuma Point, Great Exuma	31	1/23	14	0.4	II E 4 5	I E 3 4	No	No	No	n.r.
Exuma Cays	Hawksbill Cay <sup>1</sup>	28	3/12	0	1.2			No	No	No	n.r.
Exuma Cays	Leaf Cay/White Cay <sup>1</sup>	35	2/24	4	5.6	V B F 1 2 3 8 10 11	V B 1	No	No	No	p
Exuma Cays	Moriah Harbour City, Great Exuma	33	1/23	2	1.7	II E 1 2 3	I E 3	No	No	No	n.r.

## The 2006 International Piping Plover Winter Census in the Bahamas (Continued)

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Exuma Cays	Normans Cay <sup>1</sup>	27	3/9	13	2.0	I E 3		No	No	No	n.r.
Exuma Cays	Powerful Beach, Warderick Wells Cay <sup>1</sup>	30	3/26	1	0.2	II E 1	II E	No	No	No	n.r.
Exuma Cays	Sea Way Drive, Great Exuma <sup>1</sup>	32	1/21	24	0.2	I E 1 11	I E 1 11	No	No	No	n.r.
Exuma Cays	Wolf Dames Back Landing, Little Exuma <sup>1</sup>	34	1/21	0	1.0	I II E 11		No	No	No	n.r.
Grand Bahama	Barbary Beach	3	2/1	2	4.3	I E 1 11	I E 1	No	No	No	n.r.
Grand Bahama	Discovery Beach	2	2/1	22	0.5	I E 1 11	I E 2	No	No	No	n.r.
Grand Bahama	Goldrock to East Point	4	2/2	0	1.0	I E 1		No	No	No	n.r.
Grand Bahama	Island Seas - Silver Point Beach into Jetty	1	2/1	7	1.4	I E 1 11	I E 1	No	No	No	n.r.
Grand Bahama	Pelican Point West to Oil Terminal	6	2/2	26	10.1	I E 1		No	No	No	n.r.
Grand Bahama	West of Sciding Point to High Rock	5	2/2	8	1.4	I E 1 6 11	I E 6	No	No	Yes	n.r.
Great Inagua	Craig's Bight East & West to Crossing	65	2/5	1	5.0	I E 1		No	No	No	n.r.
Great Inagua	Man of War Bay	61	2/4	0	10.0	I E 1		No	No	No	n.r.
Great Inagua	Morton Salt Ponds	66	2/5	0	0.7	V E 11		No	No	No	n.r.
Great Inagua	Red Pond West	59	2/4	0	2.9	V B 1		No	No	No	n.r.
Great Inagua	The Tunnel Beach	62	2/5	0	1.2	I E 1		No	No	No	n.r.
Great Inagua	Vandayvill Beach	63	2/3	0	2.0	I E 1		No	No	No	n.r.
Great Inagua	Vandayville to Lighthouse	64	2/6	0	2.5	I E 1		No	No	No	n.r.
Great Inagua	Well Road Beach	60	2/5	0	2.2	I E 1		No	No	No	n.r.
Long Island	Atlantic Coast from Pinders to Salt Pond <sup>1</sup>	48	2/19	0	6.5	I II A 1 10 11		No	No	No	p
Long Island	Cape Santa Maria Dev., Hoosie Harbor	46	1/26	0	0.5	II E 1 3 11		No	No	No	n.r.
Long Island	Conch Cay (off Long Island)	51	1/25	19	3.7	II E 1 5 8	I E 3	No	No	No	n.r.
Long Island	Cove near C.C. Monument, Newton Cay	44	1/26	9	0.4	II E 3	II E 3	No	No	No	n.r.
Long Island	Duncanson Point	49	1/25	0	0.6	II B 11		No	No	No	n.r.
Long Island	Gordon's	52	1/27	0	1.5	I E		No	No	No	n.r.
Long Island	Joe Sound Harbor	47	1/26	11	0.3	II E 1 3	II E 3	No	No	No	n.r.
Long Island	Newton Cay, W side	45	1/26	0	0.6	II E 1		No	No	No	n.r.
Long Island	Red Pond	50	1/24	1	0.5	V E 3	I E 3	No	No	No	n.r.
New Providence	Coral Harbor Goltlore	10	2/6	0	0.3	I E 1 3 11		No	No	No	n.r.

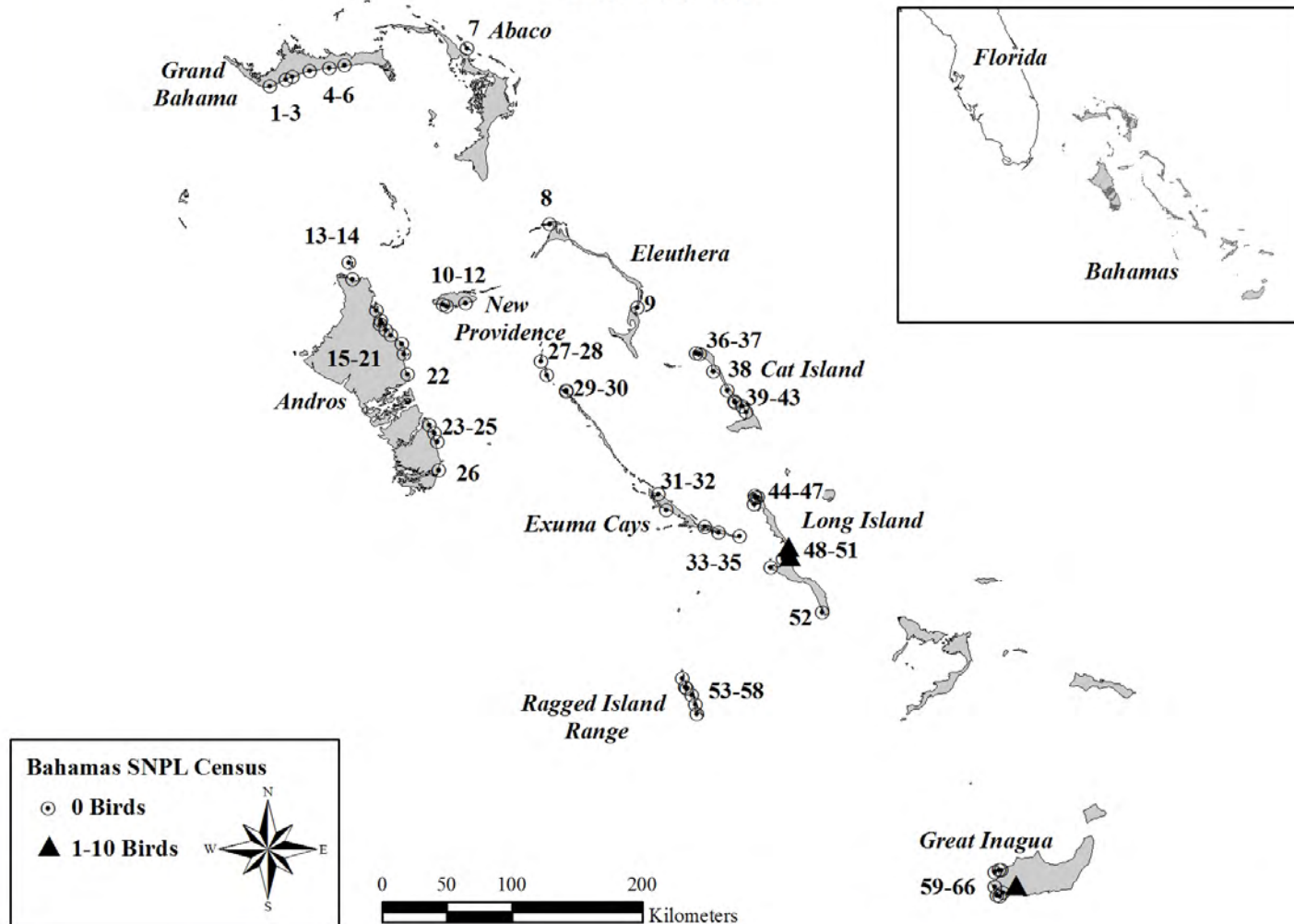
# **The 2006 International Piping Plover Winter Census in the Bahamas (Continued)**

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
New Providence	Local Harbor <sup>1</sup>	11	1/20	0	0.6	I E 11		No	No	No	n.r.
New Providence	South Beach <sup>1</sup>	12	1/20	23	0.7	I E 1 3	I E 3	No	Yes	No	n.r.
Ragged Island Range	Buena Vista Cay	53	1/31	0	3.0	I E 3		No	No	No	n.r.
Ragged Island Range	Hog Cay	57	1/29	10	3.0	I E 3	I E 3	No	No	No	n.r.
Ragged Island Range	House Bay, Racoon Cay <sup>1</sup>	54	1/21	0	1.7	I E 3		No	No	No	s(p)
Ragged Island Range	Margaret Cay, E shore	56	1/25	0	1.2			No	No	No	n.r.
Ragged Island Range	Ragged Island (bay on S end)	58	1/26	0	2.0			No	No	No	n.r.
Ragged Island Range	Southern Pond, Racoon Cay <sup>1</sup>	55	1/22	0	0.5	II V G 5		No	No	No	n.r.
<b>Total</b>				<b>417</b>	<b>128.2</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.



## 2006 International Snowy Plover Winter Census - Bahamas -



## The 2006 International Snowy Plover Winter Census in the Bahamas

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Abaco	Green Turtle Cay	7	2/1	0	1.0	II B 3		No	No	Yes	f
Andros	Andros Town	20	1/27	0	0.8	I A 1 3 10		No	No	No	f
Andros	Blanket Sound	16	1/28	0	0.8	I A 3 4 8 10		No	No	No	f
Andros	Calabash Bay	19	1/28	0	0.4	I A 1 8 10		No	No	No	f
Andros	Congo Town	23	2/3	0	0.8	I A 1 10		No	No	No	f
Andros	Flats N of Staniard Creek <sup>1</sup>	15	1/9	0	1.6			No	No	No	n.r.
Andros	Joulter's Cays <sup>1</sup>	13	1/10	0	1.6			No	No	No	n.r.
Andros	Kemps Bay	24	2/3	0	0.8	I A 1 3 4		No	No	No	n.r.
Andros	Lowe's Sound Mangrove Flats <sup>1</sup>	14	1/10	0	1.6			No	No	No	n.r.
Andros	Mars Bay	26	2/3	0	0.8	I A D 3 4 10		No	No	No	f
Andros	North Cargil Creek	22	1/27	0	0.8	I A 1 3 8 10		No	No	No	f
Andros	Small Hope Bay	18	1/28	0	0.8	I A 3 4 8 10		No	No	No	n.r.
Andros	Staniard Creek	17	1/29	0	1.2	II IV A B E 1		No	No	No	f
Andros	Summerset Creek	21	1/27	0	0.4	I A 3 10		No	No	No	f
Andros	The Coppice at Duncan Point	25	2/3	0	0.4	I A 1 10		No	No	No	f
Cat Island	Fernandez Bay	40	1/31	0	1.1	I II 1 10 11		No	No	No	n.r.
Cat Island	New Bight Beach - From T to Primary School	42	1/31	0	0.8	I E 1		No	No	No	n.r.
Cat Island	New Bight Harbor	41	1/31	0	0.6	II E 1 10		No	No	No	n.r.
Cat Island	NW Most Beach Orange Creek Point	36	1/30	0	3.3	I E 1 11		No	No	No	n.r.
Cat Island	Orange Creek, SE End	37	1/30	0	1.4	I II E 1 2 3 10 11		No	No	No	n.r.
Cat Island	Pigeon Key	38	1/30	0	5.5	I E 1 11		No	No	No	n.r.
Cat Island	Pilot Harbor, New Bight	43	1/29	0	1.1	n.r.		No	No	No	n.r.
Cat Island	Port House	39	1/29	0	2.0	II E 1 3 4 11		No	No	No	n.r.
Eleuthera	Spanish Wells	8	1/28	0	6.0	II E 1 3 4 10		No	No	No	n.r.
Eleuthera	Winding Bay, Eleuthera	9	2/6	0	5.8	I E 1		No	No	No	f
Exuma Cays	Careen Beach, Warderick Wells Cay <sup>1</sup>	29	3/14	0	1.6	II E 1		No	No	No	s(p)
Exuma Cays	Exuma Point, Great Exuma	31	1/23	0	0.4	II E 4 5		No	No	No	n.r.
Exuma Cays	Hawksbill Cay <sup>1</sup>	28	3/12	0	1.2			No	No	No	n.r.
Exuma Cays	Leaf Cay/White Cay <sup>1</sup>	35	2/24	0	5.6	V B F 1 2 3 8 10 11		No	No	No	p
Exuma Cays	Moriah Harbour City, Great Exuma	33	1/23	0	1.7	II E 1 2 3		No	No	No	n.r.

## The 2006 International Snowy Plover Winter Census in the Bahamas (Continued)

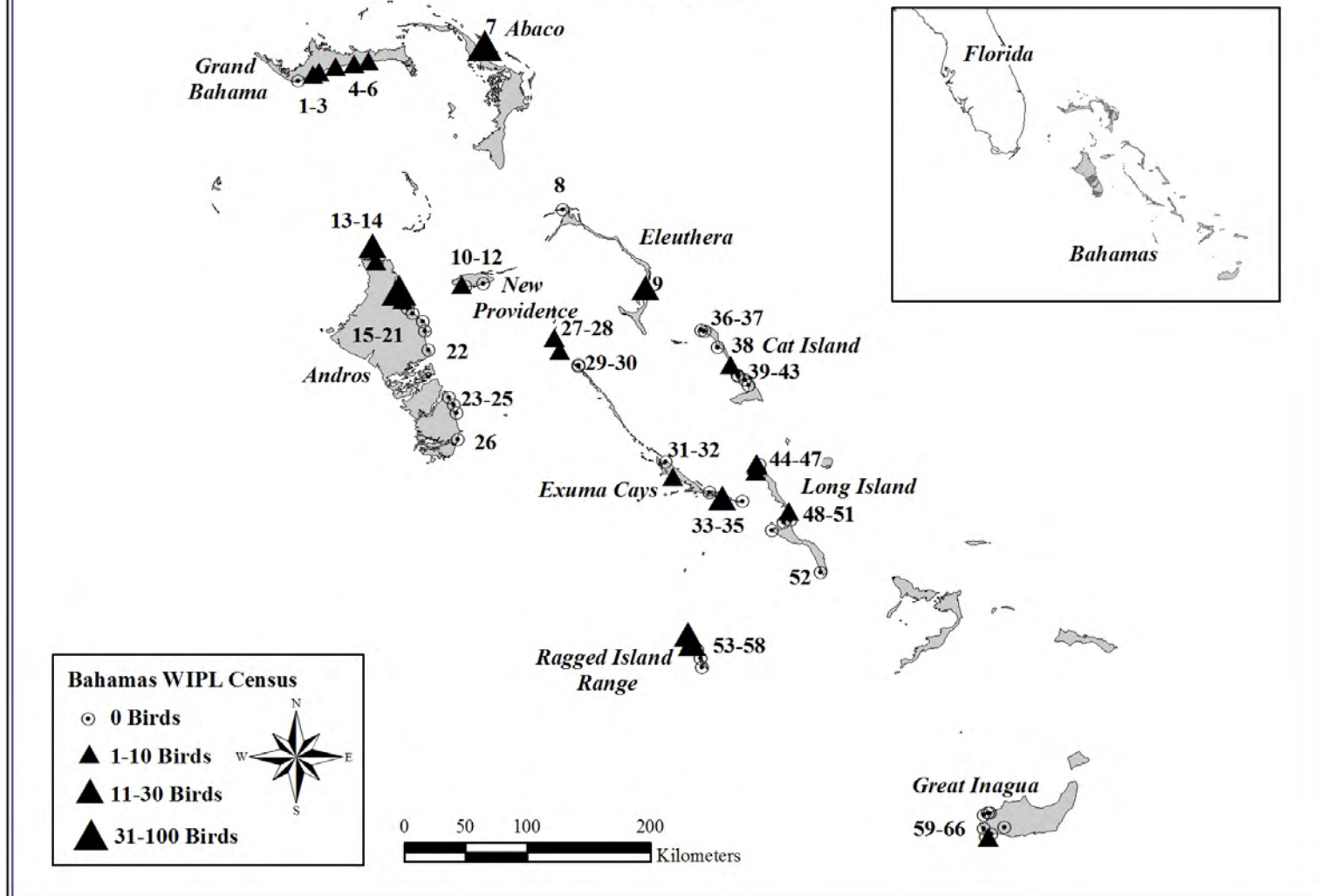
ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Exuma Cays	Normans Cay <sup>1</sup>	27	3/9	0	2.0	I E 3		No	No	No	n.r.
Exuma Cays	Powerful Beach, Warderick Wells Cay <sup>1</sup>	30	3/26	0	0.2	II E 1		No	No	No	n.r.
Exuma Cays	Sea Way Drive, Great Exuma <sup>1</sup>	32	1/21	0	0.2	I E 1 11		No	No	No	n.r.
Exuma Cays	Wolf Dames Back Landing, Little Exuma <sup>1</sup>	34	1/21	0	1.0	I II E 11		No	No	No	n.r.
Grand Bahama	Barbary Beach	3	2/1	0	4.3	I E 1 11		No	No	No	n.r.
Grand Bahama	Discovery Beach	2	2/1	0	0.5	I E 1 11		No	No	No	n.r.
Grand Bahama	Goldrock to East Point	4	2/2	0	1.0	I E 1		No	No	No	n.r.
Grand Bahama	Island Seas - Silver Point Beach into Jetty	1	2/1	0	1.4	I E 1 11		No	No	No	n.r.
Grand Bahama	Pelican Point West to Oil Terminal	6	2/2	0	10.1	I E 1		No	No	No	n.r.
Grand Bahama	West of Sciding Point to High Rock	5	2/2	0	1.4	I E 1 6 11		No	No	Yes	n.r.
Great Inagua	Craig's Bight East & West to Crossing	65	2/5	0	5.0	I E 1		No	No	No	n.r.
Great Inagua	Man of War Bay	61	2/4	0	10.0	I E 1		No	No	No	n.r.
Great Inagua	Morton Salt Ponds	66	2/5	5	0.7	V E 11		No	No	No	n.r.
Great Inagua	Red Pond West	59	2/4	0	2.9	V B 1		No	No	No	n.r.
Great Inagua	The Tunnel Beach	62	2/5	0	1.2	I E 1		No	No	No	n.r.
Great Inagua	Vandayvill Beach	63	2/3	0	2.0	I E 1		No	No	No	n.r.
Great Inagua	Vandayville to Lighthouse	64	2/6	0	2.5	I E 1		No	No	No	n.r.
Great Inagua	Well Road Beach	60	2/5	0	2.2	I E 1		No	No	No	n.r.
Long Island	Atlantic Coast from Pinders to Salt Pond <sup>1</sup>	48	2/19	6	6.5	I II A 1 10 11	II A 1	No	No	No	p
Long Island	Cape Santa Maria Dev., Hoosie Harbor	46	1/26	0	0.5	II E 1 3 11		No	No	No	n.r.
Long Island	Conch Cay (off Long Island)	51	1/25	0	3.7	II E 1 5 8		No	No	No	n.r.
Long Island	Cove near C.C. Monument, Newton Cay	44	1/26	0	0.4	II E 3		No	No	No	n.r.
Long Island	Duncanson Point	49	1/25	0	0.6	II B 11		No	No	No	n.r.
Long Island	Gordon's	52	1/27	0	1.5	I E		No	No	No	n.r.
Long Island	Joe Sound Harbor	47	1/26	0	0.3	II E 1 3		No	No	No	n.r.
Long Island	Newton Cay, W side	45	1/26	0	0.6	II E 1		No	No	No	n.r.
Long Island	Red Pond	50	1/24	2	0.5	V E 3	I E 3	No	No	No	n.r.
New Providence	Coral Harbor Goltlore	10	2/6	0	0.3	I E 1 3 11		No	No	No	n.r.

# **The 2006 International Snowy Plover Winter Census in the Bahamas (Continued)**

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
New Providence	Local Harbor <sup>1</sup>	11	1/20	0	0.6	I E 11		No	No	No	n.r.
New Providence	South Beach <sup>1</sup>	12	1/20	0	0.7	I E 1 3		No	Yes	No	n.r.
Ragged Island Range	Buena Vista Cay	53	1/31	0	3.0	I E 3		No	No	No	n.r.
Ragged Island Range	Hog Cay	57	1/29	0	3.0	I E 3		No	No	No	n.r.
Ragged Island Range	House Bay, Racoon Cay <sup>1</sup>	54	1/21	0	1.7	I E 3		No	No	No	s(p)
Ragged Island Range	Margaret Cay, E shore	56	1/25	0	1.2			No	No	No	n.r.
Ragged Island Range	Ragged Island (bay on S end)	58	1/26	0	2.0			No	No	No	n.r.
Ragged Island Range	Southern Pond, Racoon Cay <sup>1</sup>	55	1/22	0	0.5	II V G 5		No	No	No	n.r.
<b>Total</b>				<b>13</b>	<b>128.2</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

## 2006 International Wilson's Plover Winter Census - Bahamas -



## The 2006 International Wilson's Plover Winter Census in the Bahamas

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Abaco	Green Turtle Cay	7	2/1	35	1.0	II B 3	II B 3	No	No	Yes	f
Andros	Andros Town	20	1/27	0	0.8	I A 1 3 10		No	No	No	f
Andros	Blanket Sound	16	1/28	3	0.8	I A 3 4 8 10		No	No	No	f
Andros	Calabash Bay	19	1/28	0	0.4	I A 1 8 10		No	No	No	f
Andros	Congo Town	23	2/3	0	0.8	I A 1 10		No	No	No	f
Andros	Flats N of Staniard Creek <sup>1</sup>	15	1/9	38	1.6			No	No	No	n.r.
Andros	Joulter's Cays <sup>1</sup>	13	1/10	17	1.6			No	No	No	n.r.
Andros	Kemps Bay	24	2/3	0	0.8	I A 1 3 4		No	No	No	n.r.
Andros	Lowe's Sound Mangrove Flats <sup>1</sup>	14	1/10	0	1.6			No	No	No	n.r.
Andros	Mars Bay	26	2/3	0	0.8	I A D 3 4 10		No	No	No	f
Andros	North Cargil Creek	22	1/27	0	0.8	I A 1 3 8 10		No	No	No	f
Andros	Small Hope Bay	18	1/28	0	0.8	I A 3 4 8 10		No	No	No	n.r.
Andros	Staniard Creek	17	1/29	0	1.2	II IV A B E 1		No	No	No	f
Andros	Summerset Creek	21	1/27	0	0.4	I A 3 10		No	No	No	f
Andros	The Coppice at Duncan Point	25	2/3	0	0.4	I A 1 10		No	No	No	f
Cat Island	Fernandez Bay	40	1/31	0	1.1	I II 1 10 11		No	No	No	n.r.
Cat Island	New Bight Beach - From T to Primary School	42	1/31	0	0.8	I E 1		No	No	No	n.r.
Cat Island	New Bight Harbor	41	1/31	0	0.6	II E 1 10		No	No	No	n.r.
Cat Island	NW Most Beach Orange Creek Point	36	1/30	0	3.3	I E 1 11		No	No	No	n.r.
Cat Island	Orange Creek, SE End	37	1/30	0	1.4	I II E 1 2 3 10 11		No	No	No	n.r.
Cat Island	Pigeon Key	38	1/30	0	5.5	I E 1 11		No	No	No	n.r.
Cat Island	Pilot Harbor, New Bight	43	1/29	0	1.1	n.r.		No	No	No	n.r.
Cat Island	Port House	39	1/29	1	2.0	II E 1 3 4 11	II E 1	No	No	No	n.r.
Eleuthera	Spanish Wells	8	1/28	0	6.0	II E 1 3 4 10		No	No	No	n.r.
Eleuthera	Winding Bay, Eleuthera	9	2/6	13	5.8	I E 1	I E 1	No	No	No	f
Exuma Cays	Careen Beach, Warderick Wells Cay <sup>1</sup>	29	3/14	0	1.6	II E 1		No	No	No	s(p)
Exuma Cays	Exuma Point, Great Exuma	31	1/23	0	0.4	II E 4 5		No	No	No	n.r.
Exuma Cays	Hawksbill Cay <sup>1</sup>	28	3/12	3	1.2			No	No	No	n.r.
Exuma Cays	Leaf Cay/White Cay <sup>1</sup>	35	2/24	0	5.6	V B F 1 2 3 8 10 11		No	No	No	p
Exuma Cays	Moriah Harbour City, Great Exuma	33	1/23	0	1.7	II E 1 2 3		No	No	No	n.r.

**The 2006 International Wilsons Plover Winter Census in the Bahamas  
(Continued)**

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Exuma Cays	Normans Cay <sup>1</sup>	27	3/9	2	2.0	I E 3		No	No	No	n.r.
Exuma Cays	Powerful Beach, Warderick Wells Cay <sup>1</sup>	30	3/26	0	0.2	II E 1		No	No	No	n.r.
Exuma Cays	Sea Way Drive, Great Exuma <sup>1</sup>	32	1/21	1	0.2	I E 1 11		No	No	No	n.r.
Exuma Cays	Wolf Dames Back Landing, Little Exuma <sup>1</sup>	34	1/21	13	1.0	I II E 11		No	No	No	n.r.
Grand Bahama	Barbary Beach	3	2/1	4	4.3	I E 1 11		No	No	No	n.r.
Grand Bahama	Discovery Beach	2	2/1	2	0.5	I E 1 11		No	No	No	n.r.
Grand Bahama	Goldrock to East Point	4	2/2	2	1.0	I E 1		No	No	No	n.r.
Grand Bahama	Island Seas - Silver Point Beach into Jetty	1	2/1	0	1.4	I E 1 11		No	No	No	n.r.
Grand Bahama	Pelican Point West to Oil Terminal	6	2/2	5	10.1	I E 1		No	No	No	n.r.
Grand Bahama	West of Sciding Point to High Rock	5	2/2	7	1.4	I E 1 6 11		No	No	Yes	n.r.
Great Inagua	Craig's Bight East & West to Crossing	65	2/5	0	5.0	I E 1		No	No	No	n.r.
Great Inagua	Man of War Bay	61	2/4	0	10.0	I E 1		No	No	No	n.r.
Great Inagua	Morton Salt Ponds	66	2/5	0	0.7	V E 11		No	No	No	n.r.
Great Inagua	Red Pond West	59	2/4	0	2.9	V B 1		No	No	No	n.r.
Great Inagua	The Tunnel Beach	62	2/5	0	1.2	I E 1		No	No	No	n.r.
Great Inagua	Vandayvill Beach	63	2/3	2	2.0	I E 1		No	No	No	n.r.
Great Inagua	Vandayville to Lighthouse	64	2/6	0	2.5	I E 1		No	No	No	n.r.
Great Inagua	Well Road Beach	60	2/5	0	2.2	I E 1		No	No	No	n.r.
Long Island	Atlantic Coast from Pinders to Salt Pond <sup>1</sup>	48	2/19	4	6.5	I II A 1 10 11	I A 11	No	No	No	p
Long Island	Cape Santa Maria Dev., Hoosie Harbor	46	1/26	5	0.5	II E 1 3 11	II E 3	No	No	No	n.r.
Long Island	Conch Cay (off Long Island)	51	1/25	0	3.7	II E 1 5 8		No	No	No	n.r.
Long Island	Cove near C.C. Monument, Newton Cay	44	1/26	7	0.4	II E 3	II E 10	No	No	No	n.r.
Long Island	Duncanson Point	49	1/25	0	0.6	II B 11		No	No	No	n.r.
Long Island	Gordon's	52	1/27	0	1.5	I E		No	No	No	n.r.
Long Island	Joe Sound Harbor	47	1/26	3	0.3	II E 1 3	II E 3	No	No	No	n.r.
Long Island	Newton Cay, W side	45	1/26	0	0.6	II E 1		No	No	No	n.r.
Long Island	Red Pond	50	1/24	0	0.5	V E 3		No	No	No	n.r.
New Providence	Coral Harbor Goltlore	10	2/6	9	0.3	I E 1 3 11	I E 2	No	No	No	n.r.

**The 2006 International Wilson's Plover Winter Census in the Bahamas  
(Continued)**

ISLAND/ ISLAND GROUP	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
New Providence	Local Harbor <sup>1</sup>	11	1/20	0	0.6	I E 11		No	No	No	n.r.
New Providence	South Beach <sup>1</sup>	12	1/20	0	0.7	I E 1 3		No	Yes	No	n.r.
Ragged Island Range	Buena Vista Cay	53	1/31	15	3.0	I E 3	I E 3	No	No	No	n.r.
Ragged Island Range	Hog Cay	57	1/29	0	3.0	I E 3		No	No	No	n.r.
Ragged Island Range	House Bay, Racoon Cay <sup>1</sup>	54	1/21	2	1.7	I E 3	I E 3	No	No	No	s(p)
Ragged Island Range	Margaret Cay, E shore	56	1/25	0	1.2			No	No	No	n.r.
Ragged Island Range	Ragged Island (bay on S end)	58	1/26	0	2.0			No	No	No	n.r.
Ragged Island Range	Southern Pond, Racoon Cay <sup>1</sup>	55	1/22	25	0.5	II V G 5	II F 5	No	No	No	n.r.
<b>Total</b>				<b>218</b>	<b>128.2</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.



# **The 2006 International Piping Plover Winter Census in the Cuba**

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Because of the time it took to obtain work permits and visas for Cuba, the Piping Plover survey was held from February 14 to March 5, 2006. In all, 89 plovers were counted, or 34 more than in 2001. The research effort was greater in 2006 than in the 2001 survey, with 123.6 km of beaches covered versus 105.4 km in 2001.

All of the beaches where Piping Plovers were sighted in 2001 were surveyed again in 2006, except for the beach on Megano Grande Cay. On Hicacos Peninsula and Guillermo Cay, there were no sightings of Piping Plovers in 2006, whereas there were some in 2001. The construction of hotel complexes has caused disturbance to Piping Plover habitat in these areas.

In general, the Piping Plovers sighted on these beaches at high tide were resting, whereas those sighted at low tide were feeding on the extensive sand flats. The cays featuring these two types of habitat, located close together, are the ones typically frequented by this species.

Of the 89 Piping Plovers sighted, 4 were banded, 82 were not, and for 3 birds this determination could not be made. Three of the banded birds were likely banded in eastern Canada, whereas the fourth was banded in Cuba.

In the future, other beaches could be inventoried in Cuba in order to have a complete picture of the wintering population. There are nearly 1,500 cays in the archipelagos of Sabana and Camagüey. Since only the most accessible ones were inventoried, there are a number of other beaches in these archipelagos that could be surveyed, including those located on Mono, Blancos, Frágoso and Lanzanillo Kays. On the main island of Cuba, some beaches in Las Tunas province may constitute potential habitat. There are also some beaches to the west of Havana, specifically those on Levisa and Jutías Kays that appear to offer suitable habitat. South of the main island are the Jardines de la Reina and Los Canarreos archipelagos, which may have potential for the species. The sighting of one Piping Plover in 2006 on Largo Cay proves that these archipelagos offer potential as wintering grounds for the species. Unfortunately they are not very accessible.

Tourism is still expanding in Cuba. On a visit to the Hicacos Peninsula, no birds were found during the survey, whereas some were counted in 2001. The place that Piping Plovers used to frequent has been altered substantially and hotel complexes are under construction.

## Wilson's Plover

Since Wilson's Plovers appear to use rocky coastal areas to a greater extent, we no doubt surveyed only a small part of the habitat available for this species. The Wilson's Plover population that winters in Cuba is definitely a lot larger than what our results (only 57 individuals) show.

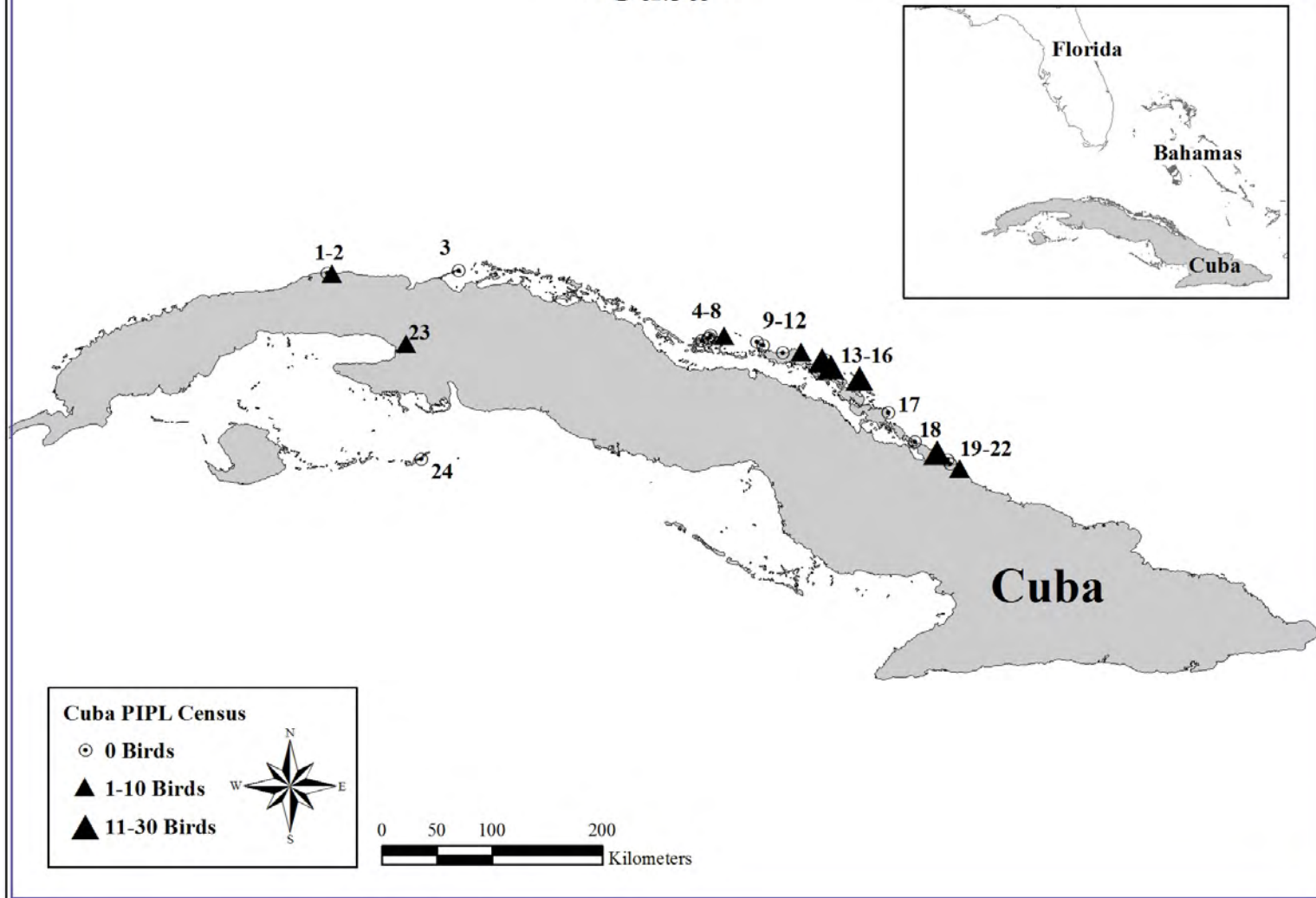
### Snowy Plover

With regard to the Snowy Plover, we were unable to survey the Las Salinas de Bidos site, which is where 88% of the 2001 sightings in Cuba were made. This species is undoubtedly rare in Cuba in the winter. However, if it were possible to survey all of the salt pans in Cuba, more of these birds would definitely be counted.

### **Comparison of Census Numbers**

Species	1991	1996	2001	2006
Piping Plover	11	64	55	89
Snowy Plover	n.r.	n.r.	16	0
Wilson's Plover	n.r.	n.r.	n.r.	57

## 2006 International Piping Plover Winter Census - Cuba -



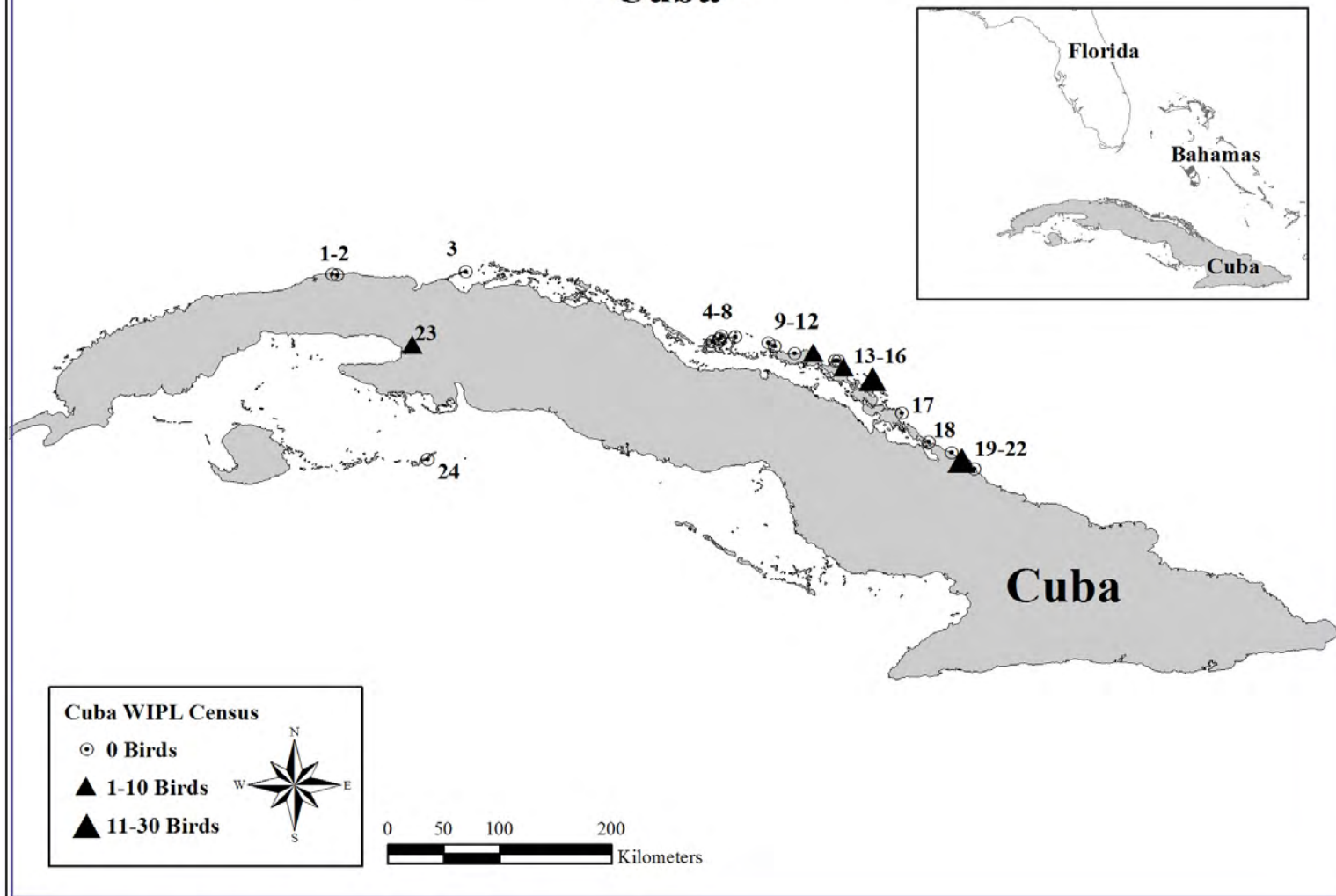
## The 2006 International Piping Plover Winter Census in Cuba

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Camaguey	Pedraplain / Cayo Anton	15	2/19	17	1.1	I E 11	I E 11	No	No	Yes	f
Camaguey	Playa Bonita / Cayo Sabinal	21	2/21	0	1.5	I E 1		No	No	Yes	f
Camaguey	Playa Cruz/Cayo Cruz	16	2/22	19	3.5	I E 1	I E 1	No	No	Yes	f
Camaguey	Playa el Faro/ Cayo Sabinal	20	2/21	0	6.8	I E 1		No	No	No	f
Camaguey	Playa Guarda Frontera / Cayo Sabinal	18	2/21	0	3.1	I E 1		No	No	No	f
Camaguey	Playa Las Calaveras / Cayo Romano	17	2/23	0	8.7	I E 1		No	No	No	f
Camaguey	Playa Los Lirios/Cayo Paredón Grande	13	2/25	18	3.8	II E 1	I E 3	Yes	Yes	Yes	f
Camaguey	Playa Los Pinos/Cayo Sabinal	19	2/21	14	7.8	I E 1	I E 1	No	No	Yes	f
Camaguey	Playa Los pinos/Cayo Paredon Grande	14	2/25	0	6.3	I E 1					f
Camaguey	Playa Santa Lucia	22	2/22	6	14.2	I A 1	I A 1	No	No	No	f
Ciego de Avila	Playa El Paso/Cayo Guillermo	10	2/26	0	3.8	I E 1		No	No	Yes	f
Ciego de Avila	Playa Las Coloradas/Cayo Coco	12	2/26	9	2.5	I E 1	I E 1	No	Yes	Yes	f
Ciego de Avila	Playa Pilar/Cayo Guillermo	9	2/26	0	1.8	I E 1		No	No	Yes	f
Ciego de Avila	Uva Caleta/ Cayo Coco	11	2/26	0	0.7	I E 1		No	Yes	Yes	f
Cuidad de Habana	Habana del Este	2	2/14	2	7.8	I A 1	I A 1	No	Yes	Yes	f
Cuidad de Habana	Plage Bacuranao	1	2/14	0	0.3	I A 1		No	No	No	f
Mantanzas	Peninsula de Hicacos	3	2/15	0	8.7	I A 1		No	Yes	Yes	f
Pinar del Rio	Playa Larga/Cayo Largo	24	3/02	0	14.4	I E 1		No	No	No	f
Pinar del Rio	Playa Paraiso/ Cayo Largo	23	3/03	1	8.2	I E 1	I E 1	No	No	No	f
Villa Clara	Playa Al Final/Cayo Santa Maria	8	2/17	3	3.1	I E 1	I E 3	No	Yes	Yes	f
Villa Clara	Playa Ensenachos #1/Cayo Ensenachos	6	2/18	0	1.4	IV E 1		No	No	Yes	f
Villa Clara	Playa Ensenachos #2/Cayo Ensenachos	5	2/18	0	1.3	IV E 1		No	No	Yes	f
Villa Clara	Playa Estrella/Cayo Santa Maria	7	2/17	0	11.0	I E 1		No	Yes	Yes	f
Villa Clara	Playa La Bruja / Cayo La Bruya	4	2/17	0	2.0	IV E 1		No	No	Yes	f
<b>Total</b>				<b>89</b>	<b>123.6</b>						

## The 2006 International Snowy Plover Winter Census in Cuba

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Camaguey	Pedraplain / Cayo Anton	15	2/19	0	1.1	I E 11		No	No	Yes	f
Camaguey	Playa Bonita / Cayo Sabinal	21	2/21	0	1.5	I E 1		No	No	Yes	f
Camaguey	Playa Cruz/Cayo Cruz	16	2/22	0	3.5	I E 1		No	No	Yes	f
Camaguey	Playa el Faro/ Cayo Sabinal	20	2/21	0	6.8	I E 1		No	No	No	f
Camaguey	Playa Guarda Frontera / Cayo Sabinal	18	2/21	0	3.1	I E 1		No	No	No	f
Camaguey	Playa Las Calaveras / Cayo Romano	17	2/23	0	8.7	I E 1		No	No	No	f
Camaguey	Playa Los Lirios/Cayo Paredón Grande	13	2/25	0	3.8	II E 1		Yes	Yes	Yes	f
Camaguey	Playa Los Pinos/Cayo Sabinal	19	2/21	0	7.8	I E 1		No	No	Yes	f
Camaguey	Playa Los pinos/Cayo Paredon Grande	14	2/25	0	6.3	I E 1					f
Camaguey	Playa Santa Lucia	22	2/22	0	14.2	I A 1		No	No	No	f
Ciego de Avila	Playa El Paso/Cayo Guillermo	10	2/26	0	3.8	I E 1		No	No	Yes	f
Ciego de Avila	Playa Las Coloradas/Cayo Coco	12	2/26	0	2.5	I E 1		No	Yes	Yes	f
Ciego de Avila	Playa Pilar/Cayo Guillermo	9	2/26	0	1.8	I E 1		No	No	Yes	f
Ciego de Avila	Uva Caleta/ Cayo Coco	11	2/26	0	0.7	I E 1		No	Yes	Yes	f
Cuidad de Habana	Habana del Este	2	2/14	0	7.8	I A 1		No	Yes	Yes	f
Cuidad de Habana	Plage Bacuranao	1	2/14	0	0.3	I A 1		No	No	No	f
Mantanzas	Peninsula de Hicacos	3	2/15	0	8.7	I A 1		No	Yes	Yes	f
Pinar del Rio	Playa Larga/Cayo Largo	24	3/02	0	14.4	I E 1		No	No	No	f
Pinar del Rio	Playa Paraíso/ Cayo Largo	23	3/03	0	8.2	I E 1		No	No	No	f
Villa Clara	Playa Al Final/Cayo Santa Maria	8	2/17	0	3.1	I E 1		No	Yes	Yes	f
Villa Clara	Playa Ensenachos #1/Cayo Ensenachos	6	2/18	0	1.4	IV E 1		No	No	Yes	f
Villa Clara	Playa Ensenachos #2/Cayo Ensenachos	5	2/18	0	1.3	IV E 1		No	No	Yes	f
Villa Clara	Playa Estrella/Cayo Santa Maria	7	2/17	0	11.0	I E 1		No	Yes	Yes	f
Villa Clara	Playa La Bruja / Cayo La Bruya	4	2/17	0	2.0	IV E 1		No	No	Yes	f
<b>Total</b>				<b>0</b>	<b>123.6</b>						

## 2006 International Wilson's Plover Winter Census - Cuba -



## The 2006 International Wilson's Plover Winter Census in Cuba

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Camaguey	Pedraplain / Cayo Anton	15	2/19	9	1.1	I E 11	I E 11	No	No	Yes	f
Camaguey	Playa Bonita / Cayo Sabinal	21	2/21	0	1.5	I E 1		No	No	Yes	f
Camaguey	Playa Cruz/Cayo Cruz	16	2/22	27	3.5	I E 1	I E 11	No	No	Yes	f
Camaguey	Playa el Faro/ Cayo Sabinal	20	2/21	13	6.8	I E 1	I E 11	No	No	No	f
Camaguey	Playa Guarda Frontera / Cayo Sabinal	18	2/21	0	3.1	I E 1		No	No	No	f
Camaguey	Playa Las Calaveras / Cayo Romano	17	2/23	0	8.7	I E 1		No	No	No	f
Camaguey	Playa Los Lirios/Cayo Paredón Grande	13	2/25	0	3.8	II E 1		Yes	Yes	Yes	f
Camaguey	Playa Los Pinos/Cayo Sabinal	19	2/21	0	7.8	I E 1		No	No	Yes	f
Camaguey	Playa Los pinos/Cayo Paredon Grande	14	2/25	0	6.3	I E 1					f
Camaguey	Playa Santa Lucia	22	2/22	0	14.2	I A 1		No	No	No	f
Ciego de Avila	Playa El Paso/Cayo Guillermo	10	2/26	0	3.8	I E 1		No	No	Yes	f
Ciego de Avila	Playa Las Coloradas/Cayo Coco	12	2/26	2	2.5	I E 1	I E 1	No	Yes	Yes	f
Ciego de Avila	Playa Pilar/Cayo Guillermo	9	2/26	0	1.8	I E 1		No	No	Yes	f
Ciego de Avila	Uva Caleta/ Cayo Coco	11	2/26	0	0.7	I E 1		No	Yes	Yes	f
Ciudad de Habana	Habana del Este	2	2/14	0	7.8	I A 1		No	Yes	Yes	f
Ciudad de Habana	Plage Bacuranao	1	2/14	0	0.3	I A 1		No	No	No	f
Mantanzas	Peninsula de Hicacos	3	2/15	0	8.7	I A 1		No	Yes	Yes	f
Pinar del Rio	Playa Larga/Cayo Largo	24	3/02	0	14.4	I E 1		No	No	No	f
Pinar del Rio	Playa Paraiso/ Cayo Largo	23	3/03	6	8.2	I E 1	I E 1	No	No	No	f
Villa Clara	Playa Al Final/Cayo Santa Maria	8	2/17	0	3.1	I E 1		No	Yes	Yes	f
Villa Clara	Playa Ensenachos #1/Cayo Ensenachos	6	2/18	0	1.4	IV E 1		No	No	Yes	f
Villa Clara	Playa Ensenachos #2/Cayo Ensenachos	5	2/18	0	1.3	IV E 1		No	No	Yes	f
Villa Clara	Playa Estrella/Cayo Santa Maria	7	2/17	0	11.0	I E 1		No	Yes	Yes	f
Villa Clara	Playa La Bruja / Cayo La Bruya	4	2/17	0	2.0	IV E 1		No	No	Yes	f
<b>Total</b>				<b>57</b>	<b>123.6</b>						

# **The 2006 International Piping Plover Winter Census in Puerto Rico**

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The 2006 International Piping Plover Census was conducted at 6 sites in Puerto Rico including one site where Piping Plovers were reported in 2001.

The censuses were carried out by 15 participants, most of whom are members of the "Red Limicola" (Puerto Rican Shorebird Network). They conduct regular monthly surveys at particular sites in Puerto Rico.

No Piping Plovers and relatively few snowy and wilson's were found during the census window. However, in some instances weather was unfavorable. Hence, to document the presence in 2006 of Piping Plovers at sites where they are usually found, our results include Piping Plover observations from two surveys during the winter, but outside the Census window. Despite, including a couple of surveys outside the Census window, we only have record of a single Snowy Plover. It is very unusual not to find Snowy Plovers at Cabo Roja, where 17 were observed during the 2001 Census. However, neither of the two winter surveys at Cabo Roja in 2006 detected Snowy Plovers.

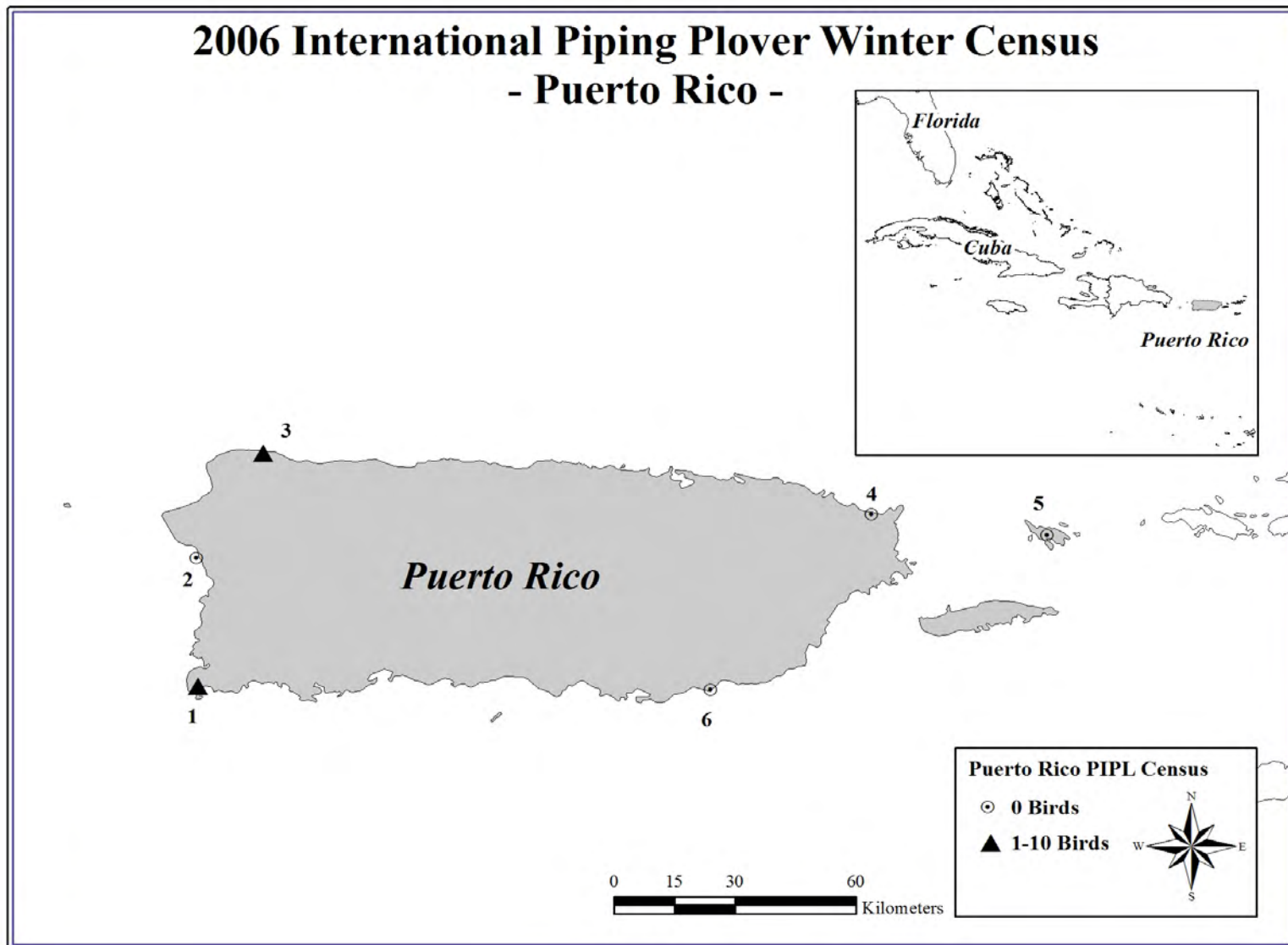
## **Comparison of Census Numbers**

Species	1991	1996	2001	2006
Piping Plover	0	0	6	2
Snowy Plover	n.r.	n.r.	17	1
Wilson's Plover	n.r.	n.r.	n.r.	63

*Summarized by E. Elliott-Smith*



## 2006 International Piping Plover Winter Census - Puerto Rico -

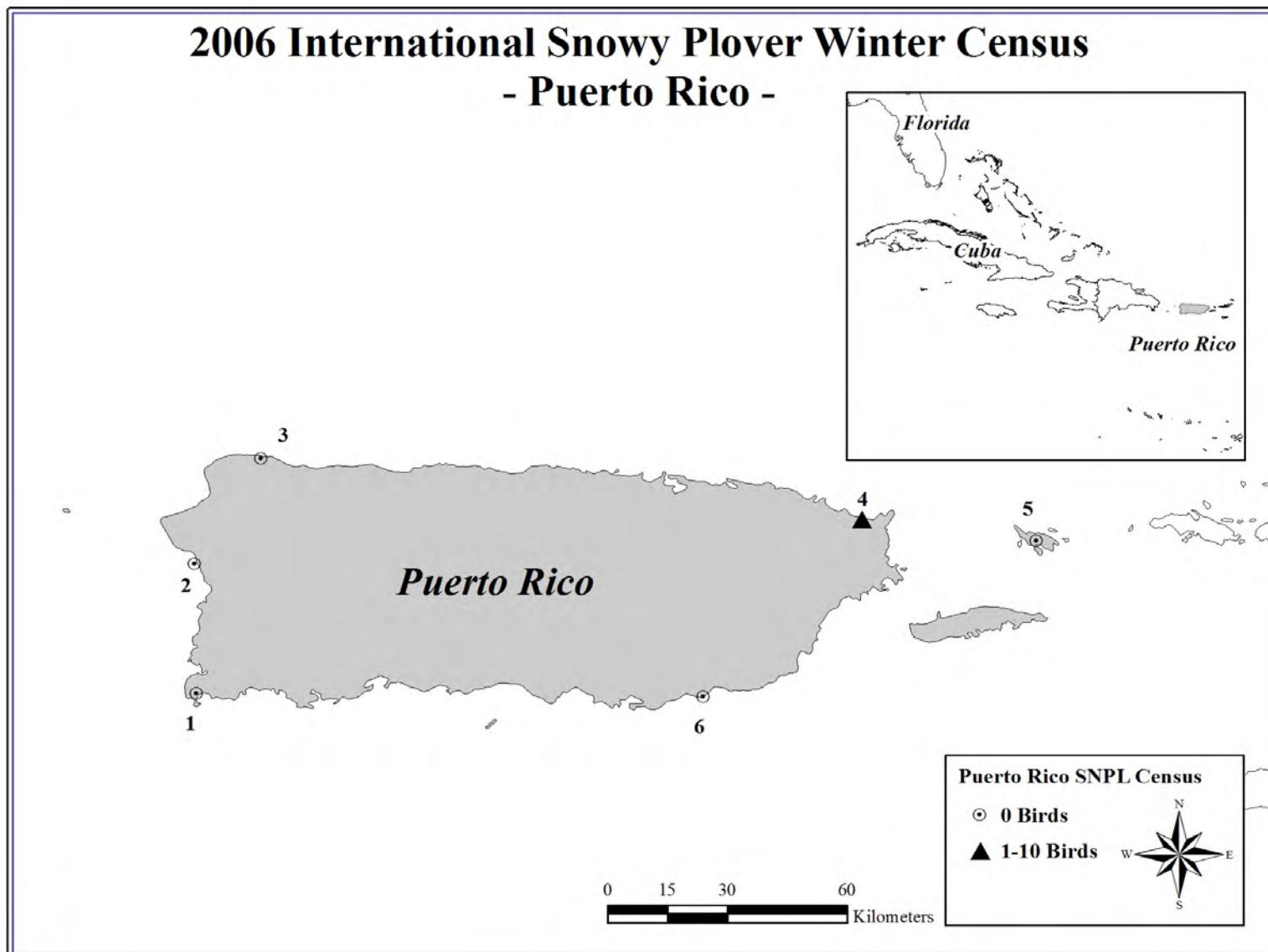


## The 2006 International Piping Plover Winter Census in Puerto Rico

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Anasco	Beach by mouth of Anasco River <sup>1</sup>	2	1/24	0	0.5	I A 2		No	No	No	s(p)/p
Arroyo	Cangrejos Beach, Punta Figuras, Punta Guilarte and Palmas Beach <sup>1</sup>	6	1/21	0	4.0	I A 1		No	No	No	m
Cabo Rojo	Cabo Rojo Salt Flats <sup>1</sup>	1	12/31	1	5.0	II E 5 8 9		Yes	Yes	Yes	f
Isabela	Beaches of Isabela, Sardinera to Golondrinas <sup>1</sup>	3	2/25	1	3.0	I 1		No	No	No	s(p)/p
Luquillo	San Miguel	4	2/5	0	3.2	I F 1		No	No	No	p
Multiple	Culebra Island <sup>1</sup>	5	1/14	0	11.0	I II A B E 1 5 6 7 8 10		No	No	Yes	s(p)/f
<b>Total</b>				<b>2</b>	<b>20.5</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

## 2006 International Snowy Plover Winter Census - Puerto Rico -

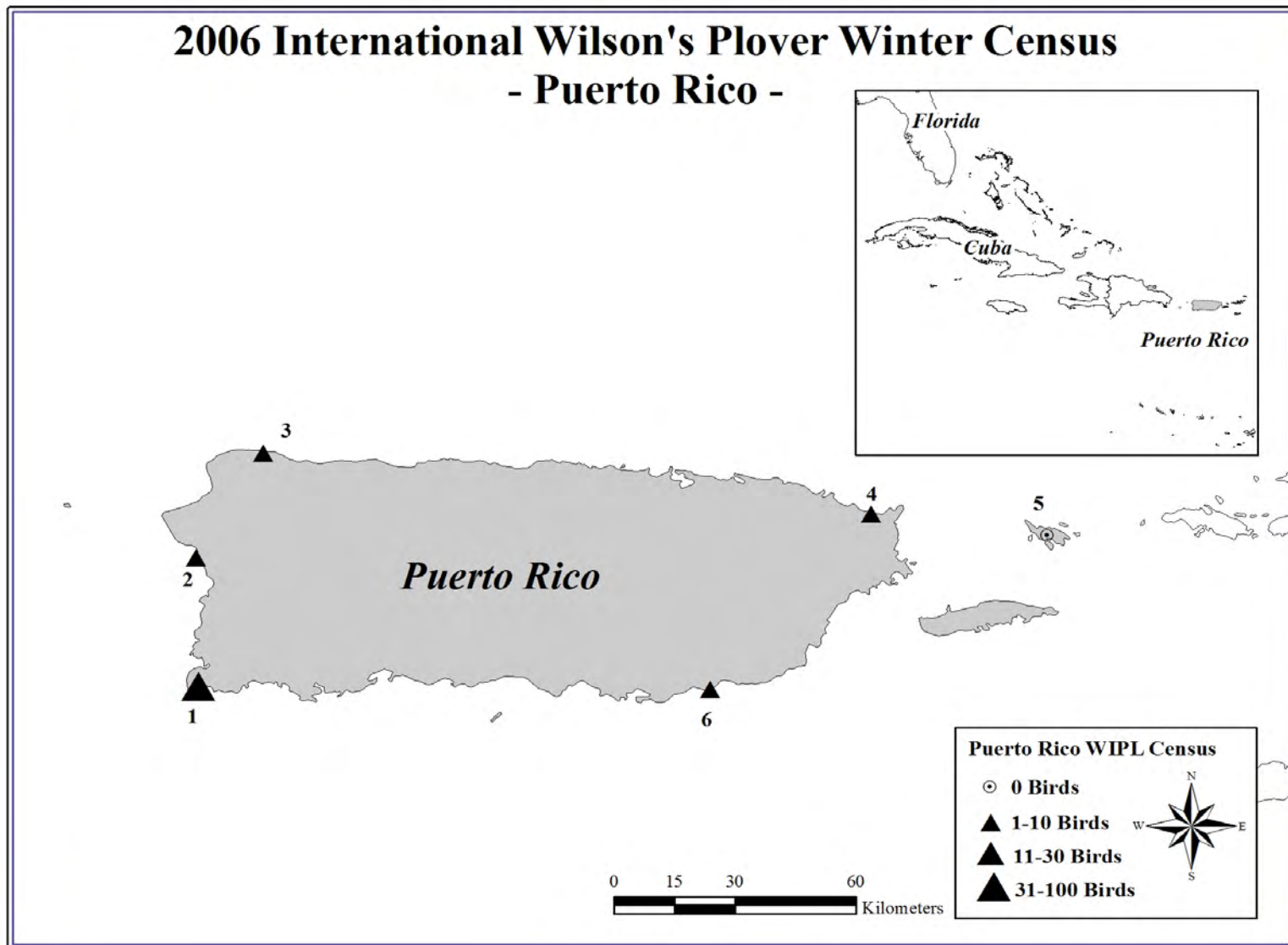


## The 2006 International Snowy Plover Winter Census in Puerto Rico

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Anasco	Beach by mouth of Anasco River <sup>1</sup>	2	1/24	0	0.5	I A 2		No	No	No	s(p)/p
Arroyo	Cangrejos Beach, Punta Figuras, Punta Guilarte and Palmas Beach <sup>1</sup>	6	1/21	0	4.0	I A 1		No	No	No	m
Cabo Rojo	Cabo Rojo Salt Flats <sup>1</sup>	1	12/31	0	5.0	II E 5 8 9		Yes	Yes	Yes	f
Isabela	Beaches of Isabela, Sardinera to Golondrinas <sup>1</sup>	3	2/25	0	3.0	I 1		No	No	No	s(p)/p
Luquillo	San Miguel	4	2/5	1	3.2	I F 1	I F 1	No	No	No	p
Multiple	Culebra Island <sup>1</sup>	5	1/14	0	11.0	I II A B E 1 5 6 7 8 10		No	No	Yes	s(p)/f
<b>Total</b>				<b>1</b>	<b>20.5</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

## 2006 International Wilson's Plover Winter Census - Puerto Rico -



## The 2006 International Wilson's Plover Winter Census in Puerto Rico

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Anasco	Beach by mouth of Anasco River <sup>1</sup>	2	1/24	7	0.5	I A 2	I A 2	No	No	No	s(p)/p
Arroyo	Cangrejos Beach, Punta Figuras, Punta Guilarte and Palmas Beach <sup>1</sup>	6	1/21	1	4.0	I A 1		No	No	No	m
Cabo Rojo	Cabo Rojo Salt Flats <sup>1</sup>	1	12/31	45	5.0	II E 5 8 9	II E 5	Yes	Yes	Yes	f
Isabela	Beaches of Isabela, Sardinera to Golondrinas <sup>1</sup>	3	2/25	9	3.0	I 1	I F 1	No	No	No	s(p)/p
Luquillo	San Miguel	4	2/5	1	3.2	I F 1	I F 1	No	No	No	p
Multiple	Culebra Island <sup>1</sup>	5	1/14	0	11.0	I II A B E 1 5 6 7 8 10		No	No	Yes	s(p)/f
<b>Total</b>				<b>63</b>	<b>20.5</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

## **The 2006 International Piping Plover Winter Census at other islands in the Greater Antilles, West Indies**

Although previous Census' have included surveys of Puerto Rico and Cuba, data from other islands in the Caribbean has been sparse. In 2006, we attempted to contact biologists and birders throughout the Caribbean to inquire about potential Piping Plover habitat, historic records, and coordinate surveys where possible. Our effort focused on the Greater Antilles islands in the northern Caribbean as we assumed that they would have greatest potential for hosting wintering Piping Plovers. Following, are the reports from our communications as well as the results from surveys that were conducted. These communications and results are ordered from north to south and east to west.

### **Turks and Caicos**

Dr M.W. Pienkowski  
Chairman, UK Overseas Territories  
Conservation Forum  
102 Broadway, Peterborough PE1 4DG,  
UK  
pienkowski@cix.co.uk

I have been trying to do some routine bird counts as often as possible during my visits, which take place 3 or 4 times a year.

Piping Plovers are not frequent, so the most likely total would be zero. I try to count a reasonable proportion of the old salt-pans on Grand Turk and Salt Cay. These cover a relatively restricted area, are mainly accessible and birds generally occur at fairly high densities (although recent cruise-liner dock activities and higher water levels following frequent tropical storms have probably affected this negatively).

The Caicos Islands hold (with the exception of most of the recently developed Providenciales and some adjacent islands) a much more natural transition between land and sea. This is one of its outstanding biological features, as such transitions are now of course rather rare. As a consequence, although there are fine beaches, more of the birds are thinly scattered over a non-linear shore and other areas. These include shifting banks, extensive shallows over soft substrate without enough depth for a boat, islands usually inaccessible in anything other than the calmest seas (because of shallow coral reefs - it took us several years to get the first scientific team on to one of these, actually the largest uninhabited island in the Caribbean), ponds surrounded by dense prickly scrub involving hard machete work to get to, etc. That is why we do not have regular counts. It would be great to conduct comprehensive surveys with the assistance of a boat but this would be a major expedition requiring many days. Turks and Caicos may be rather small but getting about in the natural areas is slow and difficult. (For the location of Turks and Caicos, see map for the Dominican Republic).

Some habitat on Grand Turk was surveyed as part of the 1991 Census but no Piping Plovers were recorded (Haig and Plissner 1992).

### **The Cayman Islands**

Patricia Bradley  
PO Box 2394GT  
Grand Cayman  
Cayman Islands  
West Indies  
pebrad@candw.ky

Very comprehensive surveys were conducted on all three Cayman Islands during the 2006 Census. Unfortunately, there were a series of Nor'westers throughout Jan and into Feb which greatly reduced the numbers of migrants and

overwintering shorebirds. This likely explains why there were no Wilson's Plovers observed. Despite the proximity of the Cayman Islands to Cuba and the presence of Piping Plovers on that island, there are no records of Piping Plovers on any of the Cayman Islands. In 25 years of monitoring, there is only one Snowy Plover record. However, Wilson's Plovers commonly winter in the Cayman Islands in small numbers.

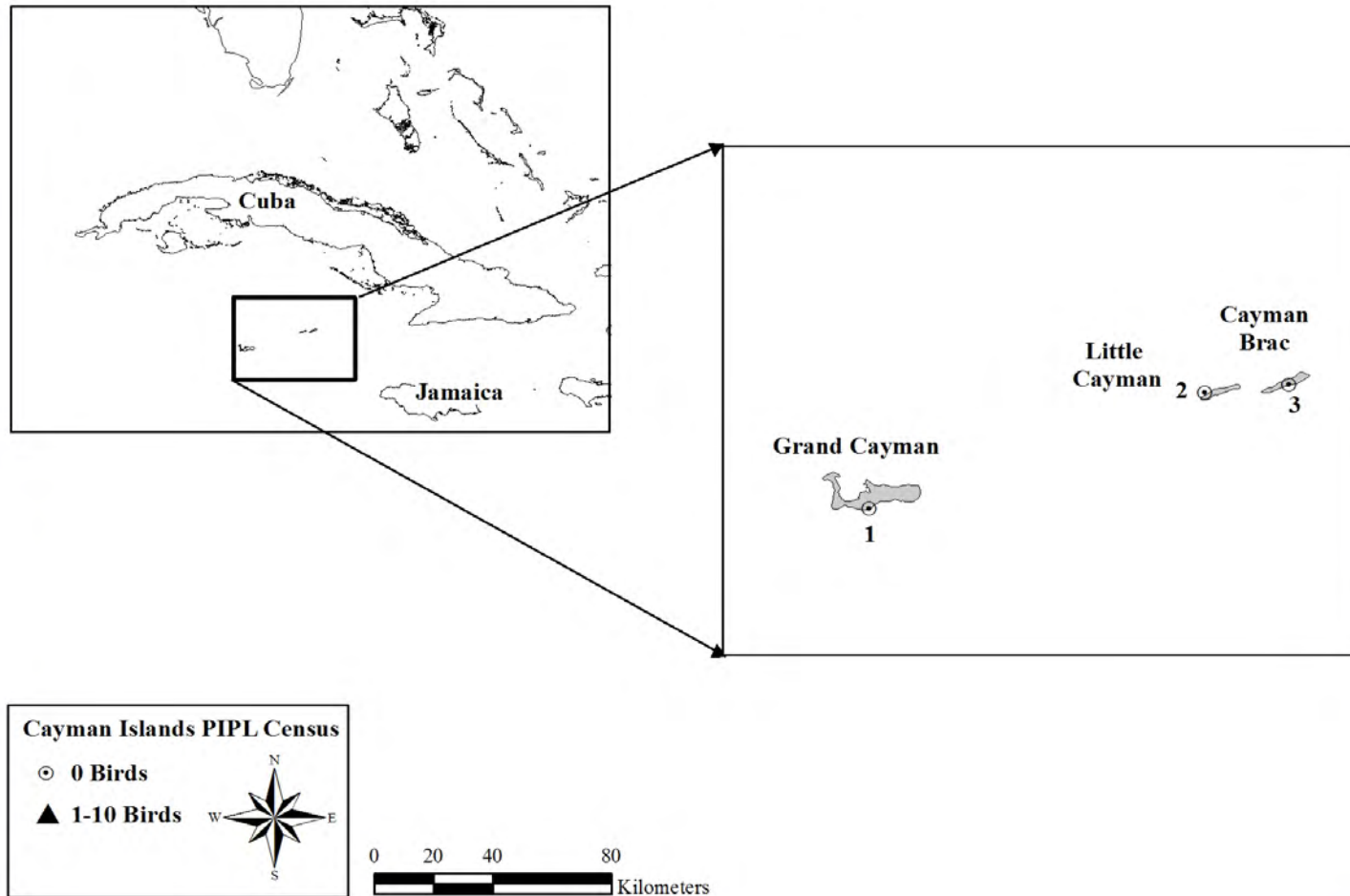
Some Cayman Island habitat was covered as part of the 1991 Census but no Piping Plovers were recorded (Haig and Plissner 1992).

## **Jamaica**

Unfortunately we were unable to coordinate any surveys on Jamaica during the 2006 Census. It is unlikely that piping or Snowy Plovers winter here but Wilson's Plovers have been observed. Some potential habitat in Jamaica was surveyed during the 1991 and 1996 Census but no Piping Plovers were seen (Haig and Plissner 1992, Plissner and Haig 1997). In the future, it might be useful to conduct surveys at Parottee Pond, Pedro Pond, Old Harbour Bay, and Yallahs Pond on the south coast and Mountain Spring Pond on the north (Bandon Hay, pers. comm.)



## 2006 International Piping Plover Winter Census - Cayman Islands -



### The 2006 International Piping Plover Winter Census in the Cayman Islands

ISLAND	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cayman Brac	Entire Island	3	1/31	0	29.0	II A 1 5 8		No	No	No	f
Grand Cayman	Entire Island	1	2/05	0	32.3	II A 1 3 5 8		No	No	No	f
Little Cayman Island <sup>1</sup>	Entire Island	2	1/22	0	32.3	II A B D 1 5 8		No	No	No	f
<b>Total</b>				<b>0</b>	<b>93.6</b>						

### The 2006 International Snowy Plover Winter Census in the Cayman Islands

ISLAND	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cayman Brac	Entire Island	3	1/31	0	29.0	II A 1 5 8		No	No	No	f
Grand Cayman	Entire Island	1	2/05	0	32.3	II A 1 3 5 8		No	No	No	f
Little Cayman Island <sup>1</sup>	Entire Island	2	1/22	0	32.3	II A B D 1 5 8		No	No	No	f
<b>Total</b>				<b>0</b>	<b>93.6</b>						

### The 2006 International Wilson's Plover Winter Census in the Cayman Islands

ISLAND	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cayman Brac	Entire Island	3	1/31	0	29.0	II A 1 5 8		No	No	No	f
Grand Cayman	Entire Island	1	2/05	0	32.3	II A 1 3 5 8		No	No	No	f
Little Cayman Island <sup>1</sup>	Entire Island	2	1/22	0	32.3	II A B D 1 5 8		No	No	No	f
<b>Total</b>				<b>0</b>	<b>93.6</b>						

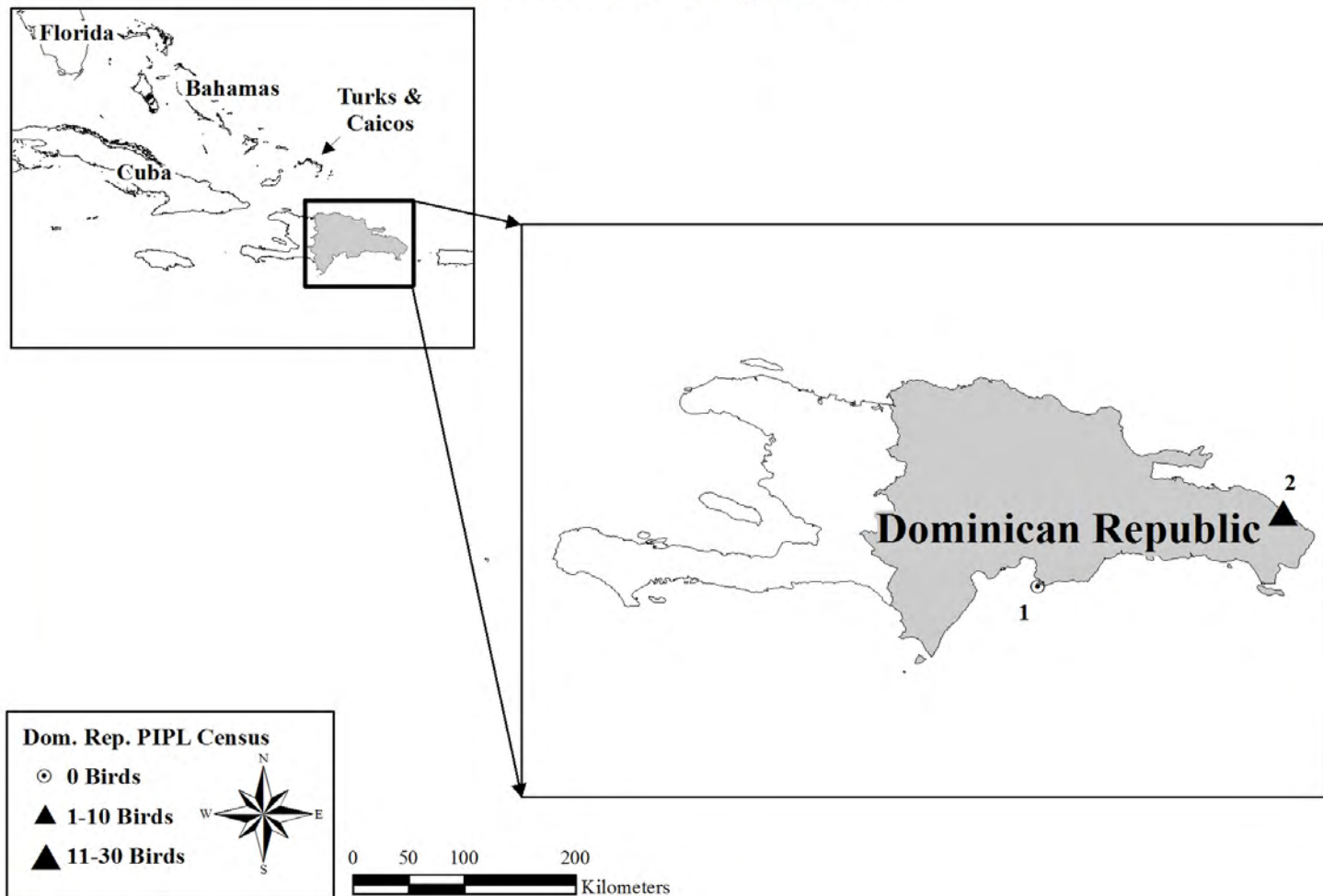
<sup>1</sup>Please note that this survey was conducted outside the Census window.

# **The Dominican Republic**

Kate Wallace  
Sociedad Ornitologica Hispaniola  
Calle Jose Gabriel Garcia 105, Zona  
Colonial  
Santo Domingo, Dominican Republic  
809-686-0882  
cua809@yahoo.com

One site was surveyed during the 2006 Census, where a Piping Plover was reported in 2000 (Ferland and Haig 2002). No Piping Plovers were observed at this site in 2006 but both wilson's and Snowy Plovers were found. This site consists of large salt flats which attract many birds. We later received a report of 12 Piping Plovers on an eastern beach in March (Paul Cook pers. comm.), and this report was verified through photos. The birds were located on an 11 km stretch of undeveloped coast just north of the Breezes Resort, which was the furthest north in a string of resorts. The birds were observed using the pure sand beach which was about 100 m wide and backed by swamp habitat. Another hotel was in the process of being built at the time of this report so it is uncertain whether any undisturbed habitat will remain.

## 2006 International Piping Plover Winter Census - Dominican Republic -

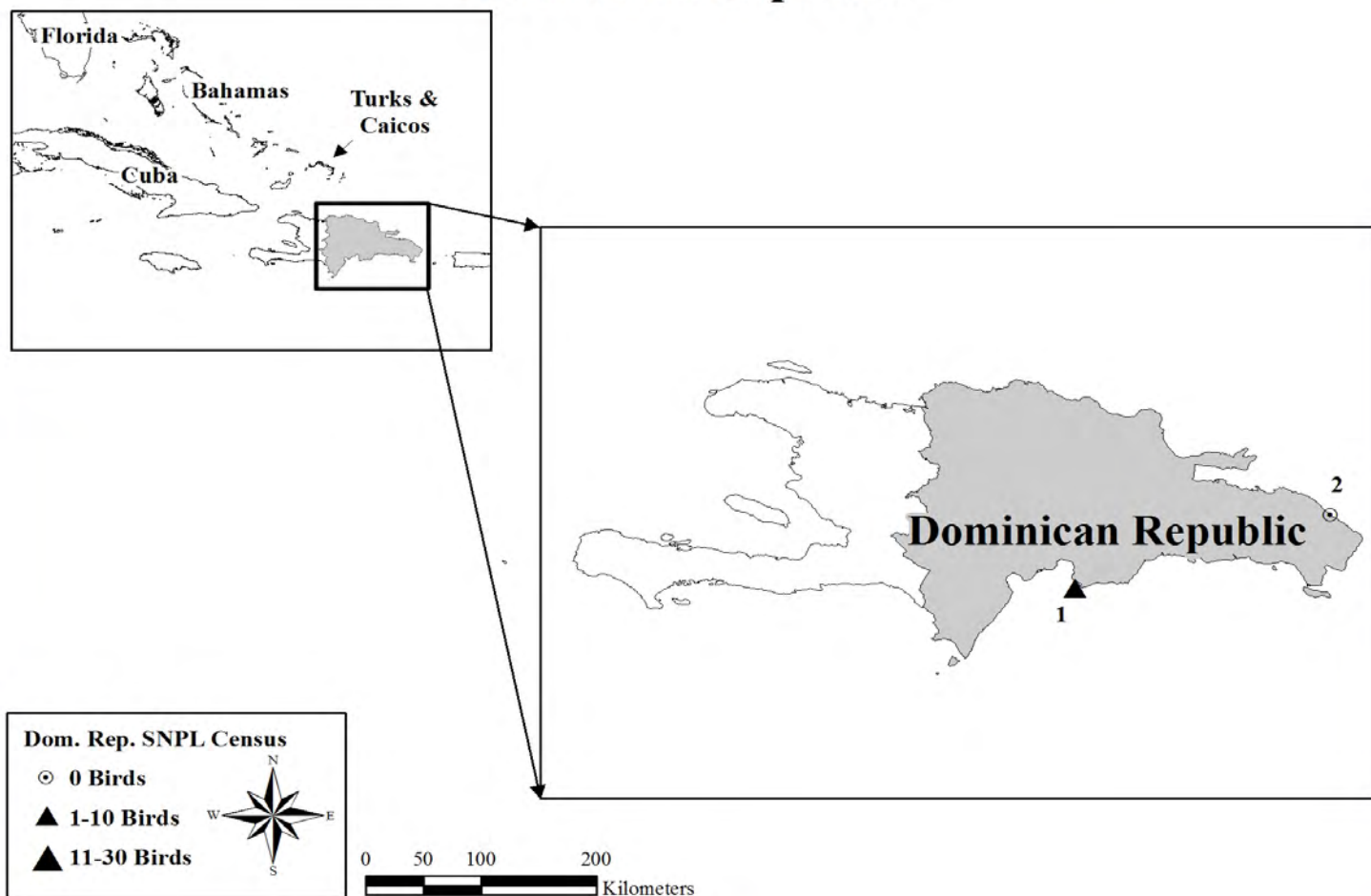


## The 2006 International Piping Plover Winter Census in the Dominican Republic

COUNTY	SITE NAME	MAP #	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Peravia	Salinas de Bani	1	2/4	0	1.6	II A 3 8		No	No	Yes	f/p
La Altagracia	Breezes Resort <sup>1</sup>	2	3/20	12	11.3	II A 1	II A 1	No	No	No	n.r.
<b>Total</b>				<b>12</b>	<b>12.9</b>						

<sup>1</sup>Please note that this survey was conducted outside the Census window.

## 2006 International Snowy Plover Winter Census - Dominican Republic -

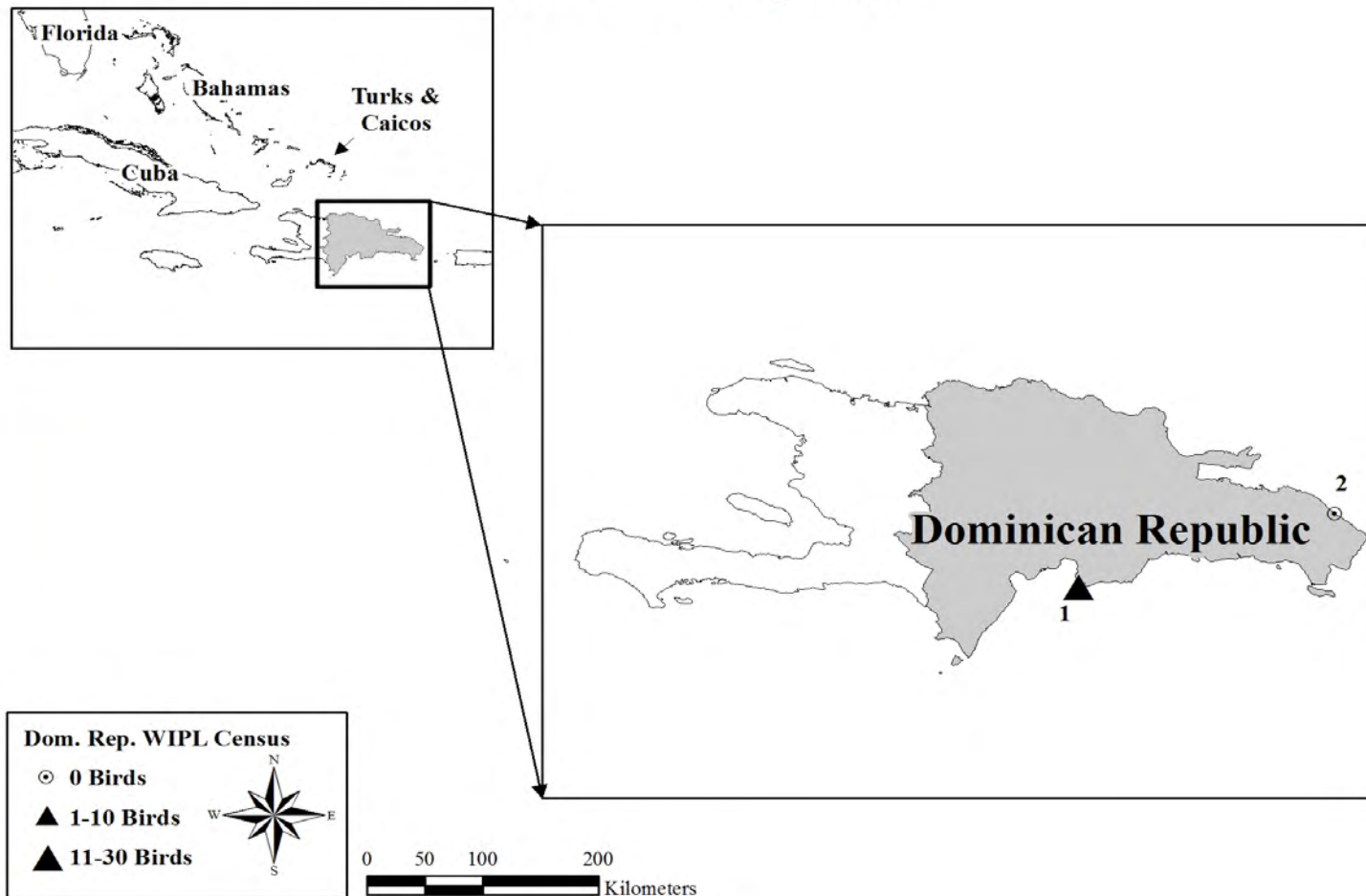


## The 2006 International Snowy Plover Winter Census in the Dominican Republic

COUNTY	SITE NAME	MAP #	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Peravia	Salinas de Bani	1	2/4	6	1.6	II A 3 8	II A 8	No	No	Yes	f/p
La Altagracia	Breezes Resort <sup>1</sup>	2	3/20	0	11.3	II A 1		No	No	No	n.r.
<b>Total</b>				<b>6</b>	<b>12.9</b>						

<sup>1</sup>Please note that this survey was conducted outside the Census window.

## 2006 International Wilson's Plover Winter Census - Dominican Republic -





## The 2006 International Wilson's Plover Winter Census in the Dominican Republic

COUNTY	SITE NAME	MAP #	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Peravia	Salinas de Bani	1	2/4	12	1.6	II A 3 8	II A 3 8	No	No	Yes	f/p
La Altagracia	Breezes Resort <sup>1</sup>	2	3/20	0	11.3	II A 1		No	No	No	n.r.
<b>Total</b>				<b>12</b>	<b>12.9</b>						

<sup>1</sup>Please note that this survey was conducted outside the Census window.

## **The 2006 International Piping Plover Winter Census in the Lesser Antilles, West Indies**

Following, are the reports from our communications as well as results from surveys conducted in the Lesser Antilles. These communications and results are also ordered from north to south and east to west.

### **The Virgin Islands St. Croix**

Claudia D. Lombard  
U.S. Fish and Wildlife Service  
Federal Building  
3013 Estate Golden Rock  
Christiansted, VI 00820

Unfortunately we were unable to coordinate surveys on all the Virgin Islands, but three surveys were conducted on St. Croix. These sites were the most likely to support plovers as they were characterized by salt and sand flats. Wilson's Plovers were observed during these surveys but no Snowy Plovers or Piping Plovers were recorded. There is one historic record of a Piping Plover on St. Croix after a hurricane in 1989 (Plissner and Haig 1997)

### **St. Martin**

Adam Brown  
Environmental Protection in the Caribbean Inc. (EPIC)  
200 Dr. MLK Jr. Blvd, Riviera Beach  
Florida 33404  
abrown@prbo.org

Comprehensive surveys of coastal and saline pond habitat were conducted on both the Netherlands and French portions of St. Martin. Only about 15 % of potential habitat was missed

(in Simpson Bay Lagoon) because it is privately owned and we were not granted access. No Piping Plovers were observed and although there are usually 10 pairs of Snowy Plovers on the island, none were observed during the 2006 Census. This is likely due to an exceptionally rainy hurricane season and winter leading to deep water ponds where there are usually salt pans. Wilson's Plovers were seen during the 2006 Census but their numbers were much lower than observed in previous years.

### **St. Kitts and Nevis**

Ken Porteus (Manitoba Coordinator) reported that his daughter searched for Piping Plovers on both islands during February 2006 but none were seen.

### **Barbuda and Antigua**

Dr. John L. Confer  
Ithaca College  
651 Hammond Hill Rd.  
Brooktondale, NY 14817  
607-274-3978  
confer@ithaca.edu

Joseph Prosper  
prosperj@myway.com

Multiple surveys were conducted by Dr. Confer and two of his students during the winter of 2006 outside the Census window. Coverage of Antigua was limited but the coverage on Barbuda was much more complete and the beaches appeared less developed and more suitable for shorebirds. Surveys involved lengthy walks on both the less storm-prone Caribbean side of the island and the more exposed Atlantic Ocean side. Additionally, the inner beaches of an extensive lagoon were covered. Nonetheless, the shoreline of Barbuda is very extensive and some potential habitat may have been missed. No plovers were seen during

any of these surveys in early January but Wilson's Plovers were observed during an earlier trip in late November.

Antigua local, Joseph Prosper, reported Piping Plovers on two Antigua beaches in May 2006 and Wilson's Plovers were also observed on a third beach where they appeared to be nesting on a sand bar.

## **Guadeloupe**

No surveys were conducted on Guadeloupe during the 2006 Census. There was one report of a Piping Plover on this island in 1999 (Ferland and Haig 2002).

## **Dominica**

We did not conduct any surveys on the island because our communications suggested that it would be a very unlikely spot for wintering Piping Plovers. Dominica local, Dr. Neils Larson reported that he spoke with the most knowledgeable person on the island, and he was not even sure that Piping Plovers had even been observed on the island. They do not have any salt ponds or similar shorebird habitat, and the only species that stays for any significant time is the resident spotted sandpiper.

## **Martinique**

No surveys were conducted on Martinique during the 2006 Census. There was one report of two Piping Plovers on this island in 1997 (Ferland and Haig 2002).

## **Barbados**

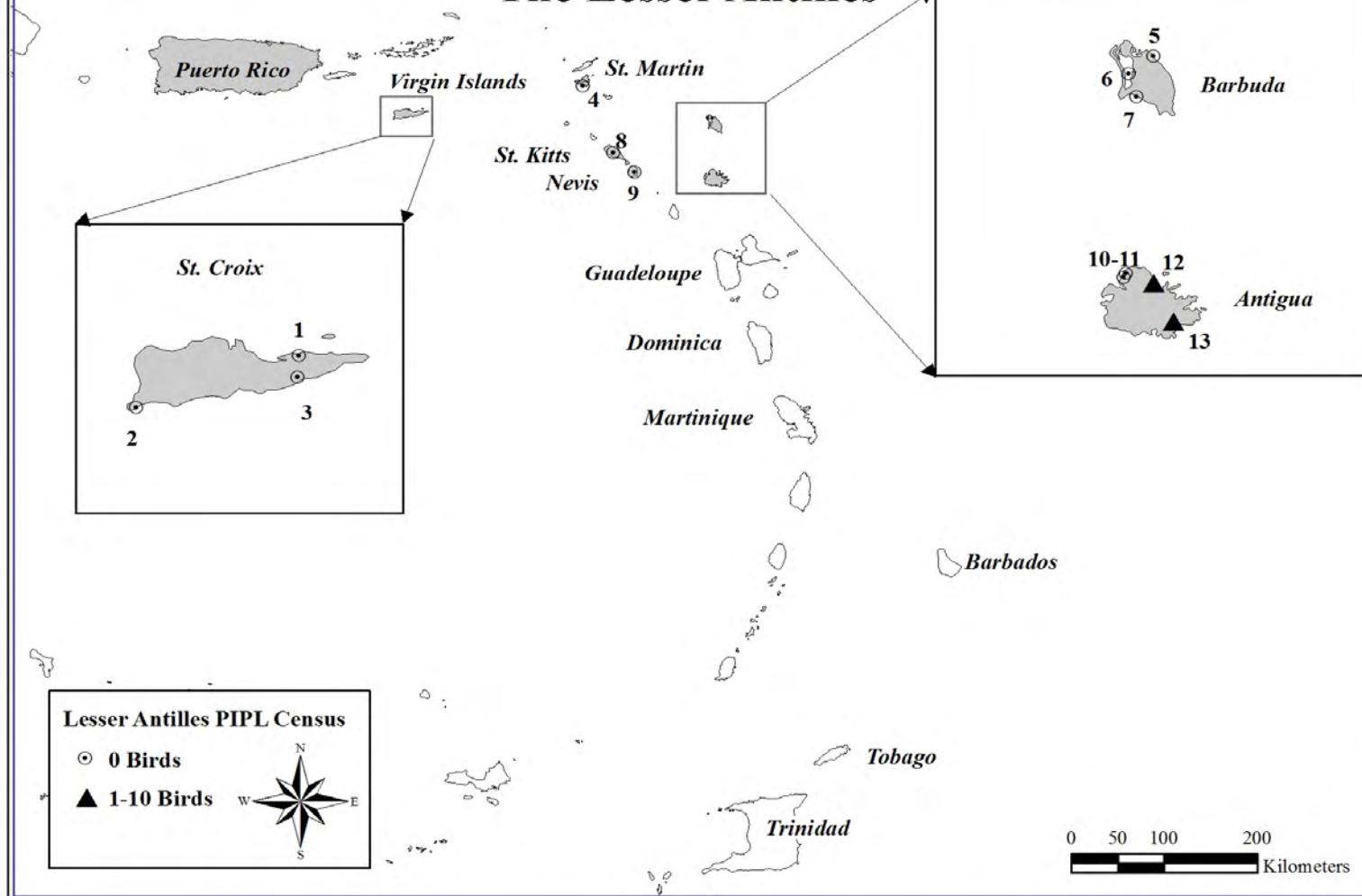
No surveys were conducted on the island because communications suggested that it would be a very unlikely spot for wintering Piping Plovers. Dr. Paul Buckley reports that

there is a single record of a Piping Plover on Barbados from September 1957 (Buckley et al. 2006).

## **Trinidad and Tobago**

We did not conduct any surveys on the island because our communications suggested that it would be a very unlikely spot for wintering Piping Plovers. Martyn Kenefick (Honorary Secretary of the Trinidad and Tobago Rare Birds Committee) reports: Piping Plovers have never been recorded on Trinidad or Tobago. There is only one record of a Snowy Plover in Tobago, from August 1968. Wilson's Plovers are annual fall migrants here but almost all records are in August and Sept. In recent years, there have been no over-wintering records.

## 2006 International Piping Plover Winter Census - The Lesser Antilles -



## The 2006 International Piping Plover Winter Census in the Lesser Antilles Islands

ISLAND	SITE NAME	MAP#	DATE	TOTAL PIPL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Antigua	Christian Cove <sup>1</sup>	13	5/22	4	n.r.			No	No	No	n.r.
Antigua	Dickenson Bay <sup>1</sup>	11	1/11	0	3.2	I A 1		No	No	No	f
Antigua	Fitches Creek <sup>1</sup>	12	5/22	10	n.r.			No	No	No	n.r.
Antigua	McKinnans Pond <sup>1</sup>	10	1/11	0	4.8	II A 8 11		No	No	No	f
Barbuda	Codrington Town Docks lagoon <sup>1</sup>	6	1/7	0	6.5	II A D 10 11		No	No	No	f
Barbuda	The River Landing <sup>1</sup>	7	1/9	0	3.2	I IV V A 1		No	No	No	f
Barbuda	Two Feet Bay <sup>1</sup>	5	1/7	0	3.2	I V A 1 11		No	No	No	f
Nevis	Nevis <sup>2</sup>	9		0	n.r.			No	No	No	n.r.
St. Croix	Great Pond (SE coast)	3	2/3	0	1.6	II A 5 8		No	No	No	s(p)
St. Croix	Sandy Point NWR (SW coast)	2	2/5	0	0.8	I II A 1 5 8 10		No	No	No	f
St. Croix	Southgate Pone (NE coast)	1	2/3	0	0.8	II A 5 8		No	No	No	s(p)/p
St. Kitts	St. Kitts <sup>2</sup>	8		0	n.r.			No	No	No	n.r.
St. Martin	Multiple locations	4	1/28	0	15.0	I II A C 1 3 4 5 7 8		No	No	No	f
<b>Total</b>				<b>14</b>	<b>39.1</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

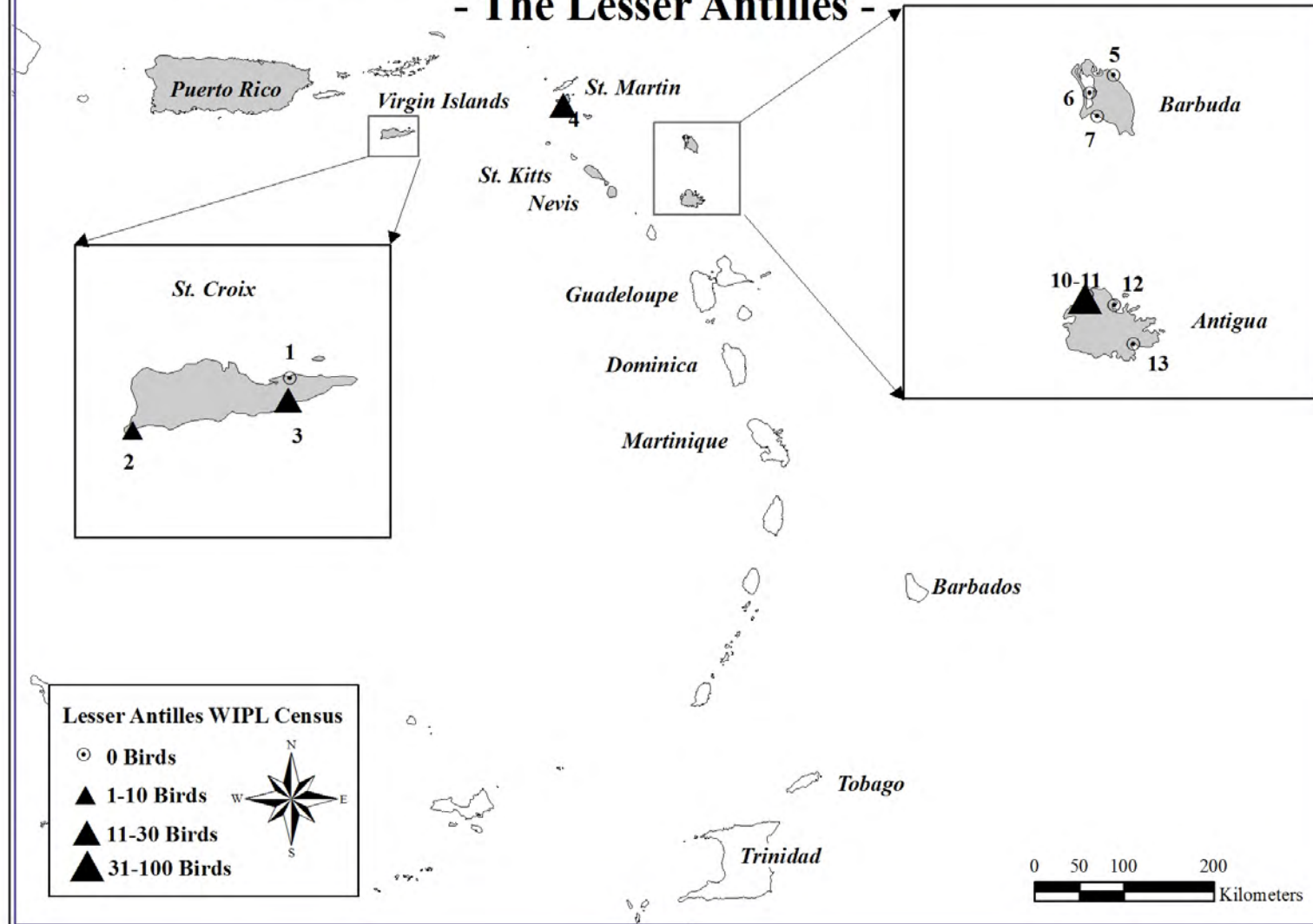
<sup>2</sup>No exact date, but surveys were conducted in February, 2006.

## The 2006 International Snowy Plover Winter Census in the Lesser Antilles Islands

ISLAND	SITE NAME	MAP#	DATE	TOTAL SNPL ADULTS	KM	SITE DESCRIPTION	SNPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Antigua	Christian Cove <sup>1</sup>	13	5/22	0	n.r.			No	No	No	n.r.
Antigua	Dickenson Bay <sup>1</sup>	11	1/11	0	3.2	I A 1		No	No	No	f
Antigua	Fitches Creek <sup>1</sup>	12	5/22	0	n.r.			No	No	No	n.r.
Antigua	McKinnans Pond <sup>1</sup>	10	1/11	0	4.8	II A 8 11		No	No	No	f
Barbuda	Codrington Town Docks lagoon <sup>1</sup>	6	1/7	0	6.5	II A D 10 11		No	No	No	f
Barbuda	The River Landing <sup>1</sup>	7	1/9	0	3.2	I IV V A 1		No	No	No	f
Barbuda	Two Feet Bay <sup>1</sup>	5	1/7	0	3.2	I V A 1 11		No	No	No	f
St. Croix	Great Pond (SE coast)	3	2/3	0	1.6	II A 5 8		No	No	No	s(p)
St. Croix	Sandy Point NWR (SW coast)	2	2/5	0	0.8	I II A 1 5 8 10		No	No	No	f
St. Croix	Southgate Pone (NE coast)	1	2/3	0	0.8	II A 5 8		No	No	No	s(p)/p
St. Martin	Multiple locations	4	1/28	0	15.0	I II A C 1 3 4 5 7 8		No	No	No	f
<b>Total</b>				<b>0</b>	<b>39.1</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

## 2006 International Wilson's Plover Winter Census - The Lesser Antilles -



## The 2006 International Wilson's Plover Winter Census in the Lesser Antilles Islands

ISLAND	SITE NAME	MAP#	DATE	TOTAL WIPL ADULTS	KM	SITE DESCRIPTION	WIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Antigua	Christian Cove <sup>1</sup>	13	5/22	0	n.r.			No	No	No	n.r.
Antigua	Dickenson Bay <sup>1</sup>	11	1/11	0	3.2	I A 1		No	No	No	f
Antigua	Fitches Creek <sup>1</sup>	12	5/22	0	n.r.			No	No	No	n.r.
Antigua	McKinnans Pond <sup>1</sup>	10	5/22	36	4.8	II A 8 11		No	No	No	f
Barbuda	Codrington Town Docks lagoon <sup>1</sup>	6	1/7	0	6.5	II A D 10 11		No	No	No	f
Barbuda	The River Landing <sup>1</sup>	7	1/9	0	3.2	I IV V A 1		No	No	No	f
Barbuda	Two Feet Bay <sup>1</sup>	5	1/7	0	3.2	I V A 1 11		No	No	No	f
St. Croix	Great Pond (SE coast)	3	2/3	11	1.6	II A 5 8		No	No	No	s(p)
St. Croix	Sandy Point NWR (SW coast)	2	2/5	2	0.8	I II A 1 5 8 10		No	No	No	f
St. Croix	Southgate Pone (NE coast)	1	2/3	0	0.8	II A 5 8		No	No	No	s(p)/p
St. Martin	Multiple locations	4	1/28	17	15.0	I II A C 1 3 4 5 7 8		No	No	No	f
<b>Total</b>				<b>66</b>	<b>39.1</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.



# The 2006 International Piping Plover Breeding Census in St. Pierre and Miquelon, France

Diane L. Amirault-Langlais  
Canadian Wildlife Service  
Environment Canada  
P.O. Box 6227  
Sackville, N.B.  
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506-364-5060  
diane.amirault@ec.gc.ca

Roger Etcheberry  
P.O. Box 8216  
24 bd des Terre-Neuvas  
Miquelon  
Îles Saint-Pierre et Miquelon, France  
retchebe@cheznoo.net

Four sites have been routinely censused during the three previous International Censuses. Of these four sites, three were covered during the census window in 2006. The three sites censused represent the extent of known suitable habitat for Piping Plovers on the islands of Saint-Pierre-et-Miquelon. One previously censused site, Dune de Miquelon, was not visited this year since Piping Plovers have never been observed at the site and the habitat is therefore not considered suitable. There are no additional sites which are thought to possess suitable habitat for Piping Plovers in the archipelago.

During the 2006 census window, four pairs were observed in suitable nesting habitat at two of the sites visited. These numbers represent a slight decrease in comparison to the nine Piping Plovers observed in 2001. The eight individuals counted represent higher numbers than observed in 1991 (four individuals) and in 1996 (six individuals).

We believe that the number of Piping Plovers observed accurately represents the population of Saint-Pierre-et-Miquelon. Surveys conducted after the census window (early July) support the fact that four nesting pairs were present on the beaches northeast of Gully of Grand Barachois and Gully of Grand Barachois.

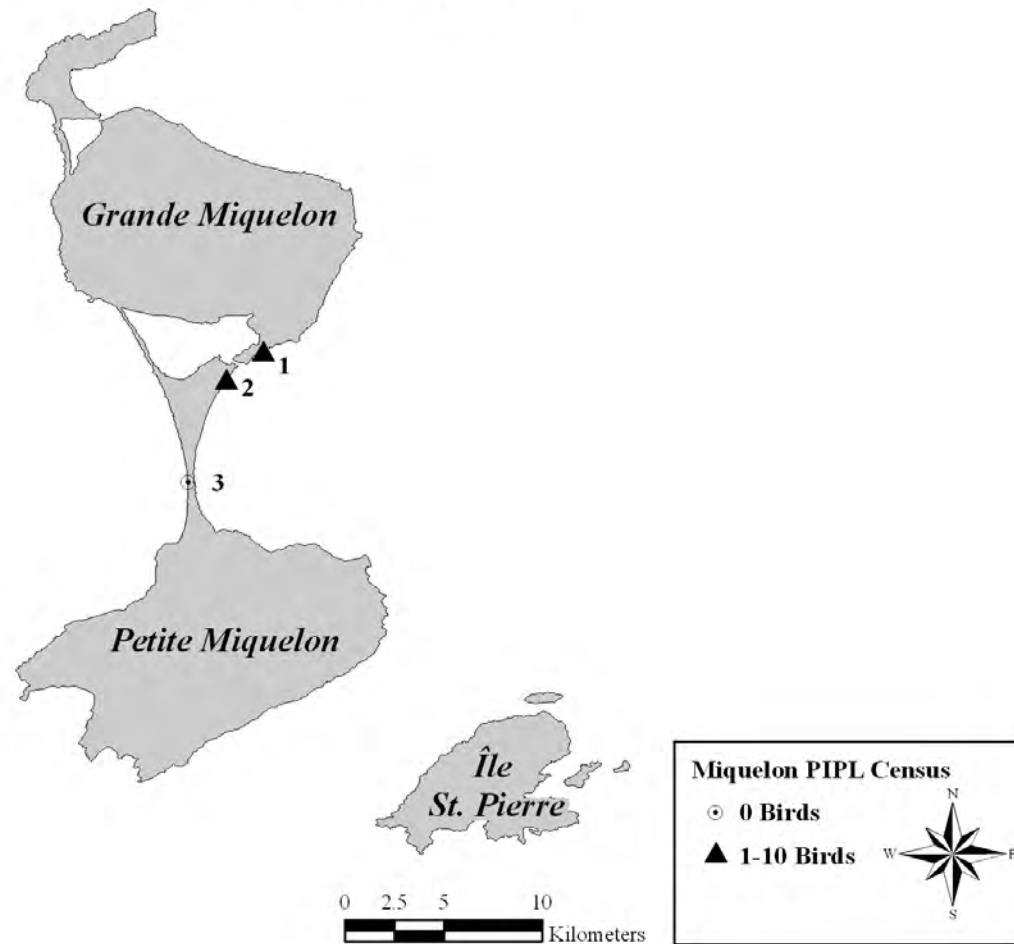
There continues to be concern for plovers related to human disturbance and impacts of predators for the Gully of Grand Barachois beach. This beach is regularly impacted by off-road vehicles, motorbikes and pedestrians with dogs. No plovers nested on the west side of the Isthmus of Langlade this year, despite the fact that the habitat remains suitable. The beach Northeast of the Gully of Grand Barachois has been occupied since 2001, providing a relatively inaccessible nesting area with little human disturbance.

## Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	4	6	9	8

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## 2006 International Piping Plover Breeding Census - St. Pierre and Miquelon-



## The 2006 International Piping Plover Breeding Census in St. Pierre and Miquelon

SITE NAME	MAP#	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWNER
Gully of Grand Barachois	2	6/15	2	4	12.0	I A 1 3 7	I A 1 7	Yes	Yes	Yes	s(p)
Northeast of Gully of Grand Barachois	1	6/13	2	4	5.0	I A 1 7	I A 1 7	Yes	Yes	Yes	s(p)
West Side of Isthme de Langlade	3	6/15	0	0	n.r.	I A 1 7		Yes	Yes	Yes	s(p)
<b>Total</b>			<b>4</b>	<b>8</b>	<b>17.0</b>						

# **The 2006 International Piping Plover Breeding Census in Newfoundland**

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This years Census overall went well. A total of 75 sites were visited, up from 43 in 2001. Three of these sites were visited twice since they were included in the detectability study. Two of the five sites selected for the detectability study were only visited once since habitat was poor to marginal. A total of 18 participants observed a total 48 adult Piping Plovers during the Census in Newfoundland which is an increase from the 39 birds observed in 2001. Key Piping Plover areas continue to be on the southwest coast of Newfoundland. One new beach (Big Barasway – Seal Cove) was found to have Piping Plovers during the Census. This is the first known and recorded sighting for this area. Habitat on this

beach has been and is suitable for nesting plovers and since it is only a short distance north of known Piping Plover beaches on the island of St. Pierre, it is not overly surprising that we found birds there.

Having visited 75 sites, we feel that all suitable Piping Plover habitat was for the most part covered. There are a couple of areas to be mapped for the next Census in 2011 and a couple of areas which we will not likely survey again due to poor habitat. However, we do not feel that the Census total of 48 adult birds adequately represents the total number of birds in Newfoundland and Labrador during the 2006 breeding season. Detection is a problem which is exacerbated by the vegetation cover on some beaches. Additionally, some birds arrive late and so would not be counted in the Census window. Hence, we believe the total number of adult Piping Plovers in Newfoundland and Labrador during the 2006 breeding season to be 63.

Piping Plovers in Newfoundland face similar threats as they do elsewhere, and this contributes to low numbers and poor productivity. Some of the main threats include human disturbance (i.e., ATV's, garbage on beaches, unleashed pets), predators (i.e., foxes, mink, gulls, dogs), flooding due to extreme high tides, etc.

The most valuable information that has become apparent from this years Census, is that birds are moving to new sites, while habitat in other areas has deteriorated. Given that new beaches are being found during the Census, we believe the International Census is indeed a valuable way to track this species and thus it aids conservation efforts.

### Comparison of Census Numbers

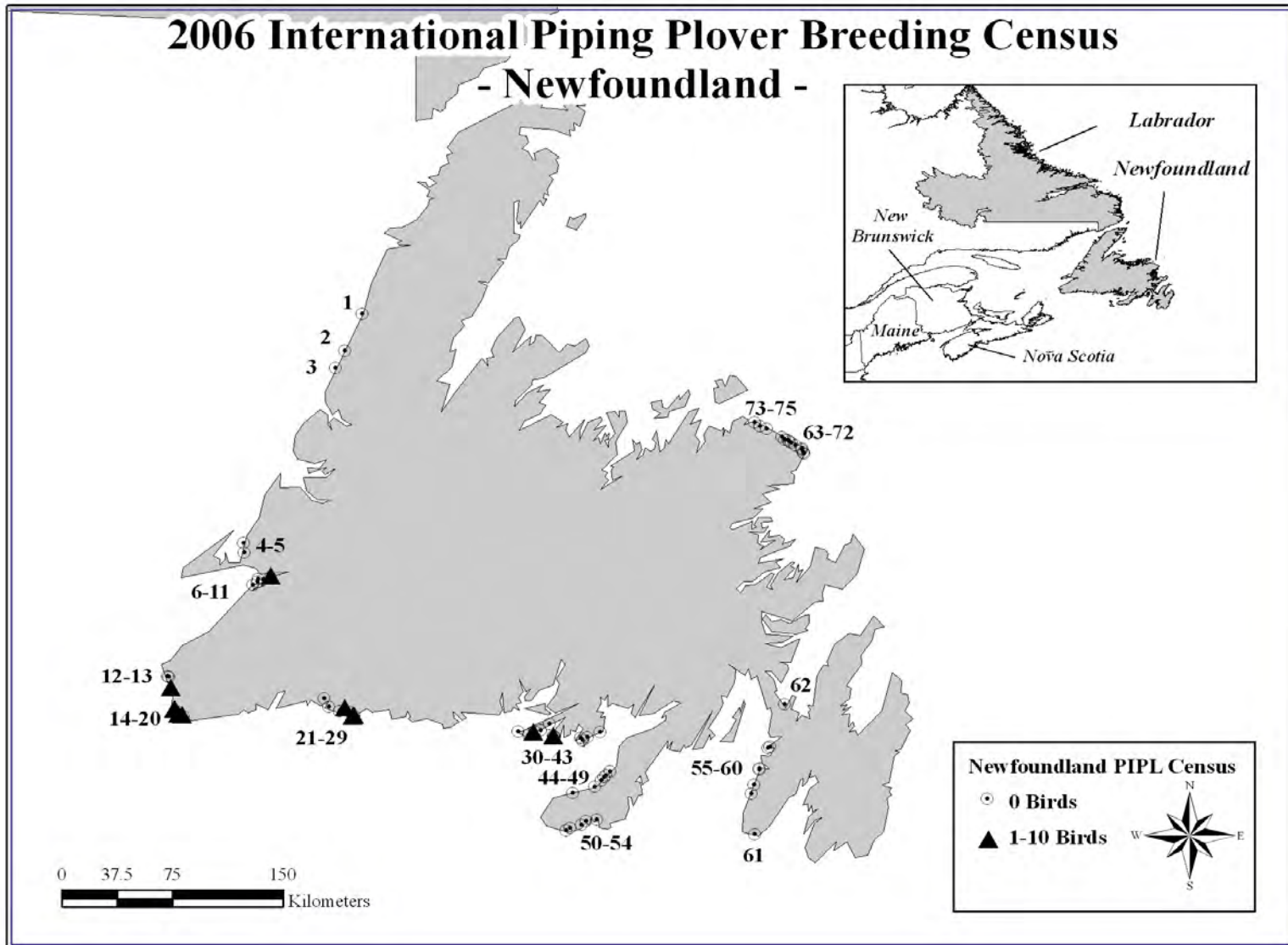
	1991	1996	2001	2006
Total Adults	7	27	39	48 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

### Detectability Study

Sites Included	First Count	Second Count
Flat Bay	0	0
Lumsden Head West	0	0
Sandy Point	0	0

## 2006 International Piping Plover Breeding Census - Newfoundland -



## The 2006 International Piping Plover Breeding Census in Newfoundland

SITE NAME	MAP#	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWNER
1st Beach, Grand Bay West	20	6/07	0	0	0.5	I II D 1		No	Yes	Yes	m
2nd Beach, Grand Bay West	19	6/07	2	4	1.8	I A 1	I II A D 1 3	No	Yes	Yes	s(p)
Banting Memorial Park	74	6/14	0	0	1.6	I A B 1		No	No	No	s(p)
Beck Bay	30	6/04	0	0	1.0	I II D 1 12		No	No	No	s(p)
Bellevue Beach	62	6/03	0	0	3.5	I II A D 1 7 12		No	No	No	s(p)
Big Barachois	17	6/16	0	0	0.5	I A 1		No	Yes	Yes	s(p)
Big Barasway	24	6/08	3	9	7.3	I II B D 1 3	I B 1	No	No	No	s(p)
Big Barasway- Seal Cove	31	6/04	0	1	1.3	I II A B I 1 7 12	II B 1	Yes	Yes	Yes	s(p)
Big Seal Cove- Ship Harbour	55	6/15	0	0	0.3	I II A D 8 15		No	No	No	s(p)
Black Island Cove	37	6/07	0	0	0.3	I II A D 1 7 12		No	No	No	m
Boxey Harbour	41	6/06	0	0	0.3	I II A D I 1 6 7 12		No	No	No	m
Cape Freels 1	63	6/16	0	0	1.8	I A B 1		Yes	Yes	Yes	s(p)
Cape Freels 2	64	6/16	0	0	2.2	I A B 1		Yes	Yes	Yes	s(p)
Cape Freels 3	65	6/16	0	0	0.7	I B 1		Yes	Yes	Yes	s(p)
Cape Freels 4	66	6/16	0	0	0.9	I A B 1		Yes	Yes	Yes	s(p)
Cape Ray Beach, J.T. Cheeseman Provincial Park	15	6/13	2	6	2.8	I II A B 1 2 3	I II A B 1	No	Yes	Yes	s(p)
Chappie Cove- Deadmans Bight	38	6/07	0	0	1.0	I II A D 1 7 12		No	No	No	m
Connoire Bay North West Arm Sandbar	21	6/03	0	0	0.8	I A 1 2		No	Yes	No	s(p)
Cowlest Beach	23	6/03	0	0	0.4	I A 1		No	No	No	s(p)
Crow Head West Beach	25	6/03	0	0	0.8	I A 1		No	No	Yes	s(p)
Deadman's Bay	72	6/16	0	0	3.1	n.r.		Yes	Yes	Yes	n.r.
East of Coombs Cove	39	6/06	0	0	0.5	I II A D 1 7 12		No	No	No	s(p)
Eastern Cove- Dog Cove	34	6/04	0	0	0.5	I II A D 1		No	No	No	s(p)
Flat Bay	7	6/13	0	0	7.8	I II B 1 7		No	No	Yes	s(p)
Fox Island River	4	6/16	0	0	1.3	I A 1		No	No	Yes	s(p)
Frenchman's Cove East	45	6/5	0	0	2.5	n.r.		No	No	Yes	s(p)
Frenchman's Cove West	46	6/6	0	0	2.3	n.r.		No	No	Yes	s(p)
Frenchman's Cove 3 (White Point)	47	6/6	0	0	1.7	n.r.		No	No	Yes	s(p)
Garnish Beach	44	6/06	0	0	1.2	I II A B 7		No	No	Yes	s(p)
Gooseberry Cove Beach	60	6/15	0	0	0.2	I II A D 1 7		No	No	No	s(p)
Grand Beach	48	6/6	0	0	3.7	n.r.		No	No	Yes	s(p)

## The 2006 International Piping Plover Breeding Census in Newfoundland (Continued)

SITE NAME	MAP#	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWNER
Great Barasway	59	6/14	0	0	1.0	I A 7		No	No	No	s(p)
Green Point (Pointe Verte)	57	6/15	0	0	0.6	I A 1 7 15		No	No	No	s(p)
L'anse au Loup	49	6/6	0	0	2.3	n.r.		No	No	Yes	s(p)
Lansey Bank Cove	53	6/07	0	0	0.2	I A B 1		No	No	No	s(p)
Little Barasway	33	6/04	0	0	0.9	I II VIII A 1 7		No	No	No	s(p)
Little Codroy / St. Andrew's Gut	14	6/15	1	4	2.0	I A 1 7	I A 7	Yes	No	Yes	s(p)
Little Lawn	54	6/07	0	0	0.6	I B 7		No	No	No	s(p)
Lumsden	68	6/14	0	0	1.0	n.r.		Yes	No	No	
Lumsden Head East	69	6/14	0	0	1.8	I A 1		Yes	Yes	Yes	s(p)
Lumsden Head West	70	6/13	0	0	1.8	n.r.		Yes	Yes	Yes	
Millville Beach, Grand Codroy Provincial Park	12	6/15	0	0	1.3	I B 1 3 15		Yes	Yes	Yes	s(p)
Musgrave Harbour	75	6/14	0	0	3.9	I A 1		Yes	Yes	Yes	s(p)
Osmond Beach	16	6/14	1	3	0.4	I A 1	I A 1	No	Unk	Yes	n.r.
Partridge Cove	42	6/05	0	0	0.5	I II VIII A B D 6 7 8		No	No	No	m
Pennybeck	71	6/16	0	0	1.1	n.r.		No	No	No	n.r.
Point au Gaul	50	6/07	0	0	2.4	I A B 1 7		No	No	No	s(p)
Point au Mal	5	6/16	0	0	2.5	I A 1		No	No	Yes	s(p)
Point Lance Beach	61	6/14	0	0	1.3	I II A 1 3 7		No	No	No	s(p)
Point Verde	58	6/14	0	0	0.4	I A 1 7		No	No	No	s(p)
Portland Creek	1	6/13	0	0	2.3	I A 1 3		No	No	No	s(p)
Rocky Barachois (Bottles Barachois)	18	6/07	1	3	1.0	I II A 1	I A 1 3	No	Yes	Yes	s(p)
Salt Water Cove	32	6/08	0	0	0.2	I A 7		No	No	Yes	s(p)
Salt Water Cove- St. Johns Bay	40	6/06	0	0	0.8	I II A D 1 3 7 12		No	No	No	m
Sandbanks Park, 1st Beach	29	6/04	0	0	0.5	I A 1 13		No	No	No	s(p)
Sandbanks Park, 2nd Beach	28	6/04	3	4	0.7	I A 1 3 12		No	No	No	s(p)
Sandbanks Park, 3rd Beach	27	6/04	4	6	0.8	I A 1 13		No	No	No	s(p)
Sandbanks Park, 4th Beach	26	6/04	3	4	1.2	I A D 1		No	No	No	s(p)
Sandy Cove	52	6/07	0	0	0.5	I A B 1		No	No	Yes	s(p)
Sandy Point	6	6/06	0	0	2.0	I A 1		Yes	Yes	Yes	s(p)



## The 2006 International Piping Plover Breeding Census in Newfoundland (Continued)

SITE NAME	MAP#	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWNER
Sandy Point (east - lighthouse end)	9	6/06	0	0	n.r.	I II C 1 8		Yes	Yes	Yes	s(p)
Sandy Point (west)	8	6/07	0	0	0.5	I II B 1 8		Yes	Yes	Yes	s(p)
Searston Beach	13	6/15	0	0	0.5	I A 1		No	Yes	Yes	s(p)
Shallow Bay	2	6/08	0	0	5.0	II D 1 3		Yes	Yes	Yes	f
Shalloway Bay	73	6/15	0	0	1.1	I A 1		No	Yes	Yes	s(p)
Ship Harbour Point	56	6/15	0	0	1.0	I A 6		No	No	No	s(p)
Short Sand Beach	36	6/12	1	2	0.5	I II A 1 3	II A 3	No	Yes	Yes	s(p)
St. Jacques Harbour	43	6/05	0	0	0.5	I II A D 7		No	No	No	m
Stephenville Crossing	10	6/12	1	2	1.0	I A 1	I A 1	Yes	Yes	Yes	s(p)
Stephenville Crossing - south side of bridge	11	6/12	0	0	1.3	I A 1		Yes	Yes	Yes	s(p)
Taylor's Bay	51	6/07	0	0	0.3	I B 1		no	No	No	s(p)
Western Brook Beach	3	6/06	0	0	1.3	I A 1 2 3		Yes	Yes	Yes	f
Western Cove	35	6/07	0	0	1.0	I II A D 1 7 12		No	No	No	m
Windmill Bight	67	6/16	0	0	0.6	n.r.		No	No	Yes	p
Wreck Island Beach	22	6/03	0	0	0.3	I A B D 1		No	No	Yes	s(p)
<b>Total</b>			<b>22</b>	<b>48</b>	<b>105.5</b>						

## **Recensement International du Pluvier Siffleur au Québec, en 2006**

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En 2006, contrairement aux inventaires précédents, les plages de la Gaspésie et de la Côte-Nord n'ont pas été recensées. Toutefois, compte tenu qu'aucun oiseau n'y avait été vu en 1991, 1996 et 2001, il est permis de croire que l'absence de recensement en 2006 dans ces régions n'a pas affecté le résultat final du décompte pour le Québec.

L'inventaire s'est déroulé au cours d'une seule journée, soit le 10 juin 2006. Toutes les plages des Îles-de-la-Madeleine ont été recensées, à l'exception des plages de l'île Brion, de l'îlot C et de l'îlot B; l'habitat de ces deux dernières îles artificielles n'est maintenant plus adéquat pour le Pluvier siffleur. Au total, 63 Pluviers siffleurs (22 couples et 19 individus seuls) ont été dénombrés sur les 124 km de plages parcourus par 33 participants. Deux plages totalisent 55,5 % des oiseaux observés. Il s'agit des plages de la dune du Sud et de l'Hôpital. Au cours de cette journée, l'éclosion des œufs de deux nids a été constatée, ce qui constitue la date d'éclosion la plus hâtive observée au Québec.

Le nombre d'oiseaux dénombrés est inférieur aux résultats des inventaires de 1991, 1996 et 2001. Toutefois, il est important de mentionner que la comparaison avec les inventaires précédents est inadéquate car en 2006, les données rapportées sont celles d'une seule journée d'inventaire alors que les résultats rapportés lors des inventaires de 1991, 1996 et

2001 étaient une compilation des données sur l'ensemble de la saison de reproduction. Telles que présentées en 2006, les données du Québec respectent davantage le protocole établie par le USGS et sont ainsi davantage comparables à celles des autres régions où se déroule l'Inventaire international du Pluvier siffleur.

Dans le cadre des travaux de protection des nids de Pluviers siffleurs menés par le Service canadien de la faune et l'organisme Attention Fragiles, une recherche active est faite pour trouver tous les nids afin de les protéger à l'aide de clôtures et d'enclos. Ce travail a permis de trouver 47 nids, dont 6 ont été considérés comme des nids de remplacement. Nous estimons donc que 41 couples se sont reproduits aux Îles-de-la-Madeleine en 2006. Ce nombre de couples est sans doute plus représentatif de la population nicheuse de Pluvier siffleur au Québec en 2006 que celui obtenu lors d'une seule journée d'inventaire.

## **The 2006 International Piping Plover Breeding Census in Quebec**

In 2006, (and contrary to previous counts), Gaspésie and North Shore beaches were not included in the census. However, given the fact that no bird had been seen there in years 1991, 1996 and 2001, the absence of a 2006 census in these areas is unlikely to have affected the final Quebec count.

The inventory took place on one day only, namely 10 June 2006. All beaches on the Îles-de-la-Madeleine were included in the census, with the exception of beaches on l'île Brion, l'îlot C and l'îlot B; habitat on these latter two artificial islands is now inadequate for the Piping Plover. In total, 63 Piping Plovers (22 pairs and 19 individual birds) were counted on the 124 km stretch of beach shoreline covered by 33 participants. A total of 55.5% of the birds

were observed on two beaches - namely, on Dune du Sud and Plage de l'Hopital. During the day of the count, egg hatchings in two nests were noted - the earliest hatching date ever observed in Quebec.

The number of birds counted is less than the inventories of 1991, 1996 and 2001. However, it is important to mention that the comparison with the preceding inventories is inadequate because in 2006, the data gathered is from just one day of inventory whereas the results reported at the time of the 1991, 1996 and 2001 inventories were a compilation of the data collected throughout the breeding season. As presented in 2006, the Quebec data fully respects the protocol established by the USGS and is therefore quite comparable with other areas where the international inventory of the Piping Plover is taking place.

Within the framework of Piping Plover nest protection carried out by the *Canadian Wildlife Service* and the *Attention Fragîles* organization, an active search is made to find all nests in order to protect them by site reporting. This work has resulted in the discovery of 47 nests, including 6 considered as replacement nests. We therefore estimate that 41 pairs reproduced on the Îles-de-la-Madeleine in 2006. This number of pairs is undoubtedly more representative of the Piping Plover population niche in Quebec in 2006 than that obtained at the time of the one-day-only inventory.

In each of the years that an international inventory has been effected (1991, 1996, 2001 and 2006), we also have the results of the inventories carried out during the one-day-only census as well as those done throughout the entire nesting season and which involved searching for nests.

Results for inventories counted on a one-day-only census in the years 1991, 1996, 2001 and 2006 are 61, 87, 55 and 63 individual birds,

respectively, whereas for the same years, calculated results from all nest searches are 76, 104, 70 and 82 individuals. Comparing these two methods shows that an inventory undertaken on a one-day-only basis detects, on average, 79.8% ( $\pm 2.9\%$ ) of the birds counted during the entire nesting season.

#### **Comparaison de Nombres du Recensement/ Comparison of Census Numbers**

	1991	1996	2001	2006
Total Adults	61 <sup>2</sup>	87 <sup>2</sup>	55 <sup>2</sup>	63 <sup>1</sup>

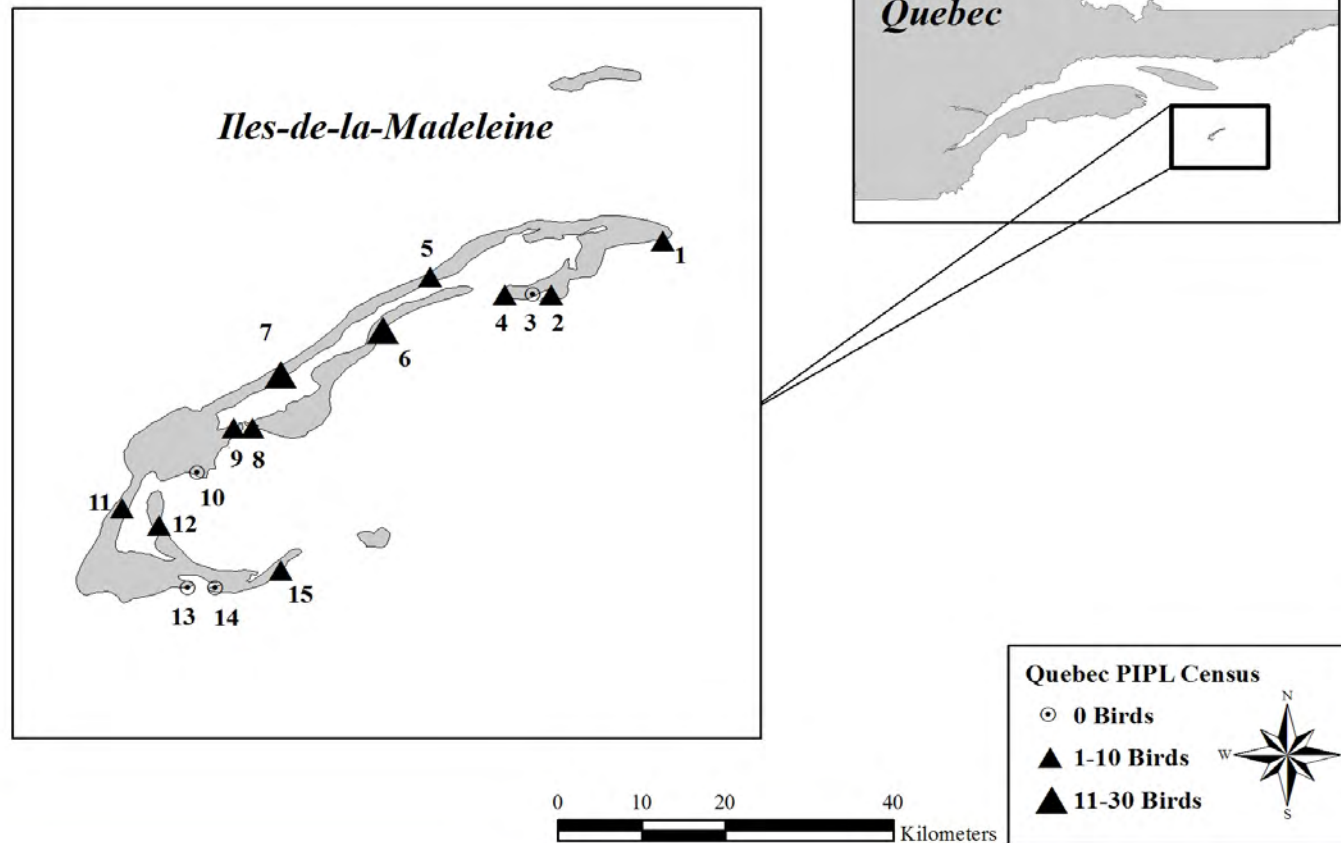
<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

<sup>2</sup>These totals differ slightly from numbers reported in previous Census reports. They represent totals from a single count.

#### **Etude de Détectabilité/ Detectability Study**

Sites Included	First Count	Second Count
Pointe de l'Est	5	5
Procul-Bourgeois	0	0

## 2006 International Piping Plover Breeding Census - Quebec -



## The 2006 International Piping Plover Breeding Census in Quebec

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Îles-de-la-Madeleine	Bassin aux Huitres (Est)	2	6/10	1	4	1.7	I G 1	I G 1	Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Bassin aux Huitres (Ouest)	3	6/10	0	0	0.6	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Dune du Bassin	13	6/10	0	0	3.2	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Dune du Nord	5	6/10	0	1	16.4	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Dune du Sud	6	6/10	8	18	19.9	I B G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	La Digue	8	6/10	0	1	2.1	I II G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	La Pointe	9	6/10	0	1	1.5	I II G 1		Yes	Yes	Yes	s(p)/p
Îles-de-la-Madeleine	Plage de l'Hôpital	7	6/10	6	17	17.5	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Plage de l'Ouest	11	6/10	2	7	11.0	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Plage du Havre	14	6/10	0	0	4.4	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Plage Martinique-Havre Aubert	12	6/10	0	1	12.6	I II G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Pointe de la Grande-Entrée	4	6/10	1	2	0.8	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Pointe de l'Est	1	6/10	2	5	19.5	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Procul-Bourgeois	10	6/10	0	0	0.8	I G 1		Yes	Yes	Yes	s(p)
Îles-de-la-Madeleine	Sandy Hook	15	6/10	2	6	12.2	I B G 1		Yes	Yes	Yes	s(p)
<b>Total</b>				<b>22</b>	<b>63</b>	<b>124.2</b>						

# The 2006 International Piping Plover Breeding Census in Nova Scotia

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We assessed 132 sites for inclusion in the 2006 Census; 29 of which were deemed unsuitable habitat for Piping Plovers. Four sites were missed this year due to weather and inaccessibility: Grahams Cove/Ferry Road, Fish Island, Inner (The Cape), and Ratcliffe Hills (The Cape). In all, 99 sites were surveyed by 38 individuals during the Census period and plovers were observed at 27 of these sites.

Results from a regional banding study indicate that plovers in southern NS are reproductively isolated from plovers in northern NS and thus, Census results have been analyzed separately for these regions. The number of adults in northern NS has increased significantly since the 2001 Census (16 adults in 2001 and 28-31 adults in 2006). Little density change was observed at occupied sites and the increase in plover numbers in the north occurred mainly at new sites (nine occupied sites in 2006 compared to four in 2001). The number of adults in southern NS has shown a substantial decline (77 adults in 2001 down to 55-56 in 2006). During the first International Census in 1991, plovers were found at 30 sites in Southern NS and this year, plovers were found at 18 sites; a further loss of two sites since 2001. A redistribution of birds has been observed in southern NS: seven sites with plovers in 2001 no longer had plovers in 2006 (-19 adults since 2001) and five previously unoccupied sites gained plovers (+8 adults since 2001) this year. A decline in birds

occurred not only due to a complete loss of plovers at the seven sites but also owing to a decline in the number of birds at sites occupied in both years.

Productivity has been relatively high at sites in northern NS for quite some time and immigration may also contribute to the observed increase. Of four birds captured in northern NS this year, two were previously captured in Prince Edward Island. Plover numbers began to decline in the south in 2003 and have shown no recovery. With the exception of 2005 when productivity was above 2 chicks fledged per pair, productivity estimates for the south have been consistently below 1.5 chicks fledged per pair since 2001. Reports to date indicate that 2006 will be yet another poor productivity year. Cool temperatures, tidal flooding, and predation take a heavy toll on eggs and young.

We feel that the results adequately reflect the actual population in Nova Scotia for the following reasons: The results reported during the NS Census are consistent with numbers received from staff and volunteers who undertake reproductive monitoring at many of the surveyed sites, there were no adverse weather or disturbance factors to influence results, and survey techniques were consistent. Our only concern was that one site known to have breeding plovers in previous Censuses was missed this year.

## Comparison of Census Numbers

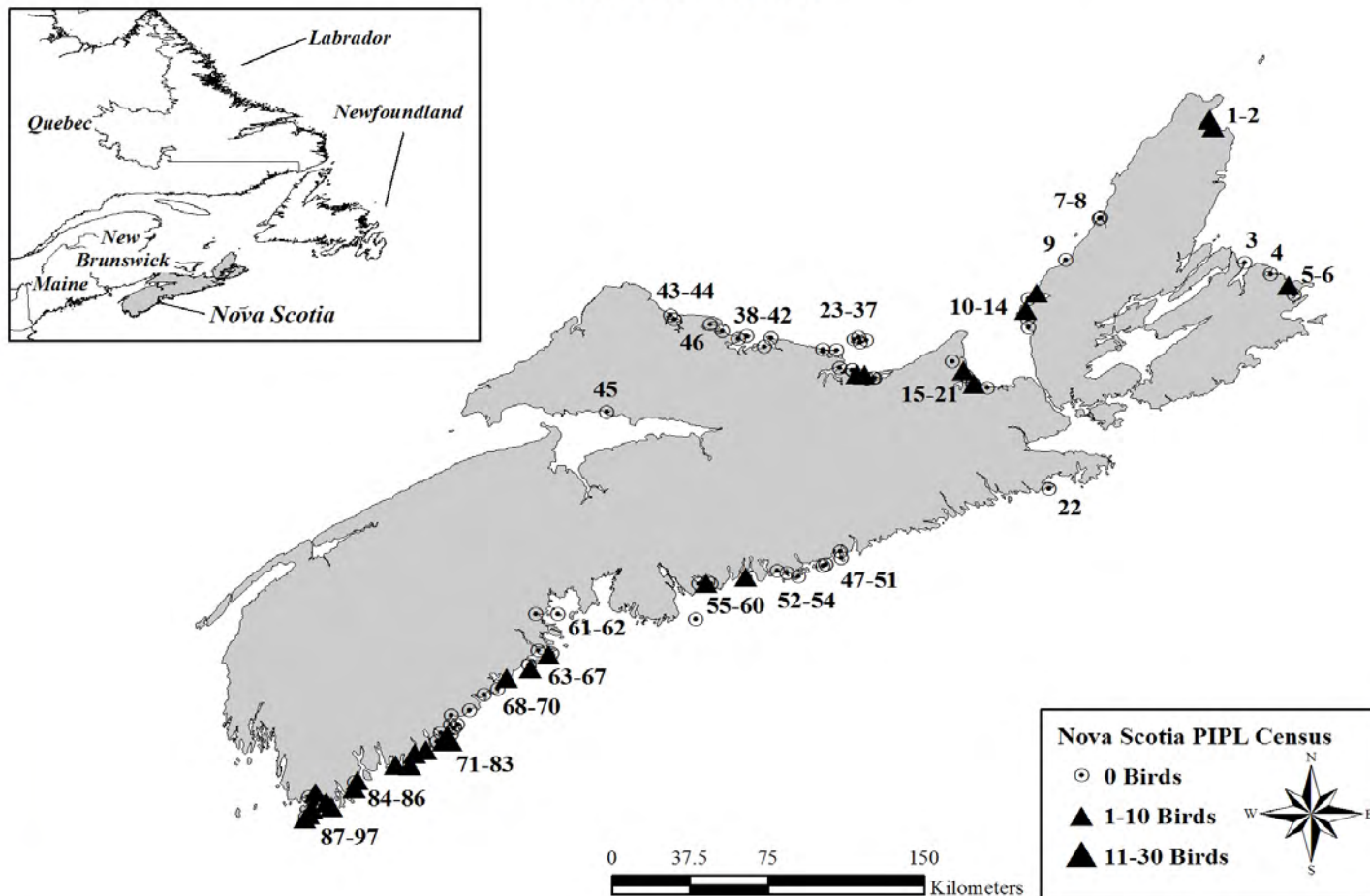
	1991	1996	2001	2006
Total Adults	113	79	93	86 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

**Detectability Study**

Sites Included	First Count	Second Count
Captains Pond and Monks Head	0	0
Pomquet	9	7
South Lakevale (Cribbons)	0	0
West Pugwash	0	0
Taylor Head Bay	0	0
Colindale	0	0
South West Mabou	2	2
Kings Head	0	0
Black Point	1	0
Goose (Indian) Point	0	0
Johnstons Pond	3	3
North Harbour	0	1

## 2006 International Piping Plover Breeding Census - Nova Scotia -





## The 2006 International Piping Plover Breeding Census in Nova Scotia

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Antigonish	Bayfield Beach	15	6/12	0	0	0.8	I A 1 7		Yes	Yes	Yes	s(p)
Antigonish	Captain's Pond & Monk's Pond (Monk's Head)	18	6/13	0	0	1.8	I A 1 3		Yes	Yes	Yes	p
Antigonish	Dunn's Beach	19	6/13	0	0	2.8	I A 1 3		Yes	Yes	Yes	s(p)
Antigonish	Mahoney's Beach	20	6/15	3	6	1.1	I B 1 7		Yes	Yes	Yes	p
Antigonish	Ogdens Pond Beach	16	6/12	0	0	0.7	I B 1 7		Yes	Yes	Yes	p
Antigonish	Pomquet Beach Park	17	6/6	4	9	7.6	I B C 1 3 7	I B 1	Yes	Yes	Yes	s(p)
Antigonish	South Lakevale	21	6/11	0	0	1.8	I A B 1 7		Yes	Yes	Yes	p
Cape Breton	Dominion (Lingan) Beach	4	6/15	0	0	2.0	I II B 1 8		Yes	Yes	Yes	s(p)
Cape Breton	Glance Bay Bar	5	6/16	1	2	2.0	I II B 1 3 8	I B 8	Yes	Yes	Yes	s(p)
Cape Breton	Port Morien Beach	6	6/15	0	0	0.5	II B 1 8		No	No	No	s(p)
Cape Breton	South Bar Beach	3	6/16	0	0	1.0	II B 1 2 8		Yes	Yes	Yes	p
Colchester	Sand Point - Five Islands	45	6/7	0	0	0.8	II A 7 1 1		No	Yes	Yes	s(p)
Cumberland	Cameron Beach	44	6/7	0	0	0.6	I B 7 1 1		Yes	Yes	Yes	s(p)
Cumberland	Hortons Point (Beach)	42	6/7	0	0	n.r.	I A 2 3 6 1 3		Yes	Yes	Yes	p
Cumberland	Long Point (Beach)	40	6/7	0	0	0.3	I II A F 1 5 8 1 1		Yes	Yes	Yes	p
Cumberland	Oak Island Beach	46	6/16	0	0	2.4	I G 1 3 1 4		Yes	Yes	Yes	p
Cumberland	Treen Point (Malagash Mines)	41	6/7	0	0	1.0	I A 1 1 3 7		Yes	Yes	Yes	s(p)
Cumberland	West Pugwash Beach	43	6/9	0	0	1.3	I C 1 2 1 2		Yes	Yes	Yes	p
Guysborough	Tor Bay Provincial Park Beach	22	6/12	0	0	0.6	I A 1		No	Yes	Yes	s(p)
Halifax	Baltee Island (Romkey's Point)	49	6/6	0	0	0.3	I G 1 7 1 5		Yes	No	Yes	s(p)
Halifax	Bull Beach	47	6/8	0	0	0.3	I A 1 7		No	Yes	Yes	s(p)
Halifax	Clam Harbour Beach	53	6/13	0	0	1.5	I A 1 1 3		Yes	Yes	Yes	s(p)
Halifax	Conrad's Beach (East & West)	56	6/16	0	1	2.0	I II A D 1 8 1 2	I A 1	Yes	Yes	Yes	s(p)
Halifax	Lawrencetown Beach	57	6/16	0	0	1.0	I A 1 7		No	Yes	Yes	s(p)
Halifax	Little Harbor (the sandbar)	52	6/12	0	0	1.0	I A 1 1 3		Yes	No	Yes	p
Halifax	Mangher's Beach, McNabs Island	60	6/14	0	0	1.4	II G 1 7		Yes	Yes	Yes	s(p)
Halifax	Martinique Beach	55	6/7	2	4	3.0	I B 1 3 1 2	I B 1 4	Yes	Yes	Yes	s(p)
Halifax	Rainbow Haven Beach (Cole Harbour)	59	6/14	0	0	1.8	II B 1		Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census in Nova Scotia (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Halifax	Sandy Cove & Eastern Sandy Cove	50	6/6	0	0	0.3	I II IV 1 15		Yes	No	Yes	p
Halifax	Sandy Cove West	51	6/6	0	0	0.3	I II A G 1 15		Yes	No	Yes	p
Halifax	Stoney Beach (Lawrencetown Head)	58	6/16	0	0	0.8	I D 1 2 7		Yes	Yes	Yes	s(p)
Halifax	Taylor Head Beach	48	6/7	0	0	0.7	I A 1 3 12		Yes	Yes	Yes	s(p)
Halifax	West Marsh/Seapool Beach	54	6/12	0	0	0.5	I A 1 3 13		Yes	Yes	Yes	p
Inverness	Belle Cote Beach	7	6/11	0	0	1.7	I A 7		No	No	No	s(p)
Inverness	Big Rory's Point/Emerson Point	14	6/12	0	0	0.8	I A B 1 7		Yes	Yes	Yes	p
Inverness	Colindale Beach	11	6/5	0	0	0.6	I A 1 7		Yes	Yes	Yes	s(p)
Inverness	Inverness Beach	9	6/12	0	0	3.5	I A 1 7		No	No	No	p
Inverness	Little Judique Harbour	13	6/6	0	0	0.6	I A 1 7		Yes	Yes	Yes	p
Inverness	Margaree Harbour Beach	8	6/11	0	0	0.5	I A 1		No	No	No	s(p)
Inverness	Shipping Point	12	6/6	2	4	1.9	I A 1 12	I A 7	Yes	Yes	Yes	s(p)
Inverness	South West Mabou Beach	10	6/5	1	2	1.7	I A 1	I A 7	No	No	Yes	s(p)
Lunenburg	Cape Bay Beach	67	6/6	2	4	2.0	I II 1 1 7	II G 1 7	Yes	Yes	Yes	m
Lunenburg	Cherry Hill Beach	68	6/10	2	4	2.0	I B 1 2 3 7		Yes	Yes	Yes	s(p)
Lunenburg	Hirtle's Beach	63	6/7	1	2	1.0	I A 1 7	I A 1	Yes	Yes	Yes	m
Lunenburg	Kingsburg Beach	64	6/7	0	0	0.6	I A 1 7		No	Yes	Yes	p
Lunenburg	Mason's Island Beach	61	6/6	0	0	0.3	I I 1 7		Yes	Yes	Yes	p
Lunenburg	Oxner's Beach	65	6/5	0	0	1.0	II A 1 7		No	No	Yes	p
Lunenburg	Rafuse Island	62	6/6	0	0	0.5	I G 1		Yes	Yes	Yes	p
Lunenburg	The Creek (Cape LeHave Island)	66	6/6	0	0	1.5	I II G 1 7		Yes	Yes	Yes	m
Pictou	Big Merigomish Island Beach	36	6/14	0	0	4.9	I B 1 7		Yes	Yes	Yes	s/p
Pictou	Bowen Island	32	6/8	0	0	0.9	II C 1		Yes	Yes	Yes	p
Pictou	Cape John, Megs Cove	38	6/8	0	0	0.7	I A 1 7 12		No	No	Yes	p
Pictou	Caribou Island, Caribou Reef	28	6/15	0	0	0.7	I G 1 7		Yes	Yes	Yes	p
Pictou	Chance Harbour Beach	30	6/7	0	0	1.6	I II A 1		No	Yes	Yes	p
Pictou	James Beach and Little Harbour Spit	33	6/8	1	2	1.0	II B 2		Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in Nova Scotia (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Pictou	Kings Head (Chisholm Beach)	34	6/8	0	0	1.2	II B 1 8 12		Yes	Yes	Yes	p
Pictou	Melmerby Beach	35	6/12	1	3	2.5	I B 1	I B 1	Yes	Yes	Yes	s/p
Pictou	Murray Beach, Rushtons Park	39	6/9	0	0	0.7	I A 1 7 12		Yes	Yes	Yes	s/p
Pictou	Pictou Bar Spit (Pictou Landing, Lighthouse Beach)	29	6/12	0	0	1.5	I B 2 14		Yes	Yes	Yes	s(p)
Pictou	Pictou Island (East end)	23	6/6	0	0	1.0	I G 1 7		No	No	Yes	p
Pictou	Pictou Island John Dans Cove	24	6/6	0	0	0.6	I G 1 15		No	No	Yes	p
Pictou	Pictou Island, North Shore Beach	25	6/6	0	0	1.1	I G 1 7		No	No	Yes	p
Pictou	Roger Point, Pictou Island	26	6/6	0	0	1.6	I G 1		No	No	Yes	p
Pictou	Savage Point, Big Merigomish Island	37	6/14	0	0	0.6	I B 7		Yes	Yes	Yes	p
Pictou	Sinclair's Island	31	6/7	0	0		I A D 1 2		Yes	Yes	Yes	p
Pictou	Waterside Beach	27	6/15	0	0	0.6	I A 7 12 14		No	No	Yes	s(p)
Queens	Back Beach, Port Mouton Island	73	6/14	0	0	1.0	II G 1		Yes	Yes	Yes	p
Queens	Beach Meadows Beach	70	6/12	0	0	1.0	I A 1 7		Yes	Yes	Yes	m/p
Queens	Carter's/Wobamkek Beach	74	6/14	0	0	1.6	I A 1 3 7		Yes	Yes	Yes	p
Queens	Cranberry Pond	75	6/14	0	0	1.0	II B 1		Yes	Yes	No	p
Queens	Gull Island Beach	71	6/14	0	0	n.r.	I G 5		Yes	Yes	No	n.r.
Queens	Little Port Joli Beach	76	6/10	0	0	2.3	I II B 1 2 11		Yes	Yes	Yes	f
Queens	Port Joli, Goose Haven Beach	78	6/12	0	0	0.2	II B 1		Yes	Yes	Yes	p
Queens	Ragged Harbour Beach	69	6/12	0	0	0.3	I A 1 1 7		Yes	Yes	Yes	m
Queens	Sandy Bay Beach	79	6/14	0	0	2.0	I A 1 3 7		Yes	Yes	Yes	s(p)
Queens	St. Catherine's Beach	77	6/16	5	12	3.3	I II B 1 2 3 7 11 12		Yes	Yes	Yes	f
Queens	Summerville Beach	72	6/12	0	0	1.3	II 1		Yes	Yes	Yes	s(p)/p
Shelburne	Black Point Beach	82	6/12	0	1	2.0	I B 1 7 15	I B 1	Yes	Yes	Yes	p
Shelburne	Bull's Head	93	6/14	0	0	0.2	I A 1 3		No	Yes	No	p
Shelburne	Burk's Point	88	6/6	1	2	1.1	I B 1 3 7	I B 1 7	Yes	Yes	Yes	p
Shelburne	Clam Point	92	6/13	0	0	1.8	I A 1 3 7		Yes	Yes	Yes	s(p)
Shelburne	Crescent Beach	83	6/5	1	2	0.8	I A 1 3 7	I B 7	Yes	Yes	Yes	m/p

## The 2006 International Piping Plover Breeding Census in Nova Scotia (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Shelburne	Crow Neck (Baccaro)	87	6/6	3	6	1.6	I B 1 3 7	I B 1 7	Yes	Yes	Yes	s/p
Shelburne	Daniels Head/Southside	95	6/13	1	2	2.7	I A 1 3 7 15	I A 15	Yes	Yes	Yes	s/p
Shelburne	Fox Bar Beach	84	6/5	1	2	1.1	I A 1 3	I B 7	Yes	Yes	Yes	p
Shelburne	Goose Point	89	6/6	0	0	0.6	I B 1 3 7		Yes	Yes	Yes	p
Shelburne	Hawk Point	97	6/13	1	2	1.5	I A 1 3 7 11	I B 1	Yes	Yes	Yes	s(p)
Shelburne	Johnston's Pond Beach	80	6/6	1	3	0.8	I B 1 3 7 11	I B 7 11	Yes	Yes	Yes	s/p
Shelburne	Louis Head Beach	81	6/14	1	2	1.9	I A 1 3	I A 1	Yes	Yes	Yes	p
Shelburne	North East Point Beach	91	6/7	0	0	0.6	I A 1 1 2 3		Yes	Yes	Yes	s(p)
Shelburne	Red Head Beach	86	6/5	1	2	1.5	I A 1 3 7		Yes	Yes	Yes	p
Shelburne	Round Bay	85	6/5	0	0	1.7	I A 1 3 7		Yes	Yes	Yes	f/s
Shelburne	Sand Hills Beach (Sabim Beach)	90	6/6	1	3	2.3	I A 1 1 2 3 11	I 1 1	Yes	Yes	Yes	s(p)
Shelburne	Stoney Island	94	6/12	1	2	0.9	I A 1 3 7	I A 7	Yes	Yes	Yes	s(p)
Shelburne	The Hawk Beach & Hawk Point	96	6/13	0	0	0.9	I A 1 3 7		Yes	Yes	Yes	s(p)
Victoria	North Harbour Beach	1	6/13	0	1	5.1	I A B 1 7	I A B 1	Yes	Yes	Yes	p
Victoria	South Harbour Beach	2	6/7	1	2	3.6	I A 1 7 12		Yes	Yes	Yes	p
<b>Total</b>				<b>39</b>	<b>87<sup>1</sup></b>	<b>132.1</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# The 2006 International Piping Plover Breeding Census on Prince Edward Island

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The Prince Edward Island section of the 2006 International Piping Plover Breeding Census was conducted between 3 June and 16 June. A total of 86 beaches were visited during the Census period (or just outside) and 80 were found to have habitat and were surveyed by 18 trained volunteers and staff. Surveyors found a total of 95 adult Piping Plovers across the Island from western Prince County to extreme eastern Kings County. Sixty-eight plovers, or 72% of the provincial population, were recorded outside the PEINP, and 27 plovers (28%) were recorded inside the Park.

All known Piping Plover sites were censused, and lists were compiled from previous year's lists. No additional areas were identified for census in future years. Census coordinators feel the 2006 census results adequately represent the actual population. The 2006 Census showed a substantial increase in adult plovers returning to PEI. The 2005 Index Count recorded only 60 plovers and 75 plovers were recorded for the year end results. The numbers are still a little lower than the last International Census (2001) where 112 plovers were counted.

Protection of plovers outside the PEINP has continued with all nesting areas protected by signage and symbolic fencing (except difficult to access off-shore islands). Additionally, there is regular monitoring by volunteers and staff and use of exclosures where monitoring by

volunteers can be maintained at required levels. Productivity and effort is monitored at all nests (except off-shore islands). Protection of plovers inside the PEINP remains high, with closed areas, enforcement, education, daily monitoring, use of exclosures and the protection of the National Park designation.

Disturbance to nesting plovers includes humans, both pedestrian and vehicular, as well as loose dogs. Enforcement of existing legislation is difficult on beaches outside the PEINP. Factors affecting population numbers include predation of eggs and chicks, weather and human disturbance.

## Comparison of Census Numbers

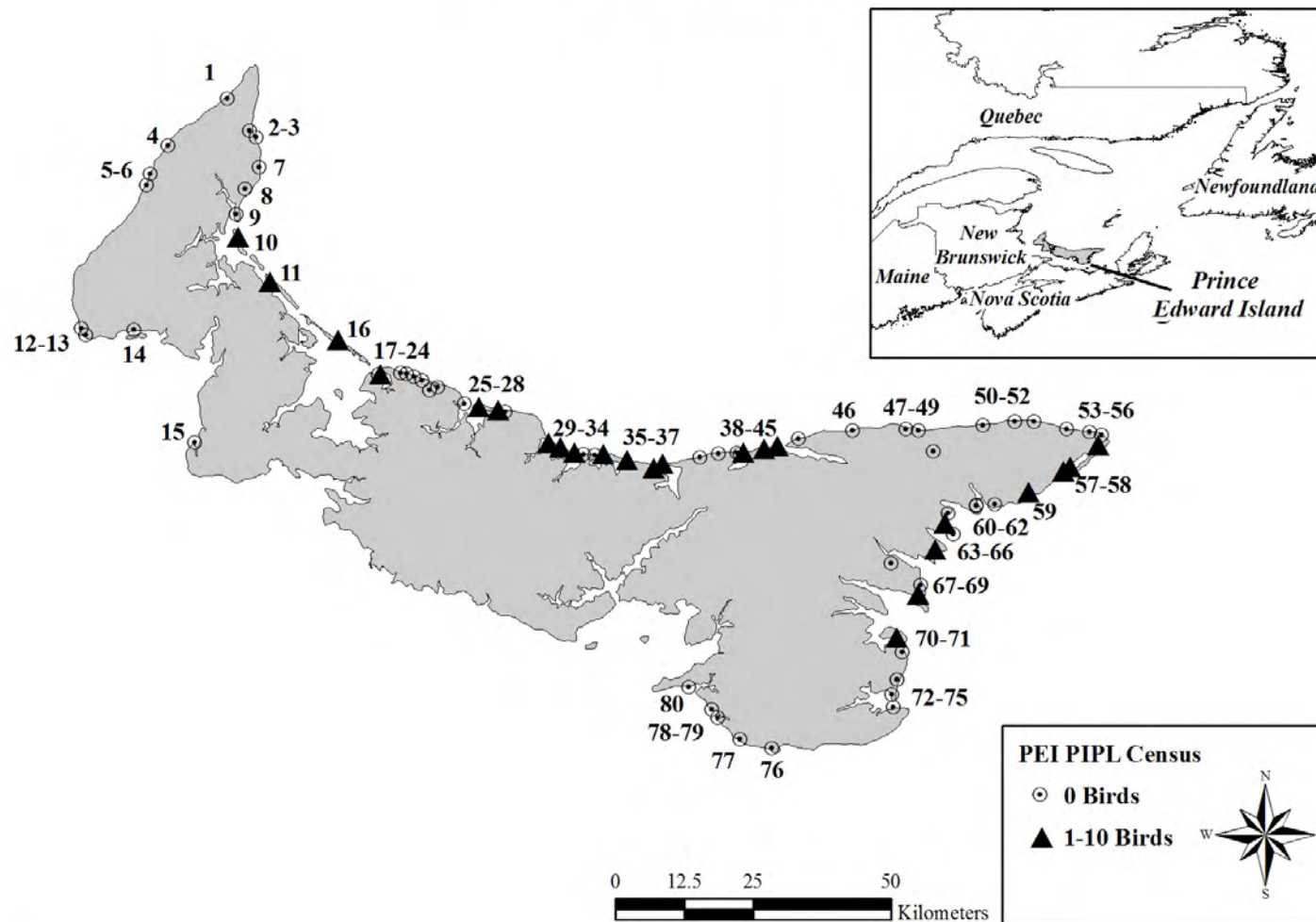
	1991	1996	2001	2006
Total Adults	110	66	112	93 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## Detectability Study

Sites Included	First Count	Second Count
Black Pond	5	4
Cross River (big pond)	0	0
East Lake	0	0
Eglington Cove	5	3
Grahams Pond	0	0
Norris Pond	0	0
North Lake	0	0
St. Margaret's	0	0
Feehan's Point	0	0
Tracadie Sandbar	0	2

## 2006 International Piping Plover Breeding Census - Prince Edward Island -



## The 2006 International Piping Plover Breeding Census on Prince Edward Island

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Kings	Basin Head (Bothwell)	58	6/09	1	2	3.5	I A 1 3	I A	Yes	Yes	Yes	s(p)
Kings	Beach Point	75	6/15	0	0	0.8	I II B 1 2		Yes	Yes	Yes	s(p)
Kings	Black Pond	59	6/09	2	5	2.3	I A 1 3 5	I A	Yes	No	Yes	s(p)
Kings	Boughton Bay (Old Ferry Spit)	67	6/09	0	0	1.5	I A 2 15		Yes	Yes	Yes	s(p)
Kings	Boughton Island	69	6/09	1	2	3.5	I II A 1 2	I A 2	Yes	Yes	Yes	s(p)
Kings	Cable Head	46	6/09	0	0	0.8	I A 1		Yes	Yes	Yes	s(p)
Kings	Campbells Cove	52	6/07	0	0	1.0	I A 1		No	No	Yes	s(p)
Kings	Canavoy (Savage Harbor East)	42	6/07	1	3	3.0	I A 1 3	I A	Yes	Yes	Yes	s(p)
Kings	Condots Pond	72	6/16	0	0	2.2	I A 1		No	No	Yes	s(p)
Kings	Cow River	47	6/9	0	0	0.3	I A 1 15		No	Yes	Yes	s(p)
Kings	Cross River (Big Pond)	50	6/13	0	0	0.5	I A 1		Yes	Yes	Yes	n.r.
Kings	Diligent Pond	56	6/9	1	2	1.3	I II A 1 3	I II A	Yes	Yes	Yes	s(p)
Kings	East Lake	54	6/13	0	0	2.0	I II A 1		No	Yes	Yes	s(p)
Kings	East Point	55	6/7	0	0	1.0	I A 1		No	No	Yes	p
Kings	Eglinton Cove	64	6/9	2	5	1.0	I A 1	I A	Yes	Yes	Yes	s(p)
Kings	Fortune Beach	63	6/9	0	0	1.0	I A 1		No	No	Yes	p
Kings	Grahams Pond	73	6/16	0	0	0.8	I A 1		No	No	Yes	s(p)
Kings	Greenwich Peninsula/ Schooner PEINP	45	6/15	0	0	8.0	I II B D 1 2 3		Yes	Yes	Yes	f
Kings	Howe Bay	65	6/9	0	0	1.5	I II A 1 2		Yes	Yes	Yes	s(p)
Kings	Lake Run (Saint Peter's)	43	6/6	1	3	1.5	I II A 1	I A 1	Yes	Yes	Yes	s(p)
Kings	Launching Point	68	6/9	0	0	0.8	I A 1		Yes	Yes	Yes	s(p)
Kings	Naufrage	48	6/7	0	0	1.0	I A 1		Yes	Yes	Yes	s(p)
Kings	Norris Pond	60	6/14	0	0	0.5	I A 1		No	No	Yes	s(p)
Kings	North Lake	53	6/13	0	0	0.8	I A 1		Yes	Yes	Yes	s(p)
Kings	Panmure Island	70	6/05	1	2	2.5	I A 1	I A 1	Yes	Yes	Yes	s(p)
Kings	Pigots Pond	40	6/07	0	0	0.8	I A 1 15		No	No	Yes	s(p)
Kings	Poverty Beach	74	6/15	0	0	1.2	I II A 1 2		Yes	Yes	Yes	s(p)
Kings	Priest Pond	51	6/07	0	0	0.8	I A B 1 15		Yes	Yes	Yes	p
Kings	Saint Peter's Harbour	44	6/12	4	8	2.5	I A E 1 3 5	I A D	Yes	Yes	Yes	s(p)
Kings	Savage Harbor West	41	6/07	0	0	0.3	I A 15		Yes	Yes	Yes	p

# The 2006 International Piping Plover Breeding Census on Prince Edward Island (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Kings	Sheep Pond	61	6/05	0	0	0.8	I A 1		No	No	Yes	s(p)
Kings	Souris Causeway	62	6/09	0	0	1.0	I A 1 5		Yes	Yes	Yes	s(p)
Kings	South Lake	57	6/09	2	4	5.0	I A I 1 2 3	II 2	Yes	Yes	Yes	s(p)
Kings	Spry Cove/ Sally's beach	66	6/09	1	2	2.5	I A B 1 3	II B 1	Yes	Yes	Yes	s(p)
Kings	St. Margaret's	49	6/13	0	0	1.0	I A 1		Yes	Yes	Yes	s(p)
Kings	Steele's Pond	71	6/06	0	0	0.8	I A 1		No	No	Yes	s(p)
							I II A B 1 3 4 7					
Prince	Black Pond West	4	6/13	0	0	1.0	15		Yes	No	Yes	s(p)
Prince	Cabot Provincial Park	17	6/06	0	0	1.5	I A 1		Yes	Yes	Yes	s(p)
Prince	Cascumpec Sand Hills	10	6/13	1	2	1.5	I C 1	I C 1	Yes	Yes	Yes	f
Prince	Cedar Dunes Park	13	6/16	0	0	1.0	I A 1		Yes	Yes	Yes	s(p)
Prince	Cedar Dunes West	12	6/15	0	0	2.0	I A 1		Yes	Yes	Yes	s(p)/p
Prince	Conway Island	11	6/13	4	8	12.0	I C 1 3	I C	Yes	Yes	Yes	s(p)
Prince	Darnley Point	18	6/06	3	6	2.0	I A 2	I A 1 14	Yes	Yes	Yes	s(p)
Prince	Foley's Pond (The Gap)	8	6/11	0	0	2.0	VIII A 1		Yes	No	Yes	p
Prince	Hog Island	16	6/13	2	4	11.0	I 1 2 11	I G 1 2	Yes	Yes	Yes	s(p)
Prince	Indian Point Sand Hills	14	6/15	0	0	7.0	I II B C 1 3 5		Yes	Yes	Yes	s(p)
Prince	Jacques Cartier East	9	6/11	0	0	11.0	VIII A B 1 2 3		Yes	Yes	Yes	s(p)
Prince	Kildare Capes	7	6/11	0	0	3.0	VIII A 1		Yes	Yes	Yes	p
Prince	Little Miminegash	6	6/13	0	0	1.5	I II A B 1 3 7		Yes	No	Yes	s(p)
Prince	Maximeville	15	6/15	0	0	2.0	I A D 1		Yes	No	Yes	s(p)
Prince	Miminegash Pond	5	6/13	0	0	1.0	I II A B 1 3 15		Yes	Yes	Yes	s(p)
Prince	Morrisons Pond	19	6/10	0	0	3.0	VIII A 1 3		No	Yes	Yes	p
Prince	Nail Pond	1	6/13	0	0	2.5	I II A 1 3 6		Yes	No	Yes	s(p)
Prince	Round Pond	3	6/11	0	0	4.0	VIII A 1		Yes	No	Yes	p
Prince	Tignish Shore	2	6/11	0	0	2.0	VIII A 1		Yes	Yes	Yes	s(p)/p
Queens	Adams Cottages	20	6/10	0	0	2.0	VIII A 1 3		No	No	Yes	p
Queens	Adams Pond	21	6/10	0	0	3.0	VIII A 1 3		No	Yes	Yes	p
Queens	Bell Point	77	6/05	0	0	1.5	I A 1		Yes	Yes	Yes	p
Queens	Blooming Point PEINP	37	6/15	3	6	11.0	I II A B D 1 3 4		Yes	Yes	Yes	f



# **The 2006 International Piping Plover Breeding Census on Prince Edward Island (Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Queens	Brackley Main PEINP	32	6/14	0	0	1.1	I A 1 3		Yes	Yes	Yes	f
Queens	Brandors Pond	22	6/10	0	0	2.0	VIII A 1 3		No	Yes	Yes	p
Queens	Campbells Pond	24	6/10	0	0	1.5	VIII A 1 3		No	Yes	Yes	p
Queens	Cavendish Campgroung PEINP	27	6/14	1	2	2.0	I A 1 3		Yes	Yes	Yes	f
Queens	Cavendish Main	28	6/14	0	0	1.0	I A		Yes	Yes	Yes	f
Queens	Cavendish Sandspit	26	6/14	5	10	4.7	I II B 1 2 3 4 11		Yes	Yes	Yes	f
Queens	Cousin's Pond	23	6/15	0	0	0.5	I A 1		Yes	Yes	Yes	s(p)
Queens	Covehead Harbor West	34	6/14	1	2	3.5	I II A 1 2 3		Yes	Yes	Yes	f
Queens	Deroche Pond	38	6/16	0	0	5.0	I A 1		Yes	Yes	Yes	s(p)
Queens	Feehan's Point	39	6/07	0	0	2.0	I A 1		No	No	Yes	s(p)
Queens	Gascoigne Cove East	78	6/05	0	0	1.0	I B 2		Yes	Yes	Yes	s(p)
Queens	Gascoigne Cove West	79	6/05	0	0	2.0	I A 1		Yes	Yes	Yes	s(p)
Queens	North Rustico Sandbar	29	6/06	4	8	1.0	I G 4	I II G 1 11	Yes	Yes	Yes	s(p)
Queens	Pond Point	80	6/05	0	0	1.0	I II A B 2		No	Yes	Yes	p
Queens	Robinson's Island Sandspit	30	6/14	1	2	3.0	I II B D 1 2		Yes	Yes	Yes	f
Queens	Rustico Causeway	31	6/14	0	2	2.0	I A I 1 2 4		Yes	Yes	Yes	f
Queens	Shaw's Beach	33	6/14	0	0	2.0	I A 1 3		Yes	Yes	Yes	f
Queens	Tracadie Beach to Covehead Harbor (East)	35	6/14	1	3	8.8	I A 1 3		Yes	Yes	Yes	f
Queens	Tracadie Sandbar	36	6/16	1	2	1.5	II D 5		Yes	Yes	Yes	s(p)
Queens	Wood Islands	76	6/05	0	0	3.0	I II B 2		Yes	Yes	Yes	s(p)/p
Queens	Yankee Beach	25	6/14	0	0	1.5	I A 1		Yes	No	Yes	s
<b>Total</b>				<b>44</b>	<b>95<sup>1</sup></b>	<b>198.4</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# **The 2006 International Piping Plover Breeding Census in New Brunswick**

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All known suitable Piping Plover habitat was censused in New Brunswick during the window count with the exception of South Richibucto Dune (North Barrier Island). Sixty beaches were surveyed including two large beaches that were split into five sites (63 sites total). Over 220 km of shoreline was covered by 35 participants. Two beaches, Miscou Centre (Miscou Island) and St-Marie St-Raphaël were surveyed for the first time during an international census. No unidentified suitable habitat has been detected and there is likely no remaining undiscovered potential habitat for Piping Plovers New Brunswick.

Four sites were selected for the detectability study in New Brunswick and all sites were surveyed twice during the census window. There were more Piping Plovers ( $n=2, 3$ ) detected at two sites during the second survey. This increase could partially be explained by plover movement, as two of the birds detected during the second surveys were singles and an extra pair detected had just initiated a nest.

Seven sites surveyed during the 2001 census were re-evaluated and thought to be unsuitable for nesting Piping Plovers due to habitat degradation caused by coastal erosion, beach succession or the presence of large gull colonies. For these reasons, Crab Island, Egg Island, Huckleberry Island, Little Huckleberry

Island, Sheldrake Island, Île Pokesudie and Neguac Spit North were not surveyed for breeding Piping Plovers.

A total of 166 adults were counted during the 2006 International Census (not including the detectability results). This is similar to the 2001 population estimate of 167 adults, and a considerable increase (17%) from the 1996 count of 146 birds. Compared to the 1991 census results, Piping Plover population has experienced a decrease of 16%, when 203 adults were counted.

These results are most likely a slight underestimate of the Piping Plover population in New Brunswick, as South Richibucto Dune (North Barrier Island) was not surveyed during the census window. This site has consistently had one to two breeding pairs per year. A site visit was conducted on July 25, and one breeding pair was discovered with three young. It is thought that this pair had been established during the International Census window. All remaining potential habitat in the province was surveyed during the census window despite several days of high winds and inclement weather resulting in some survey delays.

Excessive all-terrain vehicle (ATV) use of beaches was noted throughout the province during the census. There were at least two cases in which ATV traffic had come inches from crushing Piping Plover nests. This could be related to delays in funding that resulted in a later initiation in guardian program efforts in comparison to other years. The delay in educational efforts, as well as symbolic fencing and signage installation on beaches may have played a role in these increased levels of disturbance.

Natural ecological processes such as beach erosion and sediment deposition continuously modify habitat parameters of Piping Plover breeding beaches in New Brunswick. While

seven beaches were re-evaluated and found to be unsuitable for Piping Plovers in 2006, ten sites experienced increased use by Piping Plovers. In previous years, Escuminac beach has experienced a great deal of ATV traffic; however in recent years a breach has formed preventing vehicle traffic from accessing sections of the beach. As a result, Piping Plover use of this site and nesting success is increasing. After a decade of monitoring potential habitat, one pair of Piping Plovers was observed at Grand Lac beach for the first time during the 2006 census.

Other threats continue to impact Piping Plovers and their distribution in New Brunswick, including human disturbance and coastal development for residential and industrial purposes. The construction of a fish plant on a sand dune at St-Marie St-Raphaël has resulted in Piping Plovers abandoning the site. Other factors impacting the Piping Plovers in New Brunswick include egg and chick depredation and nest flooding.

### Comparison of Census Numbers

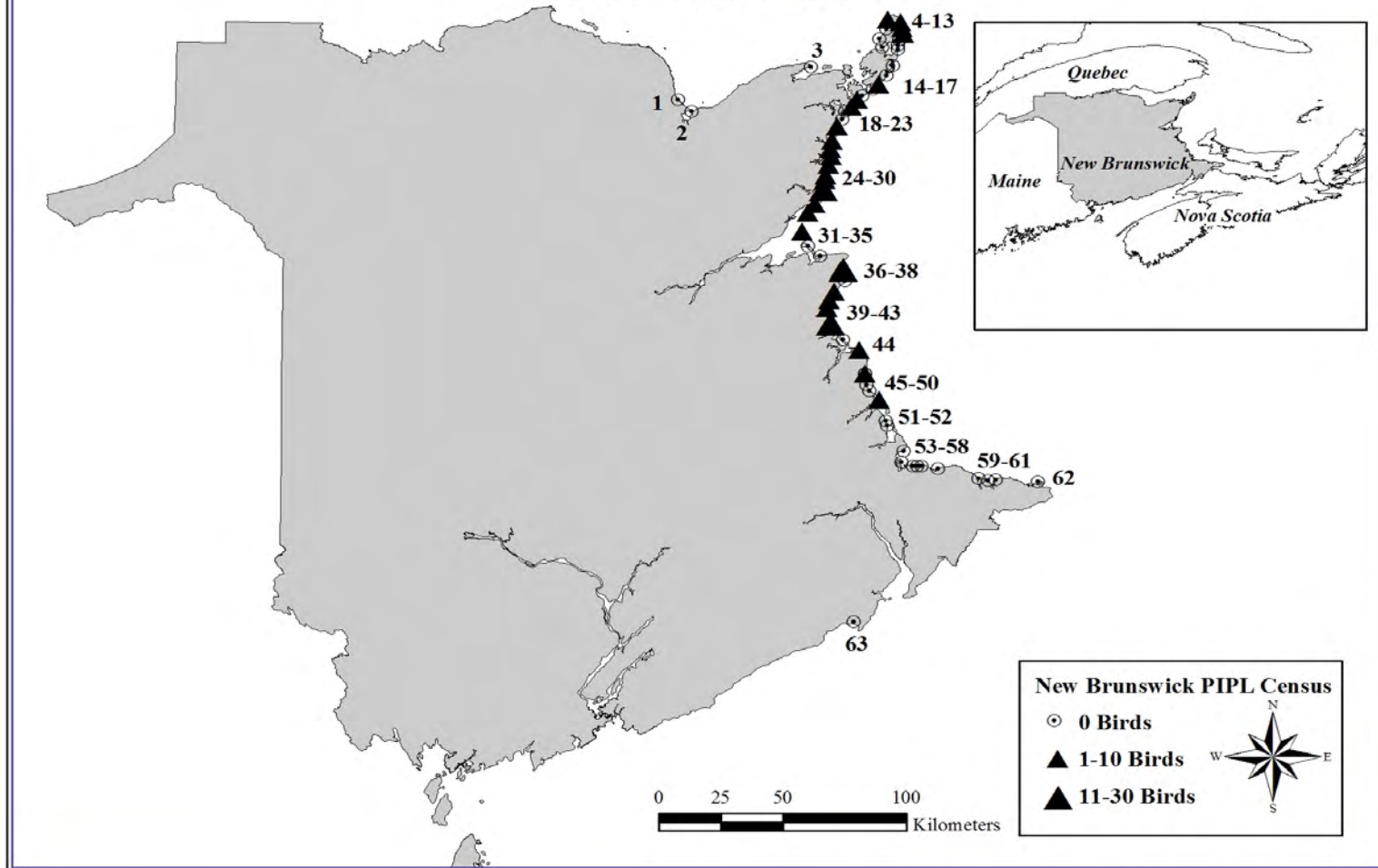
	1991	1996	2001	2006
Total Adults	203	146	167	166 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

### Detectability Study

Sites Included	First Count	Second Count
Escuminac Beaches	13	14
Escuminac Beaches – South Section	0	2
Pointe Sapin Dune, Kouchibouguac National Park	4	4
Quai de Saint Edouard	0	0
Cedar Road Spit	8	10

## 2006 International Piping Plover Breeding Census - New Brunswick -



## The 2006 International Piping Plover Breeding Census in New Brunswick

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Albert	Waterside Beach	63	6/06	0	0	3.0	I A 1		Yes	Yes	Yes	p
Gloucester	Baie-de-Petit-Pokemouche	19	6/04	3	6	1.9	I A 1 3 7 12	I A 1 7	Yes	Yes	Yes	p
Gloucester	Beresford Beach	1	6/06	0	0	2.5	I B 1		No	Yes	Yes	p
Gloucester	Cap Bateau	14	6/14	0	0	1.0	I A 1 12		Yes	Yes	Yes	s(p)/p
Gloucester	Carron Point	2	6/16	0	0	1.5	I B 1		No	Yes	Yes	p
Gloucester	Chiasson Office	17	6/09	0	0	2.0	I A 1		Yes	Yes	Yes	f/p
Gloucester	Dune de Maisonette/Pointe de Maisonette	3	6/06	0	0	0.5	I II A B 1 2 3		Yes	Yes	Yes	m
Gloucester	Ecole-La-Vague	18	6/08	0	0	2.0	I II A 1		No	Yes	Yes	f/m/p
Gloucester	Grand Lac (Lameque)	16	6/09	1	2	2.1	I II A 1 12	D 1	No	No	Yes	s(p)
Gloucester	Grand Passage (Pokemouche North)	20	6/10	3	7	4.0	I II A 1 12		Yes	Yes	Yes	p
Gloucester	Grande Plaine, Miscou Island (ward road north)	7	6/10	1	2	4.0	I A 1 12		Yes	Yes	Yes	p
Gloucester	Green Point (Pointe Verte)	23	6/13	3	6	6.0	I A 1 12		Yes	Yes	Yes	f
Gloucester	Middle Miscou, Miscou Island	9	6/14	3	6	2.8	I A B 1 2 5 11 12		Yes	Yes	Yes	s/p
Gloucester	Miscou Beach, Miscou island (MacGregor's maal Bay)	8	6/03	2	4	1.9	I A 1 2 3 12	I B 2	Yes	Yes	Yes	s/p
Gloucester	Miscou Centre Beach (stewarts Beach)	5	6/07	0	0	6.8	I B 1		Yes	Yes	Yes	n.r.
Gloucester	Miscou Harbor South, Marks Point South Miscou Island	4	6/03	0	0	1.3	I II A 1 7		Yes	Yes	Yes	s/p
Gloucester	Pigeon Hill	12	6/14	0	0	3.5	I II C 1 2		No	Yes	Yes	s(p)
Gloucester	Pigeon Hill beach (plage de pigeon hill)	13	6/14	0	0	3.0	I A 1 12		Yes	Yes	Yes	p
Gloucester	Plover Ground North	21	6/04	0	0	3.2	I II A 1 3 7 11		Yes	Yes	Yes	p
Gloucester	Plover Ground South	22	6/04	0	0	1.7	I A 1 12		Yes	Yes	Yes	p
Gloucester	Pointe-a-Bouleau	25	6/16	3	6	4.0	I B C 3		Yes	Yes	Yes	p
Gloucester	Ruisseau Cheniere (Miscou Island)	6	6/07	0	0	8.0	I G 1		Yes	Yes	Yes	n.r.
Gloucester	St. Raphael, St. Marie.	15	6/09	0	0	2.0	I A 1 12		No	No	No	p
Gloucester	Tracadie Dune	24	6/11	5	10	5.0	I C 3		Yes	Yes	Yes	s/p
Gloucester	Val Comeau	26	6/06	0	1	4.7	I V A 1 3	IV A 1	Yes	Yes	Yes	s/p

## The 2006 International Piping Plover Breeding Census in New Brunswick (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Gloucester	Wilson Point North (Miscou)	10	6/07	2	5	4.1	I II A 1 2 3 4	I A B 1 2	Yes	Yes	Yes	s/p
Gloucester	Wilson Point South (Miscou)	11	6/07	0	0	2.3	I II A B 1 2		Yes	Yes	Yes	f/s
Kent	Bar de Cocagne	51	6/13	0	0	1.9	I B		Yes	Yes	Yes	p
Kent	Bouctouche Dune	50	6/07	4	8	12.0	I VIII A 2	D 1 2 3 4	Yes	Yes	Yes	p
Kent	Chockpish Centre	45	6/12	2	4	1.8	I A 1	I A 1	No	No	No	p
Kent	Chockpish North	46	6/12	0	0	1.0	I A 1		No	No	No	p
Kent	Chockpish South	47	6/12	0	0	1.0	I II A 1 15		No	No	Yes	p
Kent	Cocagne Island	52	6/12	0	0	12.0	I II B G 1 2 5		No	No	No	p
Kent	Cote-Sainte-Anne	48	6/09	0	0	5.2	I VIII A 1		No	No	No	p
Kent	Escuminac Beaches	36	6/15	7	14	12.0	I VIII A 1		No	Yes	Yes	s(p)/p
Kent	Escuminac Beaches- South Section	37	6/15	0	2	3.0	I B 1	I B 1 4	Yes	Yes	Yes	s(p)/p
Kent	North Kouchibouguac Dune	41	6/06	3	7	3.1	I I 1 2 15		Yes	Yes	Yes	f
Kent	North Richibucto Dune	43	6/13	0	0	16.4	I C 1		Yes	Yes	Yes	f
Kent	Pointe Sapin Beach	38	6/14	0	0	3.0	I A 1 4		No	Yes	Yes	f/s/p
Kent	Pointe-Sapin Dune	39	6/05	2	4	1.3	I A 1 15		Yes	Yes	Yes	f
Kent	Portage River Dune, Kouchibouguac National Park	40	6/11	3	7	2.0	I A 1		Yes	Yes	Yes	f
Kent	Quai de St. Edouard	49	6/09	0	0	1.5	I VIII A 1		No	No	Yes	n.r
Kent	South Kouchibouguac Dune	42	6/12	5	13	2.5	I C 1 15		Yes	Yes	Yes	f
Kent	South Richibucto Beach	44	6/16	2	4	6.9	I B 1 2	I B 8	Yes	Yes	Yes	p
Northumberland	Blacklands Sandspit (Crab Island, Swinging Point, Neguac North)	31	6/14	1	3	3.0	I C 3 4		Yes	Yes	Yes	s(p)
Northumberland	Cedar Road Beach South	28	6/05	2	7	4.5	I A B 1 3 15	I II B C 1 4	Yes	Yes	Yes	s(p)/p
Northumberland	Cedar Road Spit	29	6/15	5	10	4.0	I C 2		Yes	Yes	Yes	p
Northumberland	Dune de Neguac, Neguac Beach	32	6/15	3	5	7.6	C 1 3	I G 1	Yes	Yes	Yes	s(p)/p
Northumberland	Fox Island	34	6/15	0	0	6.0	I C 1		Yes	Yes	Yes	p
Northumberland	Pointe a Barreau	27	6/05	1	2	2.6	I V A 1 3 4	I V A 1	Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in New Brunswick (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Northumberland	Portage Island National Wildlife Area	33	6/15	1	2	5.7	I B G 1	I G 1	Yes	Yes	Yes	f
Northumberland	Preston Beach	35	6/13	0	0	3.1	I B 1		Yes	Yes	Yes	p
Northumberland	Tabusintac Dune	30	6/07	12	24	7.0	I C 2		Yes	Yes	Yes	p
Westmorland	Cadman Beach	61	6/14	0	0	2.5	II B 1 3		Yes	Yes	Yes	p
Westmorland	Cap Bimet West	56	6/07	0	0	1.5	I A 1 3		Yes	Yes	Yes	p
Westmorland	Cap Brule East	55	6/12	0	0	1.0	I 1		Yes	Yes	Yes	p
Westmorland	Cape Jourimain National Wildlife Area	62	6/13	0	0	2.0	II B G 1 3 7 15		No	No	Yes	f
Westmorland	Johnston Point	60	6/14	0	0	1.3	II A B 1 2 3		Yes	Yes	Yes	p
Westmorland	Landry East	58	6/12	0	0	0.5	I A 1		Yes	Yes	Yes	p
Westmorland	Little Cape	59	6/12	0	0	1.0	I A 1		Yes	Yes	Yes	p
Westmorland	Petit Barachois	57	6/12	0	0	0.0	I A 1		Yes	Yes	Yes	p
Westmorland	Pointe Grande-Digue	53	6/07	0	0	1.0	I A		Yes	Yes	No	n.r
Westmorland	Shediac Island	54	6/12	0	0	2.0	I G 1 2		No	No	Yes	m/p
<b>Total</b>				<b>79</b>	<b>171<sup>1</sup></b>	<b>227.7</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# The 2006 International Piping Plover Breeding Census in Maine

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The 2006 International Piping Plover Census in Maine was conducted by 17 participants on June 13 and 14, 2006. Weather on those days was favorable and we observed a total of 71 adult Piping Plovers.

Our coverage of potential Piping Plover habitat during the 2006 International Piping Plover Census was very comprehensive. We were able to survey habitat covered in 2001 and additionally, we surveyed some sand beaches on near-shore islands. These islands are likely visited occasionally by foraging plovers but are not used for nesting.

Detectability was likely a problem at some of our sites. At one site, Ogunquit Beach, a single pair was seen during the 2006 Census, but there was likely a second pair at the site because we also had a nest down the beach which we do not think was associated with the pair observed. At another site, Scarborough Beach, two pairs and a fifth adult were observed. Since the single adult performed a broken wing display, there were likely 6 total birds at that site instead of 5. On the other hand, there may have been a couple of instances where birds were double counted. On two occasions, (at Laudholm and Richmond Island) we watched single birds foraging but believe they were nesting at different sites (Crescent Surf and Breakwater Beach, respectively); at Richmond Island we observed the single adult foraging for 30

minutes and then watched as it flew towards Breakwater Beach. Since we were not surveying the sites simultaneously and the birds were not marked, it is impossible to say if they were counted twice.

## Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	38	114	96 <sup>2</sup>	71 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

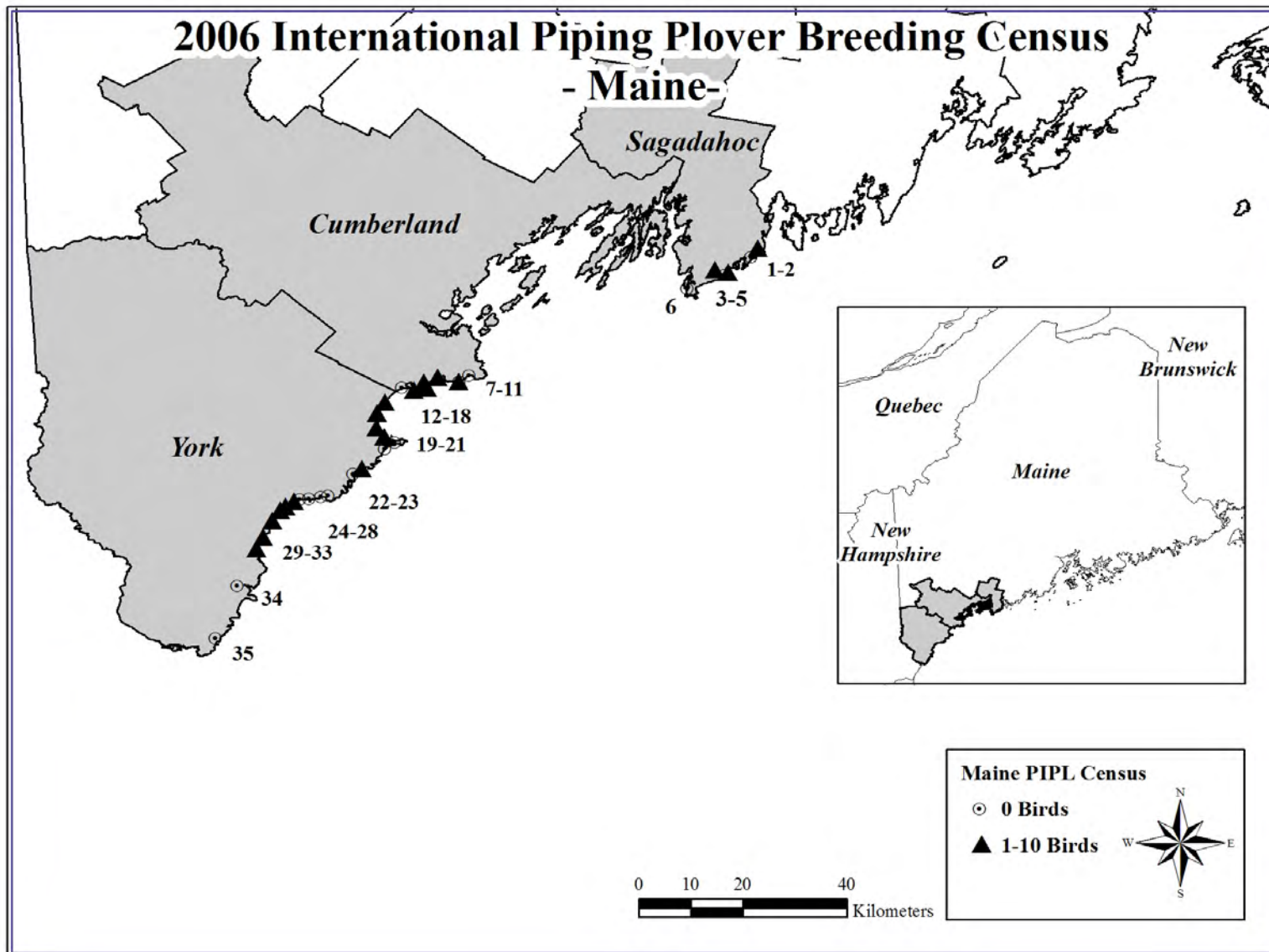
<sup>2</sup>This total included results from multiple surveys within the window and two surveys conducted outside the window. The single-survey pair count in 2001 was 38.

## Detectability Study

Sites Included	First Count	Second Count
Parsons Beach	0	0

*Summarized by E. Elliott-Smith*





## The 2006 International Piping Plover Breeding Census in Maine

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cumberland	Breakwater Beach / Ram Island	8	6/14	2	4	1.2	I A 1 2 3 5 13	I A 1 13	No	Yes	Yes	p
Cumberland	Crescent Beach State Park	7	6/14	0	0	1.3	I A 1 3		No	No	Yes	s(p)
Cumberland	Hanson House / Ram Island	9	6/14	0	0	2.3	I A 1 3		No	Yes	Yes	p
Cumberland	Higgins Beach	12	6/13	4	8	1.6	I II III A D 1 2 12 13	II BDI 2	No	Yes	Yes	s/p
Cumberland	Nano's Beach / Ram Island	10	6/14	1	2	0.4	I A 1 3 13	I A 1 13	No	Yes	Yes	p
Cumberland	Pine Point	15	6/13	0	0	2.2	I A 1		Yes	Yes	Yes	p
Cumberland	Richmond Island	11	6/14	0	1	0.5	I I 1 3 6 13	I G 1	No	No	No	p
Cumberland	Scarborough Beach	13	6/13	2	5	2.3	I A 1 3	I A 1	No	Yes	Yes	s/p
Cumberland	Western beach and Ferry	14	6/13	1	2	1.2	I A 1 3		No	Yes	Yes	s(p)
Sagadahoc	Head Beach, Hermit Island	6	6/13	0	0	0.3	I B 1 12		No	No	Yes	p
Sagadahoc	Hunnewell Beach	3	6/13	0	0	1.8	I A 1		Yes	Yes	Yes	p
Sagadahoc	Indian Point	2	6/13	0	0	0.3	III A 1 3		No	No	Yes	p
Sagadahoc	Popham Beach State Park	4	6/13	1	2	1.8	I A 1 2	I A 1	Yes	Yes	Yes	s(p)
Sagadahoc	Reid State Park	1	6/13	3	5	2.4	I III A B 1 2 3	I B1	Yes	Yes	Yes	s(p)
Sagadahoc	Seawall Beach	5	6/13	1	2	2.0	I A B 1 2 3 16	I A 2	Yes	Yes	Yes	p
York	Colony Beach	24	6/13	0	0	0.1	I A 1		No	No	Yes	m/p
York	Crescent Surf	28	6/13	3	8	0.8			Yes	Yes	Yes	f/p
York	Drakes Island	30	6/13	1	2	0.9	I B 1 3 14	I A B3	No	Yes	Yes	p
York	Ferry Beach	18	6/13	1	1	1.3	I A 1	I A 1	No	Yes	Yes	s/p
York	Fortunes Rock Beach	21	6/13	0	0	3.2	I A 1 13		No	Yes	Yes	m
York	Goochs	25	6/13	0	0	0.4	I A 1		No	Yes	Yes	m
York	Goose Rocks Beach	22	6/13	5	10	2.9	I II B 1 2	I V B2	Yes	Yes	Yes	m/p
York	Goosefare Brook	17	6/13	1	2	0.3	III A 1	III A 1	No	Yes	Yes	f
York	Hattie's Beach	20	6/13	0	0	0.2	I A 1 14		No	No	Yes	s(p)
York	Hills Beach	19	6/13	1	2	13.7	I A 1 14	I A 1	No	No	Yes	p
York	Kennebunk Beach	26	6/13	0	0	0.3	I A 1		No	Yes	Yes	m
York	Laudholm	29	6/13	0	1	0.8	III B 1		Yes	Yes	Yes	s(p)
York	Marshall Point/Batson River	23	6/13	0	0	0.3	II A 1		No	Yes	Yes	f
York	Moody Beach	32	6/13	1	2	1.2	I A 1		No	Yes	Yes	p
York	Ocean Park/ Old Orched beach	16	6/13	1	2	3.3	I A 1	I A 1	No	Yes	Yes	m

**The 2006 International Piping Plover Breeding Census in Maine  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
York	Ogunquit	33	6/13	1	2	2.3	I A 1 3	I A B1	No	Yes	Yes	m
York	Parsons Beach	27	6/13	0	0	0.8	I III B F 2 3		No	Yes	Yes	p
York	Seapoint and Crescent Beaches	35	6/13	0	0	0.5	I A 1 7		No	Yes	Yes	m
York	short sands beach ( cape Neddick)	34	6/13	0	0	0.3	I A 1		No	No	No	p
York	Wells Beach	31	6/13	4	8	1.2	I II A 1 2 6	I A 1	No	Yes	Yes	m
<b>Total</b>				<b>34</b>	<b>71</b>	<b>56.4</b>						

# **The 2006 International Piping Plover Breeding Census in New Hampshire**

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Surveys were conducted on 9 June at the two known breeding sites, as part of the 2006 International Piping Plover Census in New Hampshire. A total of 6 adults were observed during these surveys. Five additional state park beaches were checked the same day but there were no signs of Piping Plovers.

## **Comparison of Census Numbers**

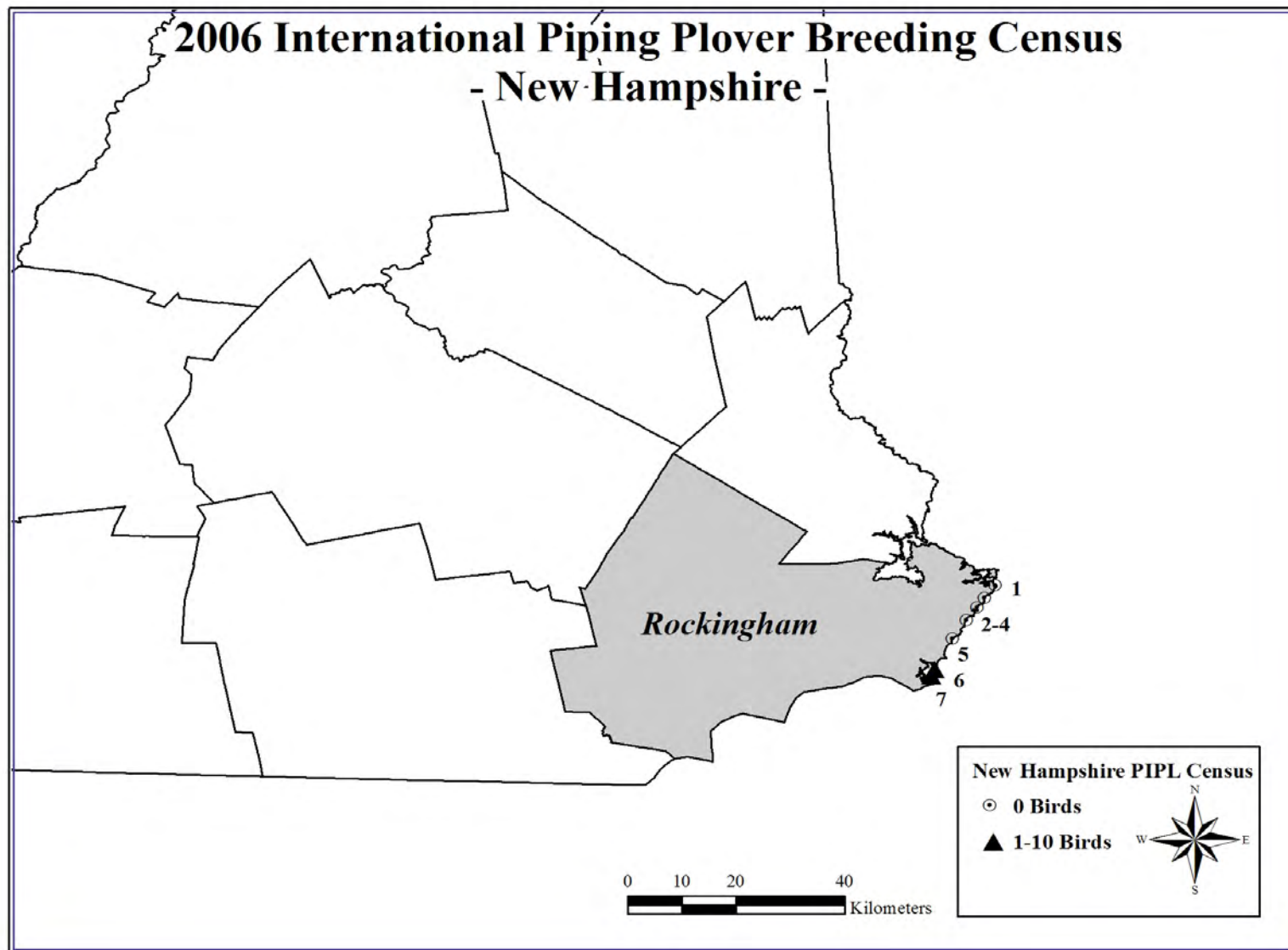
	1991	1996	2001	2006
Total Adults	n.a.	n.a.	14	6 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## **Detectability Study**

Sites Included	First Count	Second Count
Seabrook Beach	2	1

*Summarized by E. Elliott-Smith*



## The 2006 International Piping Plover Breeding Census in New Hampshire

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Rockingham	Hampton Beach State Park	6	6/8	2	4	4.0	I A 1 3 13	I A 3 13	No	No	Yes	s(p)
Rockingham	Jenness Beach State Park	4	6/9	0	0	n.r.			No	No	No	s(p)
Rockingham	North Hampton State Park	5	6/9	0	0	n.r.			No	No	No	s(p)
Rockingham	Odiorne Point State Park	1	6/9	0	0	n.r.			No	No	No	s(p)
Rockingham	Rye Harbor State Park	3	6/9	0	0	n.r.			No	No	No	s(p)
Rockingham	Seabrook Beach	7	6/6	1	2	2.4	I II A D 1 3 13	I A 1	No	No	Yes	m
Rockingham	Wallis Sands State Park	2	6/9	0	0	n.r.			No	No	No	s(p)
<b>Total</b>				<b>3</b>	<b>6</b>	<b>6.4</b>						

# **The 2006 International Piping Plover Breeding Census in Massachusetts**

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Following are results from the Massachusetts Index Count (Melvin 2007). The Index Count was conducted during the period from 1-9 June 2006. During this window, one or more surveys were conducted at each of the sites listed. We do not have results from individual surveys. This differs from how the 2006 International Piping Plover Census was conducted in most other states, but conforms to how data was reported from Massachusetts for previous International Census Reports.

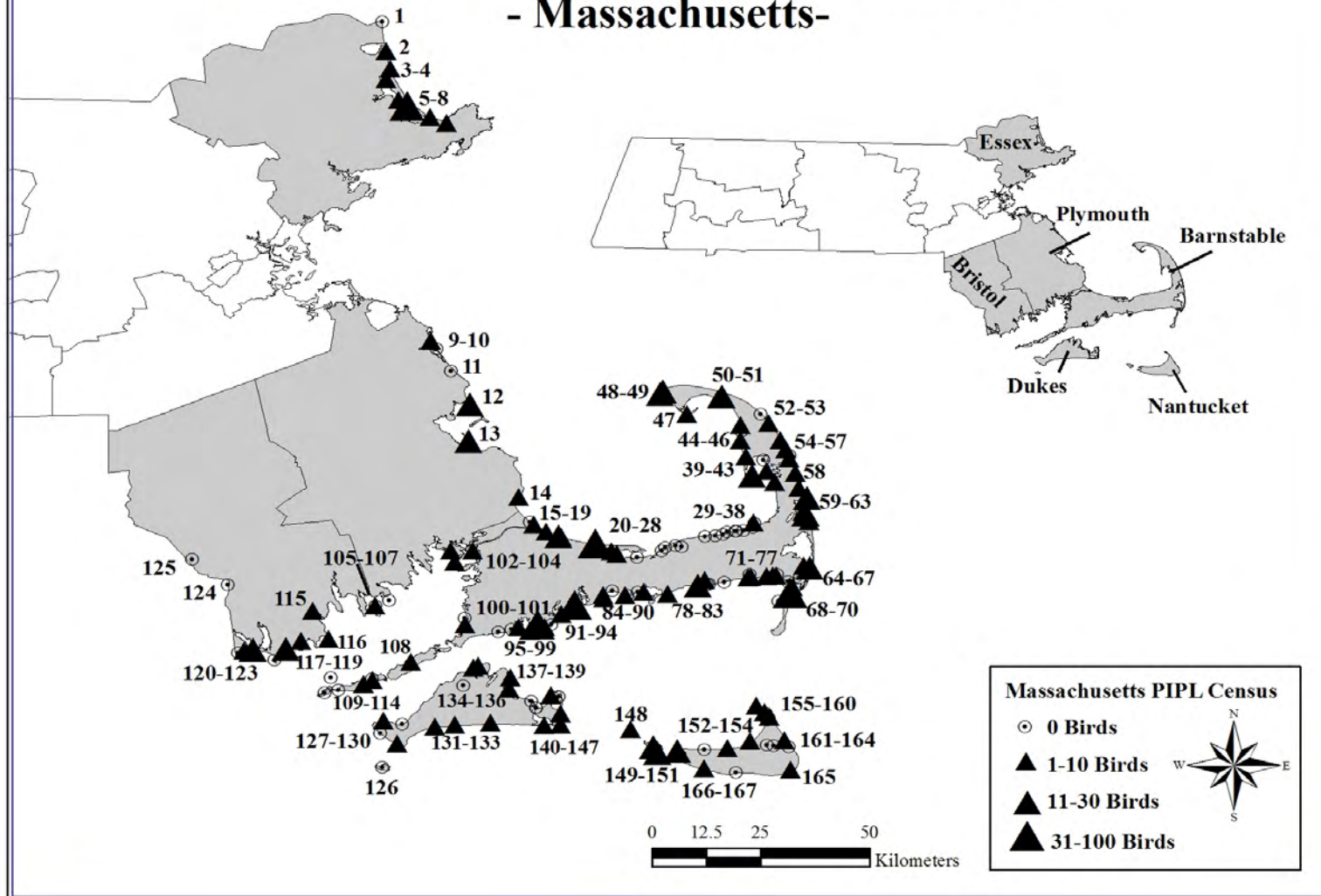
## **Comparison of Census Numbers**

	1991	1996	2001	2006
Total Adults	293	877	962	935 <sup>1</sup>

<sup>1</sup>This total is based on one or more surveys conducted at each site from June 1-9. It is comparable to other totals reported in this table, but differs from all other states and provinces where totals are based on a single survey.

*Summarized by E. Elliott-Smith*

## 2006 International Piping Plover Breeding Census - Massachusetts-





## The 2006 International Piping Plover Breeding Census in Massachusetts

COUNTY/ REGION	SITE NAME	MAP #	BR PAIRS	TOTAL ADULTS	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Barnstable	Acapesket Beach	99	0	0	n.r.		No	No	No	n.r.
Barnstable	Ballston Beach	53	2	4	n.r.	n.r.	Yes	Yes	Yes	f
Barnstable	Bank St./Market Beach/Wychmere	77	4	8	n.r.	n.r.	No	No	No	n.r.
Barnstable	Black Beach	101	0	0	n.r.		Yes	Yes	Yes	M
Barnstable	Bone Hill Road	24	0	0	n.r.		No	No	Yes	n.r.
Barnstable	Cahoon Hollow	55	1	2	n.r.	n.r.	No	No	No	n.r.
Barnstable	Chapin Beach	26	0	0	n.r.		Yes	Yes	Yes	M
Barnstable	Coast Guard Beach	60	14	28	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Cockle Cove/Ridgevale beach	72	1	2	n.r.	n.r.	No	Yes	Yes	M
Barnstable	Craigville Beach	88	0	0	n.r.		No	No	No	n.r.
Barnstable	Crosby's Landing Beach	38	3	6	n.r.	n.r.	No	No	Yes	n.r.
Barnstable	Dowse's Beach	89	1	2	n.r.	n.r.	No	Yes	Yes	n.r.
Barnstable	Duck Harbor/Bound brook	43	3	6	n.r.	n.r.	No	No	Yes	n.r.
Barnstable	East Sandwich Beach	18	3	6	n.r.	n.r.	Yes	Yes	Yes	m/p
Barnstable	Ellis Launching Beach	36	0	0	n.r.		No	Yes	Yes	n.r.
Barnstable	Forest Beach	74	1	2	n.r.	n.r.	No	Yes	Yes	M
Barnstable	Glendon Beach	79	0	0	n.r.		No	No	No	n.r.
Barnstable	Gray's Beach	25	0	0	n.r.		Yes	Yes	Yes	M
Barnstable	Great Island, Yarmouth	21	3	6	n.r.	n.r.	Yes	Yes	Yes	P
Barnstable	Haigis Beach	80	0	0	n.r.		No	No	No	n.r.
Barnstable	Harding Beach	73	2	4	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	Harding Beach Point	68	0	0	n.r.		No	No	No	n.r.
Barnstable	Harding Beach Shores	71	0	0	n.r.		No	No	No	n.r.
Barnstable	High Head/Head of the Meadow	50	7	14	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Howes St./Corporation Beach	28	0	0	n.r.		No	No	Yes	P
Barnstable	Indian Neck	41	0	0	n.r.		No	Yes	Yes	n.r.
Barnstable	Jeremy Point/Great Island	42	9	18	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Kalmus Park	84	5	10	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	Lecount Hollow	57	1	2	n.r.	n.r.	No	No	No	n.r.
Barnstable	Lieutenant's Island	40	2	4	n.r.	n.r.	No	No	Yes	n.r.
Barnstable	Linell Landing Beach	37	0	0	n.r.		No	No	Yes	n.r.

## The 2006 International Piping Plover Breeding Census in Massachusetts (Continued)

COUNTY/ REGION	SITE NAME	MAP #	BR PAIRS	TOTAL ADULTS	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Barnstable	Long Beach	90	4	8	n.r.	n.r.	Yes	Yes	Yes	m/p
Barnstable	Long Point/Wood End	47	5	10	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Longnook Beach	52	0	0	n.r.		No	Yes	Yes	n.r.
Barnstable	Marconi Beach and Station	58	3	6	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Mashnee Dike	103	1	2	n.r.	n.r.	No	No	Yes	F
Barnstable	Mayflower Beach/Town Landings	27	0	0	n.r.		No	Yes	Yes	M
Barnstable	Menauhant	98	0	0	n.r.		No	No	No	n.r.
Barnstable	Minimoy Island	70	0	0	n.r.		No	No	No	n.r.
Barnstable	Miramar Beach (Swan River)	81	1	2	n.r.	n.r.	No	No	No	n.r.
Barnstable	Morris Island Dredge Spoil	66	0	0	n.r.		No	No	No	n.r.
Barnstable	Nauset Beach, Chatham	64	12	24	n.r.	n.r.	No	Yes	Yes	M
Barnstable	Nauset Beach, Orleans	63	2	4	n.r.	n.r.	No	Yes	Yes	n.r.
Barnstable	Nauset Light Beach	59	1	2	n.r.	n.r.	No	No	No	Nr
Barnstable	Nauset Spit (Heights)	61	14	28	n.r.	n.r.	Yes	Yes	Yes	f/m
Barnstable	New Island	62	1	2	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	New Seabury	94	2	4	n.r.	n.r.	No	Yes	Yes	n.r.
Barnstable	Newcomb Hollow, Wellfleet	54	1	2	n.r.	n.r.	No	No	No	Nr
Barnstable	North Monomoy Island	67	1	2	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Paine's Creek	31	0	0	n.r.		No	No	Yes	M
Barnstable	Pamet Harbor, South	45	0	0	n.r.		No	No	Yes	M
Barnstable	Pamet Harbor-North/Corn Hill Beach	46	5	10	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	Pilgrim Beach/Beach Point	51	1	2	n.r.	n.r.	Yes	Yes	Yes	P
Barnstable	Point of Rocks	35	0	0	n.r.		No	No	No	n.r.
Barnstable	Popponesset Spit	92	4	8	n.r.	n.r.	Yes	Yes	Yes	m/p
Barnstable	Quivett Neck/Coles Pond/Crowes Pasture	30	0	0	n.r.		No	Yes	Yes	M
Barnstable	Race Point/ South Beach	48	11	22	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Race Point/North Beach	49	13	26	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Red River Beach	78	0	0	n.r.		No	No	Yes	n.r.
Barnstable	Robbins Hill Beach	33	0	0	n.r.		No	Yes	Yes	n.r.
Barnstable	Rock Landing/Maushop Village	93	0	0	n.r.		No	No	Yes	P

## The 2006 International Piping Plover Breeding Census in Massachusetts (Continued)

COUNTY/ REGION	SITE NAME	MAP #	BR PAIRS	TOTAL ADULTS	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Barnstable	Ryder Beach	44	1	2	n.r.	n.r.	No	No	No	n.r.
Barnstable	Sagamore Beach	15	0	0	n.r.		No	Yes	Yes	P
Barnstable	Saint's Landing	32	0	0	n.r.		No	No	No	n.r.
Barnstable	Sampson Island - Dead Neck	91	23	46	n.r.	n.r.	Yes	Yes	Yes	P
Barnstable	Sandy Neck	20	22	44	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	Saquatucket Bluffs	75	0	0	n.r.		No	No	No	n.r.
Barnstable	Scorton (Neck) Creek	22	4	8	n.r.	n.r.	Yes	Yes	Yes	n.r.
Barnstable	Scorton Shores	23	3	6	n.r.	n.r.	No	No	Yes	P
Barnstable	Scusset Beach State Park	16	1	2	n.r.	n.r.	No	Yes	Yes	s(p)
Barnstable	Sea St./Keyes Beach	85	0	0	n.r.		No	No	No	n.r.
Barnstable	Seagull Beach/Radio City	83	3	6	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	Sesuit Beach	29	0	0	n.r.		No	Yes	Yes	M
Barnstable	Sippewisset	100	2	4	n.r.	n.r.	No	No	No	n.r.
Barnstable	So. Sunken Meadow Spit	39	3	6	n.r.	n.r.	No	No	Yes	n.r.
Barnstable	South Beach	97	47	94	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	South Cape Beach	95	3	6	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	South Momomoy Island	69	21	42	n.r.	n.r.	Yes	Yes	Yes	F
Barnstable	Springhill Beach	19	9	18	n.r.	n.r.	Yes	Yes	Yes	m/p
Barnstable	Squaw Is. Road	86	0	0	n.r.		No	No	No	N
Barnstable	Squaw Island	87	3	6	n.r.	n.r.	No	Yes	Yes	P
Barnstable	Tern Island	65	0	0	n.r.		Yes	Yes	Yes	M
Barnstable	Town Beach	76	0	0	n.r.		No	Yes	Yes	n.r.
Barnstable	Town Neck Beach	17	3	6	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	Washburn Island	96	3	6	n.r.	n.r.	Yes	Yes	Yes	s(p)
Barnstable	West Dennis Beach	82	6	12	n.r.	n.r.	Yes	Yes	Yes	M
Barnstable	White Crest Beach	56	0	0	n.r.		No	No	No	n.r.
Barnstable	Wings Island	34	0	0	n.r.		No	No	Yes	P
Bristol	Acoaxet	121	0	0	n.r.		Yes	Yes	Yes	M
Bristol	Allens Harbor	124	0	0	n.r.		No	No	No	n.r.
Bristol	Bay Point	125	0	0	n.r.		Yes	Yes	Yes	M

## The 2006 International Piping Plover Breeding Census in Massachusetts (Continued)

COUNTY/ REGION	SITE NAME	MAP #	BR PAIRS	TOTAL ADULTS	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Bristol	Cockeast Pond	122	0	1	n.r.	n.r.	Yes	Yes	Yes	P
Bristol	Demarest Lloyd State Park	117	4	8	n.r.	n.r.	No	Yes	Yes	s(p)
Bristol	Gooseberry Neck	119	0	0	n.r.		Yes	Yes	Yes	s(p)
Bristol	Horseneck Beach	120	9	18	n.r.	n.r.	Yes	Yes	Yes	s(p)/m
Bristol	Little Beach/Barney's Joy	118	13	26	n.r.	n.r.	Yes	No	Yes	P
Bristol	Richmond Pond	123	0	0	n.r.		Yes	Yes	Yes	P
Bristol	Round Hill	116	1	2	n.r.	n.r.	Yes	Yes	Yes	M
Bristol	Salters Pond	115	1	2	n.r.	n.r.	Yes	Yes	Yes	n.r.
Bristol	Stony Point Dike	102	2	4	n.r.	n.r.	No	Yes	Yes	M
Bristol	West Island	106	1	2	n.r.	n.r.	Yes	Yes	Yes	s(p)
Bristol	Winsegansett Heights	107	0	0	n.r.		No	Yes	Yes	n.r.
Dukes	Arruda's Point/The Jetties	144	0	0	n.r.		No	Yes	Yes	n.r.
Dukes	Cape Pogue Elbow/The Narrows	146	1	2	n.r.	n.r.	No	Yes	Yes	n.r.
Dukes	Chappaquiddick Beach	145	0	0	n.r.		No	Yes	Yes	n.r.
Dukes	Chilmark Pond	131	1	2	n.r.	n.r.	No	Yes	Yes	m/p
Dukes	Cuttyhunk Island	113	0	0	n.r.		Yes	Yes	Yes	M
Dukes	Dogfish Bar	129	4	8	n.r.	n.r.	Yes	Yes	Yes	s(p)/p
Dukes	Eastville Point Beach	137	1	2	n.r.	n.r.	No	No	Yes	M
Dukes	Edgartown Great Pond/Job's Neck	133	1	2	n.r.	n.r.	Yes	Yes	Yes	P
Dukes	Eel Pond/Little Beach/Lighthouse Beach	143	0	0	n.r.		Yes	Yes	Yes	m/p
Dukes	Great Rock Bight Preserve	130	0	0	n.r.		No	No	Yes	n.r.
Dukes	Harthaven Beach	138	0	0	n.r.		Yes	Yes	Yes	P
Dukes	Leland/East Beaches	142	4	8	n.r.	n.r.	No	Yes	Yes	n.r.
Dukes	Little Neck	147	0	0	n.r.		Yes	No	Yes	M
Dukes	Long Beach/Squibnocket	127	2	4	n.r.	n.r.	Yes	No	Yes	P
Dukes	Moshup Trail Beach/Philbin Beach	128	0	0	n.r.		No	Yes	Yes	m/p
Dukes	Nashawena Island-Canapitsit	112	0	0	n.r.		Yes	Yes	Yes	n.r.
Dukes	Nashawena Island-Quicks Hole	111	3	6	n.r.	n.r.	Yes	Yes	Yes	M
Dukes	Naushon Island	108	1	2	n.r.	n.r.	Yes	Yes	Yes	M
Dukes	Nomans Land	126	0	0	n.r.		No	No	Yes	n.r.

**The 2006 International Piping Plover Breeding Census in Massachusetts  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	BR PAIRS	TOTAL ADULTS	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Dukes	Norton Point Beach	140	4	8	n.r.	n.r.	Yes	Yes	Yes	M
Dukes	Pasque Island-Quicks Hole	109	0	0	n.r.		Yes	Yes	Yes	M
Dukes	Pasque Island-Robinson's Hole	110	1	2	n.r.	n.r.	Yes	Yes	Yes	M
Dukes	Penikese Island	114	0	0	n.r.		No	No	Yes	n.r.
Dukes	Sepiessa Point Reservation	134	0	0	n.r.		No	No	Yes	n.r.
Dukes	Sylvia State Beach	139	3	6	n.r.	n.r.	Yes	Yes	Yes	s(p)
Dukes	Tashmoo	135	1	2	n.r.	n.r.	Yes	Yes	Yes	P
Dukes	Tisbury Great Pond/Black Pt. Pond/Quansoo/Long Pt.	132	1	2	n.r.	n.r.	Yes	Yes	Yes	P
Dukes	Wasque	141	1	2	n.r.	n.r.	Yes	Yes	Yes	M
Dukes	Wilfred's Point/Mink Meadows Beach	136	2	4	n.r.	n.r.	No	Yes	Yes	P
Essex	Coffin's Beach	7	0	0	n.r.		No	No	No	n.r.
Essex	Crane Beach	6	19	40	n.r.	n.r.	Yes	Yes	Yes	M
Essex	North Salisbury Beach	1	0	0	n.r.		No	No	Yes	n.r.
Essex	Parker River NWR	4	5	10	n.r.	n.r.	Yes	Yes	Yes	F
Essex	Plum Island town beaches/Newburyport/Newbury	3	2	4	n.r.	n.r.	No	Yes	Yes	n.r.
Essex	Sandy Point State Reservation	5	4	8	n.r.	n.r.	Yes	Yes	Yes	s(p)
Essex	South Salisbury Beach	2	0	0	n.r.		No	No	Yes	n.r.
Essex	Wingaersheek Beach	8	0	0	n.r.		No	Yes	Yes	P
Nantucket	Coatue	154	1	2	n.r.	n.r.	No	Yes	Yes	P
Nantucket	Coskata Inlet/The Haulover	157	0	0	n.r.		Yes	Yes	Yes	n.r.
Nantucket	Coskata-East Beach	158	3	6	n.r.	n.r.	Yes	Yes	Yes	n.r.
Nantucket	Coskata-Inner Trail	159	0	0	n.r.		Yes	Yes	Yes	n.r.
Nantucket	Coskata-West Beach	160	0	0	n.r.		Yes	Yes	Yes	n.r.
Nantucket	Dionis Beach	152	0	0	n.r.		No	No	Yes	n.r.
Nantucket	Eel Point	151	9	18	n.r.	n.r.	No	Yes	Yes	P
Nantucket	Great Point	155	2	5	n.r.	n.r.	Yes	No	Yes	P
Nantucket	Hummock Pond	167	1	2	n.r.	n.r.	No	Yes	Yes	P
Nantucket	Jetties Beach	153	3	6	n.r.	n.r.	No	No	No	n.r.
Nantucket	Low Beach/Tom Nevers	165	1	2	n.r.	n.r.	Yes	Yes	Yes	M
Nantucket	Muskeget Island	148	4	8	n.r.	n.r.	Yes	Yes	Yes	m/p

**The 2006 International Piping Plover Breeding Census in Massachusetts  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	BR PAIRS	TOTAL ADULTS	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Nantucket	Quaise Point	164	0	0	n.r.		No	Yes	Yes	n.r.
Nantucket	Quidnet/Sesachacha Pond	162	0	0	n.r.		No	Yes	Yes	M
Nantucket	Ram Island (Polpis Harbor)	163	0	0	n.r.		No	No	No	n.r.
Nantucket	Smith Point	150	6	12	n.r.	n.r.	Yes	Yes	Yes	M
Nantucket	Squam Pond	161	1	2	n.r.	n.r.	No	Yes	Yes	P
Nantucket	Surfside	166	0	0	n.r.		Yes	No	Yes	M
Nantucket	The Galls	156	1	3	n.r.	n.r.	Yes	No	Yes	M
Nantucket	Tuckernuck Island	149	7	14	n.r.	n.r.	Yes	Yes	Yes	P
Plymouth	Duxbury Beach	12	14	28	n.r.	n.r.	Yes	Yes	Yes	P
Plymouth	Ellisville	14	4	8	n.r.	n.r.	No	Yes	Yes	n.r.
Plymouth	Fourth Cliff	10	0	0	n.r.		Yes	Yes	Yes	F
Plymouth	Little Harbor Beach	104	1	2	n.r.	n.r.	Yes	No	Yes	n.r.
Plymouth	Plymouth Beach	13	10	20	n.r.	n.r.	Yes	Yes	Yes	M
Plymouth	Ram Island	105	0	0	n.r.		No	No	No	n.r.
Plymouth	Rexhame Beach	11	0	0	n.r.		No	No	Yes	C
Plymouth	Third Cliff	9	4	8	n.r.	n.r.	Yes	Yes	Yes	C
<b>Total</b>			<b>465</b>	<b>935</b>						

# The 2006 International Piping Plover Breeding Census in Rhode Island

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The 2006 International Piping Plover Census in Rhode Island was accomplished by 4 surveyors from the U.S. Fish and Wildlife Service, one volunteer, and surveyors from The Nature Conservancy, who counted 137 adult Piping Plovers during the Census window. We surveyed sites with known Piping Plover breeding pairs or that have had a history of breeding pairs within the past three years. Our census covers the majority of nesting habitat of coastal Rhode Island and adequately represents the population of breeding plovers. Census numbers were up from 107 birds in 2005 and have also increased since the 2001 Census. The factors that affected Piping Plover populations most in southern Rhode Island in 2006 were predation and nest overwash.

## Comparison of Census Numbers

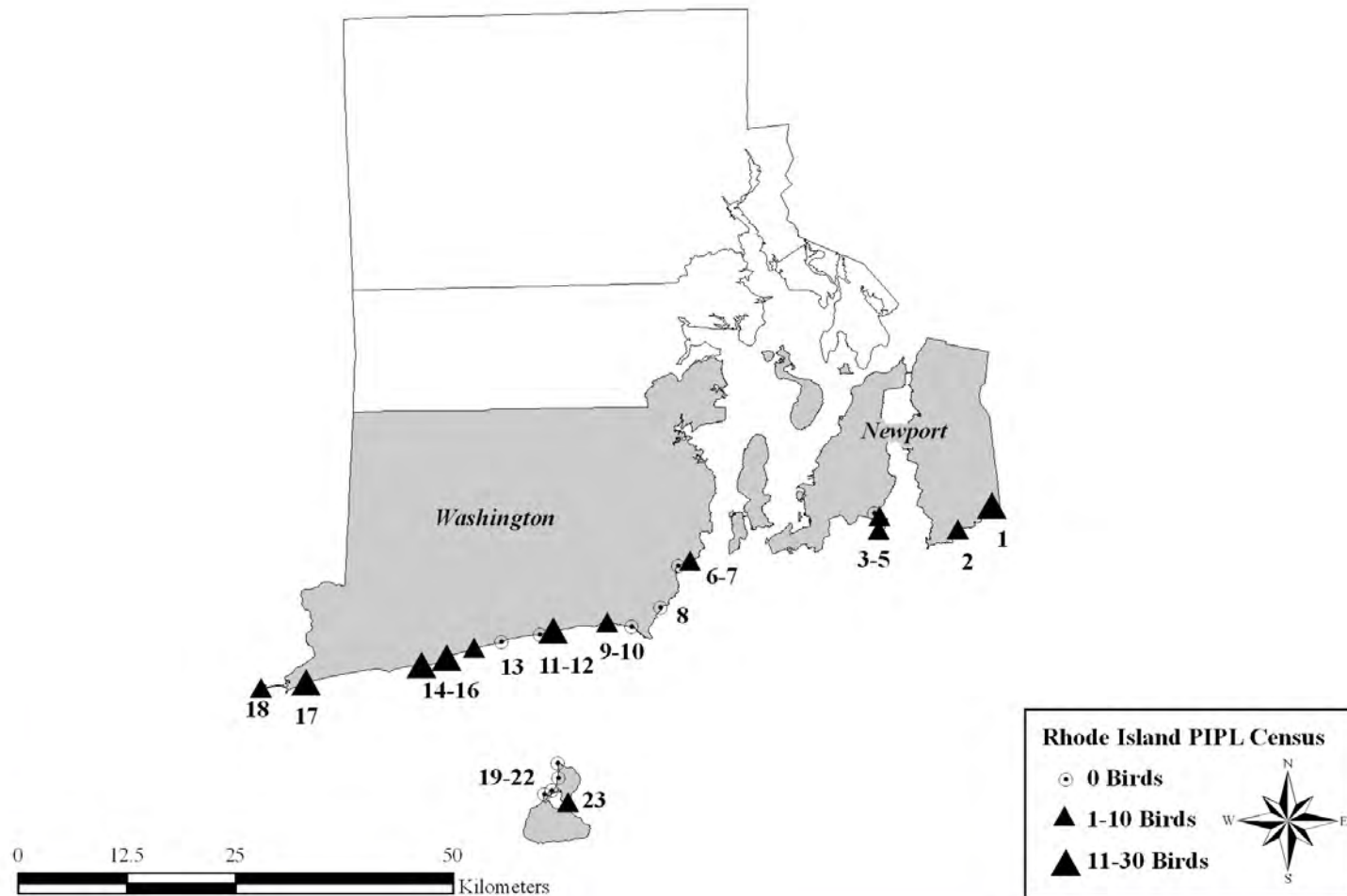
	1991	1996	2001	2006
Total Adults	47	91	93	137 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## Detectability Study

Sites Included	First Count	Second Count
East Beach (Maschaug Beach)	28	30

## 2006 International Piping Plover Breeding Census - Rhode Island -





## The 2006 International Piping Plover Breeding Census in Rhode Island

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Newport	Briggs Beach	2	6/01	4	9	n.r.	n.r.	n.r.	Yes	Yes	Yes	p
Newport	Norman Bird Sanctuary	3	6/01	0	0	n.r.	I A 1		No	No	No	p
Newport	Sachuest Point National Wildlife Refuge	5	6/01	2	4	1.1	I A 1	n.r.	No	No	No	f
Newport	Third Beach	4	6/01	2	4	1.3	I A 1	n.r.	No	No	No	m
Newport	Quicksand Pond	1	6/01	9	19	n.r.	n.r.	n.r.	Yes	Yes	Yes	p
Washington	Block Island - Beane Point	21	6/05	0	0	1.9	I G 1		No	No	Yes	f
Washington	Block Island - Coast Guard Beach	22	6/05	0	0	0.5	I G 1		Yes	No	Yes	f/p
Washington	Block Island - Sandy Point/Cow Cove	19	6/05	0	0	1.3			Yes	Yes	Yes	f/m
Washington	Block Island - Surf beach to Mansion beach	23	6/05	0	1	3.2	I G 1	n.r.	No	No	Yes	p
Washington	Block Island - West Beach	20	6/05	0	0	2.7	I G 1		No	No	Yes	m
Washington	Charlestown State Beach	13	6/04	0	0	1.2	I A 1		No	No	Yes	s(p)
Washington	East Beach (Maschaug Beach)	17	6/04	14	30	3.1	I B 1 4	n.r.	Yes	Yes	Yes	p
Washington	East Matunuck State Beach	10	6/01	1	2	1.2	I A 1	n.r.	Yes	Yes	Yes	s(p)
Washington	Green Hill	12	6/04	0	0	0.3	I A 1		No	Yes	Yes	p
Washington	Napatree Point	18	6/05	1	5	2.1	I A D 2	n.r.	Yes	Yes	Yes	p
Washington	Narragassett Town Beach	7	6/01	0	0	0.3	I A 1		No	No	No	p
Washington	Narrow River	6	6/01	1	3	1.1	I A 1	n.r.	No	No	Yes	P
Washington	Ninigret Conservation Area	15	6/09	9	18	1.0	I B 1 4	n.r.	Yes	Yes	Yes	s(p)
Washington	Ninigret National Wildlife Refuge	14	6/09	1	2	3.9	I B 1 4	n.r.	No	Yes	Yes	f
Washington	Quonochontaug Beach	16	6/02	8	16	2.9	I B 1 4	n.r.	Yes	Yes	Yes	p
Washington	Roger Wheeler State Park	9	6/04	0	0	1.4	I A 1		No	No	No	s(p)
Washington	Scarborough State Beach	8	6/04	0	0	1.0	I A 1		No	No	No	s(p)
Washington	Trustum Pond National Wildlife Refuge	11	6/02	11	26	2.8	I B 1 4	n.r.	Yes	Yes	Yes	f
<b>Total</b>				<b>63</b>	<b>139<sup>1</sup></b>	<b>34.3</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# The 2006 International Piping Plover Breeding Census in Connecticut

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The 2006 International Piping Plover Census in Connecticut was conducted by 9 participants. Weather was generally good during the census period and we observed a total of 68 birds. This number is higher than the 2001 Census total, but coverage was similar. Double surveys at two sites were reported for the detectability survey and illustrate that there is some variability in the number of plovers observed on each visit. Overall, it seems that the 2006 Census total slightly underestimated the Connecticut Piping Plover population. Our end of the season estimate was 37 pairs for the Connecticut coast.

## Comparison of Census Numbers

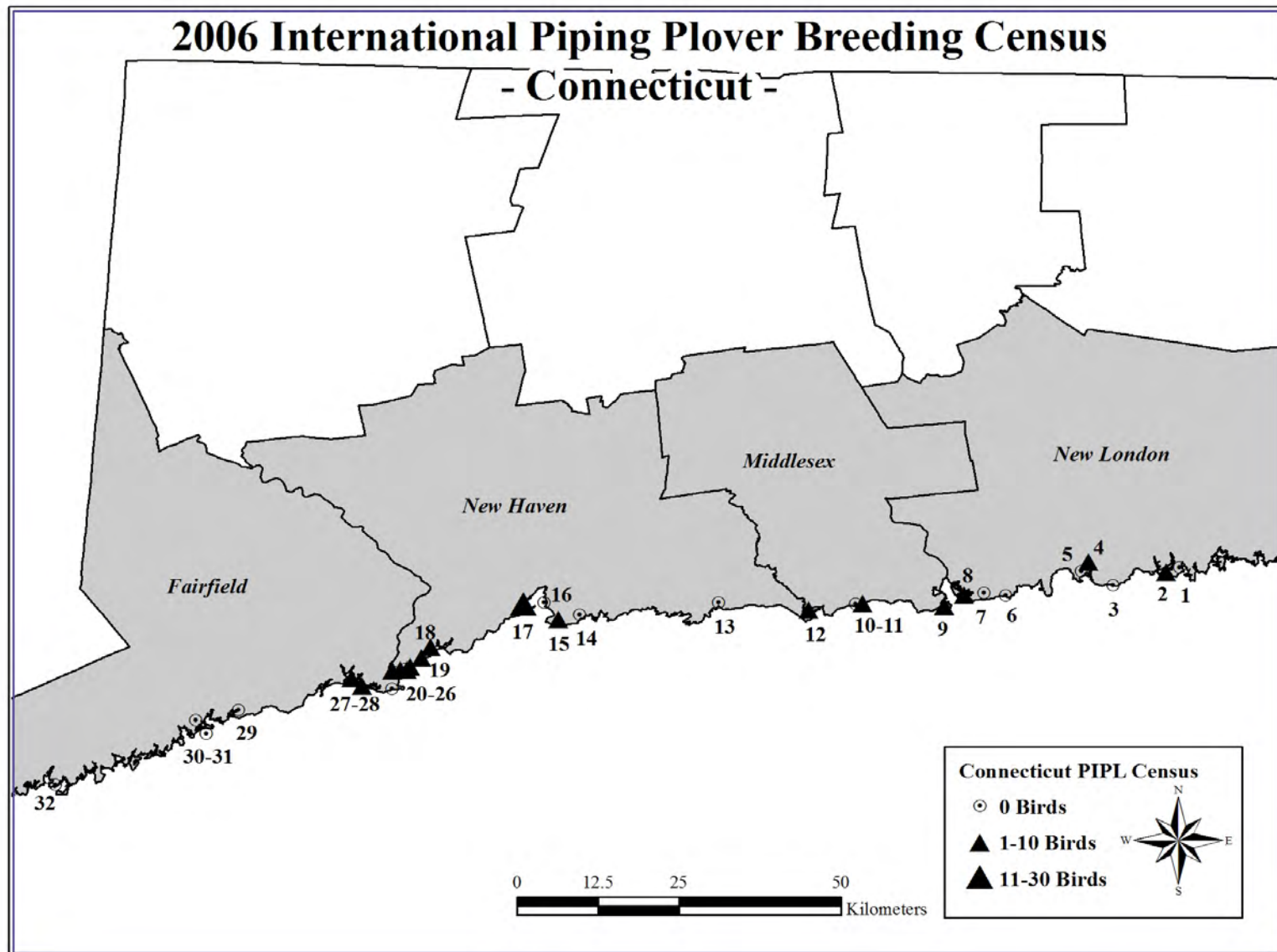
	1991	1996	2001	2006
Total Adults	67	42	45	68 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## Detectability Study

Sites Included	First Count	Second Count
East Broadway	4	2
Sandy Point/Morse Point	13	5

*Summarized by E. Elliott-Smith*



## The 2006 International Piping Plover Breeding Census in Connecticut

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Fairfield	Cockenoe Island	30	6/9	0	0	1.6		I G 1 6 9	Yes	Yes	Yes	m
Fairfield	Driftwood Point <sup>1</sup>	31	6/16	0	0	0.4	I I	12	No	Yes	Yes	p
Fairfield	Long Beach	28	6/5	4	8	1.6	I A 1 3 13	I A 1	Yes	Yes	Yes	m
Fairfield	Pleasure Beach	27	6/5	1	2	1.6	I A 1 3	I A 1	Yes	Yes	Yes	m
Fairfield	Russian Beach	26	6/2	0	0	0.8	I A 1 13		No	No	Yes	p
Fairfield	Sand Island/Pelican Island	32	6/8	0	0	1.6	I I 6		No	No	Yes	m
Fairfield	Sherwood Island	29	6/8	0	0	1.6	I A 1		Yes	Yes	Yes	s(p)
Fairfield	Short Beach	25	6/2	0	0	1.2	I A 1		Yes	Yes	Yes	m
Middlesex	Fenwick Point/Lynde Point	9	6/6	1	2	0.4	I A 13	I A 1	Yes	No	Yes	p
Middlesex	Menunketesuck Island	11	6/5	0	0	0.8	I G 9		Yes	Yes	Yes	f
Middlesex	Westbrook Private Beach	10	6/5	1	2	0.4	I A 1	I A 1	No	No	No	p
New Haven	Cedar Beach	21	6/6	1	2	0.4	I A 1	I A 1	No	No	No	p
New Haven	East Broadway	18	6/1	2	4	0.4	I A 1 13	I A 1	No	No	Yes	p
New Haven	Grass Island	13	6/6	0	0	0.8	I A 13		Yes	No	Yes	p
New Haven	Hammonasset Beach State Park	12	6/5	2	5	2.0	I A 13	I C 3	Yes	Yes	Yes	s(p)
New Haven	Kelsey Island	14	6/6	0	0	0.4	I G 1		Yes	Yes	Yes	p
New Haven	Laurel Beach	20	6/6	1	2	0.4	I A 1	I A 1	No	No	No	p
New Haven	Milford Point (Connecticut Audubon Society (CAS) Beach)	22	6/6	0	0	0.4	I A 1 13		Yes	Yes	Yes	s/m
New Haven	Milford Point (USFWS Refuge, S.B. McKinney Unit)	23	6/6	1	2	0.8	I II A 1 8 13	I A 1	Yes	Yes	Yes	f
New Haven	Milford Point Sandbar	24	6/1	3	6	0.8	I II I 6	I I 6	No	No	Yes	s/p
New Haven	Nathan Hale Park	16	6/9	0	0	0.8	I A 1 8		No	No	Yes	m
New Haven	Sandy Point/Morse Point	17	6/1	8	13	1.2	I A 1 2 6 13	I A 6	Yes	Yes	Yes	m
New Haven	Silver Sands Beach Club	15	6/13	1	2	1.2	I A 1	I A 1	No	No	Yes	p
New Haven	Silver Sands Beach State Park <sup>1</sup>	19	6/1	1	2	0.8	I A 1 13	I A 1	No	No	No	s(p)
New London	Bluff Point Coastal Reserve	2	6/8	1	2	1.6	I A C 1 3	I C 1	Yes	Yes	Yes	s(p)
New London	Griswold Point	8	6/7	4	8	1.6	I C I 1		Yes	Yes	Yes	p
New London	Harkness Memorial State Park/Goshen Cove	4	6/8	4	6	0.8	I A 1 13	I A 13	Yes	Yes	Yes	s(p)
New London	Hatchett's Point	6	6/8	0	0	0.4	I A 1 13		Yes	Yes	Yes	p
New London	Jordan Cove	5	6/8	0	0	0.8	I A 1 6		Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census in Connecticut (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
New London	Mile Creek Beach	7	6/8	0	0	0.8	I A 1		Yes	Yes	Yes	p
New London	Mumford Cove	1	6/8	0	0	0.8	I A 1		Yes	Yes	Yes	p
New London	Waterford Town Beach	3	6/8	0	0	0.8	I A 1 13		No	No	No	m
<b>Total</b>				<b>36</b>	<b>68</b>	<b>30.0</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

# The 2006 International Piping Plover Breeding Census in New York

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The 2006 International Piping Plover Census of New York was conducted by over 60 participants that covered over 300 km of shoreline during the Census window. Total Piping Plovers observed increased from 624 in the 2001 International Census to 860 in 2006. Some of the sites that had been surveyed in previous Census' were not covered in 2006; these sites did not have Piping Plovers previously and the likelihood of finding birds there in 2006 was low (i.e., Fire Island Pines, Fishers Island, Quintuck Creek). In addition to sites covered in 2001, we were able to cover a few potentially suitable sites that were missed during the 2001 Piping Plover Census and were found to have a total of 10 birds during the 2006 surveys. Overall, the coverage of suitable habitat during the 2006 Census was very comprehensive.

Similar to Massachusetts, counts for some sites may have been based on multiple surveys within the Census period. Although the total number of birds counted during the 2006 Census was high relative to the 2001 number and relative to most other states, comprehensive monitoring suggests that it is an underestimate of New York's Piping Plover population.

One noteworthy observation during the 2006 International Census, was a pair of birds on

Orchard Beach in the Bronx and the subsequent discovery of a three-egg nest. This beach is the only mainland beach in New York where Piping Plovers were found during this or any other Census. Piping Plovers in New York are generally restricted to Long Island and there is only one previous Census record of birds elsewhere; this record was of four birds in Fishers Island during the 1991 International Census.

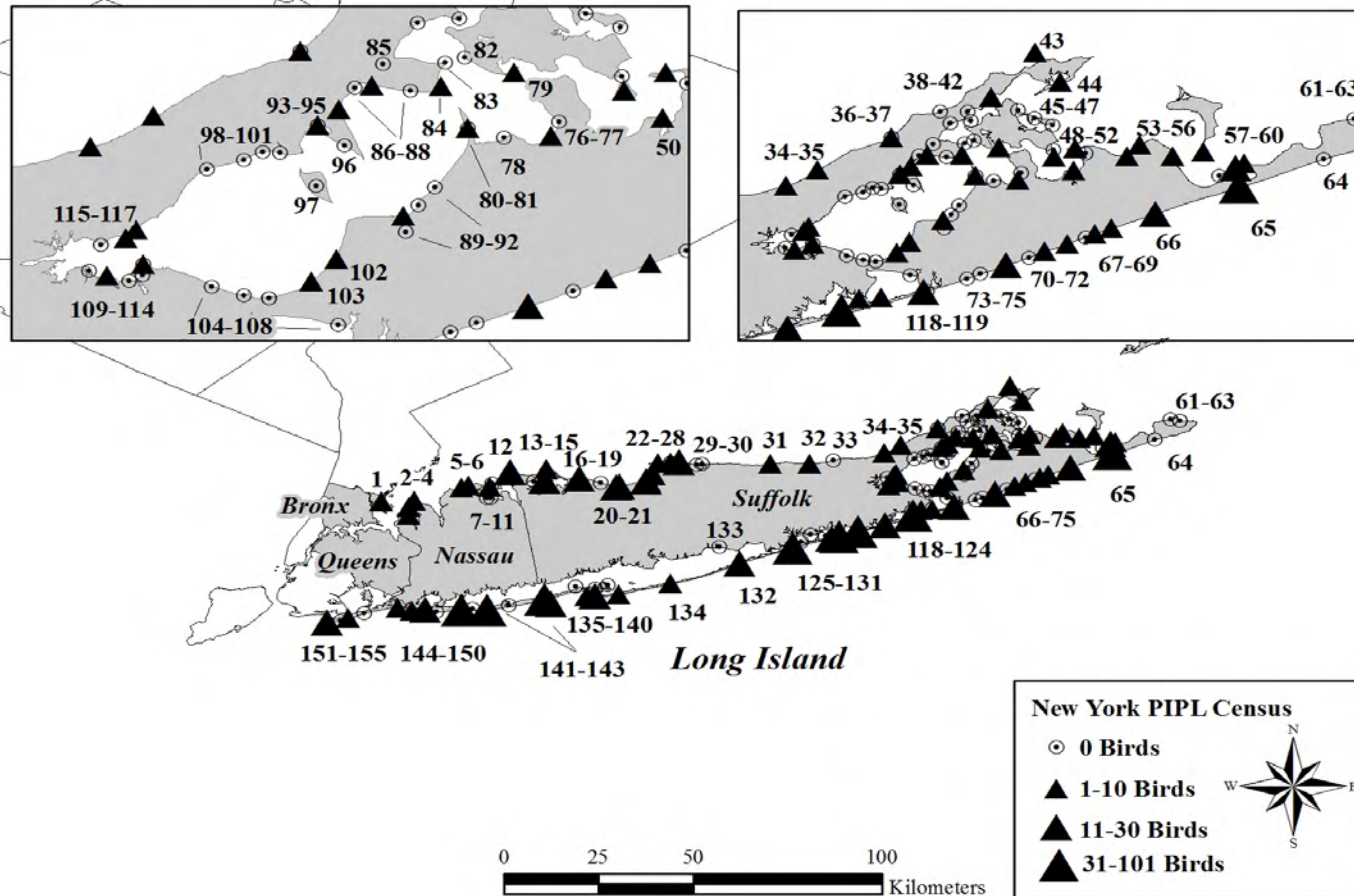
## Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	338	493	624	852 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

*Summarized by E. Elliott-Smith*

## 2006 International Piping Plover Breeding Census - New York -



## The 2006 International Piping Plover Breeding Census in New York

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Bronx	Orchard Beach	1	n.r.	1	2	n.r.	n.r.	n.r.	No	No	No	n.r.
Nassau	Beekman Beach	11	6/06	0	0	0.7	n.r.		No	No	No	n.r.
Nassau	Centre Island - North Side	7	6/06	0	0	0.9	n.r.		No	No	No	n.r.
Nassau	Centre Island Beach	8	6/01	1	2	2.0	n.r.	n.r.	No	No	No	n.r.
Nassau	Centre Island Creek	9	n.r.	1	2	n.r.	n.r.	n.r.	No	No	No	n.r.
Nassau	Frost Creek	5	6/06	2	4	1.4	n.r.	n.r.	No	No	No	n.r.
Nassau	Half Moon Beach	3	6/01	3	6	1.0	n.r.	n.r.	No	No	No	n.r.
Nassau	Jones Beach West	144	6/02	21	42	7.7	n.r.	n.r.	No	Yes	Yes	s(p)
Nassau	Long Beach Island Atlantic Beach	149	n.r.	5	10	1.3	n.r.	n.r.	No	Yes	Yes	s(p)
Nassau	Long Beach Island Lido Beach	146	6/01	19	38	1.8	n.r.	n.r.	No	Yes	Yes	m/p
Nassau	Long Beach Island Long Beach	147	6/07	0	0	4.2	n.r.		No	Yes	Yes	s(p)
Nassau	Long Beach Island Point Lookout	145	6/06	0	0	1.0	n.r.		No	Yes	Yes	s(p)
Nassau	Plum Point	2	6/01	1	2	0.4	n.r.	n.r.	Yes	Yes	No	n.r.
Nassau	Prospect Point	4	6/01	3	6	0.4	n.r.	n.r.	No	No	Yes	P
Nassau	Roosevelt Beach	10	6/06	0	0	0.5	n.r.		No	No	No	n.r.
Nassau	Stehli Beach	6	6/06	1	2	1.3	n.r.	n.r.	No	No	No	n.r.
Nassau	Zacks Bay	143	6/08	0	0	0.8	n.r.		Yes	Yes	No	n.r.
Queens	Arverne by the Sea	148	n.r.	14	28	1.6	n.r.	n.r.	No	Yes	Yes	M
Queens	Breezy Point (Cooperative Area)	154	6/09	8	16	1.7	n.r.	n.r.	Yes	Yes	Yes	P
Queens	Breezy Point (Park Service property)	155	n.r.	15	30	4.0	n.r.	n.r.	Yes	Yes	Yes	n.r.
Queens	Far Rockaway	150	n.r.	2	4	n.r.	n.r.	n.r.	No	No	Yes	M
Queens	Fort Tilden Beach	153	n.r.	0	0	n.r.	n.r.		No	No	No	n.r.
Queens	Jacob Riis Beach	152	n.r.	2	4	1.6	n.r.	n.r.	Yes	Yes	Yes	n.r.
Queens	Rockaway Beach	151	n.r.	0	0	6.5	n.r.		Yes	Yes	Yes	n.r.
Suffolk	Accabonac Harbor	55	6/09	1	2	4.0	n.r.	n.r.	No	Yes	Yes	M
Suffolk	Alewife Brook	52	6/01	0	0	0.5	n.r.		No	No	No	n.r.
Suffolk	Angel Shores	86	6/05	0	0	0.5	n.r.		Yes	No	No	n.r.
Suffolk	Asharoken Beach	16	n.r.	4	8	3.2	n.r.	n.r.	No	Yes	Yes	P
Suffolk	Asharoken Beach (Private)	17	n.r.	4	8	n.r.	n.r.	n.r.	No	No	No	n.r.
Suffolk	Atlantic Double Dunes	66	9/08	9	18	6.5	n.r.	n.r.	No	Yes	Yes	s(p)



**The 2006 International Piping Plover Breeding Census in New York  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Suffolk	Birch Creek	113	6/05	1	2	n.r.	n.r.	n.r.	No	No	Yes	M
Suffolk	Callahans Beach	19	6/04	0	0	1.6	n.r.		No	No	No	n.r.
Suffolk	Canoe Place Beach (West of Shinnecock Canal)	107	6/07	0	0	0.3	n.r.		No	No	No	n.r.
Suffolk	Captree island	136	6/06	0	0	7.0	n.r.		No	No	No	n.r.
Suffolk	Cedar Beach Point	84	6/06	2	4	1.2	n.r.	n.r.	Yes	Yes	Yes	s(p)/m
Suffolk	Cedar Beach to Mount Sanai	30	6/08	0	0	2.0	n.r.		No	No	Yes	m/p
Suffolk	Cedar Point	51	6/01	3	6	3.2	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Cherry Point	57	n.r.	0	0	n.r.	n.r.		No	No	No	n.r.
Suffolk	Conkling Point	40	6/01	0	0	0.8	n.r.		Yes	Yes	Yes	P
Suffolk	Corey Creek Mouth	87	6/05	1	2	0.8	n.r.	n.r.	Yes	No	Yes	m/p
Suffolk	Cow Yard Beach	111	6/05	0	0	n.r.	n.r.		No	No	Yes	M
Suffolk	Crab Creek	82	6/01	0	0	1.3	n.r.		Yes	Yes	Yes	P
Suffolk	Crab Meadow Beach	18	n.r.	6	12	1.6	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Cutchogue Harbor	94	6/08	1	2	1.0	n.r.	n.r.	No	Yes	Yes	P
Suffolk	Cutchogue Harbor (TNC Preserve)	95	6/08	0	0	n.r.	n.r.		No	No	No	P
Suffolk	Downs Creek	99	6/09	0	0	0.2	n.r.		Yes	Yes	Yes	n.r.
Suffolk	East Hampton Beach	67	6/05	3	6	3.2	n.r.	n.r.	Yes	Yes	Yes	m/p
Suffolk	East Inlet Island	128	6/14	0	0	1.2	n.r.		No	No	No	n.r.
Suffolk	Eatons Neck Point	15	n.r.	2	4	3.2	n.r.	n.r.	Yes	Yes	Yes	P
Suffolk	Fairfield Pond Lane Beach	70	6/07	3	6	2.6	n.r.	n.r.	No	Yes	Yes	n.r.
Suffolk	Fire Island Democrat Point	137	6/09	13	26	4.8	n.r.	n.r.	Yes	Yes	Yes	s(p)
Suffolk	Fire Island East (aka Smith Point)	131	6/08	16	32	16.1	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Fire Island Lighthouse (FINS)	139	6/04	1	3	1.6	n.r.	n.r.	Yes	Yes	Yes	n.r.
Suffolk	Fire Island Lighthouse (Robert Moses State Park)	135	6/08	1	2	12.9	n.r.	n.r.	No	Yes	Yes	s(p)
Suffolk	Fire Island Sunken Forest	134	6/04	0	1	2.4	n.r.	n.r.	Yes	Yes	Yes	n.r.
Suffolk	Fire Island Wilderness	132	6/08	15	30	n.r.	n.r.	n.r.	Yes	Yes	Yes	P
Suffolk	Fish Cove	92	6/08	0	0	0.3	n.r.		No	Yes	No	n.r.
Suffolk	Flax Pond Beach	25	6/08	1	2	3.2	n.r.	n.r.	No	Yes	Yes	s(p)/p

## The 2006 International Piping Plover Breeding Census in New York (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Suffolk	Fresh Pond	89	6/08	0	0	0.3	n.r.		No	Yes	Yes	M
Suffolk	Fresh Pond Landing	32	6/01	1	2	1.6	n.r.	n.r.	Yes	Yes	Yes	n.r.
Suffolk	Gardiners Island (Cartwright Point)	56	n.r.	1	2	n.r.	n.r.	n.r.	No	No	No	n.r.
Suffolk	Georgica Pond	68	6/06	1	2	1.6	n.r.	n.r.	Yes	Yes	Yes	m/p
Suffolk	Gibson Beach	48	6/08	0	0	n.r.	n.r.		Yes	Yes	Yes	n.r.
Suffolk	Gin Lane Beach	75	6/06	0	0	2.1	n.r.		No	Yes	Yes	s(p)
Suffolk	Goff Point	60	6/02	4	8	4.8	n.r.	n.r.	Yes	Yes	Yes	s(p)
Suffolk	Goldsmith Inlet	36	6/02	0	2	4.8	n.r.	n.r.	Yes	Yes	Yes	m/p
Suffolk	Goldsmith Inlet (Private)	37	6/02	0	0	n.r.	n.r.		No	No	No	n.r.
Suffolk	Goose Creek Flanders Bay	114	6/05	0	0	0.8	n.r.		Yes	Yes	Yes	M
Suffolk	Goose Creek Southold Bay	85	6/05	0	0	n.r.	n.r.		No	No	Yes	n.r.
Suffolk	Gull Pond West	42	6/01	1	2	0.5	n.r.	n.r.	Yes	Yes	Yes	P
Suffolk	Hallocks Pond	34	6/01	1	2	1.6	n.r.	n.r.	No	No	No	n.r.
Suffolk	Hashamomuck Beach	38	6/02	0	0	0.8	n.r.		No	No	No	n.r.
Suffolk	Hicks Island	58	6/02	6	12	2.4	n.r.	n.r.	Yes	Yes	No	s(p)
Suffolk	James Creek	101	6/09	0	0	0.4	n.r.		No	No	No	n.r.
Suffolk	Jamesport Town Beach	115	6/01	2	4	1.2	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Jessup Neck (Clam Island)	80	6/07	0	0	2.4	n.r.		Yes	Yes	Yes	M
Suffolk	Jessup Neck (USFWS property)	81	6/08	4	8	4.8	n.r.	n.r.	No	Yes	Yes	F
Suffolk	Jones Beach East (lot 9)	142	6/02	7	14	n.r.	n.r.	n.r.	No	No	No	n.r.
Suffolk	Jones Beach Island East	141	6/06	21	42	5.7	n.r.	n.r.	Yes	Yes	Yes	s(p)
Suffolk	Kimogener Point	98	6/09	0	0	0.3	n.r.		No	Yes	Yes	n.r.
Suffolk	Lazy Point	59	n.r.	0	0	0.8	n.r.		No	Yes	Yes	M
Suffolk	Lionhead Beach	54	6/09	1	2	2.8	n.r.	n.r.	Yes	Yes	Yes	m/p
Suffolk	Little Creek	93	6/01	1	2	0.8	n.r.	n.r.	No	Yes	Yes	n.r.
Suffolk	Little Hog Neck	96	6/06	0	0	0.8	n.r.		No	Yes	Yes	P
Suffolk	Lloyd Neck East Beach	13	6/08	2	4	1.6	n.r.	n.r.	No	Yes	Yes	M
Suffolk	Lloyd Point	12	6/08	7	14	2.4	n.r.	n.r.	Yes	Yes	Yes	s(p)
Suffolk	Long Beach Peninsula	22	6/08	5	11	11.3	n.r.	n.r.	Yes	Yes	Yes	M

## The 2006 International Piping Plover Breeding Census in New York (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Suffolk	Long Beach Sag Harbor	77	6/08	1	2	1.6	n.r.	n.r.	No	Yes	Yes	n.r.
Suffolk	Lower Beach	46	6/02	0	0	0.8	n.r.		No	Yes	Yes	M
Suffolk	Marratooka Point	100	6/09	0	0	0.5	n.r.		Yes	Yes	Yes	P
Suffolk	Mashomack Point	49	6/08	1	2	5.0	n.r.	n.r.	Yes	Yes	Yes	P
Suffolk	Mattituck Inlet	35	6/08	2	4	3.2	n.r.	n.r.	No	Yes	Yes	m/p
Suffolk	Meschutt Beach (County Park)	105	6/13	0	0	2.1	n.r.		No	Yes	Yes	M
Suffolk	Meschutt Beach (Private)	106	6/07	0	0	2.1	n.r.		Yes	Yes	Yes	P
Suffolk	Miamogue Point	116	6/01	1	2	0.8	n.r.	n.r.	No	Yes	Yes	P
Suffolk	Middle Pond Inlet	104	6/02	0	0	0.3	n.r.		Yes	Yes	Yes	s(p)
Suffolk	Mill Creek	112	6/05	0	0	0.8	n.r.		No	No	Yes	M
Suffolk	Montauk Beach	64	6/08	0	0	4.0	n.r.		No	Yes	Yes	M
Suffolk	Mount Misery Point	28	6/09	6	14	3.2	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Napeague Beach	65	6/05	22	44	10.5	n.r.	n.r.	Yes	Yes	Yes	s(p)/m
Suffolk	Nazeras Island	140	6/09	0	0	0.9	n.r.		No	No	No	n.r.
Suffolk	New Made Island	130	6/14	0	0	0.8	n.r.		No	No	No	n.r.
Suffolk	Northwest Creek Mouth	50	6/01	1	2	2.4	n.r.	n.r.	No	Yes	Yes	M
Suffolk	Oak Beach	138	6/07	0	0	3.6	n.r.		No	Yes	Yes	s(p)/m
Suffolk	Old Field Beach (Suffolk County Parks)	26	6/09	4	8	n.r.	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Old Field Beach (Village Property)	27	6/08	0	0	n.r.	n.r.		Yes	Yes	Yes	M
Suffolk	Old Town Road Beach	74	6/06	0	0	0.8	n.r.		No	Yes	Yes	M
Suffolk	Orient Beach	44	n.r.	1	2	11.3	n.r.	n.r.	Yes	Yes	Yes	s(p)
Suffolk	Oyster Pond (County Park)	62	6/01	0	0	2.4	n.r.		Yes	Yes	Yes	s(p)
Suffolk	Oyster Pond (MSP)	63	6/09	0	0	2.4	n.r.		Yes	Yes	Yes	s(p)
Suffolk	Paradise Beach Point	83	6/05	0	0	0.8	n.r.		Yes	Yes	No	P
Suffolk	Pine Neck	78	6/06	0	0	0.6	n.r.		Yes	Yes	Yes	n.r.
Suffolk	Pipes Cove	41	6/01	0	0	n.r.	n.r.		No	No	Yes	P
Suffolk	Plum Island	43	6/09	1	2	0.8	n.r.	n.r.	No	No	Yes	F
Suffolk	Port of Egypt	39	6/01	0	0	0.2	n.r.		No	Yes	Yes	P
Suffolk	Red Cedar Point	109	6/07	1	2	0.5	n.r.	n.r.	Yes	Yes	Yes	s(p)

**The 2006 International Piping Plover Breeding Census in New York  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Suffolk	Red Creek Pond	110	6/07	0	0	0.8	n.r.		No	Yes	Yes	n.r.
Suffolk	Reel Point	47	6/06	0	0	1.2	n.r.		No	Yes	No	P
Suffolk	Reeves Park	33	6/05	0	0	1.3	n.r.		No	No	No	n.r.
Suffolk	Richmond Creek	88	6/05	0	0	0.5	n.r.		Yes	Yes	Yes	M
Suffolk	Robins Island	97	6/08	0	0	1.6	n.r.		Yes	Yes	No	P
Suffolk	Roe Avenue Patchogue	133	6/08	0	0	0.2	n.r.		Yes	Yes	Yes	m/p
Suffolk	Sagaponack Pond	71	6/07	1	2	2.7	n.r.	n.r.	No	Yes	Yes	n.r.
Suffolk	Sammys Beach Peninsula	53	6/07	4	8	1.6	n.r.	n.r.	No	Yes	Yes	m/p
Suffolk	Sams Creek	72	6/09	0	0	0.8	n.r.		No	Yes	Yes	n.r.
Suffolk	Sand City	14	6/02	7	14	1.6	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Sebonac Creek	102	6/01	2	4	2.4	n.r.	n.r.	No	Yes	Yes	n.r.
Suffolk	Sebonac Neck	103	6/08	2	6	2.4	n.r.	n.r.	Yes	Yes	Yes	P
Suffolk	Shagwong Point	61	6/01	1	2	2.8	n.r.	n.r.	No	No	Yes	M
Suffolk	Shell Beach	79	6/01	1	2	2.0	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Short Beach	21	6/02	6	12	2.4	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Short Beach Sag Harbor	76	6/08	0	0	0.4	n.r.		No	No	No	n.r.
Suffolk	Simmons Point	117	6/01	0	0	1.1	n.r.		No	Yes	Yes	P
Suffolk	Southampton Beach (Shnnecock to East County Park)	118	6/07	0	0	7.5	n.r.		Yes	Yes	Yes	C
Suffolk	Southampton Beach (Southampton Village)	119	6/06	6	12	n.r.	n.r.	n.r.	Yes	Yes	Yes	n.r.
Suffolk	Squire Pond	108	6/07	0	0	1.2	n.r.		No	Yes	Yes	n.r.
Suffolk	Sunken Meadow	20	6/04	6	14	1.2	n.r.	n.r.	No	Yes	Yes	s(p)
Suffolk	Terrel River	129	6/09	0	0	0.2	n.r.		No	No	Yes	M
Suffolk	Towd Neck	91	6/05	1	2	2.3	n.r.	n.r.	No	Yes	Yes	s(p)
Suffolk	Upper Beach	45	6/09	0	0	2.0	n.r.		No	Yes	Yes	F
Suffolk	Wading River Beach	31	6/06	1	2	1.6	n.r.	n.r.	No	Yes	Yes	m/p
Suffolk	Wainscott Pond	69	n.r.	0	0	0.8	n.r.		No	Yes	Yes	m/p
Suffolk	Warner Island West Island	120	6/15	0	1	0.4	n.r.	n.r.	No	No	No	n.r.
Suffolk	Warner Islands East Island	121	6/15	1	2	1.0	n.r.	n.r.	No	No	No	n.r.

**The 2006 International Piping Plover Breeding Census in New York  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Suffolk	Watermill Beach	73	6/09	6	12	4.7	n.r.	n.r.	No	Yes	Yes	P
Suffolk	West Meadow Beach	24	6/08	1	2	2.0	n.r.	n.r.	No	Yes	Yes	M
Suffolk	Westhampton Island Hampton Beach	124	6/05	10	20	6.0	n.r.	n.r.	No	Yes	Yes	P
Suffolk	Westhampton Island Tiana Beach (Private)	122	6/03	6	12	7.7	n.r.	n.r.	No	Yes	Yes	P
Suffolk	Westhampton Island Tiana Beach (Shinnecock W. Cty Park)	123	6/07	17	34	7.7	n.r.	n.r.	No	Yes	Yes	M
Suffolk	Westhampton Island West (Cupsogue County Park)	127	6/06	7	14	5.0	n.r.	n.r.	No	Yes	Yes	C
Suffolk	Westhampton Island West (Village of Westhampton Dunes)	126	n.r.	19	38	n.r.	n.r.	n.r.	Yes	Yes	Yes	M
Suffolk	Westhampton Island Westhampton Beach	125	6/05	22	44	6.1	n.r.	n.r.	Yes	Yes	Yes	P
Suffolk	Whites Beach	29	6/08	0	0	0.7	n.r.		No	No	No	n.r.
Suffolk	Wooley Pond	90	6/05	0	0	0.5	n.r.		No	Yes	Yes	P
Suffolk	Youngs Island	23	6/08	1	2	4.8	n.r.	n.r.	No	Yes	Yes	M
<b>Total</b>				<b>420</b>	<b>852</b>	<b>336.8</b>						

# The 2006 International Piping Plover Breeding Census in New Jersey

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Todd Pover  
Conserve Wildlife Foundation of NJ  
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A total of 209 adult Piping Plovers were counted in New Jersey during the 1-9 June Census period using International Census methodology (provided by USGS). This represents an 8% decrease from the 2001 Census total of 228 adult Piping Plovers.

Of the 209 adults observed during the 2006 survey, 84 pairs were recorded according to the survey protocol for determining pairs. As a result of intensive monitoring at New Jersey breeding sites (on average at least 3 visits to each site per week), we know that the strict parameters for determining pairs during the International Census greatly underestimates the actual number of pairs present in the area during the Census period. Based on intensive monitoring, we believe that there were 102 pairs in New Jersey at the time of the Census.

A total of 55 sites were surveyed during the Census period. Piping Plovers were present at 22 (40%) of the sites that were surveyed. All known (active) nesting sites were surveyed. In addition, surveys were conducted at any sites where Piping Plovers have nested since being federally listed in 1986, any new suitable habitat resulting from beach replenishment projects or natural forces, and areas in close proximity to major nesting sites (even if they have not historically had birds present). No Piping Plovers were found during the Census, except at sites where we already knew them to be present, based on our regular monitoring. At one site (Strathmere Natural Area) plovers were not detected during the Census although they were known to be present and began laying eggs at the site two days after the Census period ended.

The majority of the sites surveyed in New Jersey were along the Atlantic Ocean beach strand, although a small number of sites along the Raritan Bay and the Delaware Bay were also surveyed. The Raritan Bay sites (8) had not been surveyed in any previous International Piping Plover Census.

Six sites were surveyed twice during the Census period as part of the detectability study. Of those sites, 4 had Piping Plovers present. In the cases where birds were present, the number of birds varied slightly between the two surveys. Specifically, one less bird was found at each of the sites during the second survey. In reporting the total number of adults surveyed during the Census period, the results of the first survey were used.

## Comparison of Census Numbers

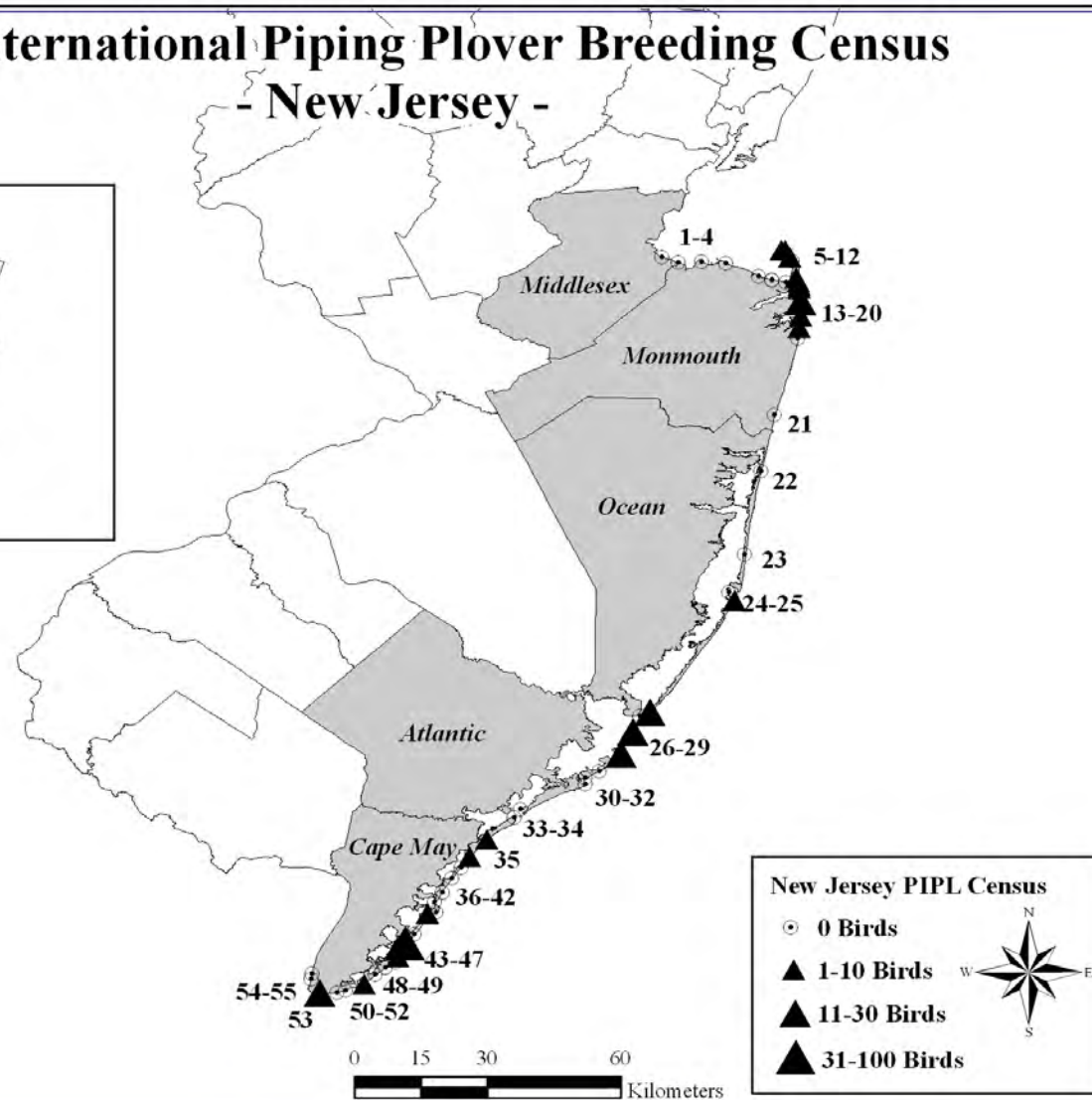
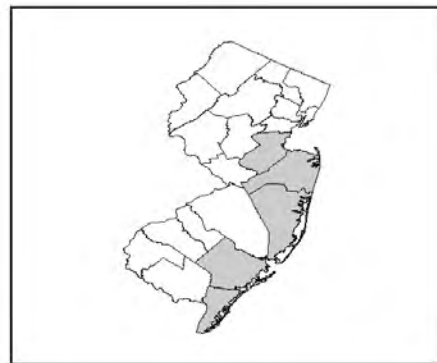
	1991	1996	2001	2006
Total Adults	280	209	228	209 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

**Detectability Study**

Sites Included	First Count	Second Count
North Brigantine Natural Area	15	14
Ocean City Center (18th St. - 59th St.)	9	8
Wildwood Crest	0	0
Sea Isle City North, 30th to 1st	0	0
Critical Zone - Sandy Hook NRA	7	6
Hidden - Sandy Hook	5	4

# **2006 International Piping Plover Breeding Census** **- New Jersey -**





## The 2006 International Piping Plover Breeding Census in New Jersey

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Atlantic	Atlantic City - Inlet	32	6/5	0	0	0.6	I C 1 13		No	No	No	m
Atlantic	Brigantine Beach South	30	6/7	0	0	6.4	I C 1 3 13		Yes	Yes	Yes	m
Atlantic	Brigantine Cove	31	6/7	0	0	0.6	I C 1		Yes	Yes	Yes	m
								I C 1 4 15				
Atlantic	Little Beach Unit- Forsythe NWR	28	6/14	8	20	3.3	I C 1 4 15 16	16	Yes	Yes	Yes	f
Atlantic	North Brigantine Natural Area	29	6/8	6	15	5.4	I C 1 4 13	C 1 4	Yes	Yes	Yes	s(p)
Atlantic	Seaview Harbor Marina	33	6/2	0	0	0.5	I C 1 3 13		No	No	No	p
Cape May	2 Mile Beach	50	6/1	1	2	1.9	I C 1 4	I C 1 4	Yes	Yes	Yes	f
Cape May	Avalon (north), 30th St. to Townsend's Inlet	41	6/6	0	0	2.4	I B 13		Yes	Yes	Yes	m
Cape May	Avalon Dunes (32nd St. - 60th St.)	42	6/6	2	5	2.5	I B 3 13	I B 3	Yes	Yes	Yes	m
Cape May	Cape May City	52	6/8	0	0	4.1	I B 1 3 13		Yes	Yes	Yes	m
Cape May	Cape May Meadows (Migratory Bird Refuge)	53	6/8	6	13	2.4	I VIII A B 1 3 13	I B1 13	Yes	Yes	Yes	s(p)
Cape May	Champagne Island - Hereford Inlet	45	6/4	1	4	0.5	I II A G 1 3 13	II G 1 3	No	No	No	m
Cape May	Corson's Inlet State Park	35	6/5	2	4	2.2	I VIII C 1 3 13	I C 1	Yes	Yes	Yes	s(p)
Cape May	Ferry Beach	55	6/8	0	0	1.7	I B 1 3 13		No	No	Yes	m
Cape May	Higbee Beach/Sunset Beach	54	6/8	0	0	4.4	I B 1 3 13		Yes	Yes	Yes	s/m
Cape May	North Wildwood-Hereford Inlet	46	6/4	2	6	0.8	I VIII C 1 3 13	I VIIC 1 3	Yes	Yes	Yes	m
Cape May	North Wildwood Ocean Front	47	6/7	0	0	2.1						
Cape May	Ocean City Center (18th St. - 59th St.)	35	6/5	3	9	7.5	I C 1 3 13	I C 1 3	Yes	Yes	Yes	m
Cape May	Ocean City North	34	6/2	0	0	1.0	I C 1 3		Yes	Yes	Yes	m
Cape May	Sea Isle City North, 30th to 1st	38	6/4	0	0	3.4	I C 1 3 13		Yes	Yes	Yes	m
Cape May	Sea Isle City South	39	6/7	0	0	4.3	I C 1 3 13		Yes	Yes	Yes	m
Cape May	Stone Harbor (center), 104th St. to 70th St., Avalon	43	6/6	0	0	3.8	I C 1 3 13		Yes	Yes	Yes	m
Cape May	Stone Harbor Point	44	6/6	10	34	1.0	I II VIII C 1 3 12 13	I II VIIC 1 12	Yes	Yes	Yes	m
Cape May	Strathmere/Whale Beach	37	6/4	0	0	2.9	I C 1 3 13		Yes	Yes	Yes	s/m
Cape May	Townsend's Inlet	40	6/7	0	0	0.6	I C I 1 3 13		Yes	Yes	Yes	m
Cape May	USCG-Training Center/Poverty	51	6/3	0	0	1.8	I B 1 3 13		Yes	Yes	Yes	f
Cape May	Wildwood	48	6/7	0	0	2.6	I C 1 3 13		No	No	No	m

## The 2006 International Piping Plover Breeding Census in New Jersey (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cape May	Wildwood Crest	49	6/7	0	0	2.6	I C 1 3 13		No	No	No	m
Middlesex	Laurence Harbor	1	6/09	0	0	2.2	II A 1 3 13		No	No	No	m
Monmouth	Atlantic Highlands	8	6/09	0	0	0.5	II A 1 3		No	No	No	m
Monmouth	Cliffwood	2	6/09	0	0	0.9	II A 1 3 13		No	No	No	m
Monmouth	Critical Zone - Sandy Hook	13	6/07	3	7	0.5	I B I 1 3 13	I B1 3	Yes	Yes	Yes	f
Monmouth	Earle-east	5	6/09	0	0	1.3	II A 1 3		No	No	No	m
Monmouth	Earle-west	6	6/09	0	0	0.3	II A 1 3 13		No	No	No	m
Monmouth	Fee - Sandy Hook	14	6/07	4	8	0.4	I B 1	I B1 3	No	No	Yes	f
Monmouth	Hidden - Sandy Hook	15	6/07	2	5	0.6	I B 1 3	I B1	No	No	Yes	f
Monmouth	Keansburg	4	6/09	0	0	3.4	II A 1 3		No	No	No	m
Monmouth	Leonardo	7	6/08	0	0	0.9	II A 1 3		No	No	No	m
Monmouth	Long Branch	20	6/05	0	0	3.9	I A 1		No	No	Yes	m
Monmouth	Monmouth Beach	18	6/08	2	4	2.6	I A 1 3 13	I A 1	No	Yes	Yes	m
Monmouth	North Beach - Sandy Hook	9	6/07	4	8	1.7	I B 1 3 4 13	I B1 3	Yes	Yes	Yes	f
Monmouth	North Gunnison - Sandy Hook	11	6/07	4	8	0.7	I B 1 3 13	I B1 3	Yes	Yes	Yes	f
Monmouth	Sea Bright	17	6/08	5	11	5.5	I A 1 3 13	I A 1	No	Yes	Yes	m
Monmouth	Sea Girt	21	6/05	0	0	1.4	I A 1 3 15		No	Yes	Yes	m
Monmouth	Seven Presidents Park	19	6/06	2	2	1.3	I A 1 3 15	I A 1	No	Yes	Yes	m
Monmouth	South Fee – Sandy Hook	16	6/07	1	2	0.2	I B 1 13	I B1	No	No	Yes	f
Monmouth	South Gunnison - Sandy Hook	12	6/07	0	0	1.1	I B 1 3 4 13		Yes	Yes	Yes	f
Monmouth	Union Beach	3	6/09	0	0	1.0	II A 1 3 13		No	No	No	m
Monmouth	USCG - Sandy Hook	10	6/07	4	8	0.6	I B 1 3 13	I B1 3	Yes	Yes	Yes	f
Ocean	Barnegat Light	25	6/04	3	5	2.0	I C 1 3 13		Yes	Yes	Yes	s/m
Ocean	High Bar Harbor	24	6/01	0	0	1.4	II C D 2 13		No	No	No	s(p)
Ocean	Holgate Unit - Forsythe NWR	26	6/13	9	29	3.5	I C 1 2 4 15 16	I B1 2 3 15 16	Yes	Yes	Yes	f
Ocean	Island Beach State Park	23	6/07	0	0	10.5	I VIII C 1 2 3 13		Yes	Yes	Yes	s(p)
Ocean	Mantoloking	22	6/09	0	0	3.5	I C 1 3 13		Yes	Yes	Yes	m
Ocean	Tucker's Island	27	6/13	0	0	0.3	II G 6 12		Yes	Yes	No	n.r.
<b>Total</b>				<b>84</b>	<b>209</b>	<b>125.5</b>						

# **The 2006 International Piping Plover Breeding Census in Delaware**

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The 2006 International Piping Plover Census in Delaware was conducted by 2 participants from the Delaware Natural Heritage and Endangered Species Program who surveyed 12 sites and counted 18 Piping Plovers. The number of plovers observed has risen slowly but steadily since previous censuses.

There are two Piping Plover nesting sites currently known for the state of Delaware. Both of these sites are located within the boundaries of Cape Henlopen State Park. Plovers have not nested elsewhere in Delaware since 2002. Along with the suitable habitat at Cape Henlopen State Park, parts of the potential habitat at the 2002 site (Delaware Seashore State Park – Key Box Road to Tower Road) are symbolically fenced by the end of March. Fencing stays in place throughout the plover breeding season.

All state owned ocean beach properties as well as one on the southern Delaware Bayshore (Beach Plum Island Nature Preserve) were surveyed periodically from April to June. Piping Plovers are not usually observed further north on the Delaware Bay from this point. Additionally, two municipally owned ocean beaches were surveyed in 2006. These beaches are not typically surveyed due to lack of nesting habitat. However, these beaches were replenished in winter of 2006 and could now

support beach-nesting birds. No nesting was observed at the nourished beaches in 2006.

Virtually all of the ocean beaches not censused during the June Piping Plover Census are built up with housing and other construction right up to the primary dune. The beach in front of the primary dune in these areas is heavily used by the public and affords no suitable nesting habitat. The inland bays in Delaware south of Cape Henlopen State Park lack the open, sandy beaches that make for suitable nesting habitat for Piping Plovers. Hence, all known suitable habitat for Piping Plovers was censused in 2006. Although various uncensused beaches will continue to be spot-checked, it is unlikely that large areas of suitable habitat have gone unnoticed.

As is the case with most rare or threatened wildlife, habitat loss and degradation is likely the strongest limiting factor on Piping Plover numbers in Delaware. As noted above, beaches not in state ownership are highly developed. Also, of the state-owned beaches, Only Cape Henlopen and Beach Plum Island have both open water front beaches and protected back beaches or mudflats that are available to nesting plovers. This mix of both kinds of beach seems to contribute to a mosaic of nesting and feeding opportunities that are crucial to the successful rearing of chicks in the Mid-Atlantic area. In areas where there does seem to be the requisite mix of habitats, predators may be playing a role in limiting the increase of Piping Plover numbers in Delaware.

As the lead agency in monitoring and protecting Piping Plovers in Delaware, the Natural Heritage and Endangered Species Program will continue to work to increase Piping Plover productivity and overall numbers in our state. We greatly appreciate the support of federal agencies in this effort and also look forward to contributing to future Piping Plover Censuses. We feel that range wide censuses do help to

give the conservation community as a whole a needed yardstick to gauge how the species is responding to protection efforts.

#### **Comparison of Census Numbers**

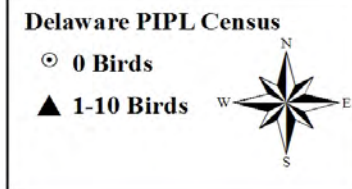
	1991	1996	2001	2006
Total Adults	4	8	10	18 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## 2006 International Piping Plover Breeding Census - Delaware -



0 5 10 20  
Kilometers



## The 2006 International Piping Plover Breeding Census in Delaware

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Sussex	Beach Plum Island Nature Preserve	1	6/07	0	0	3.2	II B 1 5		Yes	Yes	Yes	s(p)
Sussex	Cape Henlopen S.P. (Gordon's Pond to Herring Point)	4	6/01	4	8	2.4	I VIII A 1 4 16	D 4 16	No	Yes	Yes	s(p)
Sussex	Cape Henlopen S.P. (Herring Point to Ocean Side Point Crossing)	3	6/08	0	0	3.2	I A 1		No	Yes	Yes	s(p)
Sussex	Cape Henlopen S.P. (Ocean Side Point Crossing to Fishing Pier)	2	6/08	5	10	2.7	I II A D 1 3 4 5 6 12	I II A D 3 4 12	Yes	Yes	Yes	s(p)
Sussex	Delaware Seashore S.P. (3R's Road to Indian River Inlet)	11	6/09	0	0	1.6	I A 1		Yes	Yes	Yes	s(p)
Sussex	Delaware Seashore S.P. (Conquest Road to Coast Guard Station)	9	6/09	0	0	1.9	I A 1 4		Yes	Yes	Yes	s(p)
Sussex	Delaware Seashore S.P. (Indian River Inlet to Coast Guard Station)	10	6/04	0	0	2.7	I A 1 5		Yes	Yes	Yes	s(p)
Sussex	Delaware Seashore S.P. (Key Box Road to Conquest Road)	8	6/08	0	0	1.6	I A 1 4		Yes	Yes	Yes	s(p)
Sussex	Delaware Seashore S.P. (Tower Road to Key Box Road)	7	6/01	0	0	1.8	I A 1 4		Yes	Yes	Yes	s(p)
Sussex	Dewey Beach	6	6/01	0	0	1.5	I A 1		No	No	No	m
Sussex	Fenwick Island S.P. (bathhouse to York Beach)	12	6/09	0	0	4.2	I A 1		Yes	Yes	Yes	s(p)
Sussex	Rehoboth Beach	5	6/04	0	0	1.8	I A 1		No	Yes	Yes	m
<b>Total</b>				<b>9</b>	<b>18</b>	<b>28.6</b>						

# The 2006 International Piping Plover Breeding Census in Maryland

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Assateague Island was the only known breeding site for Piping Plover within the state of Maryland during the 2006 breeding season.

The density of nesting plovers, along with their overlapping forage and avoidance behaviors, do not permit a timely, systematic census of nesting pairs. However, a population census was conducted along the length of Assateague Island, Maryland during the census window. In addition, monitoring of plover breeding activity before and after the census permitted observers to estimate the number of pairs with nests or broods during that time period.

The census in Maryland occurred on 6-7 June. A total of 167 adult Piping Plovers were observed by census staff.

The possibility exists that some remote or obscure habitat may have harbored additional birds that were not observed or counted, but there is also a possibility that as census observers proceeded along the island, some counted plovers may have flown in front of the observers resulting in double counts. Irregularities may also occur due to migrants.

The Maryland population breeds at a high density along one section of island. Nests are often placed in close proximity to each other. Some nesting birds are difficult to observe due

to an encroachment of vegetation throughout the habitat. Birds also often move long distances and commingle on foraging habitat. It is not possible to differentiate "breeding pairs" during the Census in Maryland, so we settle on documented nesting pairs. Based on consistent monitoring methods, it is estimated that the Maryland plover population consisted of approximately 64 nesting pairs. This estimate assumes that all nests were found, and that any re-nesting activity was correctly identified and was between the same bonded birds. These assumptions are consistent with historic methodologies, but are subject to increasing error since the ability to observe plovers has dropped.

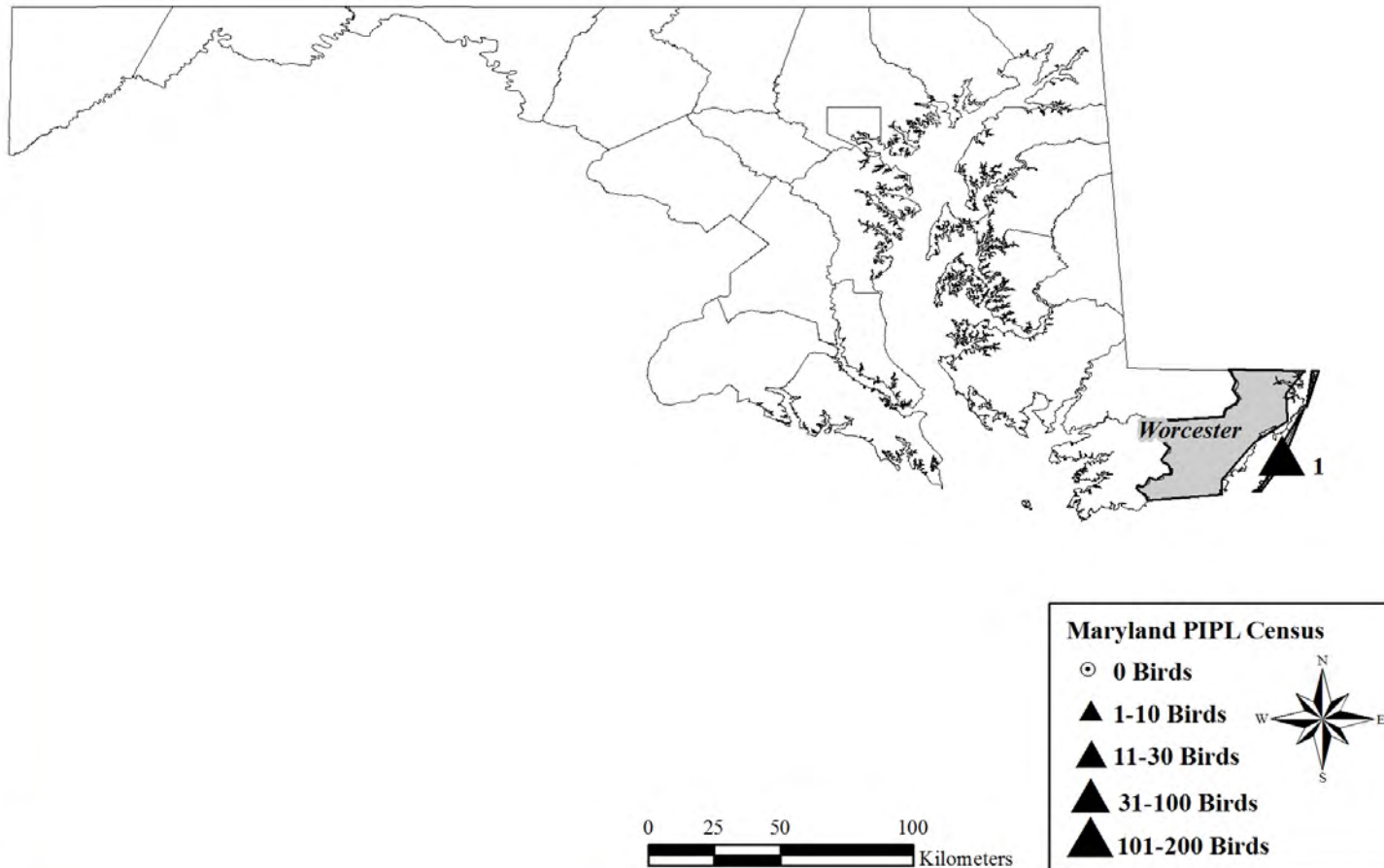
With the degradation of habitat (due to lack of overwash which is an essential element of habitat here) there has been a number of non-breeding birds hanging out here during the breeding season. How to handle their count has been unanswered. They are counted during the census, since they share foraging habitat with the breeding birds. In addition, some of the breeding birds are in dense vegetation unlike any other plover breeding site, and they are very difficult to observe during a census, even with line transects and observers spaced 50 meters apart.

## Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	35	155	112	167 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## 2006 International Piping Plover Breeding Census - Maryland -





## The 2006 International Piping Plover Breeding Census in Maryland

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Worcester	Assateague Island National Seashore	1	6/06	64	167	20.0	I B 1 11	I B 1 11	Yes	Yes	Yes	f
<b>Total</b>				<b>64</b>	<b>167</b>	<b>20.0</b>						

# **The 2006 International Piping Plover Breeding Census in Virginia**

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The 2006 census was a thorough effort, covering 100% of known Piping Plover sites and 100% of known suitable habitat. No attempt was made to survey unknown areas that may contain suitable habitat on the western shore of the Chesapeake Bay largely because no breeding activity has been recorded at known western shore sites (i.e., Craney Island and Grandview Beach) since 1997. Moreover, Plum Tree Island NWR, located north of Grandview Beach, which has been surveyed annually since 2001 has had no breeding pair occurrences indicating that plovers no longer breed west of Virginia's Eastern Shore. Wise Point, a stretch of beach owned and managed by Eastern Shore of Virginia NWR on the lower eastern shore of the Chesapeake Bay, has been surveyed annually for Piping Plovers since 2002 and represents the only new site added to the 2006 breeding census.

During the 1991 census, a total of 270 individuals were counted on 14/18 sites surveyed. In 1996, the total number of individuals observed on 12/20 sites dropped to 155, a 43% decrease from 1991 (assuming uniform coverage of individual sites between years). In 2001, a total of 198 individuals were counted on 6/21 sites surveyed, which represents a 28% increase over the 1996 total and a 27% decrease from the 1991 total. In 2006, the census resulted in a total of 305 adults observed at 12/21 sites surveyed, the highest

number of individuals counted during a census year. Of the 21 sites censused in 2006, four were not covered in 1991; Dawson Shoals (.74 km in length), Little Cobb Island (.97 km in length), Wise Point (2.7 km) and Plum Tree Island NWR (3.8 km in length). Wise Point and Plum Tree Island NWR were not surveyed in 1996 and Wise Point was the only site not surveyed in 2001. For purposes of this report, the number and treatment of aforementioned census sites varied slightly among the four census years. In 1991, 1996, 2001, and 2006, Assateague Island's Wild Beach, Wash Flats, Overwash, and Hook were considered one site as were the north and south halves of Metompkin Island even though in some years they were surveyed on separate days. In 1991, 1996 and 2001, Cedar Sandbar and Cedar Island were deemed as two separate sites even though in 2001 they formed one barrier island, and Back Bay National Wildlife Refuge and False Cape State Park were reported as two individual sites despite the fact that they encompass a contiguous stretch of mainland beach. In this report, we consider Cedar Sandbar and Cedar Island as one site and refer to it as it North Cedar Island and renamed the section of Cedar Island south of an existing breach as South Cedar Island and consider it a separate site. Moreover, we combined Back Bay National Wildlife Refuge and False Cape State Park into one site and added the Wise Point site, which was not covered in any of the previous censuses.

From 1986-2003, Virginia's breeding population remained relatively stable with an annual average of approximately 100 pairs. In the 2004 the number of pairs increased to 152 and in 2005 the number rose to 192 pairs (both totals represent end-of-season estimates). Although this year's statewide end-of-season pair total is still pending, census results suggest that it will be very close to last year's total. Because Piping Plovers are known to breed at one year of age and exhibit high site fidelity to the region from which they originated, these

annual population increases may be the result of several years of high productivity (i.e., 1.93 chicks per pair in 2003, 2.23 chicks per pair in 2004 and 1.52 chicks per pair in 2005).

The northern barrier islands (Assateague – Cedar Islands) continue to support the majority of Virginia’s breeding population while the occurrence of breeding plovers on the southern barrier islands has fluctuated over time. From 1986 – 1996, the number of breeding pairs on the southern islands ranged from 13 to 30. From 1997 – 2003, the numbers dropped to less than 10 pairs. Reasons for the decline may have included a decrease in suitable nesting habitat because of beach erosion and encroaching vegetation, less foraging habitat relative to the northern islands, and high densities of mammalian predators (primarily raccoons) on some of the islands such as Parramore, Hog and Smith Islands. The number of breeding pairs on the lower islands started to increase (11 pairs in 2004, 23 pairs in 2005 and approximately 36 pairs in 2006) after Hurricane Isabel struck the mid-Atlantic coast in the fall of 2003. The storm scoured many of the barrier islands and created washovers and shellflats that afforded plover broods unimpeded access to backside foraging areas. The increase in suitable habitat along with on-going mammalian predator management efforts and a spike in the breeding population following several years of high productivity may have contributed to the increase in breeding activity on the lower islands.

I believe the census results adequately reflect the actual Piping Plover population in Virginia for reasons stated above.

Some of the known factors affecting Piping Plovers in Virginia include nest/chick depredation by raccoons, foxes, gulls and other avian species; loss of nests as a result of ocean overwash during years with severe storms; and varying degrees of human disturbance,

especially at sites on the western shore of the Chesapeake Bay where breeding activity has been nonexistent since 1997. The level of human disturbance on Virginia’s barrier islands remains minimal compared to major plover breeding areas in other states, as such it is difficult to determine the overall impact human disturbance has on the state’s breeding population.

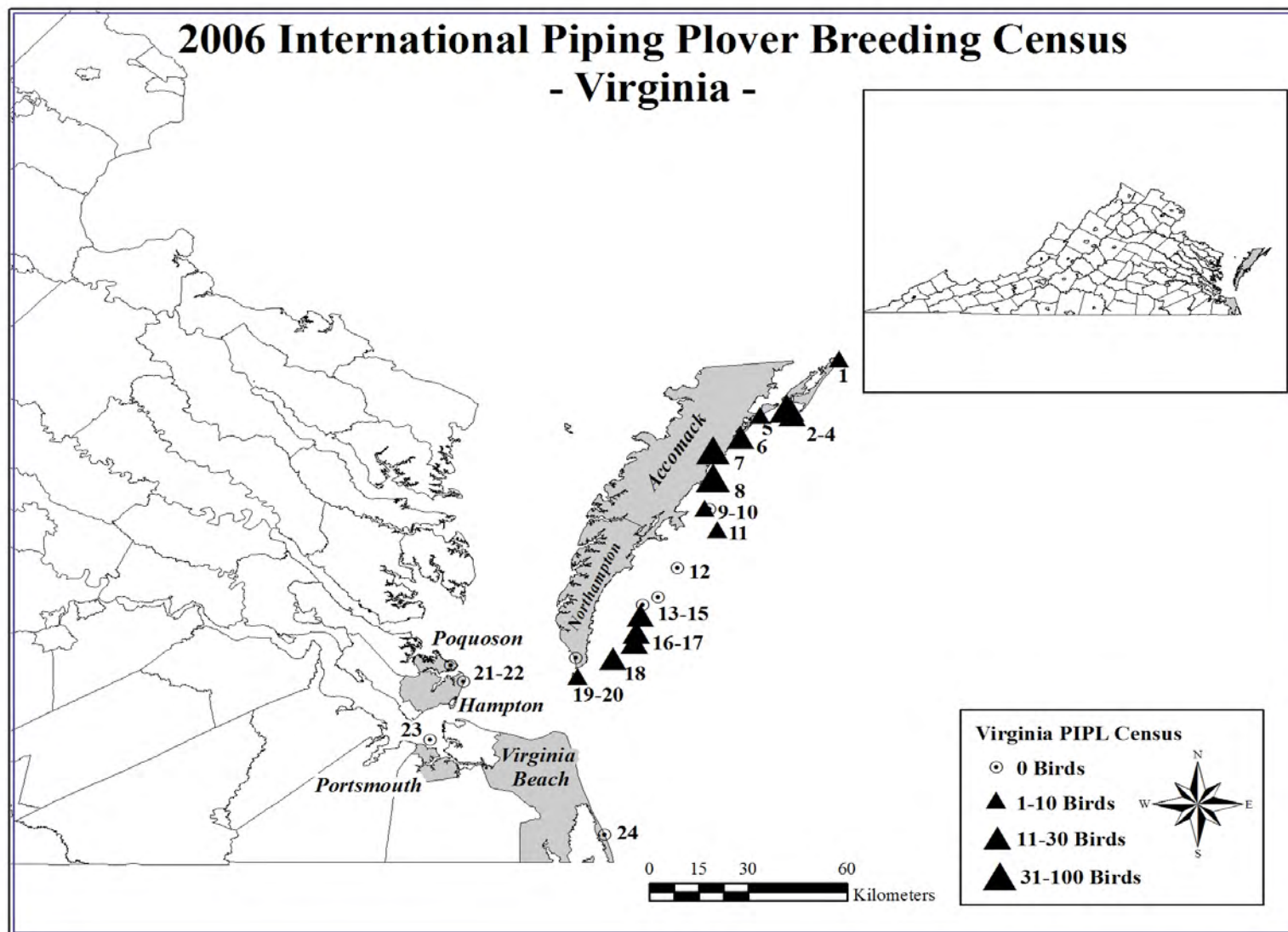
#### Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	270	155	198	305 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

#### Detectability Study

Sites Included	First Count	Second Count
Hook, Assateague Island	35	37
Overwash, Assateague Island	11	13
Parramore	2	0
Wild Beach, Assateague Island	3	5



## The 2006 International Piping Plover Breeding Census in Virginia

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Accomack	Assawoman	6	6/5	17	25	8.1	I C 1 3 4 5 12 15		Yes	Yes	Yes	f
Accomack	Dawson Shoals	9	6/7	0	0	1.2	II 15 16		No	Yes	Yes	p
Accomack	Hook, Assateague Island	3	6/8	19	37	3.6	I B C 1 2 3 12 15		Yes	Yes	Yes	f
Accomack	Metompkin Island	7	6/8	38	85	17.7	I C 1 3 4 5 12 15	I C 1 3 4 5 12 13 15	Yes	Yes	Yes	f/p
Accomack	North Cedar Island	8	6/8	27	54	16.3	I C 1 3 4 5 12 13 15	I C 1 3 4 5 12 13 15	Yes	Yes	Yes	s(p)/f/p
Accomack	North Wash Flats, Assateague Island	4	6/3	8	16	2.8	I C 16		Yes	Yes	Yes	f
Accomack	Overwash, Assateague Island	2	6/8	7	13	3.6	I II B C 1 3 4 5 15		Yes	Yes	Yes	f
Accomack	Parramore Island	11	6/7	1	2	23.1	I C 1 2 3 4 13 15	I C 4 I C 1 3 4 5 12 15	Yes	Yes	Yes	p
Accomack	South Cedar Island	10	6/5	2	4	4.4	I C 1 3 4 5 12 15	12 15	Yes	Yes	Yes	f/p
Accomack	Wallops Island	5	6/8	1	4	3.1	I C 1		Yes	Yes	Yes	f
Accomack	Wild Beach, Assateague Island	1	6/9	4	5	10.9	I B C 1 3 5 13		Yes	Yes	Yes	f
Hampton	Grandview Beach	22	6/8	0	0	3.0	II III A 1 4		Yes	Yes	Yes	m
Northampton	Cobb Island	13	6/7	0	0	15.3	I C 1 3 4 5 13 15		Yes	Yes	Yes	p
Northampton	Fisherman Island	19	6/8	1	3	9.5	I II C 1 2 3 5	I C 5 12	No	No	Yes	f
Northampton	Hog Island	12	6/9	0	0	23.7	I C 1 3 4 5 13 15		Yes	Yes	Yes	p
Northampton	Little Cobb Island	14	6/7	0	0	1.0	I C 1 3 4 5 13 15		Yes	Yes	Yes	p
Northampton	Myrtle Island	17	6/1	6	12	3.7	I C 1 4 13 15 16	I C 1 4 16	Yes	Yes	Yes	p
Northampton	Ship Shoal Island	16	6/1	10	15	4.6	I C 1 2 4 5 12 15 16	I C 5 12 16	Yes	Yes	Yes	p
Northampton	Smith Island	18	6/1	10	23	1.3	I C 1 4 13 15 16	I C 1 4 16	Yes	Yes	Yes	p
Northampton	Wise Point	20	6/9	0	0	2.7	II A 1 2 3 I C 1 2 3 4 5 12 13 14 15 16	I C 2 4	No	No	No	s(p)/f
Northampton	Wreck Island	15	6/4	6	13	9.2	14 15 16		Yes	Yes	Yes	s(p)
Poquoson	Plum Tree Island NWR	21	6/7	0	0	4.0	II III A D 1 4		No	No	Yes	f
Portsmouth	Craney Island	23	6/1	0	0	16.0	VIII E 1 16		Yes	Yes	Yes	f
Virginia Beach	Back Bay NWR & False Cape State Park	24	6/6	0	0	10.5	I B 1 3		Yes	Yes	Yes	s(p)/f
<b>Total</b>				<b>157</b>	<b>311<sup>1</sup></b>	<b>155.6</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

## **The 2006 International Piping Plover Breeding Census in North Carolina**

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The 2006 International Breeding Piping Plover Census in North Carolina was largely complete with all known sites and most suitable habitats surveyed. A total of approximately 352 km of shoreline was surveyed by 29 participants during the census window.

Carolina Beach has been surveyed in past years, but was missed this year. I do not believe any nesting plover were overlooked at this site as there have been no known breeding attempts by Piping Plovers at Carolina Beach. Furthermore the site is unsuitable for nesting because of the high level of recreational activity including beach driving. Two sites were surveyed outside of the census window in mid-June. Figure Eight Island was surveyed on June 13<sup>th</sup> and Currituck NWR was surveyed on June 22<sup>nd</sup>. Brown's Island was surveyed for the first time during the census window this year. Brown's Island is part of Camp Lejeune Marine Base and is difficult to access. While no Piping Plovers were found at the site this year, suitable habitat exists and every effort should be made to survey the site in future years.

Numbers are up considerably from the 2001 International Census and also up from earlier census years. A total of 87 birds were counted during the window; an increase of over 80% from the 2001 tally of 48 birds. North Carolina had been experiencing a population decline

since the late 1990s, but in 2005 the population began to increase. The increase is due in part to changes in habitat and predator populations as a result of Hurricane Isabel which struck North Carolina's coast in 2003. Since then, we have gained recruits from neighboring states and reproductive success on our beaches has increased.

Results from the census window count slightly underestimate the actual breeding population in NC. I believe our final season count of 96 birds (46 pairs) more accurately reflects North Carolina's population. The census window may be a bit early for North Carolina. North Carolina plovers appear to initiate nesting later than states to the north and we almost always count additional pairs after the census window.

Availability of habitat (both gains and losses), predation and human disturbance are the most important factors impacting Piping Plover numbers in North Carolina. In 2003 Hurricane Isabel created new foraging and nesting habitat on portions of Cape Lookout and Cape Hatteras National Seashores. This has undoubtedly contributed to the increase in numbers we've witnessed in recent years. At the same time, plovers continue to be absent from former nesting areas in the northern and southern most counties in North Carolina. In southern counties there has been a loss of habitat to development and associated beach stabilization. In recent years this has occurred on almost all accreting inlet spits. Beaches in northernmost Currituck County have become very vegetated and now have extremely high levels of human disturbance including ORV traffic. Human disturbance and increased predation has greatly reduced the quality of habitat at many nesting sites in North Carolina. Mammalian predators are the biggest concern, but avian predators and ghost crabs also take eggs and chicks.

### Comparison of Census Numbers

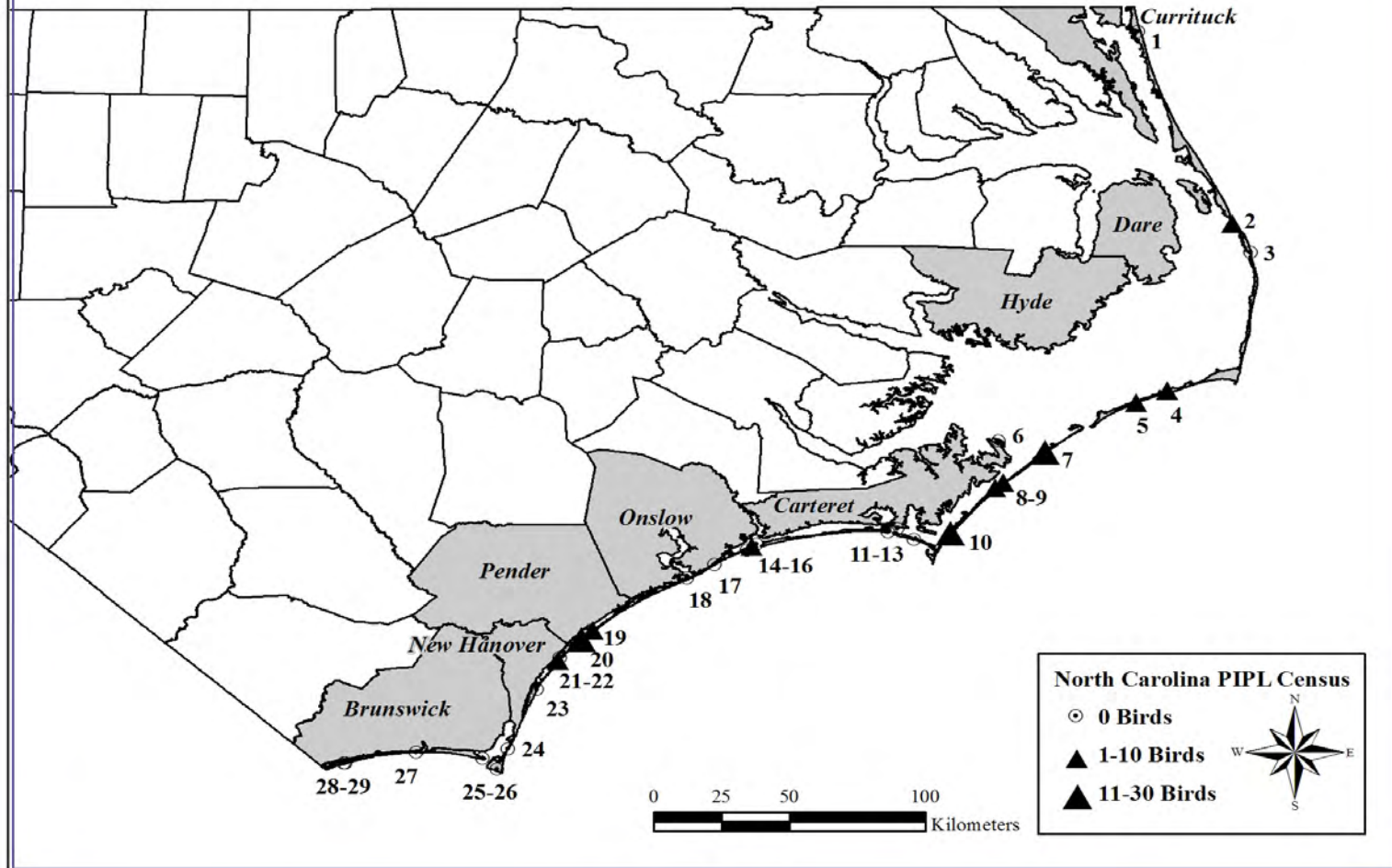
	1991	1996	2001	2006
Total Adults	86	73	48	87 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

### Detectability Study

Sites Included	First Count	Second Count
Fort Macon State Park	0	0
North Core Banks (Portsmouth Island)	14	16

## 2006 International Piping Plover Breeding Census - North Carolina -





## The 2006 International Piping Plover Breeding Census in North Carolina

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Brunswick	Bald Head Island	25	6/7	0	0	9.7	I III C 1 3 4 6		Yes	Yes	Yes	s/p
Brunswick	Bird Island & Sunset Beach	28	6/6	0	0	4.4	I II VIII C D 1		Yes	Yes	Yes	p
Brunswick	Holden Beach	27	6/6	0	0	2.8	I II VIII C 1		Yes	Yes	Yes	p
Brunswick	Oak Island (Long Beach)	26	6/6	0	0	3.2	I VIII C 1		Yes	Yes	Yes	p
Brunswick	Ocean Isle Beach	29	6/6	0	0	2.4	I II VIII C D 1		Yes	Yes	Yes	p
Carteret	Cape Lookout N.S.; Middle Core Banks (north of New Drum Inlet)	8	6/1	4	8	4.8	I II C 1 3 4 12	II C 4 12	Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; N Core Banks (Portsmouth Island)	7	6/12	8	16	30.6	I II C 1 3 4 12	I C 4	Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; Ophelia Island	9	6/1	2	4	1.2	I II C 1 3 4 12	I II C 4 12	Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; S Core Banks	10	6/6	15	30	38.7	I II C 1 3 4 6 12	I II C 4	Yes	Yes	Yes	f
Carteret	Cape Lookout N.S.; Shackleford Banks	11	6/1	0	0	14.5	I II C 1 2 3 12		Yes	Yes	Yes	f
Carteret	Cedar Island NWR	6	6/6	0	0	11.3	II D 1		Yes	No	Yes	f/p
Carteret	Fort Macon State Park	13	6/2	0	0	3.2	I II C 1		Yes	Yes	Yes	s(p)
Carteret	Rachel Carson Estuarine Research Reserve (Bird Shoal)	12	6/9	0	0	6.5	II B E G 1 2 3 4 6 12 15		Yes	Yes	Yes	s(p)
Carteret/ Onslow	Bogue Inlet Island Complex (including emerald Isle- west end)	14	6/1	0	0	4.0	I II VIII C 1 6		Yes	Yes	Yes	s/p
Currituck	Noth of Corolla	1	6/22	0	0	12.9	I B 1 3 4 5		Yes	Yes	Yes	f/s/p
Dare	Cape Hatteras N.S.; Cape Point to Hatteras Inlet	4	6/9	3	6	27.4	I VIII C 1 3		Yes	Yes	Yes	f
Dare	Cape Hatteras N.S.; Bodie Island and Rodanthe to Buxton	2	6/4	0	1	48.5	I II C 1 2 4 12	II C 4	Yes	Yes	Yes	f
Dare	Pea Island NWR	3	6/6	0	0	20.2	I II C 1 2 3 4		Yes	Yes	Yes	f
Hyde	Cape Hatteras N.S.; Ocracoke Island	5	6/9	1	5	27.4	I II B C 1 2 4 12	II C 12	Yes	Yes	Yes	f
New Hanover	Figure Eight Island	21	6/13	0	0	8.9	I II C 1 6 12		Yes	Yes	Yes	f/p
New Hanover	Fort Fisher SRA	24	6/7	0	0	9.7	I II C 1 4 5 12		Yes	Yes	Yes	s/p
New Hanover	Masonboro Island	23	6/9	0	0	12.8	I II C 1 3 4 6 12		Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census in North Carolina (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
New Hanover	Wrightsville Beach	22	6/7	0	1	2.4	I II C 1 3 12	I C 1	No	Yes	Yes	s/m/p
Onslow	Hammocks Beach State Park; E end Bear Island	15	6/1	1	3	0.8	I II C 1	I C 1	Yes	Yes	Yes	s(p)
Onslow	Hammocks Beach State Park; ocean front and W end Bear Island	16	6/7	0	0	5.6	I C 1		Yes	Yes	Yes	s(p)
Onslow	Onslow Beach & Brown's Island; Camp Lejune Marine Corps Base	17	6/6	0	0	17.7	I C 1 2 4 12 16 I II C 1 3 4 5 12		No	No	No	f
Pender	Lea & Hutaff Islands	20	6/7	5	11	3.9	13 15	I C 1 4	Yes	Yes	Yes	m
Pender	N Topsail Beach; New River Inlet	18	6/2	0	0	0.8	I VIII C 1		Yes	Yes	Yes	p
Pender	S Topsail Beach; New Topsail Inlet	19	6/2	2	4	2.0	I II VIII C D 1 4 5	II VIHC D1 5	Yes	Yes	Yes	p
<b>Total</b>				<b>41</b>	<b>89<sup>1</sup></b>	<b>338.3</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# **The 2006 International Piping Plover Breeding Census at Great Lakes sites in Michigan, Wisconsin, Illinois, Indiana, Ohio, Pennsylvania, and New York**

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The 2006 International Piping Plover Breeding Census in the U.S. Great Lakes was completed during the 3 June to 16 June census period. Surveys of known and/or potential breeding habitat for the Great Lakes population of the Piping Plover (*Charadrius melodus*) covered a seven state area that included Michigan, Wisconsin, Illinois, Indiana, Ohio, Pennsylvania and New York. A total of 70 coastal sites were visited one or more times, including 55 sites in Michigan. Some areas were reported as a single site in 2006 but were broken down into two or more sites in 2001; hence, although the number of sites reported in 2001 was greater, we surveyed more shoreline in 2006. Sites selected for survey in Michigan and Wisconsin were based primarily on the results of the 2001 International Piping Plover Breeding Census. These sites included nearly all of the currently known breeding locations in the U.S. Great Lakes. Some sites surveyed in 2001 were not

included in the 2006 census due to lack of access, or the current lack of habitat. Alternately, a small number of new sites were added to the effort in 2006 as a result of recent observations of Piping Plover presence.

Census locations selected for survey in the other five Great Lakes states were based primarily on designated critical habitat areas (USFWS May 7, 2001). These sites are generally considered the best potential Piping Plover habitat outside their current range in Michigan and Wisconsin.

A total of 45 pairs of Piping Plovers were observed in the U.S. Great Lakes during the census period. The 45 breeding pairs recorded in 2006 represent a 55% increase from the 2001 survey results of 29 breeding pairs. Of these 45 pairs, 4 were recorded in Wisconsin, with the remainder in Michigan. No observations of Piping Plovers were recorded for the other five states.

The number of Piping Plovers tallied for 2006 International Breeding Census varied significantly, however, from the number recorded during the annual monitoring program in the Great Lakes. Annual monitoring efforts reported a total of 53 breeding pairs. This tally is the result of intense survey efforts and nearly daily monitoring of active breeding locations. The discrepancy in the number of Piping Plovers counted in 2006 may have been due to weather conditions during the census period or movement patterns of birds. As many of the observers who participated in the International Census, were the same as those employed for the seasonal monitoring program, observer bias is not a likely cause of the discrepancy.

Water levels in the Great Lakes over the past few years continue to be below long-term averages. Although this provides for expanded shoreline areas and, therefore, greater amounts of potential Piping Plover nesting habitat, continually low lake levels are resulting in

vegetative changes which may reduce plover breeding habitat quality. Management at some of these sites may be necessary in the future to maintain optimal nesting conditions.

#### Comparison of Census Numbers - Michigan

	1991	1996	2001	2006
Total Adults	39	47	65	101 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

#### Detectability Study - Michigan

Sites Included	First Count	Second Count
Sturgeon Point	0	0
Grand Marais (East Bay)	4	4
Big Charity Island	0	0
Platte Point/Mouth of Platte River <sup>1</sup>	8	9
Fisherman's Island State Park	0	0
North Point	0	0
Bliss Township Beach	0	1
Cross Villiage Central	0	0
Cross Villiage North	3	2
Cross Villiage South	0	0
Sturgeon Bay, Wilderness State Park	5	4
Temperance Island, Wilderness State Park	0	0
Thorn Swift Nature Preserve	0	0
Waugoshance Island, Wilderness State Park	0	0
Waugoshance Point, Wilderness State Park <sup>1</sup>	2	2
Au Sable River Mouth/Lake Huron Beach	0	0
Dimmick's Point, North Manitou Island	27	26
Donner's Point, North Manitou Island	0	0
Leelanau State Park	0	0
South Manitou Island	0	0
Muskegon South - City Beach	0	0

#### Detectability Study – Michigan con't

Sites Included	First Count	Second Count
Muskegon State Park (North)	0	0
Ottawa Beach and Macatawa	0	0

<sup>1</sup>This site was not officially selected for the detectability study.

#### Comparison of Census Numbers - Wisconsin

	1991	1996	2001	2006
Total Adults	1	0	6	8 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

#### Detectability Study - Wisconsin

Sites Included	First Count	Second Count
Wisconsin Point	0	0
Point Beach	0	0
Seagull Bar (Marinette)	0	0
Harrington Beach State Park	0	0
Kohler-Andrae State Park	0	0

#### Comparison of Census Numbers – Other States

	1991	1996	2001	2006
Total Adults	n.a.	n.a.	0	0

#### Detectability Study – Other States

Sites Included	First Count	Second Count
Illinois Critical Habitat Units (all 5)	0	0
Indiana Dunes Natinal Lakeshore	0	0

**2006 International Piping Plover Breeding Census  
- Michigan -**

*Lake Superior*

*Lake Huron*

*Lake Michigan*

**Michigan PIPL Census**

- 0 Birds
- ▲ 1-10 Birds
- ▲ 11-30 Birds

0 40 80 160 Kilometers

## The 2006 International Piping Plover Breeding Census in Michigan

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Alcoma	Harrisville State Park	52	6/06	0	0	0.8	V VIII A 1		Yes	Yes	Yes	s(p)
Alcoma	Sturgeon Point	51	6/06	0	0	1.6	V VIII A 1 15		Yes	Yes	Yes	s(p)
Alger	12 Mile Beach to Beaver Creek	2	6/11	0	0	8.1	V A 1 7		No	Yes	Yes	n.r.
Alger	Au Train River Mouth	1	6/11	0	0	3.2	V A 1 3 7		No	No	Yes	n.r.
Alger	Grand Marais (East Bay)	5	n.r.	2	4	3.2	n.r.	n.r.	Yes	Yes	Yes	p
Alger	Grand Marais (West Bay)	4	n.r.	0	0	2.4	n.r.	n.r.	Yes	Yes	Yes	f/p
Alger	Hurricane River to 12 Mile Beach CG	3	6/11	0	0	4.0	V A 1 7		No	Yes	Yes	n.r.
Arenac	Big Charity Island	54	n.r.	0	0	n.r.	n.r.		No	Yes	Yes	f/p
Arenac	Little Charity Island	55	6/06	0	0	1.0	V G 3 8 12		No	Yes	No	f
Benzie	Elberta Beach	38	6/12	0	0	1.6	1		No	Yes	Yes	m
Benzie	Platte Point/Mouth of Platte River	36	6/14	4	9	13.7	II V A D 1	V D 1	Yes	Yes	Yes	f
Benzie	Point Betsie	37	6/12	0	0	2.4	V A 1 7		No	Yes	Yes	p
Berrian	New Buffalo Harbor	44	6/11	0	0	1.2	II V A 1		No	Yes	Yes	m
Charlevoix	Bonner's Bluff/Landing, Beaver Island	15	6/12	0	0	1.0	V VIII I 1 3 7		No	Yes	Yes	s(p)/p
Charlevoix	Donegal Bay/McCauley Point, Beaver Island	14	6/09	0	0	3.2	V I 1 2 3 7 12 15		Yes	Yes	Yes	s(p)/p
Charlevoix	Fisherman's Island State Park	30	6/07	0	0	1.4	V VIII A 1 12		Yes	Yes	Yes	s(p)
Charlevoix	High Island (NE spit and W side)	12	n.r.	1	2	2.6	V G 1 2 7		Yes	Yes	Yes	s(p)
Charlevoix	McFaddin Pt./Green's bay, Beaver Island	16	6/12	0	0	2.2	V VIII I 1 2 3 15		Yes	Yes	Yes	s(p)/p
Charlevoix	North Point	29	6/07	0	0	1.0	V A 1 7		Yes	Yes	Yes	s(p)/p
Charlevoix	Point Lookout, Beaver Island	13	6/09	0	0	1.0	V VIII I 1 3		No	Yes	Yes	p
Cheboygan	Cheboygan State Park	47	6/05	0	0	0.2	II V VIII A 1 12		Yes	Yes	Yes	s(p)
Cheboygan	Grass Bay	48	6/05	0	0	6.5	V VIII A 1 2 10 11		No	Yes	Yes	s(p)/p
Chippewa	De Tour Beach	46	6/15	0	2	3.2	V A 1 8 12	V A 1 12	No	Yes	Yes	s(p)
Chippewa	De Tour Township	45	6/15	0	0	3.2	V A 1 8 12		No	Yes	Yes	p
Chippewa	Vermilion Beach & Weatherhogs	8	6/01	0	0	2.0	V VIII A 1		Yes	Yes	Yes	p
Delta	Indian Point, E side	9	6/07	2	4	3.6	A 1 11 12	1	No	No	No	f/p
Emmet	Bliss Township Beach	23	6/10	0	1	2.7	V A 1	V A 1	No	No	Yes	s(p)/m

## The 2006 International Piping Plover Breeding Census in Michigan (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Emmet	Cross Village Central	25	6/09	0	0	2.7	V A 1		Yes	Yes	Yes	p
Emmet	Cross Village North	24	6/05	1	3	1.8	V A 1		Yes	Yes	Yes	p
Emmet	Cross Village South	26	6/09	0	0	3.2	V A 1		Yes	Yes	Yes	p
Emmet	Petoskey State Park	28	6/05	0	0	0.8	V A D 1 3 8 15		No	Yes	Yes	s(p)
Emmet	Sturgeon Bay, Wilderness State Park	22	6/05	2	5	4.0	VIII A 1 3 12		Yes	Yes	Yes	s(p)
Emmet	Temperance Island	20	6/08	0	0	4.8	V A 7		No	Yes	Yes	s(p)
Emmet	Thorn Swift Nature Preserve	27	6/09	0	0	0.4	V A 1 7		No	Yes	Yes	p
Emmet	Waugoshance Island, Wilderness State Park	19	6/10	0	0	1.6	V C 6 7 11		Yes	No	Yes	s(p)
Emmet	Waugoshance Point, Wilderness State Park	21	6/08	1	2	11.3	V A 7		Yes	Yes	Yes	s(p)
Iosco	Au Sable River Mouth/Lake Huron Beach	53	6/06	0	0	2.4	V VIII A 1		No	Yes	Yes	s(p)
Leelanau	Dimmick's Point (North Manitou Island)	32	6/07	12	27	3.2	II V I 1 8 15	V G 1 8	Yes	Yes	Yes	f
Leelanau	Donnor's Point	33	6/06	0	0	2.4	II V I 1 15		No	Yes	Yes	f
Leelanau	Leelanau State Park	31	6/18	0	0	12.9	V I 1 2 3		Yes	Yes	Yes	s(p)
Leelanau	Sleeping Bear Point/ Glen Haven	35	6/09	6	10	11.3	V A D 1 3		No	No	No	f
Leelanau	South Manitou Island	34	6/12	0	0	11.3	V G 1		Yes	Yes	Yes	f
Luce	Deer Park	7	6/14	0	0	8.1	V A 1 7		Yes	Yes	Yes	s(p)
Luce	Lake Superior State Forest Campground	6	6/14	0	0	8.1	V A 1 7		No	Yes	Yes	s(p)
Mackinac	Brevort River Mouth	17	6/15	2	4	7.3	V A 1 2	V A 2	No	No	No	f
Mackinac	Pt. Aux Chenes	18	6/14	5	11	3.2	V A C 1 5 7	V A C 1 5	Yes	Yes	Yes	f/p
Mason	Ludington State Park	40	6/11	6	17	14.5	V VIII A 1 3 4 7 12 15	V VIII A 1 3 7 12 15	Yes	Yes	Yes	s(p)
Mason	Nordhouse Dunes Wilderness	39	6/12	1	2	8.1	V A 1 3 11	V A 1	No	No	No	f
Muskegan	Muskegan South - City Beach	42	6/10	0	0	2.4	V A 1		Yes	No	Yes	m
Muskegan	Muskegon State Park (North)	41	6/10	0	0	4.0	V A 1		Yes	Yes	Yes	s(p)

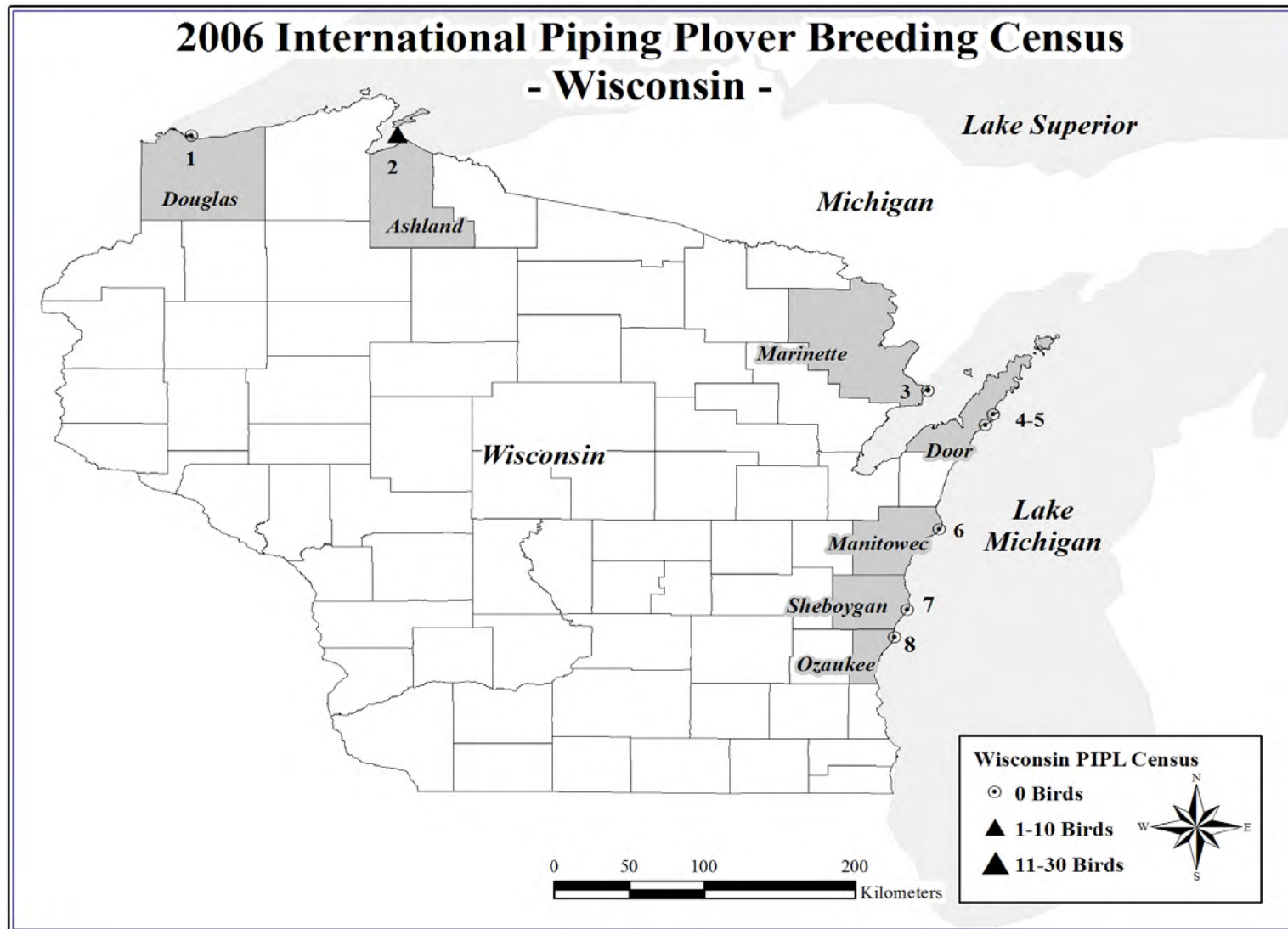
## The 2006 International Piping Plover Breeding Census in Michigan (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Ottawa/ Allegan	Ottawa Beach & Macatawa	43	6/13	0	0	2.8	V A 1		Yes	Yes	Yes	s(p)
Presque Isle	Black Point/Thompson Harbor	50	6/12	0	0	1.6	V VIII A 7		No	Yes	Yes	s(p)
Presque Isle	Hofft State Park	49	6/05	0	0	3.2	V VIII A 1 14		No	No	Yes	s(p)
Schoolcraft	Manistique River Mouth	10	6/07	0	0	0.6	V A 1 13		Yes	Yes	Yes	s(p)
Schoolcraft	Seul Choix Point	11	6/07	0	0	0.8	V A 15		No	Yes	Yes	p
<b>Total</b>				<b>41</b>	<b>103<sup>1</sup></b>	<b>214.4</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site. In addition to the sites specifically selected for the detectability study, we received data from two surveys at Platte Point/Mouth of Platte River and report the higher number of birds seen (9 birds vs. 8 seen on 6/6)

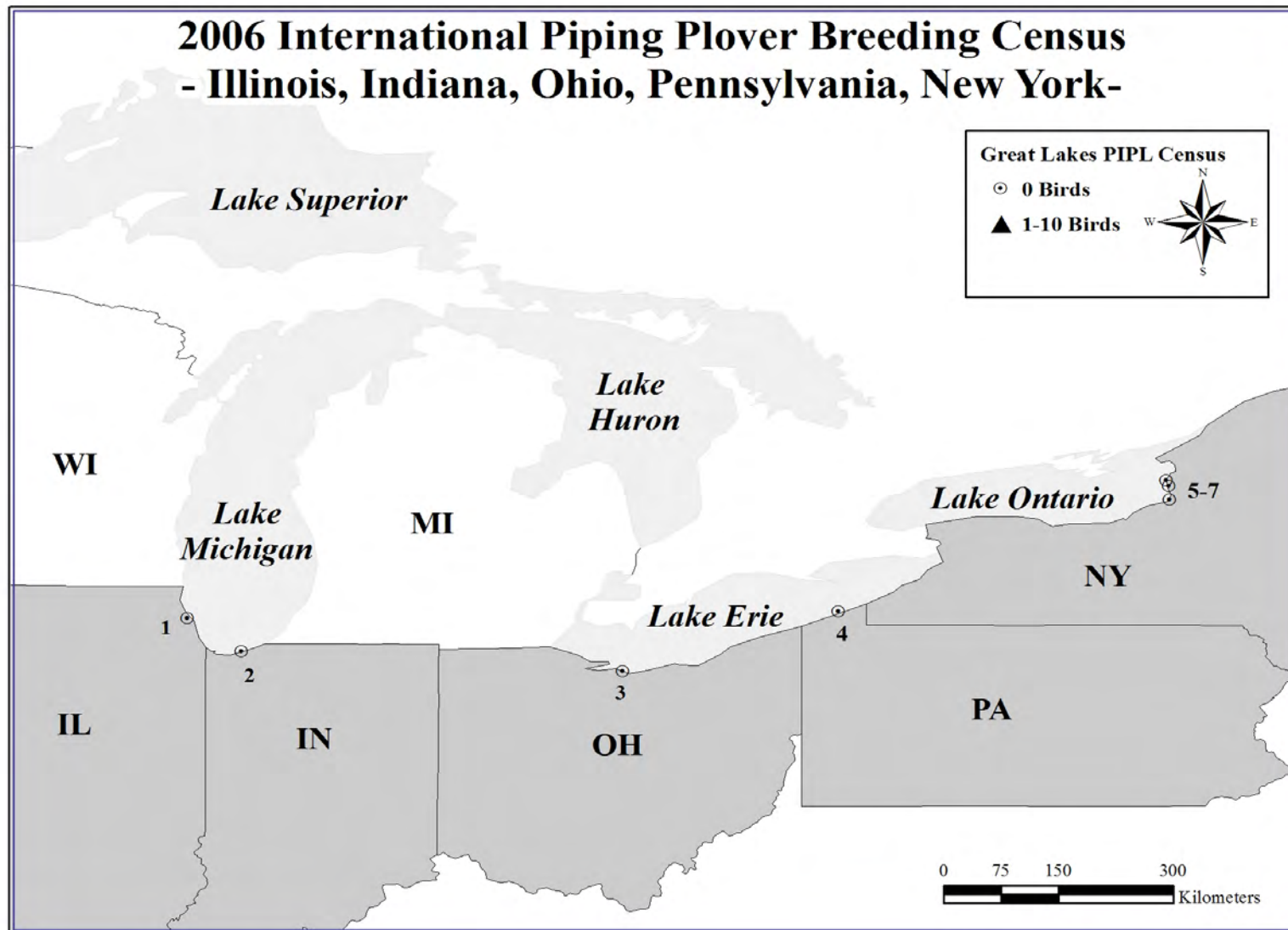


## 2006 International Piping Plover Breeding Census - Wisconsin -



## The 2006 International Piping Plover Breeding Census in Wisconsin

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Ashland	Long Island (sand cut)	2	n.r.	4	8	9.7	n.r.	n.r.	Yes	Yes	Yes	f
Door	Lilly Bay	5	n.r.	0	0	1.6	n.r.		Yes	Yes	Yes	s(p)/p
Door	Whitefish Dunes State Park	4	n.r.	0	0	1.6	n.r.		Yes	Yes	Yes	s(p)/p
Douglas	Wisconsin Point	1	n.r.	0	0	6.0	n.r.		Yes	Yes	Yes	m
Manitowoc	Point Beach	6	n.r.	0	0	3.7	n.r.		Yes	Yes	Yes	s(p)
Marinette	Seagull Bar (Marinette)	3	6/12	0	0	2.1	V A 1 7 12		Yes	Yes	Yes	s(p)/m
Ozaukee	Harrington Beach State Park	8	n.r.	0	0	1.6	n.r.		Yes	Yes	Yes	s(p)
Sheboygan	Kohler-Andrae State Park	7	n.r.	0	0	3.2	n.r.		Yes	Yes	Yes	s(p)
<b>Total</b>				<b>4</b>	<b>8</b>	<b>29.6</b>						



**The 2006 International Piping Plover Breeding Census at other Great Lakes sites in  
Illinois, Indiana, Ohio, Pennsylvania, and New York**

STATE	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
IL	Illinois Critical Habitat Units (all 5)	1	6/08	0	0	14.9	V A I 1 3 12		No	No	Yes	s(p)
IN	Indiana Dunes Natinal Lakeshore	2	6/06	0	0	3.2	V A 1		No	No	Yes	f/s(p)
NY	Eastern Lake Ontario Dune System - Zone 1	7	6/07	0	0	8.9	V A		No	No	Yes	s(p)/p
NY	Eastern Lake Ontario Dune System - Zone 2	6	6/07	0	0	6.5	V A B 1 7		No	No	Yes	s(p)/p
NY	Eastern Lake Ontario Dune System - Zone 3	5	6/13	0	0	8.9	II V A B 1 7		No	No	Yes	s(p)/p
OH	Sheldon Marsh State Nature Preserve	3	6/03	0	0	2.0	VIII B 1 2 12		No	No	Yes	s(p)
PA	Presque Isle State Park	4	6/11	0	0	6.0	V B 1 2 3 7 14		No	No	Yes	s(p)
<b>Total</b>				<b>0</b>	<b>0</b>	<b>18.1</b>						

# **The 2006 International Piping Plover Breeding Census in Ontario**

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An intensive survey of former breeding locations of the Piping Plover in Ontario was conducted during 2006 as part of the International Piping Plover Census. Former and potential breeding locations along the Great Lakes shorelines (Lakes Superior, Huron, Erie, Ontario) and Lake of the Woods, Ontario, were surveyed as part of this census. Only two sites in Lake Huron did not get censused in 2006 (Horseshoe Bay-Great Duck Island and West Duck Island-N.E. Shore) because of their remote location in the Lake Huron. These two sites remain as a priority for future surveys given their proximity to the growing Michigan population of Piping Plovers.

Forty-five locations within Ontario were censused during 2006 (41 sites on the Ontario Great Lakes and 4 sites on Lake of the Woods – Figure 1) compared to 37 sites during the 2001 survey, 17 sites during the 1996 survey, and three sites during the 1991 survey. All of these locations were surveyed on foot with some locations requiring the use of a boat to access offshore islands.

Despite our intensive effort, Piping Plovers were located at only two of the 45 sites censused. One adult was observed at Windy Point on 31 May and one banded adult was observed at Presqu'ile Provincial Park on 29-30 May on Lake Ontario. The band combination from the Presqu'ile plover was determined to be that of a fledgling bird banded in Michigan. We also sited a single Piping Plover on a repeat visit to Windy Point on 20 July. Lastly, we also observed a single adult at Wasaga Beach Provincial Park on 3 May but this observation is not included in the Census tally because it was a month prior to the Census window and at a time when many birds are still migrating.

An examination of the individual site survey forms suggests that weather conditions were not a factor in locating plovers during the survey window. All of the 45 sites were surveyed during relatively stable weather conditions. Water levels on Lake of the Woods and on the Ontario Great Lakes were well below normal during 2006 resulting in greater availability of potential nesting habitat.

Plover census volunteers were quite disappointed with the census results for Ontario. Wasaga Beach Provincial Park staff were hopeful that an attempted nesting of a pair of plovers at the park in 2005 would result in another attempt in 2006. The Michigan population of Piping Plovers continues to do well and the best hope for the Ontario Great Lakes is for this growing population to re-colonize former breeding locations in Ontario. Given the intensive census effort in 2006 in Ontario, it would have been difficult for a breeding pair of plovers to go undetected. It is however, encouraging for Ontario to report two individual sightings of plovers from the Great Lakes and two from Lake of the Woods during the breeding season. Ontario remains optimistic that a breeding pair will establish itself at one of the former breeding sites.

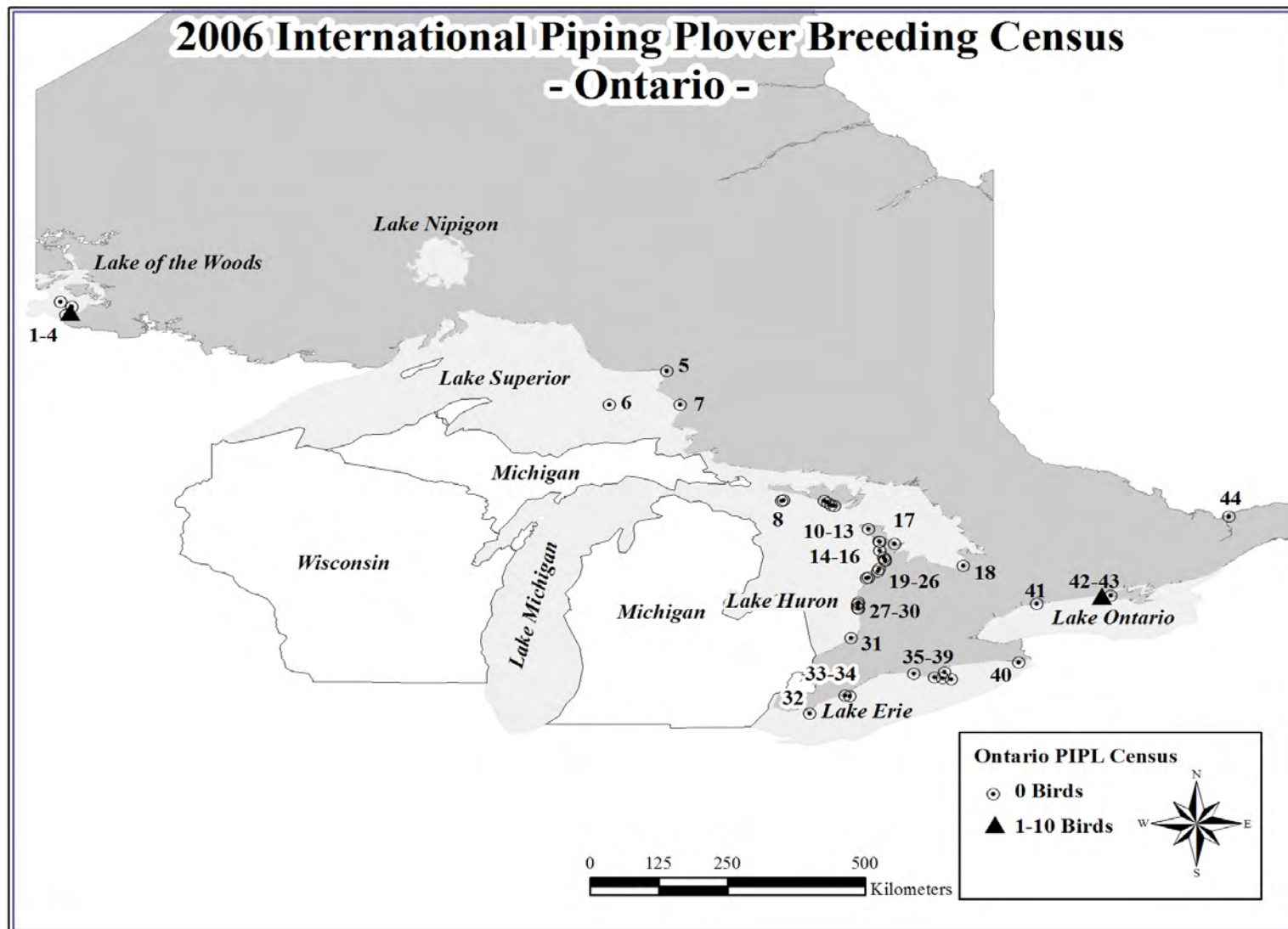
### Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	5	4	2	2 <sup>1</sup>

<sup>1</sup>These birds were seen just prior to the official Census period

### Detectability Study

Sites Included	First Count	Second Count
Agawa Bay	0	0
Carter Bay	0	0
Driftwood Beach, Michipicoten Post Prov. Park	0	0
Long Point, Courtright Ridge E	0	0
Long Point, Courtright Ridge W	0	0
Point Abino (west side)	0	0
Providence Bay	0	0
South Beach, Rondeau Prov. Park	0	0
Timber Bay	0	0



## The 2006 International Piping Plover Breeding Census in Ontario

Lake	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Lake Erie	Erieau Beach	33	6/15	0	0	1.0	V A 1 7		No	No	No	m
Lake Erie	Hahn Woods to Hastings Drive	36	6/15	0	0	3.8	V A B 1 2 12		No	No	Yes	s(p)/f/p
Lake Erie	Long Point, Courtright Ridge E	39	6/14	0	0	22.0	V A B 1 2 7 12		Yes	Yes	Yes	s(p)/f
Lake Erie	Long Point, Courtright Ridge W	37	6/12	0	0	6.0	V A 1 2 3		Yes	Yes	Yes	f/p
Lake Erie	Point Albino (West Side)	40	6/11	0	0	1.8	V A 1		No	No	Yes	p
Lake Erie	Point Pelee National Park	32	6/16	0	0	11.0	V A B 1		No	No	No	f
Lake Erie	Port Burwell Provincial Park	35	6/14	0	0	2.0	V A 1		No	No	No	s(p)
Lake Erie	South Beach, Rondeau Prov. Park	34	n.r.	0	0	5.0	V A 1		No	No	Yes	s(p)
Lake Erie	Turkey Point Beach	38	6/16	0	0	4.0	II V A 1 2		No	No	No	s(p)
Lake Huron	Baie du Dore	26	6/11	0	0	1.0	A 1		No	No	Yes	m
Lake Huron	Carter Bay	12	6/8	0	0	0.9	III V G 1 3 15		No	No	Yes	s(p)
Lake Huron	Chief's Point	20	6/12	0	0	6.0	A 1		No	No	Yes	m
Lake Huron	Desert Point, Great Duck Island	9	6/7	0	0	1.2	V G 1 3 7		No	Yes	Yes	p
Lake Huron	Dorcas Bay, Singing Sands	14	6/7	0	0	2.0	A 1		No	No	Yes	f
Lake Huron	Golf Course Road N to Point Farms Park	29	6/16	0	0	1.8	V A 1 7				Yes	s(p)/p
Lake Huron	Golf Course Road S to Sunset Beach	30	6/16	0	0	1.3	V A 1 7 12		No	No	Yes	p
Lake Huron	Hope Bay	17	6/8	0	0	2.0	A 1		No	No	Yes	m
Lake Huron	Inverhuron Provincial Park	25	6/13	0	0	3.8	V E 1 15		No	No	No	s(p)
Lake Huron	Michael's Bay	13	6/8	0	0	0.8	II V G 1 12		No	No	Yes	s(p)
Lake Huron	Miramichi Bay	8	6/11	0	0	2.0	II V G 1		No	No	Yes	m
Lake Huron	Myles Bay	15	6/13	0	0	2.0	V A 1		No	No	Yes	s(p)
Lake Huron	Pinery Beach	31	6/9	0	0	10.0	V A 1		No	No	No	s(p)
Lake Huron	Port Albert N to Mid Huron Beach Road	27	6/15	0	0	3.3	IV A 1		No	No	Yes	p
Lake Huron	Port Albert S to Brindley Beach Road	28	6/15	0	0	5.5	V A 3 7 12		No	No	Yes	p
Lake Huron	Port Elgin	24	6/10	0	0	6.0	V A 1		No	No	Yes	m
Lake Huron	Providence Bay	10	6/6	0	0	0.4	II V VIII G 1 3 12		No	No	Yes	m/p
Lake Huron	Red Bay/Howdenvale	19	6/16	0	0	3.0	A 1		No	No	Yes	m



## The 2006 International Piping Plover Breeding Census in Ontario (Continued)

Lake	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Lake Huron	Sauble Beach North	21	6/14	0	0	3.0	V A 1		No	No	Yes	m
Lake Huron	Sauble Beach South	22	6/14	0	0	3.0	V A 1		No	No	Yes	m
Lake Huron	Southampton	23	6/10	0	0	5.0	A 1		No	No	Yes	m
Lake Huron	Stokes Bay	16	6/13	0	0	3.0	A 1		No	No	Yes	m
Lake Huron	Timber Bay	11	6/6	0	0	1.0	V VIII D G 1 3 15		No	No	Yes	p
Lake Huron	Wasaga Beach Prov. Park	18	6/9	0	0	2.5	V A D 1 2 3		No	No	Yes	s(p)
Lake of the Woods	Big Island - Oshie Bay	1	6/9	0	0	2.0	V G 1		Yes	Yes	Yes	s(p)
Lake of the Woods	Bigsby Island - Deep Bay	2	6/9	0	0	0.5	V B 8		Yes	Yes	Yes	s(p)
Lake of the Woods	Sable Islands Prov. Nature Preserve	3	6/10	0	0	6.0	V C 1 3 5		Yes	Yes	Yes	s(p)
Lake of the Woods	Windy Point <sup>1</sup>	4	5/30	0	1	2.0	B 1		Yes	Yes	Yes	p
Lake Ontario	Darlington Prov. Park / Oshawa Second Marsh <sup>2</sup>	41	6/5	0	0	3.4	V A B 1 7 12		No	No	No	s(p)/m
Lake Ontario	Presquile Provincial Park <sup>1</sup>	42	5/29	0	1	2.0	II A 1					s(p)
Lake Ontario	Wellers Bay National Wildlife Area	43	6/14	0	0	3.5	V B 6		No	No	No	f
Lake Superior	Agawa Bay	7	6/16	0	0	3.0	V A 1 3 7 8		Yes	No	Yes	s(p)
Lake Superior	Caribou Island	6	6/13	0	0	4.7	V G 1 2 3 15		Yes	No	Yes	p
Lake Superior	Driftwood Beach, Michipicoten Post Provincial Park	5	6/11	0	0	2.0	VI VIII A 1 7 8		No	No	Yes	s(p)
Ottawa River	Kitchissippi Lookout	44	6/15	0	0	2.0	III A 1 12		No	No	No	f
<b>Total</b>				<b>0</b>	<b>2</b>	<b>158.1</b>						

<sup>1</sup> Please note that these surveys were conducted outside the Census window.

<sup>2</sup> Please note that coordinator reports this as two separate sites.

# **The 2006 International Piping Plover Breeding Census in Minnesota**

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Although we have quite a bit of available habitat, historical searches have shown that in recent years, breeding has been confined to Lake of the Woods. We did sample all of the known nesting sites on the lake, although every mile of sandy beach was not checked. Census numbers were lower than previously, but we know that our population in the state is declining, and may possibly disappear in the future. I believe that the results adequately represent the actual population in the state, plus or minus 2 pairs. Factors affecting plovers the most in our region are erosion, disappearance of critical portions of the primary nesting site (i.e., Pine and Curry Island on Lake of the Woods), and the urbanized character of the Duluth nesting sites.

## **Comparison of Census Numbers**

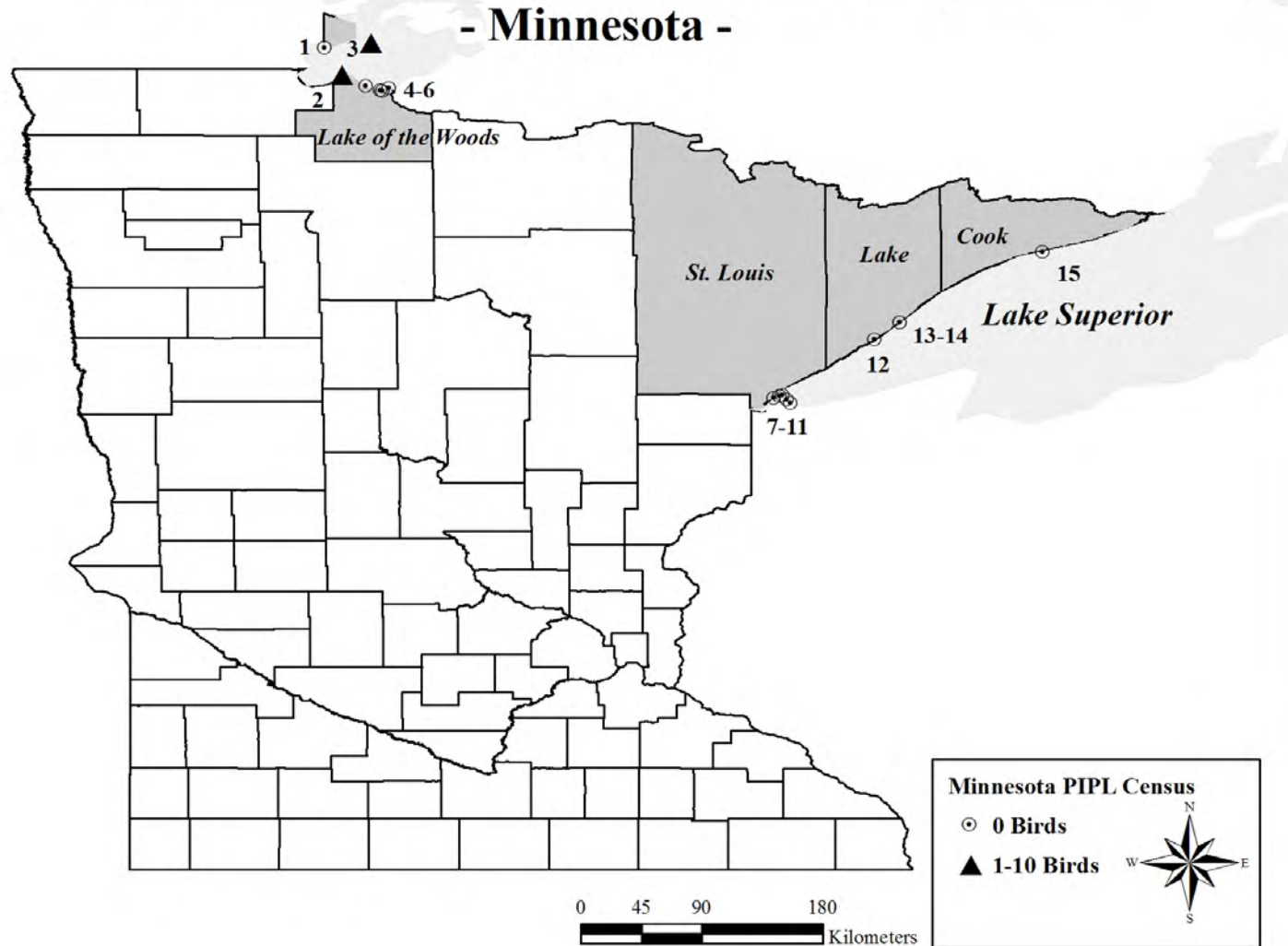
	1991	1996	2001	2006
Total Adults	13	10	7	4 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## **Detectability Study**

Sites Included	First Count	Second Count
Morris Point	0	0

## 2006 International Piping Plover Breeding Census - Minnesota -



## The 2006 International Piping Plover Breeding Census in Minnesota

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Cook	Grand Marais	15	6/14	0	0	0.8	7		No	No	No	n.r.
Lake	Beaver Bay, river mouth	14	6/13	0	0	0.4	III F 11		No	No	No	p
Lake	Beaver Bay, Cove Point	13	6/13	0	0	0.4	V A 1 15		No	Yes	No	p
Lake	Goosberry Falls river outlet	12	6/13	0	0	0.5	III V A 7		No	No	No	s(p)
Lake of the Woods	Garden Island State Recreation Area	3	6/21	1	2	0.9	V G 7		No	Unk	No	s(p)
Lake of the Woods	Morris Point	5	6/12	0	0	1.5	V A B 2		Yes	Yes	Yes	s(p)
Lake of the Woods	Pine and Curry Island	6	6/12	0	0	6.1	V C 3		Yes	Yes	Yes	s(p)
Lake of the Woods	Rocky Point	2	6/12	1	2	1.2	V A 1		Yes	Yes	Yes	s(p)
Lake of the Woods	Stoney Point	1	6/12	0	0	0.6	V A G 1 2		No	Unk	No	p
Lake of the Woods	Zippel Bay	4	6/6	0	0	1.3	V B 6		Yes	Yes	Yes	s(p)
St. Louis	Duluth Port Terminal	8	6/7	0	0	n.r.	III VIII I 15		No	No	No	p
St. Louis	Duluth T49 R14 Section 8	7	6/7	0	0	2.1	III VIII I 15		Yes	No	No	n.r.
St. Louis	Hearding Island	9	6/7	0	0	1.0	V E 1		No	No	No	s(p)
St. Louis	MN Point (Canal Park)	10	6/7	0	0	n.r.	16		No	No	No	n.r.
St. Louis	MN Point (end of peninsula)	11	6/7	0	0	6.1	V I 1		No	No	No	n.r.
<b>Total</b>				<b>2</b>	<b>4</b>	<b>22.9</b>						

# The 2006 International Piping Plover Breeding Census in Manitoba

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This has been a disappointing year for Piping Plovers in Manitoba, whereby only four adult pairs have been located within the province. This is a 50% reduction from the 2001 International Census. In an effort to find new potential nesting areas within the province, an extended habitat suitability survey was conducted in 2005. One hundred and ninety two sites were identified as having potential suitable plover habitat based on GIS analysis, historical records and aerial reconnaissance flights. Of these, 82 were visited and assessed. From these results, 46 sites were chosen for the 2006 International Census based on the potential for suitable nesting habitat and ease of surveyor accessibility.

Over previous censuses, traditional nesting sites like the Gull Bay, Clandeboye Bay, West Shoal Lake, Grand Marais, Hecla Island and Grand Beach could always be relied on to accommodate at least one pair of nesting plovers. This year marks the first time that only one site was home to these birds. Grand Beach had the only observed sighting of Piping Plovers in 2006. The absence of the birds from the other sites is disturbing in that extirpation of this species from Manitoba is now becoming a possibility. Since the first International Census in 1991, the population has declined 90% from 80 birds to the current count of 8 adults.

A possible explanation for the poor showing of birds this year maybe attributed to the fact that the last three seasons were plagued with above normal water levels limiting available suitable habitat for the plovers. Lake Manitoba, Lake Winnipeg, Lake Winnipegosis and West Shoal Lake all reported above normal water levels in 2006. Increased human activity, gulls and vegetation encroachment, also may have played a role in the absence of plovers from some of our traditional sites this year.

Although it is possible that a few birds may have been missed during the census, I feel the numbers accurately reflect the state of the birds in this province. Loss of suitable habitat in Manitoba continues to be a limiting factor in the disappearance of the plovers, especially since the loss of the prime nesting site at West Shoal Lake. This lake used to be home in excess of sixty plovers until the flooding of the lake in 1997. Since then, the lake continues to expand each year leaving little hope that it will return to condition that originally attracted the birds to the area.

The four pairs that bred at Grand Beach this summer were very successful in that they were able to raise a total of thirteen fledged chicks. With the support of the guardianship program and the help of the Grand Beach Park staff, Grand Beach should continue to attract four or five breeding pairs of Piping Plovers in future seasons. As far as the other sites in Manitoba are concerned, the water levels will need to return to normal or below normal water levels so that more suitable beach habitat is exposed for the birds to use.

## Comparison of Census Numbers

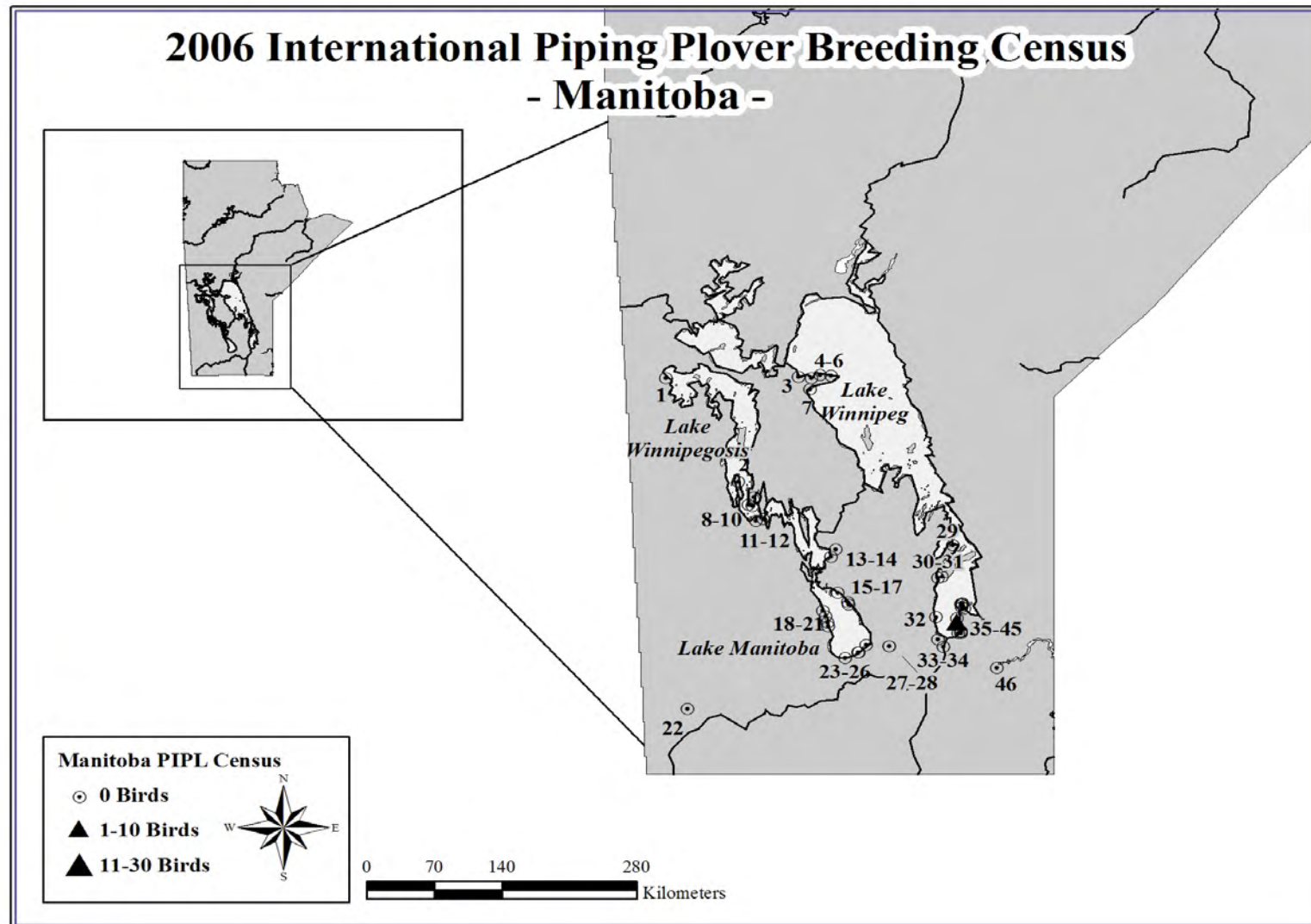
	1991	1996	2001	2006
Total Adults	80	60	16	8 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

**Detectability Study**

Sites Included	First Count	Second Count
Twin Lakes Beach	0	0
Albert Beach	0	0
Sandy Bay Point	0	0

## 2006 International Piping Plover Breeding Census - Manitoba -



## The 2006 International Piping Plover Breeding Census in Manitoba

LAKE/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Lake Manitoba	Big Sandy Point	18	6/06	0	0	3.0	V A 1 8 9		Yes	Yes	No	p
Lake Manitoba	Clandeboy Bay	24	6/08	0	0	1.0	V A 1 7		Yes	Yes	Yes	s(p)
Lake Manitoba	Delta Beach	23	6/15	0	0	1.0	V A 1		No	Yes	No	n.r.
Lake Manitoba	Elm Point	15	6/08	0	0	1.0	V A 15		No	No	No	n.r.
Lake Manitoba	Hall's Beach	21	6/06	0	0	0.1	V A 1		No	No	No	p
Lake Manitoba	Hall's Pasture	19	6/06	0	0	1.5	V A 1 8 13		No	No	No	p
Lake Manitoba	Hollywood Beach	20	6/06	0	0	0.5	V A 1 12		Yes	Yes	Yes	m
Lake Manitoba	Lundar Beach Provincial Park	17	6/08	0	0	1.9	V A 1 7 15		No	No	No	n.r.
Lake Manitoba	Lundar Beach South Section	16	6/08	0	0	0.6	V A 1		Yes	No	No	n.r.
Lake Manitoba	Silver Bay	14	6/08	0	0	0.4	V A 1 7 15		No	No	No	n.r.
Lake Manitoba	Stoney Beach	25	6/03	0	0	2.0	V A B 1		No	Yes	No	n.r.
Lake Manitoba	Twin Lakes Beach	26	6/06	0	0	3.0	V A 1 7		Yes	Yes	Yes	s(p)
Lake Manitoba	Watchorn Provincial Park	13	6/08	0	0	0.3	V A		No	No	No	n.r.
Lake of the Woods	Buffalo Point	46	6/26	0	0	0.5	II V A 1 6 11 15		No	No	No	n.r.
Lake Winnipeg	Albert Beach	39	6/14	0	0	2.0	V A 1 7		No	No	Yes	m
Lake Winnipeg	Beaonia Beach	44	6/14	0	0	1.5	V A 1 7		No	No	Yes	m
Lake Winnipeg	Chalet Beach	33	6/13	0	0	1.0	V A 1		No	No	No	n.r.
Lake Winnipeg	Elk Island	35	6/22	0	0	5.0	V G 1 7		No	No	Yes	s(p)
Lake Winnipeg	Grand Beach	41	6/10	4	8	3.0	II V A I 1 15	n.r.	Yes	Yes	Yes	s(p)
Lake Winnipeg	Grand Marais Spit	43	6/10	0	0	1.5	V B 1 2 7		No	Yes	No	s(p)
Lake Winnipeg	Hecla Island Sand Spit	31	6/14	0	0	0.2	V I 2		Yes	Yes	Yes	s(p)
Lake Winnipeg	Hillside Beach	37	6/14	0	0	3.0	V A 1 7		No	No	Yes	m
Lake Winnipeg	Island Beach	42	6/14	0	0	0.7	V A 1 7		No	No	No	n.r.
Lake Winnipeg	Longpoint - Hole in the Wall	4	6/14	0	0	2.5	V A 7		No	No	No	s(p)
Lake Winnipeg	Longpoint - Little Moose Lake	6	6/14	0	0	3.5	V A 7		No	No	No	s(p)
Lake Winnipeg	Longpoint - Sturgeon Skin Point	5	6/14	0	0	3.5	V A 7		No	No	No	s(p)



**The 2006 International Piping Plover Breeding Census in Manitoba  
(Continued)**

LAKE/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Lake Winnipeg	Longpoint- Saskachayweow Bar	3	6/14	0	0	3.5	V A 7		No	No	No	s(p)
Lake Winnipeg	North Gull Bay Spit	7	5/29	0	0	4.0	V A 1 2 7		Yes	Yes	No	n.r.
Lake Winnipeg	Patricia Beach	45	6/14	0	0	1.6	V A 1 7		Yes	Yes	Yes	s(p)
Lake Winnipeg	Red River Delta (West)	34	6/11	0	0	4.0	V A B 1 12		No	No	No	s(p)
Lake Winnipeg	Riverton Sandbar & Sandspit	30	6/03	0	0	1.7	V I 14 15		Yes	Yes	Yes	s(p)
Lake Winnipeg	Sandy Bay	36	6/14	0	0	2.0	II V A 1 7		No	No	Yes	m
Lake Winnipeg	Stevens Island	40	6/10	0	0	2.0	V C 2 7		No	Yes	No	s(p)
Lake Winnipeg	Victoria Beach	38	6/14	0	0	1.0	V A 1		Yes	Yes	Yes	s(p)
Lake Winnipeg	Wells Harbour	29	6/13	0	0	0.5	II V A 1		No	No	No	n.r.
Lake Winnipeg	Willow Island	32	6/04	0	0	0.5	V A 1 12		No	Yes	Yes	s(p)
Lake Winnipegosis	Overflowing River Salt Flat Ecological Reserve	1	6/16	0	0	1.0	V A 5 8 10		No	No	No	s(p)
Lake Winnipegosis	Robinson Bay on Red Deer Point	2	6/15	0	0	0.2	II V 1 7		No	No	No	n.r.
Lake Winnipegosis	Salt Point 1 Location	9	6/14	0	0	0.5	V A 15		No	Yes	No	n.r.
Lake Winnipegosis	Salt Point 2 location	10	6/14	0	0	1.0	V A 15		No	Yes	No	n.r.
Lake Winnipegosis	Salt Point 3 location	8	6/14	0	0	0.1	IV A 10		No	Yes	No	n.r.
Lawrence Lake	Lawrence Lake	11	6/14	0	0	0.0	IV A 10		No	No	No	n.r.
Oak Lake	Oak Lake	22	6/13	0	0	0.3	V A 1 7		Yes	Yes	Yes	s(p)
Salt Lake	Salt Lake	12	6/14	0	0	1.6	IV A D 10		No	No	No	p
Shoal Lakes	West Shoal Lake (S end)	27	6/06	0	0	1.0	IV A 15		Yes	Yes	Yes	s(p)
Shoal Lakes	West Shoal Lake (W point)	28	6/06	0	0	0.3	IV A 15		Yes	Yes	Yes	s(p)
<b>Total</b>				<b>4</b>	<b>8</b>	<b>71.0</b>						

# **The 2006 International Piping Plover Breeding Census in Saskatchewan**

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A total of 1420 Piping Plovers were counted in Saskatchewan in 2006, including at least 548 breeding pairs. This is the highest number since surveys began and represents a large increase from 2001. Piping Plovers were counted at 69 sites with numbers of birds at each occupied basin ranging from 1 to 253 (Lake Chaplin; 281 birds including detectability survey at that site).

Of the 321 sites assigned for surveying, we visited about 90%. A total of 255 sites were surveyed but many of the sites without birds were found to have marginal or unsuitable habitat. Additional lakes (about 40) were visited but not surveyed because habitat was unsuitable. Of the sites missed, most were small or unlikely to have had any suitable habitat during the 2006 Census period. Hence, much greater than 90% of the total Piping Plover habitat in the province was surveyed. Of the sites found to have Piping Plovers during previous censuses, only a few were missed in 2006 and numbers of birds recorded at these sites during previous censuses was small ( $\leq 5$  birds). Only two sites with recent records of Piping Plovers were completely missed. The first is Grant Lake (UTM 370 484) which had one plover during the 2001 Census. The second is Allan Potash Mine, which had 6 adults in 2005. However, a mine employee reported that water levels were very high at Allan Potash in 2006, so there was little if any suitable habitat. Also, we were unable to gain access to a small

unnamed site in the Missouri Coteau (UTM 702 290) which had a single pair in 2001; this site appeared to have habitat and we attempted to look for Piping Plovers using a spotting scope but none were seen. Hence, it is unlikely that many birds were missed at sites that we were unable to survey.

In addition to sites surveyed previously, we attempted to survey 21 new sites. Of these sites, 14 were found to have potential habitat. However, no Piping Plovers were observed during our surveys of new sites. Indeed, similar to previous censuses, 52% of Piping Plovers observed during the 2006 Census were from four basins (Chaplin Lake, Big Quill Lake, Lake Diefenbaker, and Old Wives Lake).

Unusual weather may have affected some of the 2006 Census results. We started the season with peculiar conditions. The South, including the Missouri Coteau, was mostly dry until the 8-10 June rains, with many small basins having very little if any habitat when surveyed prior to the rain. Piping Plover counts suggest that breeding populations at these basins were not stable until at least a few days after the rains. For instance, Unnamed, UTM 717 067 had no birds on 3 June but 16 adults on 13 June, and UTM 842 003 had no birds on 5 June but 5 on 15 June. Numbers fluctuated at other basins immediately after the rains (11-15 June) and some flocking behavior was observed. In addition to creating new habitat, the rains also may have caused flooding in some basins as numbers at a few sites dropped after the rains. Unfortunately, the 2006 Census dates span the period prior to and immediately after the rains and many surveys were conducted outside the Census window; hence, some surveys were conducted before the rains and some after. Since most of the South was not resurveyed after Piping Plover populations stabilized, it is difficult to determine the accuracy of the 2006 Piping Plover count for this province. Additionally, one of the assumptions of the detectability study is that the

true number of birds at a site is the same for both surveys; this assumption was likely invalid for multiple Saskatchewan sites included in the detectability study.

While drought may have been a problem during the beginning of the 2006 Census in the South, the opposite problem was apparent in the northern part of the range. For the second year in a row, increased precipitation in the north resulted in high water levels. Many sites that were suitable in previous years were inundated in 2006, so they offered little if any Piping Plover habitat (i.e., Blaine Lake, Lizard Lake, NW of Van Scoy, Radisson Lake, Basin Lake, Bruno Lake, Lake Charron, Lenore Lake, Lucien Lake, Muskiki Lake, Shannon Lake, Waldsea Lake, Chisholm Lake, Ear Lake, Houchen Lake, Jay Lake, Wells Lake, etc.).

Cattle and disturbance by people were two of the most commonly recorded threats to Piping Plover. Drought and flooding, predation, and other agricultural activities also have negative impacts on Piping Plovers and their habitat in Saskatchewan. In addition to posing a threat to plovers, human disturbance may have affected the 2006 Census results in some areas. Many visitors and dogs were present during the 4 June census of Coteau Beach, Lake Diefenbaker. Similarly there were a few ATV tracks in Hitchcock Bay, and even an ATV racing a motorcycle on the beach during a survey of that site.

#### Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	180	276	150	1420 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

#### Detectability Study

Sites Included	First Count	Second Count
Big Quill Lake (W side) <sup>1</sup>	58	74

#### Detectability Study - Continued

Sites Included	First Count	Second Count
Big Quill Lake (E side) <sup>1</sup>	28	30
Colt Lake	0	0
Usinneskaw Lake	0	0
Agnellice Lake <sup>2</sup> (UTM 660 300)	0	0
Bead Lake <sup>2</sup>	0	0
Bliss Lake	18	26
Burn Lake <sup>1</sup>	8	20
Chaplin Lake (Zone 5) <sup>3</sup>	81	109
Coal Mine Lake <sup>1</sup>	8	13
Coteau Pots (UTM 300 345) <sup>2</sup>	0	0
Dryboro Lake	29	8
East Coteau Lake	23	44
Frederick Lake (UTM 435 425)	21	19
Green Lake <sup>2</sup>	0	2
Ratcliffe South <sup>2</sup>	0	0
Ritchie Lake <sup>2</sup>	3	0
Salt Lake (UTM 215 590) <sup>2</sup>	0	2
Scottie Lake (UTM 800 220) <sup>2</sup>	0	0
Shoe Lake <sup>1</sup>	25	17
Unnamed, UTM 295 375 <sup>2</sup>	0	0
Unnamed, UTM 304 706 <sup>2</sup>	5	2
Unnamed, UTM 310 378	0	0
Unnamed, UTM 430 164 ("Skull Lake") <sup>2</sup>	14	8
Unnamed, UTM 540 279 (Butterfly Lake)	12	39
Unnamed, UTM 571 267 <sup>2</sup>	0	0
Unnamed, UTM 590 248 <sup>2</sup>	0	0
Unnamed, UTM 650 075 <sup>1</sup>	0	4
Unnamed, UTM 717 067	0	16
Unnamed, UTM 735 128 <sup>4</sup>	1	0
Unnamed, UTM 738 085 <sup>2</sup>	3	3
Unnamed, UTM 770 230 <sup>2</sup>	0	0
Unnamed, UTM 831 160 <sup>2</sup>	0	0
Unnamed, UTM 832 010 <sup>1</sup>	2	0
Unnamed, UTM 840 020 <sup>1</sup>	10	9
Unnamed, UTM 842 003	0	5
Unnamed, UTM 842 027	1	4
Unnamed, UTM 846 992 <sup>1</sup>	11	15
Unnamed, UTM 849 167 <sup>2</sup>	1	0

### Detectability Study - Continued

Sites Included	First Count	Second Count
Unnamed, UTM 856 984 <sup>1</sup>	0	0
Unnamed, UTM 860 985 <sup>1</sup>	0	0
Bruno Lake	0	0
Elkona Lake	1	0
Unnamed, UTM 665 130	0	0
Unnamed, UTM 670 165	0	0
Landis Lake	0	0
Little Tramping Lake	0	0
Lydden Lake	0	0
Peter Pond Lake/Sandy Point	6	0
Reflex lake E	2	0
Seagram Lake W	4	7
Ibsen Lake <sup>2</sup>	0	0
Soda Lake	0	0
Coteau Beach (Lake Dief) <sup>5</sup>	5	2
Hitchcock Bay (Lake Dief) <sup>5</sup>	10	3
Prairie Lake (Lake Dief) <sup>6</sup>	6	5
South Elbow (Lake Dief) <sup>5</sup>	12	18
NW of Blucher (UTM 155 642)	4	6
Notukeu Lake	6	2
Success Lake	0	0

<sup>1</sup>These sites were not randomly selected as part of the Census detectability study. They were surveyed twice as part of a separate study conducted by Cherri Gratto-Trevor, but we include the data here for informational purposes.

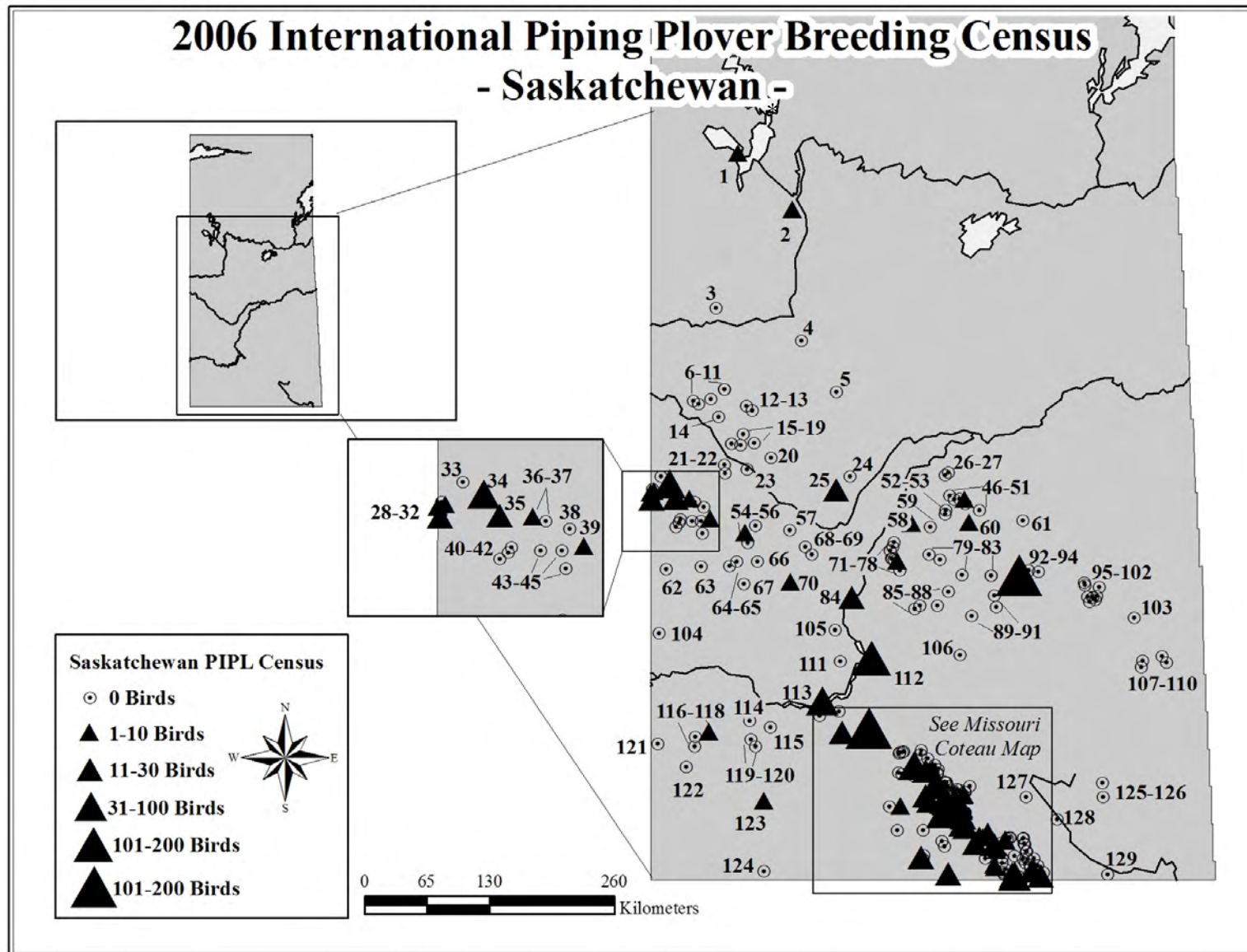
<sup>2</sup>Replicate survey was conducted first (outside of Census window) so second survey was used to calculate official total.

<sup>3</sup>Only a portion of this site (Zone 5) was included in the detectability study

<sup>4</sup>Both surveys conducted outside of Census period. Second count included in official total since it is closer to census dates.

<sup>5</sup>This is one of three sections of "Lake Dief. (Riverhurst to Arms)" that was surveyed twice as part of the detectability study.

<sup>6</sup>This is a section of "Lake Dief (Sask. Landing to Riverhurst)" that was surveyed twice.

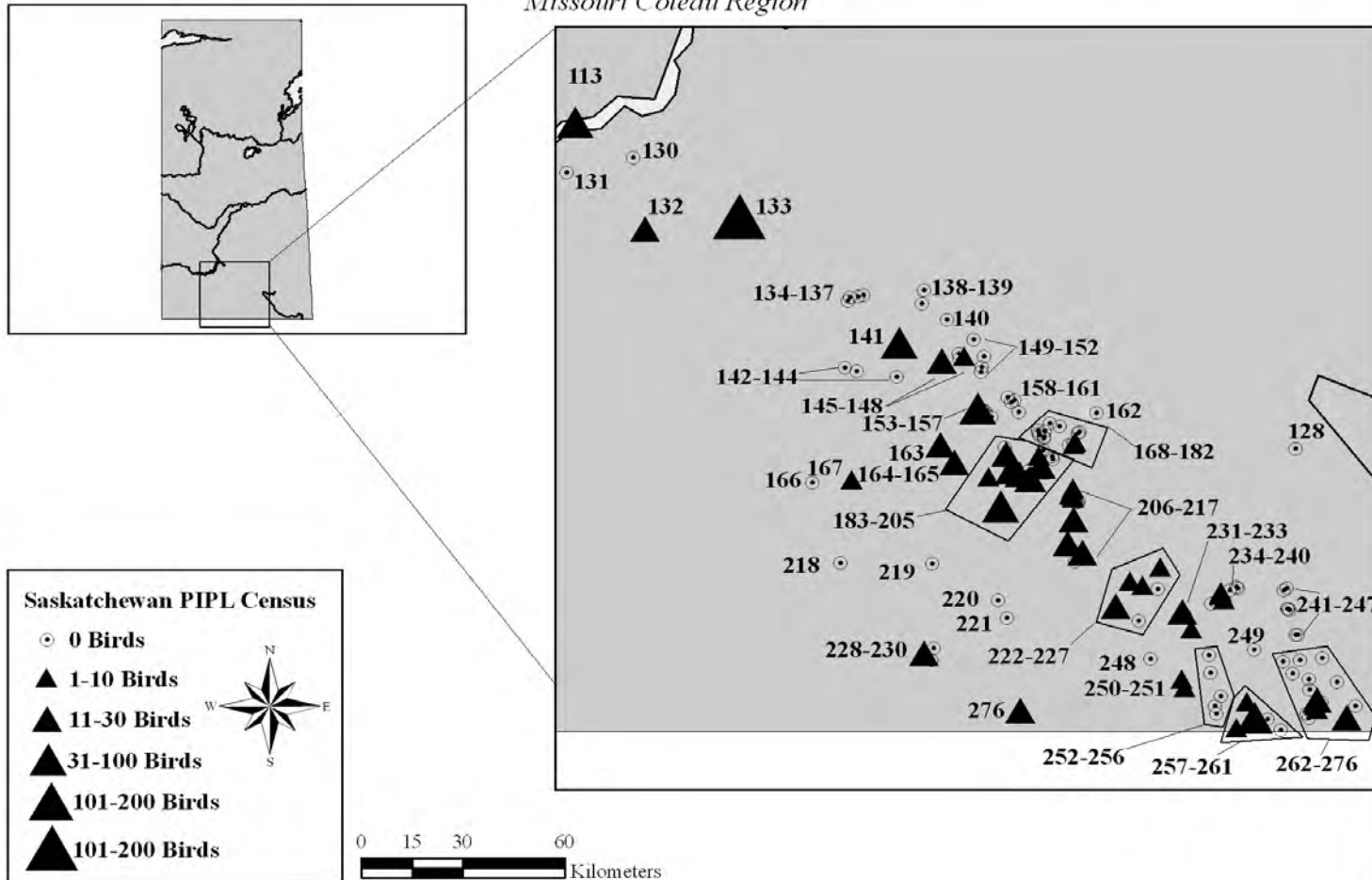


\*Please note that some sites on the map were visited but not officially surveyed (refer to table).

# 2006 International Piping Plover Breeding Census

## - Saskatchewan\* -

Missouri Coteau Region



\*Please note that some sites on the map were visited but not officially surveyed (refer to table).

## The 2006 International Piping Plover Breeding Census in Saskatchewan

COUNTY/REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Big Quill/Last Mountain	Big Quill Lake	92	6/3	81	222	80.0	IV A 10 15	IV A 10 12 15	Yes	Yes	Yes	f
Big Quill/Last Mountain	Bitter Lake <sup>2</sup>	101							Yes	Yes	Yes	p
Big Quill/Last Mountain	Borrow Pit	82	6/6	0	0	n.r.	VIII A 7		Yes	Yes	Yes	p
Big Quill/Last Mountain	Bultel Lake	86	6/3	0	0	4.0	IV D 10		Yes	Yes	Yes	p
Big Quill/Last Mountain	Colt Lake	91	6/5	0	0	n.r.	IV V A 7 10		Yes	Yes	Yes	f
Big Quill/Last Mountain	Devil's Lake	87	6/4	0	0	12.0	IV D 10		Yes	Yes	Yes	p
Big Quill/Last Mountain	Echo Lake <sup>2</sup>	98							Yes	Yes	Yes	m
Big Quill/Last Mountain	Horseshoe Lake	85	6/3	0	0	5.0	V D 12 15		Yes	Yes	Yes	p
Big Quill/Last Mountain	Jansen Lake	83	6/3	0	0	n.r.	IV I 10		Yes	Yes	Yes	p
Big Quill/Last Mountain	Kutawagan Lake Complex	90	6/16	0	0	n.r.	IV V A 6 7		Yes	Yes	Yes	f
Big Quill/Last Mountain	Lac du Chemin	89	6/6	0	0	n.r.	IV A 10		Yes	Yes	Yes	p
Big Quill/Last Mountain	Last Mountain Lake	106	6/11	0	0	25.0	V A 1 2 6		Yes	Yes	Yes	s/p
Big Quill/Last Mountain	Little Manitou Lake	88	6/5	0	0	18.3	IV A 7 10		Yes	Yes	Yes	s(p)/p
Big Quill/Last Mountain	Little Quill Lake	94	6/6	0	0	n.r.	IV V A 1 7		Yes	Yes	Yes	s(p)
Big Quill/Last Mountain	Lovering Lake East <sup>2</sup>								Yes	Yes	Yes	m
Big Quill/Last Mountain	Margo Lake	95	6/3	0	0	n.r.	V A 1 7 15		Yes	Yes	Yes	p
Big Quill/Last Mountain	Mud Lake (Middle Quill Lake)	93	6/16	0	0	13.0	IV A 6 10 12		Yes	Yes	No	s(p)
Big Quill/Last Mountain	Newburn Lake <sup>2</sup>	100							Yes	Yes	Yes	m
Big Quill/Last Mountain	Salt Lake <sup>2</sup>	102							Yes	Yes	Yes	p
Big Quill/Last Mountain	Silver Lake <sup>2</sup>	99							Yes	Yes	Yes	p
Big Quill/Last Mountain	Stonewall Lake	97	6/13	0	0	0.5	IV A 1		Yes	Yes	Yes	n.r.
Big Quill/Last Mountain	Unnamed, UTM 832 482	81	6/3	0	0	6.0	IV D 10		Yes	Yes	Yes	n.r.
Big Quill/Last Mountain	Usinneskaw Lake	96	6/13	0	0	n.r.	V A 1 15		Yes	Yes	Yes	p
Missouri Coteau	Agnellice Lake	160	6/13	0	0	3.0	IV 7 10		Yes	Yes	Yes	p
Missouri Coteau	Alkali Lake (UTM 500 280)	261	6/10	0	0	1.5	IV A 6 10		Yes	Yes	Yes	s/p
Missouri Coteau	Alma Lake	266	6/11	0	0	2.0	V A 15		Yes	No	No	p
Missouri Coteau	Bead Lake <sup>3</sup>	225	5/30	0	0	2.5	IV A 10		Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Missouri Coteau	Beaubien Lake <sup>2</sup>	267							Yes	No	No	p
Missouri Coteau	Big Muddy Lake (Lower)	251	6/7	2	5	20.0	IV 15		Yes	Yes	Yes	s(p)
Missouri Coteau	Big Muddy Lake (Upper)	250	6/13	2	7	60.0	IV 10		Yes	Yes	Yes	s(p)
Missouri Coteau	Bliss Lake	184	6/15	7	26	11	n.r.		Yes	Yes	Yes	n.r.
Missouri Coteau	Bonneau Lake <sup>2</sup>	220							Yes	Yes	Yes	p
Missouri Coteau	Bowden Lake <sup>2</sup>	245							Yes	Yes	Yes	p
Missouri Coteau	Burn Lake	198	6/14	10	20	7.0	IV 7	IV 7	Yes	Yes	Yes	f
								IV D 7 8				
Missouri Coteau	Channel Lake	215	6/6	7	21	6.4	IV D 7 10	10	Yes	Yes	Yes	p
							IV VI VIII A 12	IV A 10 12				
Missouri Coteau	Chaplin Lake	133	6/14	79	281	50.0	15	15	Yes	Yes	Yes	f
Missouri Coteau	Coal Mine Lake	226	6/16	3	13	8.0	IV H 7 8 10	IV H 7	Yes	Yes	Yes	s(p)
Missouri Coteau	Cookson Reservoir	277	6/6	5	16	45.0	VI I 1 7	VI A 7	Yes	Yes	Yes	p
Missouri Coteau	Coteau Pots (UTM 300 342) <sup>2</sup>								Yes	Yes	Yes	n.r.
Missouri Coteau	Coteau Pots (UTM 300 345) <sup>3</sup>	255	5/28	0	0	0.8	IV A 7 10		Yes	Yes	Yes	p
Missouri Coteau	Coteau Pots (UTM 300 350) <sup>2</sup>								Yes	Yes	Yes	n.r.
Missouri Coteau	Dryboro Lake	195	6/11	6	29	6.0	IV 6 7 8 10	IV 7 8	Yes	Yes	Yes	f
Missouri Coteau	Dunkirk Lake (UTM 490 432) <sup>3</sup>	147	6/24	0	0	1.3	A 15		Yes	No	Yes	p
Missouri Coteau	East Coteau Lake	258	6/15	21	44	8.0	IV A 7 10	IV A 7	Yes	Yes	Yes	s/p
Missouri Coteau	Edna Lake	224	6/6	0	2	6.0	IV D 10		Yes	Yes	Yes	p
Missouri Coteau	Elsie Lake	237	6/12	0	2	3.2	IV A 7 12	IV A 7	Yes	Yes	Yes	s(p)
Missouri Coteau	Fife Lake	228	6/7	10	27	16.0	VIII A 7 8		Yes	Yes	Yes	s(p)
	Frederick Lake											
Missouri Coteau	(UTM 435 425)	145	6/4	3	21	17.0	IV A I 7 10	IV A I 7 10	Yes	Yes	Yes	s/p
Missouri Coteau	Green Lake	222	6/7	1	2	2.1	IV D 7	IV D 7	Yes	Yes	Yes	p
Missouri Coteau	Handsome Lake <sup>2</sup>		5/25						Yes	Yes	Yes	p
Missouri Coteau	Horizon Lake	216	6/6	3	14	10.0	IV D 10		No	Yes	Yes	p
Missouri Coteau	Howe Pond (UTM 556 388) <sup>3</sup>	152	6/23	0	0	1.0	IV 1 6 7		Yes	Yes	Yes	p
Missouri Coteau	Jim Creek Lake	257	6/11	0	1	12.0	IV I		No	Yes	Yes	f
Missouri Coteau	Karl Lake	244	6/12	0	0	1.6	IV A 7 10 12		Yes	Yes	Yes	s(p)



# **The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Missouri Coteau	Lake of the Rivers (E Side)	164	6/4	4	16	22.0	IV I 7	IV I 7 10	Yes	Yes	Yes	p
Missouri Coteau	Lake of the Rivers (W Side)	165	6/5	1	7	22.0	IV I 7 12 15	IV I 7 10	Yes	Yes	Yes	p
Missouri Coteau	Little Coteau Lake	259	6/15	0	0	n.r.	IV A 6 10 14		Yes	Yes	Yes	m
Missouri Coteau	Lonetree Lake	260	6/5	1	3	7.0	IV D I 7 10 15		Yes	Yes	Yes	p
Missouri Coteau	MacDonagh Lake	236	6/13	0	0	2.4	IV A 10 12		Yes	Yes	Yes	s(p)
Missouri Coteau	Mackenzie Lake <sup>2</sup>	234							Yes	Yes	Yes	p
Missouri Coteau	Marjorie Lake	239	6/5	1	3	3.8	IV I 10		Yes	No	Yes	p
Missouri Coteau	Mather Lake <sup>2</sup>	264							Yes	Yes	No	p
Missouri Coteau	McGrath Lake	231	6/7	5	12	4.0	IV D 7	IV D 7	Yes	Yes	Yes	p
Missouri Coteau	McGrath Lake South	232	6/7	0	0	4.0	IV D 7 10 12		Yes	No	Yes	n.r.
Missouri Coteau	Montague Lake	219	6/8	0	0	10.0	VIII H 10		Yes	Yes	Yes	s/p
Missouri Coteau	N of Bliss Lake (UTM 630 155)	183	6/13	0	0	2.0	IV A 6 7		Yes	No	Yes	p
Missouri Coteau	North Pond (UTM 395 500) <sup>3</sup>	230	5/29	0	0	0.8	IV A 10		Yes	Yes	Yes	p
Missouri Coteau	Old Wives Lake	141	6/6	32	86	70.0	IV I 1 6 7 8 10 12	IV I 6 7 8 10 12	Yes	Yes	Yes	f/s/p
Missouri Coteau	Oro Lake	185	6/6	0	0	4.2	V A 7 15		Yes	Yes	Yes	s/m/p
Missouri Coteau	Overland Lake <sup>2</sup>	274							Yes	Yes	No	p
Missouri Coteau	Payn Lake <sup>2</sup>	272							No	Yes	No	p
Missouri Coteau	Ratcliffe South <sup>2</sup>	275							Yes	No	No	p
Missouri Coteau	Reed Lake	132	6/3	8	21	22.4	IV D 1 5 6 7 8 10 14		Yes	Yes	Yes	s/m/p
Missouri Coteau	Ritchie Lake <sup>2</sup>	223	5/29	1	3	5.8	IV A 7	IV A 7 10	Yes	Yes	Yes	p
Missouri Coteau	Rivard Lake	221	6/6	0	0	6.4	IV A 6 8 10		Yes	Yes	Yes	p
Missouri Coteau	Salt Lake (UTM 215 590)	233	6/14	0	2	9.8	IV D 7 12	IV D 7	Yes	Yes	Yes	f
Missouri Coteau	Salt Lake (UTM 288 035)	131	6/3	0	0	2.0	IV VIII D 1 6 7 15		Yes	Yes	Yes	p
Missouri Coteau	Sandoff Lake	269	6/7	4	15	9.0	IV A 7 10	IV A 7 10	Yes	Yes	Yes	s/p
Missouri Coteau	Scottie Lake (UTM 800 220) <sup>3</sup>	169	6/1	0	0	3.0	VIII A 15		Yes	No	Yes	p

## The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Missouri Coteau	Shoe Lake	190	6/3	9	25	12.8	IV H 6 10	IV H 1 6	Yes	Yes	Yes	f/s/p
Missouri Coteau	Skyeta Lake (UTM 735 197)	170	6/7	0	0	11.0	IV A 15		Yes	No	Yes	s(p)
Missouri Coteau	Stiles Lake	240	6/5	0	0	3.0	IV 10		Yes	No	Yes	p
Missouri Coteau	Twelve Mile Lake	218	6/5	0	0	38.7	IV 1 7 10 12 14		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 028 055	166	6/14	0	0	n.r.	VI 14		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 050 625	227	6/5	0	0	1.5	IV A 7		Yes	Yes	No	p
Missouri Coteau	Unnamed, UTM 085 495 <sup>2</sup>	248	6/5				IV A 14		No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 135 405 <sup>3</sup>	142	6/19	0	0	1.0	V I 12		Yes	No	Yes	p
Missouri Coteau	Unnamed, UTM 148 612 <sup>3</sup>	134	6/22	0	0	n.r.	n.r.		Yes	No	No	s(p)
Missouri Coteau	Unnamed, UTM 150 065	167	6/14	1	2	2.0	IV D I 7	IV D	Yes	No	Yes	p
Missouri Coteau	Unnamed, UTM 155 623 <sup>3</sup>	135	6/22	0	0	0.4	n.r.		Yes	No	Yes	n.r.
Missouri Coteau	Unnamed, UTM 170 394 <sup>3</sup>	143	6/19	0	0	1.0	V I 12		Yes	No	Yes	p
Missouri Coteau	Unnamed, UTM 180 625	136	6/5	0	0	0.7	V A 15		Yes	No	No	p
Missouri Coteau	Unnamed, UTM 195 630	137	6/5	0	0	1.0	IV A 1 7 10		Yes	No	No	p
Missouri Coteau	Unnamed, UTM 272 510 <sup>2</sup>	252							No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 275 456 <sup>2</sup>	253							No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 295 330 <sup>2</sup>	256							No	Yes	Yes	n.r.
Missouri Coteau	Unnamed, UTM 295 375	144	6/13	0	0	0.2	IV A 6 7 10		No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 304 706 <sup>3</sup>	238	5/31	1	5	3.9	IV A 7 10	IV A 7 10	Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 310 378	254	6/7	0	0	1.5	IV I 10		No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 360 717 <sup>2</sup>	235							Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 375 604 <sup>3</sup>	139	6/22	0	0	1.6	n.r.		Yes	No	Yes	n.r.
Missouri Coteau	Unnamed, UTM 382 645 <sup>3</sup>	138	6/22	0	0	0.8	n.r.		Yes	No	Yes	n.r.
Missouri Coteau	Unnamed, UTM 400 535 <sup>3</sup>	229	5/29	0	0	1.3	n.r.		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 414 530	249	6/14	0	0	3.0	IV A 7 10		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 430 164 ("Skull Lake")	163	6/2	6	14	6.0	IV VIII A 1 7 10	VIII A 1 7 10	No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 455 552 <sup>3</sup>	140	6/23	0	0	1.0	IV 1 3 6 7 8		No	Yes	Yes	n.r.
Missouri Coteau	Unnamed, UTM 488 445 <sup>2</sup>								Yes	No	Yes	p

## The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Missouri Coteau	Unnamed, UTM 493 073	130	6/3	0	0	2.5	IV D G 1 6 7 8 15		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 500 450	146	6/6	0	0	4.0	IV A 6 7 10 12		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 503 440	148	6/6	1	2	2.4	IV A	IV A D 7 10	Yes	Yes	Yes	s/p
Missouri Coteau	Unnamed, UTM 503 713	242	6/4	0	0	1.0	IV I 10		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 505 486	262	6/14	0	0	8.1	n.r.		No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 512 718	241	6/4	0	0	4.0	IV 11		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 514 656	243	6/12	0	0	0.8	IV A 7 10 12		Yes	Yes	Yes	s(p)
Missouri Coteau	Unnamed, UTM 534 490	149	6/6	0	0	2.0	IV 6 7 12 15		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 535 455	265	6/11	0	0	3.0	V A 6 7		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 540 279 (Butterfly Lake)	153	6/14	9	39	4.0	IV H I 8 10	IV H I 10	Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 543 575 <sup>2</sup>	246							Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 550 575 <sup>2</sup>	247							Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 560 273	154	6/6	0	0	3.7	IV A 1 7 10		Yes	Yes	Yes	s(p)
Missouri Coteau	Unnamed, UTM 560 404 <sup>3</sup>	151	6/23	0	0	1.0	IV VIII 15		Yes	No	Yes	n.r.
Missouri Coteau	Unnamed, UTM 565 273	155	6/6	0	0	1.4	IV A I 7 10		Yes	Yes	Yes	s(p)
Missouri Coteau	Unnamed, UTM 567 435 <sup>3</sup>	150	6/23	0	0	11.0	IV 12		Yes	No	Yes	n.r.
Missouri Coteau	Unnamed, UTM 571 267	156	6/13	0	0	3.0	IV A 6 7		Yes	No	Yes	p
Missouri Coteau	Unnamed, UTM 578 063 <sup>3</sup>	204	6/23	1	4	6.0	IV 1 6 7 8 10	IV A 6 7	Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 590 248	157	6/13	0	0	1.0	IV A 6 7		No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 591 408	268	6/10	0	0	0.4	V A 6 10		No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 613 345	271	6/7	0	1	2.0	IV A 7 10	IV A 7 10	Yes	Yes	Yes	s/p
Missouri Coteau	Unnamed, UTM 613 353	273	6/7	0	0	0.5	IV A 7 10		Yes	Yes	Yes	s/p
Missouri Coteau	Unnamed, UTM 628 368	270	6/10	0	0	0.8	V A 6 10		No	Yes	No	p
Missouri Coteau	Unnamed, UTM 640 309	158	6/14	0	0	1.0	IV A 7		Yes	No	Yes	p
Missouri Coteau	Unnamed, UTM 646 096	189	6/5	0	0	2.0	n.r.		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 650 075	196	6/14	2	4	0.5	IV 7	IV 7	Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 650 295	159	6/14	0	0	1.2	IV A		Yes	Yes	Yes	p

# **The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Missouri Coteau	Unnamed, UTM 662 075 (adj. to Burn Lake) <sup>3</sup>	197	6/19	0	1	0.5	IV A 10 14		Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 673 266	161	6/14	0	0	0.5	IV A		Yes	No	Yes	p
Missouri Coteau	Unnamed, UTM 684 062 <sup>3</sup>	199	6/19	1	2	3.2	IV A 8		Yes	No	Yes	f
Missouri Coteau	Unnamed, UTM 691 060 <sup>3</sup>	200	6/19	0	0	1.2	IV A 7		Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 700 080 <sup>3</sup>	194	6/19	0	0	0.5	IV A 7		Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 705 056	201	6/3	10	28	4.5	IV A 7 8 10	IV A 7 8 10	Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 714 054	203	6/3	0	2	1.0	IV A 7 10	IV A 7 10	Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 717 067	202	6/12	6	16	4.0	IV 7 8	IV 7 8	Yes	Yes	Yes	f/p
Missouri Coteau	Unnamed, UTM 725 075	193	6/3	0	0	1.0	IV A 10		Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 733 205	171	6/14	0	0	2.0	IV 10 14		Yes	No	Yes	n.r.
Missouri Coteau	Unnamed, UTM 735 128 <sup>3</sup>	189	5/27	0	1	1.1	IV A 7 10	IV A 10	Yes	No	Yes	f
Missouri Coteau	Unnamed, UTM 737 191	174	6/7	0	0	1.5	IV A 10		Yes	No	Yes	s/p
Missouri Coteau	Unnamed, UTM 738 085	191	6/13	1	3	0.1	IV A 10		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 739 075	192	6/13	0	0	0.1	IV A 10		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 740 181	175	6/7	0	0	2.3	IV A 7 10		Yes	No	Yes	s/p
Missouri Coteau	Unnamed, UTM 740 187	176	6/7	0	0	2.6	IV A 7 10		Yes	No	Yes	s/p
Missouri Coteau	Unnamed, UTM 752 204	177	6/13	0	0	0.4			Yes	No	Yes	n.r.
Missouri Coteau	Unnamed, UTM 770 230	168	6/13	0	0	2.2	IV A 7 10		Yes	No	Yes	p
Missouri Coteau	Unnamed, UTM 775 125 <sup>3</sup>	186	6/19	0	0	3.2	IV V A 7 10		Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 776 116 <sup>3</sup>	187	6/19	0	0	3.2	IV V A 7 10		Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 831 160 <sup>3</sup>	178	6/1	0	0	3.0	VIII A 15		Yes	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 832 010	208	6/12	1	2	1.0	IV I 6 7	IV I 6	Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 840 020	207	6/12	2	10	3.5	IV 6 7	IV 6 7	Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 841 995	210	6/5	2	4	3.0	IV D 6 7	IV H 8 10	Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 842 003	209	6/15	0	5	0.5	IV H 7 10	IV H 7 10	Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 842 027	206	6/15	2	4	1.5	IV 6 7	IV 7	Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 842 162	179	6/7	2	4	2.5	IV A 7 10	IV A 7	Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Missouri Coteau	Unnamed, UTM 845 167	180	6/16	0	0	0.5	IV A 10		No	Yes	Yes	n.r.
Missouri Coteau	Unnamed, UTM 846 992	214	6/15	5	15	3.5	IV 7		Yes	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 847 800 <sup>2</sup>	217							No	Yes	No	m
Missouri Coteau	Unnamed, UTM 848 171	181	6/16	0	2	0.5	IV A 1 6 7	IV A 6	No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 849 167 <sup>3</sup>	182	5/27	1	1	0.7	IV A 7 10	IV A 7	No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 851 988	211	6/5	0	0	1.2	IV D 7 12		No	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 856 984	212	6/12	0	0	0.5	IV H 7 10		No	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 857 197	172	6/16	0	0	1.5	IV A 7		No	Yes	Yes	p
Missouri Coteau	Unnamed, UTM 860 985	213	6/12	0	0	1.0	IV H 7 10		No	Yes	Yes	f
Missouri Coteau	Unnamed, UTM 863 200	173	6/16	0	0	2.0	IV A 1 6		Yes	Yes	Yes	n.r.
Missouri Coteau	Unnamed, UTM 915 261	162	6/14	0	0	1.3	IV A 12		No	Yes	Yes	p
Missouri Coteau	Wellington Lake	263	6/10	0	0	3.0	V A 7		Yes	Yes	No	p
Missouri Coteau	West Coteau Lake	276	6/14	5	15	18.7	n.r.		Yes	Yes	Yes	p
								IV I 1 7 10				
Missouri Coteau	Willow Bunch Lake	205	6/6	30	66	49.9	IV I 1 7 10 12 14	14	Yes	Yes	Yes	p
North Central	Blaine Lake North	24	6/6	0	0	9.0	IV A		Yes	Yes	Yes	p
North Central	Green Lake	4	6/13	0	0	0.9	V A 1 7 8 9 13		Yes	Yes	Yes	s(p)
North Central	Lizard Lake	57	6/10	0	0	6.0	V D 12		Yes	Yes	Yes	p
North Central	NW of Van Scoy Lake	68	6/15	0	0	12.0	IV I 12		Yes	Yes	No	p
North Central	Pekakumew Lake	5	6/10	0	0	5.0	IV A 1 7 10		No	No	No	n.r.
North Central	Radisson Lake <sup>2</sup>								Yes	Yes	Yes	p
North Central	Redberry Lake	25	6/6	8	19	25.0	IV A 1 7 10 12		Yes	Yes	Yes	s/p
North Central	Van Scoy Lake	69	6/15	0	0	10.0	IV I 12		Yes	Yes	Yes	p
Northeast	Basin Lake	48	6/6	0	0	n.r.	IV A 10		Yes	Yes	Yes	s(p)
Northeast	Bruno Lake	47	6/13	0	0	4.8	V I 6		No	Yes	Yes	p
Northeast	Buffer lake	58	6/4	2	4	23.0	IV A 10	IV A 10	Yes	Yes	Yes	p
Northeast	Elkona Lake	49	6/4	0	1	5.0	IV A 10	IV A 10	Yes	Yes	Yes	p
Northeast	Houghton Lake	60	6/3	0	1	0.3	V A 10	IV A 10	Yes	Yes	Yes	f/p
Northeast	Jumping Lake (big)	26	6/13	0	0	4.8	V 12		Yes	Yes	Yes	n.r.
Northeast	Jumping Lake (small) <sup>2</sup>	27							Yes	Yes	Yes	p

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Northeast	Lake Charron	61	6/12	0	0	10.0	V A 1 6 7 8 12		Yes	Yes	Yes	s(p)
Northeast	Lenore Lake <sup>3</sup>	51	6/19	0	0	n.r.	V A 1 2 5 6 7		Yes	Yes	Yes	p
Northeast	Lucien Lake <sup>2</sup>								No	Yes	Yes	m/p
Northeast	Middle Lake	50	6/16	0	0	n.r.	IV A 10		Yes	Yes	Yes	p
Northeast	Muskiki Lake	59	6/5	0	0	n.r.	V A 15		Yes	Yes	Yes	f/p
Northeast	Shannon Lake	46	6/12	0	0	10.0	V A 6 7 12 14		No	Yes	Yes	p
Northeast	Unnamed, UTM 665 130 <sup>3</sup>	53	6/17	0	0	1.6	IV A 10 15		Yes	Yes	Yes	p
Northeast	Unnamed, UTM 670 165 <sup>3</sup>	52	6/17	0	0	n.r.	IV A 8 15		No	Yes	Yes	p
Northeast	Waldsea <sup>2</sup>								Yes	Yes	No	n.r.
Northwest	Aroma Lake	55	6/6	3	7	8.0	IV D 1 7 8 10	IV D 8 10	Yes	Yes	Yes	p
Northwest	Atton Lake	22	6/8	0	0	4.8	V A B 1 3 12 14		No	Yes	No	m
Northwest	Belliveau Lake	7	6/9	0	0	n.r.	IV A 7 8 10 15		No	No	Yes	p
Northwest	Birch Lake	20	6/7	0	0	1.0	IV A 7 15		No	No	No	p
Northwest	Blackfoot Lake (UTM 595 880) <sup>3</sup>	18	6/2	0	0	n.r.	IV A 10		No	Yes	No	p
Northwest	Brightsand Beach (Regional Park)	10	6/6	0	0	2.0	V A 1 5 7 12		No	No	No	m
Northwest	Brightsand Lake, McFellar's Beach (S end) <sup>4</sup>	11	6/6	0	0	4.0	V A 7 8 12 14 15		No	No	No	p
Northwest	Chisholm Lake	40	6/16	0	0	2.0	IV A 12		No	Yes	Yes	p
Northwest	Ear Lake <sup>3</sup>	45	6/28	0	0	6.0	n.r.		Yes	Yes	Yes	p
Northwest	Ferron Lake <sup>34</sup>	15	6/2	0	0	2.0	IV A 7		No	No	No	p
Northwest	Freshwater Lake N	31	6/5	0	2	4.2	IV H 7	IV H 7	No	Yes	Yes	s(p)
Northwest	Freshwater Lake S	32	6/5	3	18	3.9	IV H 7	IV I 7	No	Yes	Yes	s(p)
Northwest	Houchen Lake	38	6/7	0	0	2.3	V A 12		No	No	Yes	p
Northwest	Jackfish Lake <sup>3</sup>	19	6/2	0	0	1.0	V A I 1 15		No	No	No	m/p
Northwest	Jay Lake <sup>3</sup>	44	6/30	0	0	n.r.	n.r.		Yes	Yes	No	p
Northwest	Jones Lake (SW of Keppel Lake) <sup>3</sup>	54	6/22	0	0	0.3	V A		No	No	Yes	n.r.
Northwest	Keppel Lake <sup>2</sup>								Yes	Yes	Yes	n.r.
Northwest	Killsquaw Lakes	39	6/7	1	2	14.0	IV A D H 1 2 5 7	IV D 2	Yes	Yes	Yes	p
Northwest	Lac Des Isles	3	6/11	0	0	7.3	V A 1 7		Yes	Yes	Yes	s(p)
Northwest	Lac Ile-a-La-Crosse <sup>3</sup>	2	6/23	1	2	0.8	V D 2	V D 2	Yes	Yes	Yes	m

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Northwest	Lambert Lake	21	6/14	0	0	5.6	IV A 10 15		Yes	Yes	Yes	n.r.
Northwest	Landis Lake	56	6/9	0	0	4.0	IV I 13		Yes	Yes	Yes	p
Northwest	Little Manitou Lake	35	6/15	6	13	18.3	IV A 1 15	IV A 1	No	No	Yes	s(p)
Northwest	Little Tramping Lake	64	6/10	0	0	2.0	V I 12 15		No	Yes	Yes	p
Northwest	Lydden Lake	66	6/9	0	0	10.0	V D 14 15		Yes	Yes	Yes	p
Northwest	Maiden Lake	13	6/3	0	0	3.2	IV A 12		No	No	No	p
Northwest	Manitou Lake	34	6/7	17	57	75.0	n.r.		Yes	Yes	Yes	s(p)/m/p
Northwest	Peck Lake <sup>2</sup>								Yes	Yes	No	n.r.
Northwest	Peter Pond Lake, sandy point <sup>3</sup>	1	6/23	3	6	6.6	V A 2	V A 2	Yes	Yes	Yes	s(p)
Northwest	Peterson's Farm (Brightsand Lake) <sup>4</sup>	9	6/5	0	0	2.0	V A 7 14 15		No	No	No	p
Northwest	Picnic Lake <sup>2</sup>								No	No	Yes	p
Northwest	Ray's Lake	6	6/9	0	0	2.0	IV V VIII A 5 8 10 15		No	No	Yes	p
Northwest	Reed Lake NW	43	6/30	0	0	n.r.	n.r.		Yes	Yes	Yes	p
Northwest	Reflex Lake E	30	6/13	1	2	11.8	IV A 1 3 15	IV A 1	Yes	Yes	Yes	s(p)/p
Northwest	Reflex lake W	29	6/6	3	8	10.7	IV H 7 10		Yes	Yes	Yes	p
Northwest	Russell Lake <sup>3</sup>	17	6/2	0	0	1.0	IV A 2 7 15		Yes	Yes	Yes	p
Northwest	Schopfer Slough	28	6/12	0	0	4.1	IV A 7 12		No	Yes	Yes	p
Northwest	SE of Russel Lake (UTM 639 968)	16	6/2	0	0	0.2	IV VIII A I 7		No	No	No	p
Northwest	Seagram Lake E	37	6/7	0	0	4.6	V A 12		Yes	Yes	Yes	p
Northwest	Seagram Lake W <sup>3</sup>	36	6/23	1	7	9.6	IV A 1 7 10	IV A 1 7	Yes	Yes	Yes	p
Northwest	Spruce Lake	8	6/9	0	0	n.r.	V A 12 14		No	No	No	p
Northwest	Stony Lake	12	6/5	0	0	0.4	IV A 7 12 15		Yes	Yes	Yes	p
Northwest	Sunny Lake	23	6/16	0	0	4.5	IV A 12		No	Yes	Yes	p
Northwest	Thompson Lakes <sup>4</sup>	14	6/3	0	0	n.r.	IV A 2 10 11		No	No	No	p
Northwest	Tramping Lake	65	6/5	0	0	0.5	V I 5 8 12 15		Yes	Yes	Yes	p
Northwest	Wells Lake	33	6/9	0	0	11.0	n.r.		No	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)

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Northwest	West of Spruce Lake (UTM 262 344) <sup>2</sup>								No	No	Yes	p
Northwest	Winterhaldt Lake	41	6/16	0	0	1.5	IV A 12		No	Yes	Yes	p
Northwest	Zoller Lake	42	6/16	0	0	3.0	IV B 12		No	Yes	Yes	p
Regina Plains	Boundary Dam Reservoir	129	6/7	0	0	2.2	VI A 1 7		Yes	Yes	No	s(p)
Regina Plains	Crescent Lake	109	6/7	0	0	10.0	V A 15		Yes	Yes	Yes	n.r.
Regina Plains	Good Spirits Lake <sup>2</sup>								Yes	Yes	Yes	s(p)
Regina Plains	Horseshoe Lake	103	6/6	0	0	2.0	V VIII A 1		Yes	Yes	Yes	p
Regina Plains	Ibsen Lake <sup>3</sup>	127	5/31	0	0	7.2	V A 12		Yes	Yes	Yes	p
Regina Plains	Leech Lake	107	6/7	0	0	12.0	I A 15		Yes	Yes	Yes	n.r.
Regina Plains	Moose Mountain Lake	125	6/15	0	0	14.0	VIII C I 15		Yes	Yes	Yes	s(p)
Regina Plains	Nickle Lake	128	6/5	0	0	n.r.	VI I 15		Yes	Yes	Yes	s/m
Regina Plains	Potts Lake	110	6/3	0	0	n.r.	n.r.		No	No	No	n.r.
Regina Plains	Rock Lake	126	6/13	0	0	4.0	V A 1 15		Yes	Yes	Yes	p
Regina Plains	Soda Lake	108	6/12	0	0	3.0	IV A 15		Yes	Yes	Yes	n.r.
S. Saskatchewan R.	Lake Dief (Sask. Landing to Riverhurst)	113	6/3	21	42	97.0	III VI A 1 7 12	VI A 1 6 7 12	Yes	No	Yes	s(p)/m/p
S. Saskatchewan R.	Lake Dief. (Riverhurst to Arms)	112	6/3	71	168	113.0	n.r.		Yes	Yes	Yes	s(p)
S. Saskatchewan R.	S. Saskatchewan R., middle	84	6/4	3	18	105.9	n.r.		Yes	Yes	Yes	s(p)/f/p
Saskatoon SE	Bradwell Reservoir	78	6/10	0	0	0.5	VII 7 15		Yes	Yes	Yes	m
Saskatoon SE	Burke Lake	72	6/5	0	0	1.7	IV I 12		Yes	Yes	Yes	p
Saskatoon SE	Esker Slough (UTM 124 657)	76	6/3	0	0	n.r.	VIII D 15		Yes	Yes	Yes	p
Saskatoon SE	Meacham S and E	79	6/6	0	0	n.r.	n.r.		Yes	Yes	Yes	p
Saskatoon SE	Meacham SE (UTM 603 647)	80	6/10	0	0	0.5	VIII D I 7		Yes	Yes	Yes	p
Saskatoon SE	NW of Blucher (UTM 097 670)	74	6/3	0	0	2.0	VIII D 15		Yes	Yes	No	p
Saskatoon SE	NW of Blucher (UTM 103 667)	75	6/3	0	0	n.r.	VIII D 15		Yes	Yes	No	p



## The 2006 International Piping Plover Breeding Census in Saskatchewan (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE <sup>1</sup>	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Saskatoon SE	NW of Blucher (UTM 155 642)	77	6/15	3	6	4.8	VIII D 7		Yes	Yes	Yes	p
Saskatoon SE	Patience Lake	73	6/14	0	0	10.0	IV I 10 12		Yes	Yes	Yes	p
Saskatoon SE	Porter Lake <sup>3</sup>	71	7/5	0	0	4.0	IV I 12		Yes	Yes	Yes	s/p
Southwest	Antelope Lake	120	6/7	0	0	13.5	IV D 1 8 10		Yes	Yes	No	p
Southwest	Bigstick Lake, N&W sides	118	6/15	0	0	1.0	IV H 14		Yes	Yes	No	f/s/p
Southwest	Freefight Lake	116	6/6	2	7	6.0	IV A 1 2 7 8	IV A 1 7	Yes	Yes	Yes	s(p)
Southwest	Ingebrigt Lake	117	6/6	0	0	11.2	IV A 10		Yes	Yes	Yes	s/p
Southwest	Lonetree Lake	124	6/5	0	0	n.r.	IV D I 7 10 15		Yes	Yes	Yes	p
Southwest	MacLaren Lake	121	6/5	0	0	2.0	V A 1 12		Yes	Yes	Yes	m/p
Southwest	N of Antelope Lake (UTM 818 790)	119	6/6	0	0	8.0	IV A 10		No	Yes	No	s(p)/p
Southwest	Notukeu Lake	123	6/6	3	6	9.6	IV A 1 5 7 8 10	IV A 5 6	Yes	Yes	Yes	p
Southwest	S of Tenaille Lake (UTM 110 467)	122	6/5	0	0	10.0	IV A 1 7		Yes	Yes	No	s/p
Southwest	Snakehole Lake	114	6/4	0	0	1.0	IV A D 10		Yes	Yes	Yes	p
Southwest	Success Lake	115	6/5	0	0	5.0	IV A 10		No	Yes	Yes	p
West	Alsask Reservoir	104	6/7	0	0	1.0	IV A 10		Yes	Yes	Yes	p
West	Luck Lake	111	6/8	0	0	1.6	IV I 13		No	No	Yes	n.r.
West	Opuntia Lake	67	6/5	0	0	1.3	V I 12		Yes	Yes	No	f
West	Plover Lake	62	6/7	0	0	6.4	IV A 12 14		Yes	Yes	No	p
West	Stockwell Lake	105	6/6	0	0	0.2	V I 12		Yes	Yes	Yes	f
West	Valley Center (UTM 025 454)	70	n.r.	1	2	4.0	IV I 10		Yes	Yes	Yes	m
West	Zella Lake	63	6/5	0	0	0.3	IV VIII I 12		Yes	Yes	Yes	p
<b>Total</b>				<b>548</b>	<b>1596<sup>5</sup></b>	<b>1821.8</b>						

<sup>1</sup> At some large sites surveys spanned multiple days. We report the date surveys were initiated.

<sup>2</sup> These sites had no habitat and were not surveyed but are in this table to document they were checked during or near the Census period. Some sites were also included on maps.

<sup>3</sup> Please note that these surveys were conducted outside the Census window.

<sup>4</sup> Locations mapped include some uncertainty ( $\pm$  10-20 km).

<sup>5</sup> This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# **The 2006 International Piping Plover Breeding Census in Alberta**

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Virtually all known Piping Plover sites and habitats were visited in Alberta during the 2006 International Census. A total of 32 observers participated in the survey contributing approximately 350 person-hours of survey effort. These observers covered at least 450 km of shoreline by foot, boat, vehicle, or all-terrain vehicle at 71 lakes in Alberta. All sites that were covered in previous international censuses that had suitable habitat were visited. Fifty six lakes surveyed in 2001 were not surveyed this year because the habitat there was known to be currently unsuitable. Eleven lakes that were not surveyed in 2001 were included in the 2006 census because Piping Plovers had been observed there at some time over the last four years or they were deemed to have suitable habitat. Overall, at least 95% of the known historical and potentially suitable habitat was surveyed in Alberta during the 2006 census.

Breeding populations of Piping Plovers in Alberta increased from 180 to 276 individuals between 1991 and 1996, although this increase was at least partly attributable to a large increase in the number of lakes surveyed (48 to 103). A substantial decline was observed between 1996 and 2001, from 276 to 150 individuals with similar survey efforts (115 lakes surveyed). In 2006, 274 birds were observed in Alberta (71 lakes surveyed), indicating that populations in Alberta have rebounded to similar levels found

in 1996 and show an 83% increase since 2001. This may be due, in part, to implementation of Alberta's Piping Plover Recovery Plan initiated in 2002. This has resulted in habitat protection and improvement at several lakes as well as a nest predator exclosure program which has dramatically increased nesting success of plovers where implemented.

Results from the 2006 survey adequately represent the actual population within Alberta. Since the 2001 International census, breeding pair and brood surveys have been completed on between 33 and 44 lakes each year. This has led to new populations being discovered on five Alberta lakes and results in habitat suitability being monitored at many historical sites. It is unlikely that many lakes with substantial plover populations were missed during the 2006 survey. The observed population of 274 individuals is likely an underestimate since some birds observed as singles may have had a mate. Further, because most nests in Alberta are initiated by about May 15th, some failed breeders may move away from breeding areas by mid-June.

Habitat conditions in Alberta differ greatly from year to year, depending on precipitation. Water levels are highly variable on most lakes, and vegetation encroachment can limit the availability of suitable habitat. In 2006, water levels were relatively high, and beach widths were fairly narrow. Despite this, more plovers were found in Alberta than in any year since 1996.

Even if suitable habitat is present, land use (recreation, grazing, industrial activity) can reduce habitat quality in some areas. However, extensive management over the past few years has alleviated this problem to some extent. In addition, use of predator exclosures at key plover lakes has resulted in large gains in productivity. Management of habitat and nests has no doubt contributed to higher populations

of plovers in Alberta since the last international census.

### Comparison of Census Numbers

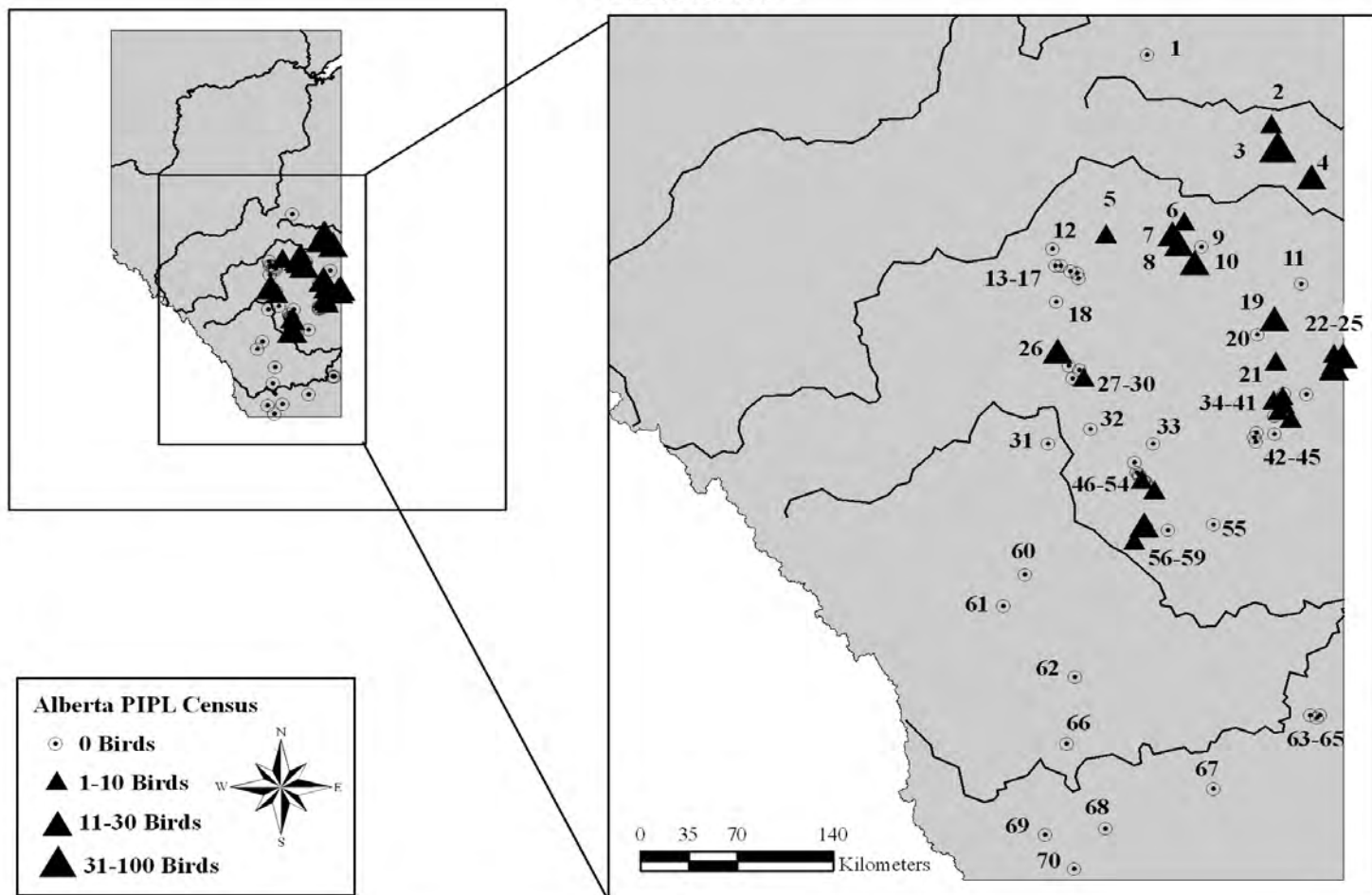
	1991	1996	2001	2006
Total Adults	180	276	150	274 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

### Detectability Study

Sites Included	First Count	Second Count
Rockeling Bay	0	0
Shanks Lake	0	0
Birch Lake, North Basin	0	0

## 2006 International Piping Plover Breeding Census - Alberta -



## The 2006 International Piping Plover Breeding Census in Alberta

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Beaver	Beaverhill Lake	5	6/16	3	8	16.0	IV A 1 5 6 7 10 14		No	Yes	Yes	s(p)
Bonnyville	Frog Lake	4	6/09	4	12	46.0	IV H 7		No	Yes	Yes	federal
Bonnyville	Muriel Lake	3	6/10	18	46	10.0	V H 1 7 8	V H 1 8	No	Yes	Yes	s(p)/m/p
Camrose	Bittern Lake	18	6/06	0	0	5.0	IV A 7 10		No	Yes	Yes	s(p)/p
Camrose	Buffalo Lake	30	6/13	0	0	20.0			Yes	Yes	Yes	s(p)/m/p
Camrose	Miquelon Lake #1 <sup>1</sup>	17	6/01	0	0	2.0	V 1 2 6 12 15		No	Yes	Yes	p
Camrose	Miquelon Lake #2 <sup>1</sup>	16	5/25	0	0	2.0	IV A D G 6 7		Yes	Yes	Yes	s(p)
Camrose	Miquelon Lake #3 (Main lake) <sup>1</sup>	15	5/25	0	0	7.0	IV A D G 1 6 7 12		Yes	Yes	Yes	s(p)/p
Camrose	Red Deer Lake <sup>1</sup>	26	6/18	8	16	7.0	IV A D 6 7	IV A 7	No	Yes	Yes	s(p)/p
Camrose	Rockeling Bay	28	6/05	0	0	3.5	IV A D 6 7 12		Yes	Yes	Yes	s(p)
Camrose	Sittingstone Lake North and South	27	6/06	0	0	8.0	IV D 7		No	No	Yes	s(p)
Cardston	Shanks Lake <sup>1</sup>	70	6/02	0	0	2.4	V VIII A 1 7 8 10		No	Yes	Yes	s(p)/p
Cardston	St. Mary Reservoir	69	6/09	0	0	n.r.	VII I		No	Yes	Yes	s(p)
Cypress (MD)	Chappice Lake <sup>1</sup>	63	6/19	0	0	5.6	IV A 7 10 14		Yes	Yes	Yes	s(p)
Cypress (MD)	Rutherford Lake	64	6/20	0	0	3.2	IV A 7 10 12		Yes	Yes	Yes	s(p)/p
Cypress (MD)	Sam Lake	65	6/19	0	0	5.6	IV A 7 10 12		Yes	Yes	Yes	s(p)
Forty-Mile	Chin Coulee	67	6/09	0	0	n.r.	VIE I		No	No	No	n.r.
Leduc	Joseph Lake	13	6/15	0	0	11.0	IV A 1 6 7 12		No	No	Yes	s(p)/m/p
Leduc/ Camrose	Oliver Lake <sup>1</sup>	14	5/26	0	0	3.5	IV A D G 6 7		No	No	No	s(p)/p
Lethbridge	Keho Lake <sup>1</sup>	66	6/20	0	0	n.r.	VI D 12		Yes	Yes	Yes	s(p)/p
Minburn	Akasu Lake <sup>1</sup>	7	6/02	5	12	10.5	IV A G 7 10 12		Yes	Yes	Yes	s(p)
Minburn	Birch Lake, Main Basin	10	6/13	12	22	7.0	IV A G 7 10	IV A G 7 8 10	No	Yes	Yes	s(p)
Minburn	Birch Lake, North Basin	9	6/13	0	0	3.0	IV A G 7 10		No	Yes	Yes	m
Minburn	Junction Lake	8	6/05	7	14	6.2	IV A 1 7 10	IV A 7 10	No	Yes	Yes	s(p)
Paintearth/ Stettler/SA2	Sullivan Lake	33	6/07	0	0	20.0	IV A D 6 12		No	Yes	Yes	s(p)/p

## The 2006 International Piping Plover Breeding Census in Alberta (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Provost (MD)	Clark Lake <sup>1</sup>	2	6/01	1	9	1.5	IV H 7	IV H 7	No	No	No	n.r.
Provost (MD)	Hansman Lake	34	6/16	0	0	0.9	IV I 12		No	No	Yes	m
Provost (MD)	Horseshoe Lake	36	6/07	3	8	11.0	IV H 7 10	IV H 7	Yes	Yes	Yes	p
Provost (MD)	McLaren (formerly unnamed SE on Captain Eyre Lake)	38	6/04	3	6	4.5	IV H 7	IV H 7	No	Yes	Yes	n.r.
Provost (MD)	Metiskow Lake	35	6/16	0	0	2.5	IV 7		Yes	Yes	Yes	m
Provost (MD)	Piper Lake	37	6/04	2	6	1.4	IV H 7	IV H 7	Yes	Yes	Yes	p
Provost (MD)	Sunken Lake	40	6/07	3	7	1.2	IV H 7		Yes	Yes	Yes	p
Provost (MD)	West Lake	39	6/08	0	0	4.3	IV A 7		No	No	No	p
Provost/Wainwright	Killarney Lake	24	6/08	9	27	11.2	IV H 7	IV H 7	Yes	Yes	Yes	s(p)
Red Deer	Goosequill Lake <sup>1</sup>	31	5/06	0	0	8.8	IV I 15		Yes	Yes	Yes	s(p)/p
Rockyview (MD)	Dalemead Lake (Langdon reservoir)	61	6/06	0	0	10.4	VI D 6		No	No	No	s(p)/p
Special Areas 1	Chain Lake 2	50	6/04	0	0	n.r.	VIII I 12		No	No	Yes	s(p)/p
Special Areas 2	Chain Lake 3A	51	6/04	0	0	2.5	IV H 10		Yes	Yes	Yes	s(p)/p
Special Areas 2	Chain Lake 5	49	6/04	0	0	0.0	VIII I 14		No	Yes	Yes	p
Special Areas 2	Chain Lake 6 <sup>1</sup>	48	6/18	0	0	5.0	VIII I 14		Yes	Yes	Yes	p
Special Areas 2	Coleman Lake	56	6/12	0	0	12.0	IV A D 6 7		No	No	Yes	s(p)
Special Areas 2	Dowling Lake <sup>1</sup>	54	6/02	3	8	33.0	IV H 7 10 12	IV H 7	Yes	Yes	Yes	s(p)/p
Special Areas 2	Handhills Lake	58	6/03	8	17	13.0	IV H 7 10	IV H 7	Yes	Yes	Yes	p
Special Areas 2	Littlefish Lake	59	6/05	2	4	6.0	IV H 1 7	IV H 1 7	Yes	Yes	Yes	s(p)
Special Areas 2	Pearl Lake (Chain Lake 1)	1	6/05	0	0	6.0	IV H 10		Yes	Yes	Yes	s(p)/p
Special Areas 2	Plover Lake	55	6/19	0	0	0.0	IV I 15		No	Yes	Yes	m
Special Areas 2	Unnamed Lake (0.5km S of Handhills)	57	6/03	0	0	1.0	IV H 7		No	No	Yes	m
Special Areas 4	Foster Lake	41	6/14	1	2	6.7	IV A 1 7 12	IV A 7	No	No	Yes	s(p)/p
Special Areas 4	Gooseberry Lake	42	6/08	0	0	10.0	IV A 1 10 12		Yes	Yes	Yes	s(p)/p
Special Areas 4	Neutral Hills A <sup>1</sup>	45	6/19	0	0	4.6	IV A 6 10 12		Yes	Yes	Yes	s(p)/p
Special Areas 4	Neutral Hills B1 & B2 <sup>1</sup>	44	6/19	0	0	19.8	IV A 6 10 12		Yes	Yes	Yes	s(p)/p
Special Areas 4	Neutral Hills C1 <sup>1</sup>	43	6/19	0	0	n.r.	IV A		Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in Alberta (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Starland	Chain Lake 7 <sup>1</sup>	47	6/18	0	0	4.0	IV H 10		Yes	Yes	Yes	s(p)/p
Starland	Clear Lake - Chain Lake 3	52	6/04	0	0	3.4	IV H 10		Yes	Yes	Yes	s(p)/p
Starland/ Special Areas 2	Chain Lake 4	53	6/04	2	7	11.0	IV H 7 10	IV H 7	Yes	Yes	Yes	s(p)/p
Stettler	Lowden Lake	32	6/07	0	0	7.5	IV A D 6 12		Yes	Yes	Yes	s(p)/p
Stettler	Spiers Lake	46	6/07	0	0	4.0	IV A D 6 7	IV D 7	Yes	Yes	Yes	f/p
Stettler	Rider Lake	29	6/06	0	1	4.0	IV A D G 6 7 10	IV D 7	Yes	Yes	Yes	s(p)/p
Strathcona	Cooking Lake	12	6/15	0	0	2.2	IV G 1 2 5		No	No	No	s(p)
Two Hills	Plain Lake	6	6/14	0	1	4.5	IV A 12	IV A 8	No	No	Yes	s(p)/p
Vermilion River	Albert Lake	11	6/12	0	0	2.0	IV A 7 10		Yes	Yes	Yes	s(p)/p
Vulcan	McGregor Lake	62	n.r	0	0	n.r.	n.r.		No	Yes	Yes	s(p)
Wainwright (MD)	Baxter Lake	19	6/07	10	15	4.0	IV A G 7 10		Yes	Yes	Yes	s(p)
Wainwright (MD)	Border Lake	21	6/07	0	1	1.5	IV A 1 12	IV A 12	No	No	No	federal
Wainwright (MD)	Cipher Lake <sup>1</sup>	22	5/31	1	2	.2	IV H 7	IV H 7	Yes	Yes	Yes	m
Wainwright (MD)	Mott Lake	20	6/07	0	0	5.0	IV A 1 12		No	No	No	federal
Wainwright (MD)	NW of Killarney <sup>1</sup>	25	6/28	3	6	4.0			No	Yes	Yes	m
Wainwright (MD)	Reflex Lake	23	6/06	6	17	10.7	IV H 7 10		Yes	Yes	Yes	p
Warner	Milk River Ridge Reservoir	68	6/09	0	0	2.0	VI A 1 7		No	No	No	n.r.
Wheatland	Dawson Lake	60	6/06	0	0	2.4	V D 6 10		No	No	No	p
<b>Total</b>				<b>114</b>	<b>274</b>	<b>454.2</b>						

<sup>1</sup> Please note that these surveys were conducted outside the Census window.

# **The 2006 International Piping Plover Breeding Census at sites on the Missouri River (MT, ND, SD, NE)**

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The area of survey was the Missouri River from Fort Peck Lake in eastern Montana to Ponca State Park in northeastern Nebraska. Not all of the river and reservoirs between these two boundaries were surveyed as some areas lack habitat.

Of historic and known Piping Plover habitat along the Missouri River and reservoirs only one area was missed during the census. This was the northern part of the Snake Creek Embankment on the east side of Lake Sakakawea, North Dakota. Due to a misunderstanding between two survey crews, each thought the other would survey the site. Neither surveyed the site. As the site immediately west of this site had one Piping Plover and the site immediately south of the site had five Piping Plovers and given that this area contained limited amounts of habitat, it is believed that few plovers were missed. Overall, the Piping Plover adult census for the Missouri River was 1,266.

In comparison to previous International Piping Plover Census results, 2006 represents a record number of Piping Plovers on the Missouri River.

In 1991 625 plovers were counted, in 1996 the census was 187 and in 2001 the number was 1,048. This would represent a 21% (1266/1048) increase in Piping Plover numbers from 2001 to 2006. However, as a part of the U.S. Fish & Wildlife Service's 2001 Biological Opinion on the Missouri River, the Corps of Engineers is required to conduct an annual census for Piping Plovers on the Missouri River. A comparison with the 2005 results tells a different story. In 2005 a record number of 1,764 Piping Plover adults were counted on the Missouri River. This represents a 28% decline in plover numbers compared to 2006. What follows is a segment by segment comparison between 2005 and 2006.

Segment	2005	2006	Percent Change
Fort Peck Lake	26	18	-31
Missouri below Fort Peck	2	5	+150
Lake Sakakawea	746	427	-43
Missouri below Garrison	220	170	-23
Lake Oahe	364	314	-13
Missouri below Ft. Randall	42	37	-12
Lewis & Clark Lake	24	3	-88
Missouri below Gavins Pt.	340	292	-14
Total	1764	1266	-28

As the table shows, Piping Plover numbers decreased in seven of the eight segments. Lake Sakakawea had the largest decrease with a decline of 319 adults. The Missouri below Garrison Dam, Lake Oahe and the Missouri below Gavins Point Dam also saw substantial declines in adult numbers with 50, 50 and 48 respectively.

This Census represents the first time in nine years that Piping Plover numbers declined on the Missouri River from one year to the next.



However 2006's 1,266 adults compares favorably to the average annual count of 777 adults for 1993 through 2005. (1993 was the first year a complete census of the Missouri River was completed.)

I believe the 2006 census of the Missouri River adequately represents Piping Plover numbers for the river. From previous years censuses the historical nesting areas on the river were well known and weekly surveys conducted during May 2006 prior to the adult census gave the crews an idea of where the plovers were located. The quality of the crews also provided for accurate counts. Each crew had at least one person with two years experience and several crews had members with five to ten years of experience.

Without question, habitat quality and quantity are the primary factors affecting Piping Plover numbers on the Missouri River. Both the quality and quantity of habitat have been declining on the Missouri River, especially on Lake Sakakawea. Drought in the northern Great Plains and diminished snowpack in the northern Rockies have caused the lake levels for Fort Peck Lake, Lake Sakakawea and Lake Oahe to decline throughout the several past years. This has created substantial shoreline beach habitat for the plovers on Lakes Sakakawea and Oahe. In 2006 however, Lake Sakakawea began the nesting season six feet higher than in 2005. The inundation of shoreline habitat plus the loss of habitat due to vegetation encroachment greatly reduced the amount of habitat available on the lake and probably was responsible for the substantial reduction in adult numbers on the lake. The decline in adult numbers on the Missouri below Garrison Dam and Lake Oahe cannot be attributed to any specific cause, but vegetation encroachment probably reduced the amount of habitat available to the plovers. On the Missouri River below Fort Randall and Gavins Point Dams, increased releases to support navigation on the lower Missouri River

decreased the amount of habitat available during the census compared to 2005.

#### Comparison of Census Numbers - Overall

	1991	1996	2001	2006
Total Adults	625	185	476	1,266 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

#### Comparison of Census Numbers - Montana

	1991	1996	2001	2006
Total Adults	26	24	7	23 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

#### Detectability Study - Montana

Sites Included	First Count	Second Count
Missouri River Mile 1637.0	0	0

#### Comparison of Census Numbers – N Dakota

	1991	1996	2001	2006
Total Adults	307	125	643	702 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

#### Detectability Study – North Dakota

Sites Included	First Count	Second Count
Missouri River Mile 1381.0	2	2
Missouri River Mile 1380.0 (Rerag Island)	7	5
Missouri River Mile 1377.3 (Sara's Island)	0	0
Missouri River Mile 1356.4	0	0
Missouri River Mile 1341.3 (Wilton Island)	0	0
Missouri River Mile 1334.3 (North Double Ditch)	8	6
Missouri River Mile 1328.2 (Sundown Acres)	1	2

### Detectability Study – North Dakota con't

Sites Included	First Count	Second Count
Lake Oahe (Double Hook) RM 1301.7	5	4
Lake Oahe (Little Joe Flats) RM 1294.1	0	0
Lake Oahe (McLean Island) RM 1291.7	8	6
Lake Oahe (Fort Rice) RM 1275	0	0
Lake Oahe (Porcupine Hill Island) RM 1248.9	0	0
Lake Sakakawea- Tobacco Garden Bay	20	14
Lake Sakakawea- Charlson Flats	0	0
Lake Sakakawea- White Earth Bay	4	2
Lake Sakakawea- Antelope Creek	3	4
Lake Sakakawea- Beacon Island	3	4
Lake Sakakawea- Rodeo Island East <sup>1</sup>	0	0
Lake Sakakawea- Fox Island	5	9
Lake Sakakawea- Shell Creek Bay	0	0
Lake Sakakawea- Gull Island	5	8
Lake Sakakawea- Van Hook North	0	0
Lake Sakakawea- Van Hook SE	0	0
Lake Sakakawea- Sheepshead Island	26	45
Lake Sakakawea- Deepwater Bay East <sup>2</sup>	2	2
Lake Sakakawea- Arikara Bay	10	12
Lake Sakakawea- Ruona Bay	1	0
Lake Sakakawea- Nishu Bay	2	0
Lake Sakakawea- Beaver Creek Bay	4	1
Lake Sakakawea- Renner Bay <sup>3</sup>	0	0

Sites Included	First Count	Second Count
Lake Sakakawea- Douglas East Arm	1	0
Lake Sakakawea- Douglas Creek Bay <sup>4</sup>	0	0
Lake Sakakawea- De Trobriand Bay <sup>5</sup>	0	0
Lake Sakakawea- Steinke Bay	3	0
Lake Sakakawea- West TottenWest <sup>6</sup>	5	3
Lake Sakakawea- Mallard Island NE	15	8
Lake Sakakawea- Mallard Island South	0	0

<sup>1</sup>Only east side was included in detectability survey and no birds were seen there on either survey.

<sup>2</sup>Only a portion of this site (2 and 3) was included in the detectability study and 2 birds were seen in this portion on both surveys.

<sup>3</sup>Only a portion of this site (pt #4) was included in the detectability study and no birds were seen there on either survey.

<sup>4</sup>Only portions of this site (islands # 1 and 3) were included in detectability survey and no birds were seen there on either survey.

<sup>5</sup>Only a portion of this site was included in the detectability study and no birds were seen there on either survey.

<sup>6</sup>Only a portion of this site (5 and 7) was included in the detectability study.

### Comparison of Census Numbers – Nebraska

	1991	1996	2001	2006
Total Adults	0	9	8	191 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

### Detectability Study – Nebraska

Sites Included	First Count	Second Count
Missouri River Mile 799.0	2	5
Missouri River Mile 781.5	6	8

### Comparison of Census Numbers – S Dakota

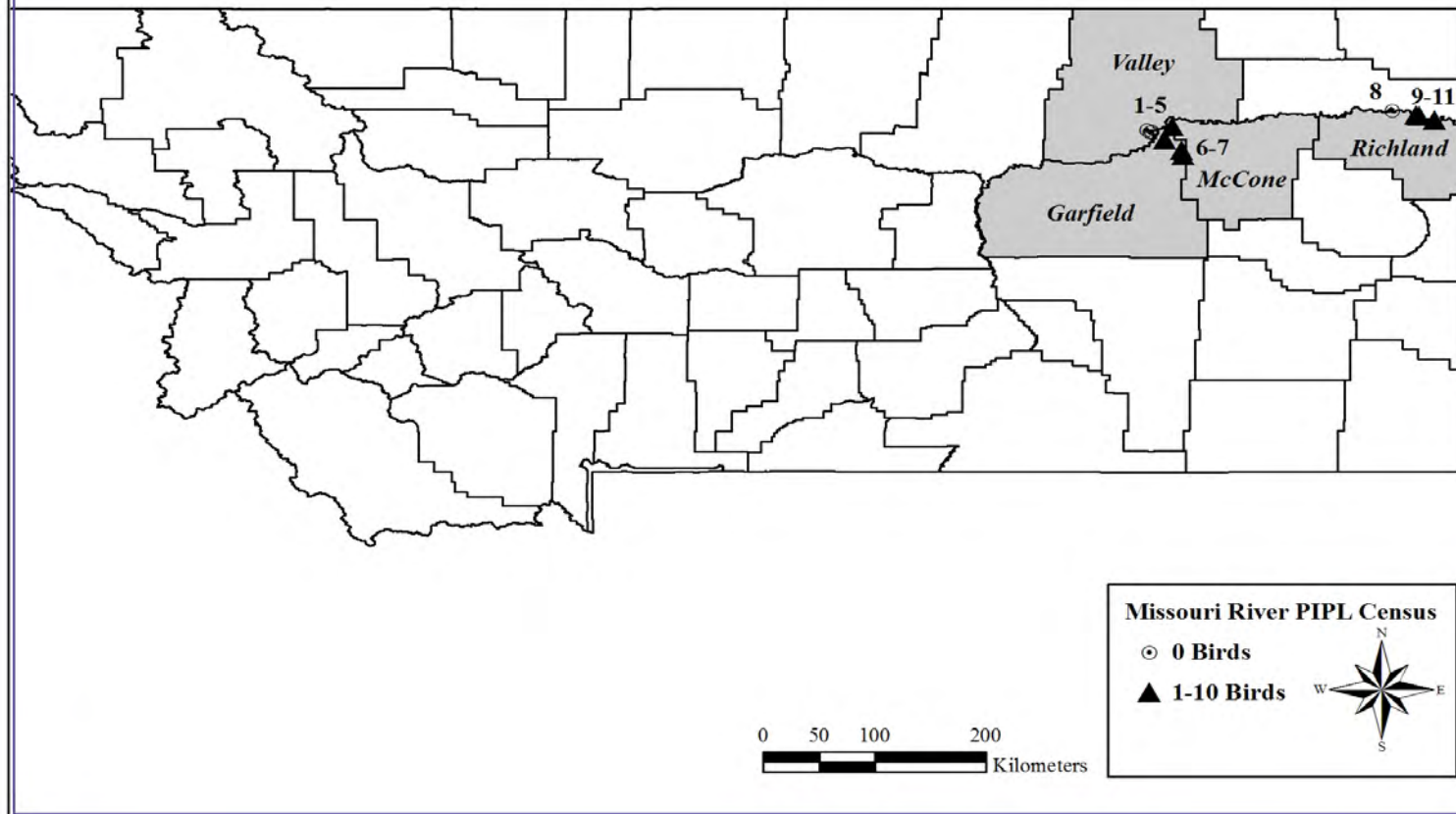
	1991	1996	2001	2006
Total Adults	292	29	390	350 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

### Detectability Study – South Dakota

Sites Included	First Count	Second Count
Missouri River Mile 790.9	1	1
Missouri River Mile 773.0	1	0
Missouri River Mile 768.0	4	4
Lake Oahe (Demery Island) RM 1231.3	0	0
Lake Oahe (Kenel Flats-North) RM 1230.5	19	13
Lake Oahe (Kenel South) RM 1229	19	24
Lake Oahe (Le Compte Creek) RM 1188.5	0	0
Lake Oahe (Blue Blanket) RM 1189	0	0
Lake Oahe (Swift Bird South) RM 1159	18	20
Lake Oahe (Cheyenne River - Fish Gut Creek) RM 1110	0	0
Lake Oahe (Little Bend-West) RM 1111	0	1
Lake Oahe (Dry Creek) RM 1091	0	0
Lake Oahe (Plum Creek) RM 1090	0	0
Lake Oahe (Cow Creek) RM 1089	6	6
Missouri River Mile 842 (The Complex)	0	0

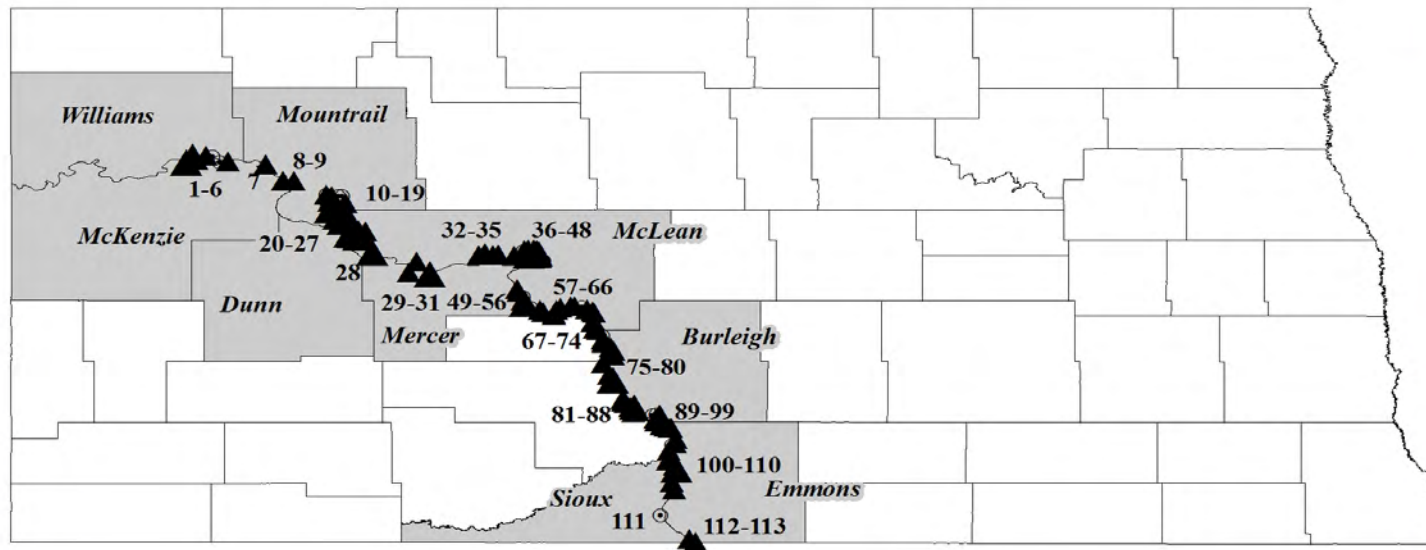
## 2006 International Piping Plover Breeding Census - Missouri River (Montana) -



## The 2006 International Piping Plover Breeding Census on the Missouri River in Montana

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Garfield	Haxby Point SE	4	6/9	1	2	0.5	VI A 15	VIA 15	Yes	Yes	Yes	f
Garfield	Rock Creek Bay	7	6/9	1	2	0.2	VI A 7	VIA 7	Yes	Yes	Yes	f
Garfield	Rock Creek Bay North	6	6/9	2	4	0.5	VI A 7	VIA 7	Yes	Yes	Yes	f
McCone	Bear Creek Bay	5	6/6	1	2	0.3	VI A I 7	VII 7	Yes	Yes	Yes	f
Richland	Below Culbertson Missouri River Mile 1607.0	11	6/7	0	1	0.6	III F 5	III F 5	Yes	Yes	Yes	s(p)
Richland	Below Culbertson Missouri River Mile 1614.8	10	6/7	1	3	0.3	III F 5	III F 5	Yes	Yes	Yes	s(p)
Richland	Missouri River Mile 1615.5	9	6/8	0	1	1.0	III F 5	III F 5	Yes	Yes	Yes	s(p)
Richland	Missouri River Mile 1637.0	8	6/8	0	0	0.8	III A F 5		Yes	Yes	Yes	s/p
Valley	Duck Creek Bay	1	6/6	1	3	0.4	VI G 8 15	VI G 8	Yes	Yes	Yes	f
Valley	Skunk Coulee Bay North 1	2	6/6	1	3	0.2	VI A 7	VI A 7	Yes	Yes	Yes	f
Valley	Skunk Coulee Bay North 2	3	6/6	1	2	0.6	VI I 7	VII 7	Yes	Yes	Yes	f
<b>Total</b>				<b>9</b>	<b>23</b>	<b>5.4</b>						

## 2006 International Piping Plover Breeding Census - Missouri River (North Dakota) -



0 37.5 75 150  
Kilometers



## The 2006 International Piping Plover Breeding Census on the Missouri River in North Dakota

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Burleigh	Lake Oahe (Apple Creek) RM 1300.5	88	6/7	1	2	0.2	III VI F 5 13	III F 5	Yes	Yes	Yes	f
Burleigh	Lake Oahe (Castillo's Corner-Huff) RM 1288	94	6/8	2	4	1.2	III F 5 12	VI F 5	Yes	Yes	Yes	f
Burleigh	Lake Oahe (Double Hook) RM 1301.7	87	6/7	2	5	1.6	III VI F 1 2 13	III F 1 2	Yes	Yes	Yes	f
Burleigh	Lake Oahe (Huff Island-North) RM 1289.3	93	6/8	0	1	1.2	III F 5 13	III F 5	Yes	Yes	Yes	f
Burleigh	Lake Oahe (Jace Island) RM 1291.9	91	6/7	4	8	2.9	III VI F 5	III F 5	Yes	Yes	Yes	f
Burleigh	Lake Oahe (Little Heart Island) RM 1302.5	86	6/7	0	1	0.4	III VI F 2 5 13	III F 2	Yes	Yes	Yes	f
Burleigh	Lake Oahe (Little Joe Flats) RM 1294.1	89	6/15	0	0	1.2	III VI F 5		Yes	Yes	Yes	f
Burleigh	Lake Oahe (McLean Island) RM 1291.7	92	6/7	2	8	2.4	III VI F 5 13	III F 5	Yes	No	Yes	f
Burleigh	Lake Oahe (Rifle Range Island) RM 1293	90	6/7	0	0	1.2	III VI F 5 13		No	Yes	Yes	f
Burleigh	Missouri River Mile 1304 (Mary's Bend)	85	6/7	5	9	2.8	III F 2 5 13	III F 2 5 13	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1306 (Sibley Island)	84	6/15	1	2	0.2	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1308.9 (Eagle's Nest)	83	6/7	5	10	2.1	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1310 (Tressel)	82	6/7	3	4	0.8	III F 5	III F 5	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1310.4 (Barracles)	81	6/7	1	4	1.2	III F 5	III F 5	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1319.5 (Heskett)	80	6/6	6	12	1.6	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1322 (Hoge Island)	79	6/14	1	1	0.2	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1328.2 (Sundown Acres)	78	6/14	1	2	0.8	III F 5 13	III F 5	Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census on the Missouri River in North Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Burleigh	Missouri River Mile 1332 (Cadillac Ranch)	77	6/6	2	4	0.2	III F 5 13	III F 5	No	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1334.3 (North Double Ditch)	76	6/6	4	8	1.9	III F 5 13	III F 5	No	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1336 (Twin Buttes)	75	6/6	4	9	3.6	III F 5 13	III F 5	No	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1338.3 (Golf Ball Island)	74	6/6	1	1	1.2	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1339 (Highlines)	73	6/6	0	4	2.4	III F 5 13	III F 5	No	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1339.8 (Overlook)	72	6/6	0	2	1.6	III F 5 13	III F 5	No	Yes	Yes	s(p)
Burleigh	Missouri River Mile 1341.3 (Wilton Island)	71	6/6	0	0	0.8	III F 5 13		Yes	Yes	Yes	s(p)
Dunn	Lake Sakakawea- Independence Point	20	6/12	0	4	9.7	VI A 1 7 12	VI A 7	No	Yes	Yes	f
Dunn	Lake Sakakawea- Ruona Bay	27	6/12	0	1	3.2	VI A 12	VI A 12	No	Yes	Yes	f
Emmons	Lake Oahe (Barrels) RM 1284.3	97	6/8	4	9	3.2	III F 5 13	III F 5	Yes	Yes	Yes	f
Emmons	Lake Oahe (Benoff Island) RM 1283.8	98	6/8	1	1	0.2	III F 5	III F 5	Yes	No	Yes	f
Emmons	Lake Oahe (Cyclone Bar) RM 1278.2	100	6/8	1	1	1.2	III F 5 13	III F 5	Yes	Yes	Yes	f
Emmons	Lake Oahe (Fire Island) RM 1285	96	6/8	5	10	1.2	III F 5 13	III F 5	Yes	Yes	Yes	f
Emmons	Lake Oahe (Glencoe) RM 1283	99	6/8	1	4	1.2	III F 5 13	III F 5	Yes	Yes	Yes	f
Emmons	Lake Oahe (Gravel Pit) RM 1265.6	107	6/12	1	3	0.4	III VI F 5	VI F 5	Yes	No	Yes	f
Emmons	Lake Oahe (OJ Flats) RM 1266.2	106	6/12	3	5	0.8	VI F 5	VI F 5	Yes	No	Yes	f
Emmons	Lake Oahe (Sheer Island) RM 1276	101	6/12	1	2	0.2	VI F 5	VI F 5	Yes	No	Yes	f
Emmons	Lake Oahe (Silo Island) RM 1286	95	6/8	3	6	2.0	III F 2 5	III F 2 5	Yes	No	Yes	f
Emmons	Lake Oahe (SSD) RM 1264.6	108	6/12	6	12	0.4	VI F G 5	VI F 5	Yes	Yes	Yes	f
Emmons	Lake Oahe (State Line WPA- north)	113	6/13	5	9	8.1	VI A 1	VI A 1	Yes	No	Yes	f
Emmons	Lake Oahe (State Line) RM 1234	112	6/9	2	4	2.4	VI A 7	VI A 7	Yes	No	Yes	f
McKenzie	Lake Sakakawea- Antelope Creek	8	6/22	2	4	4.8	VI A 1 7 12	VI A 7	Yes	No	Yes	f



## The 2006 International Piping Plover Breeding Census on the Missouri River in North Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
McKenzie	Lake Sakakawea- Beacon Point	6	6/15	1	5	6.5	VI A 1 12	VI A 1	Yes	Yes	Yes	f
McKenzie	Lake Sakakawea- Charlson Flats (1502 RM)	5	6/13	0	0	2.4	VI A 12		No	No	Yes	f
McKenzie	Lake Sakakawea- Tobacco Gardens Bay	1	6/7	9	20	2.4	VI A 1	VI A 1	No	Yes	Yes	f
McLean	Lake Sakakawea- Arikara Bay	25	6/15	3	12	4.8	VI A 1 6 7	VI A 6 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Arikara South	26	6/6	5	14	3.2	VI A 1 6 7 12	VI A 1 6 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- De Trobiand Bay	36	6/6	2	9	13.2	VI A 1 12	VI A 1	No	Yes	Yes	f
McLean	Lake Sakakawea- Deepwater Bay East	23	6/5	2	8	11.3	VI A 1 6 7 12	VI A 1 6 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Deepwater Bay West	22	6/5	4	9	6.5	VI A 1 7 12	VI A 1 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Deepwater Island	24	6/6	6	13	0.8	VI G 7 8	VI G 7	No	No	No	f
McLean	Lake Sakakawea- Douglas Creek Bay	32	6/6	1	7	1.6	VI A 12 14	VI A 12 14	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Douglas East Arm	33	6/13	0	1	3.2	VI A 7 12	VI A 12	Yes	Yes	Yes	f
McLean	Lake Sakakawea- East Bible Camp Bay	34	6/13	2	5	4.0	VI A 7 15	VI A 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Garrison Cabin Site	35	6/13	1	1	0.8	VI A 7	VI A 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Good Bear Bay to Bay of Italy	28	6/13	7	12	19.4	VI A 1 7	VI A 1 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Mallard Island	42	6/15	2	3	8.1	VI A 1 7	VI A 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Mallard Island NE	43	6/7	6	15	3.2	VI G 1 7 12	VI G 1 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Mallard Island South	47	6/14	0	0	6.5	VI A 7 8		Yes	Yes	Yes	f
McLean	Lake Sakakawea- Nishu Bay/Island	30	6/13	0	2	5.6	VI G 12	VI G 12	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Seven Sisters	40	6/7	13	29	1.6	VI G 7	VI G 7	No	No	No	f
McLean	Lake Sakakawea- Sheep's Head Island	21	6/15	20	45	4.8	VI G 6 7	VI A G 6 7	No	Yes	Yes	f

## The 2006 International Piping Plover Breeding Census on the Missouri River in North Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
McLean	Lake Sakakawea- Shell Village Island	19	6/5	28	87	10.0	VI G 1 3 6 12 15	VI G 1 6 15	No	Yes	Yes	f
McLean	Lake Sakakawea- Snake Creek Embankment	46	6/5	2	5	1.6	VI A D 7 12 15	VI D 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Steinke Bay	38	6/6	2	3	19.4	VI A G 1 7 12	VI G 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Steinke Bay Island	39	6/7	8	15	9.7	VI G 1 7 12 15	VI G 1 7 15	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Steinke Bay Peninsula	37	6/16	0	0	0.8	VI A 7 12		Yes	Yes	Yes	f
McLean	Lake Sakakawea- Van Hook SW	18	6/7	2	12	10.5	VI A 7 12 15	VI A 7	No	Yes	Yes	f
McLean	Lake Sakakawea- West Totten East	45	6/8	0	1	5.6	VI A 1 7 12 15	VI G 1	Yes	Yes	Yes	f
McLean	Lake Sakakawea- West Totten Islands	44	6/7	6	14	1.6	VI A 7 12 15	VI G 7	No	No	No	f
McLean	Lake Sakakawea- West Totten West	41	6/12	6	13	3.2	VI A G 1 7 15	VI A G 1 7	Yes	Yes	Yes	f
McLean	Lake Sakakawea- Wolf Creek	48	6/14	0	0	8.1	VI A 12		Yes	Yes	Yes	f
McLean	Missouri River Mile 1344 (Carlisle Island)	70	6/5	0	1	1.2	III F 5	III F 5	No	Yes	Yes	s(p)
McLean	Missouri River Mile 1345 (Sanger)	69	6/5	3	6	0.2	III F 5 13	III F 5	No	Yes	Yes	s(p)
McLean	Missouri River Mile 1347.5 (Cross Ranch Island)	68	6/5	4	8	0.8	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1348.3 (Painted Woods Creek Island)	67	6/5	2	4	3.2	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1351 (Tweetum Island)	66	6/5	1	5	1.2	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1352.5 (Bardello Island)	65	6/5	2	7	0.3	III F 5 13	III F 5	No	Yes	Yes	s(p)
McLean	Missouri River Mile 1353.7 (Washburn Island)	64	6/5	1	2	2.4	III F 5 13	III F 5	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1356.4	63	6/4	0	0	0.3	III F 5 6 13		No	Yes	Yes	s(p)
McLean	Missouri River Mile 1357.3	62	6/4	0	4	0.3	III F 5 6 13	III F 6	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1358	61	6/4	3	10	0.1	III F 3 5 6 13	III F 5 6	No	Yes	Yes	s(p)
McLean	Missouri River Mile 1361	60	6/4	0	2	0.2	III F 5 6 13	III F 5	Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census on the Missouri River in North Dakota (Continued)

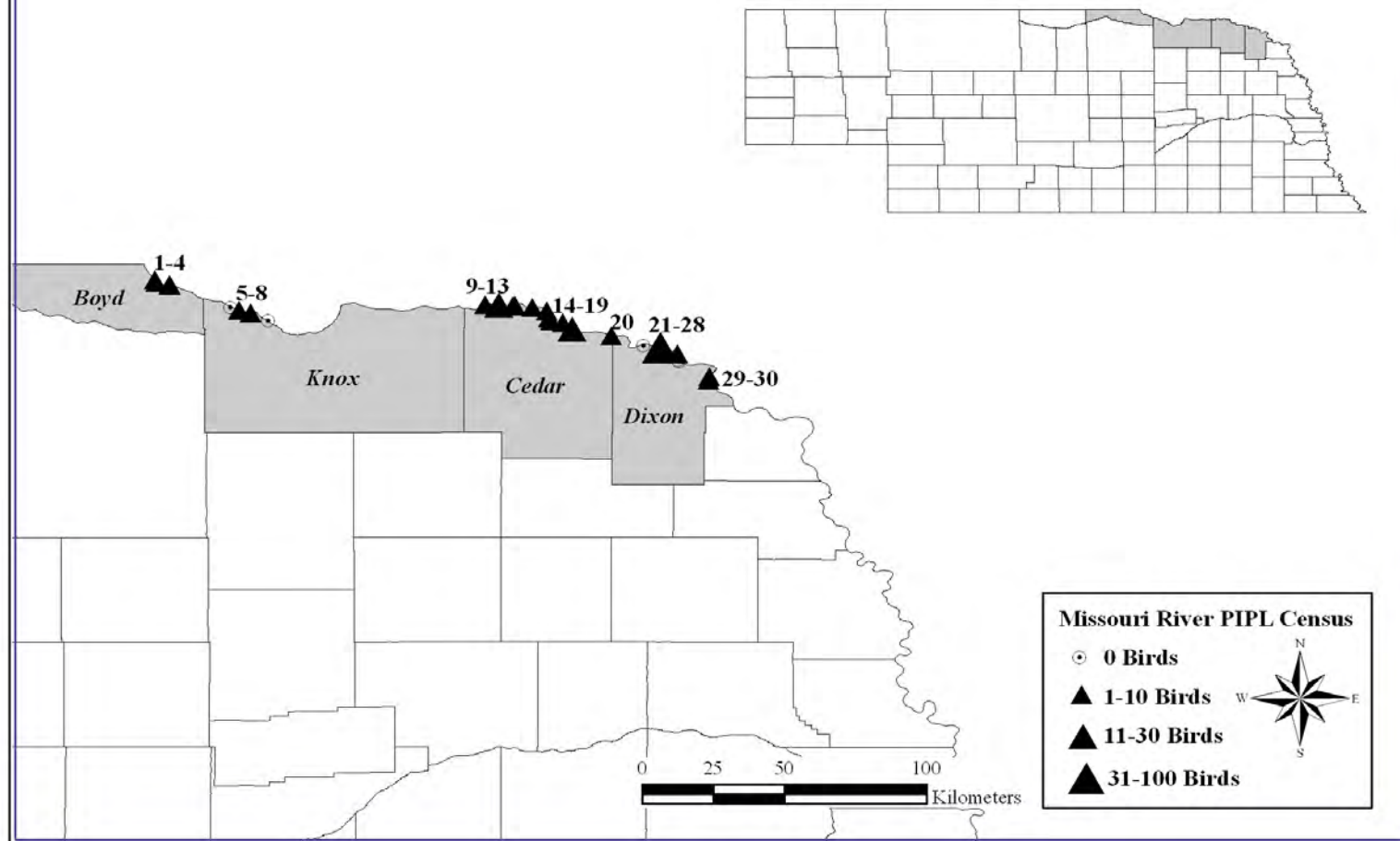
COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
McLean	Missouri River Mile 1362.4	59	6/4	1	3	0.2	III A 1 6 12	III A 1 6	No	Yes	Yes	s(p)
McLean	Missouri River Mile 1364.5 (Cow Bar)	58	6/4	2	7	0.3	III F 1 3 6	III F 1 1	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1365.0	57	6/4	0	4	0.2	III F 3 5 6	III F 6	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1367.5	56	6/4	2	9	0.3	III F 5 6 13	III F 5 6 13	No	Yes	Yes	s(p)
McLean	Missouri River Mile 1369.0	55	6/3	0	1	0.1	III A 3 5 12 15	III A 12	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1370.0	54	6/3	0	0	0.1	III F 5 6		Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1374 (Honey Hole)	53	6/3	2	15	0.5	III F 5 6 13	III F 5 6 13	No	Yes	Yes	s(p)
McLean	Missouri River Mile 1376.0	52	6/3	0	2	0.3	III G 6	III G 7	No	No	Yes	s(p)
McLean	Missouri River Mile 1377.3 (Sara's Island)	51	6/13	0	0	0.3	III F 8 12 13		Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1380 (Rerag Island)	50	6/3	2	7	0.3	III F 5 6 13	III F 6 13	Yes	Yes	Yes	s(p)
McLean	Missouri River Mile 1381	49	6/13	1	2	0.8	III F 5 6 13	III F 5	No	No	Yes	s(p)
Mercer	Lake Sakakawea- Beaver Creek Bay	29	6/16	1	4	32.3	VI A 1 7	VI A 7 VI A 6 7	Yes	Yes	Yes	f
Mercer	Lake Sakakawea- Renner Bay	31	6/8	9	19	6.5	VI A 6 7 12	12	Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- Beacon Island	9	6/22	2	4	2.4	VI G 1 8 13 14	VI G 8	Yes	No	Yes	f
Mountrail	Lake Sakakawea- Fox Island	15	6/14	3	9	3.2	VI G 1 7 12	VI B 1	Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- Gull Island	11	6/20	3	8	3.2	VI A 1 7 12	VI A 1	Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- Rodeo Island (Van Hook Arm)	10	6/13	0	1	1.6	VI A 1 7 12	VI A 7	Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- Shell Creek Bay	13	6/6	0	0	5.5	VI A 12		Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- Van Hook Arm	14	6/6	0	0	6	VI A 12		Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- Van Hook Arm East	16	6/6	4	6	2.4	VI A 12		Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- Van Hook North	12	6/6	0	0	8.9	VI A 6 12		Yes	Yes	Yes	f
Mountrail	Lake Sakakawea- White Earth Bay	7	6/16	2	4	1.6	VI A 1 8 12	VI A 1	Yes	No	Yes	f

## The 2006 International Piping Plover Breeding Census on the Missouri River in North Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Mountrail/ McLean	Lake Sakakawea- Van Hook SE	17	6/15	0	0	2.4	VI A 7		Yes	Yes	Yes	f
Sioux	Lake Oahe (Beaver Bay) RM 1255.8	110	6/12	1	2	0.2	VI A 12	VI A 12	No	No	No	f
Sioux	Lake Oahe (Cannonball Island) RM 1268.5	104	6/12	0	1	0.2	VI F 5	VI F 5	Yes	Yes	Yes	f
Sioux	Lake Oahe (Casino) RM 1258.7	109	6/12	0	1	1.6	VI A 5 12	VI A 12	No	No	No	f
Sioux	Lake Oahe (Fort Rice) RM 1275	102	6/12	0	0	n.r.	VI A 12		Yes	No	Yes	f
Sioux	Lake Oahe (Porcupine Hill Island) RM 1248.9	111	6/16	0	0	0.2	VI A 12		Yes	No	Yes	f
Sioux	Lake Oahe (Reagan Reach) RM 1268	105	6/12	0	1	0.8	VI F 5	VI F 5	Yes	Yes	Yes	f
Sioux	Lake Oahe (South Rice) RM 1273.3	103	6/12	1	5	1.6	VI F 5	VI F 5	Yes	No	Yes	f
Williams	Lake Sakakawea- Hofflund (RM 1505)	3	6/9	2	5	5.7	VI A 7	VI A 7	No	No	Yes	f
Williams	Lake Sakakawea- Little Egypt (RM 1507)	4	6/9	0	0	1.6	VI A 7		No	Yes	Yes	f
Williams	Lake Sakakawea- Red Mike	2	6/12	10	28	6.5	VI A 1	VI A 1	No	No	Yes	f
<b>Total</b>				<b>282</b>	<b>733<sup>1</sup></b>	<b>363.5</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

## 2006 International Piping Plover Breeding Census - Missouri River (Nebraska) -



## The 2006 International Piping Plover Breeding Census on the Missouri River in Nebraska

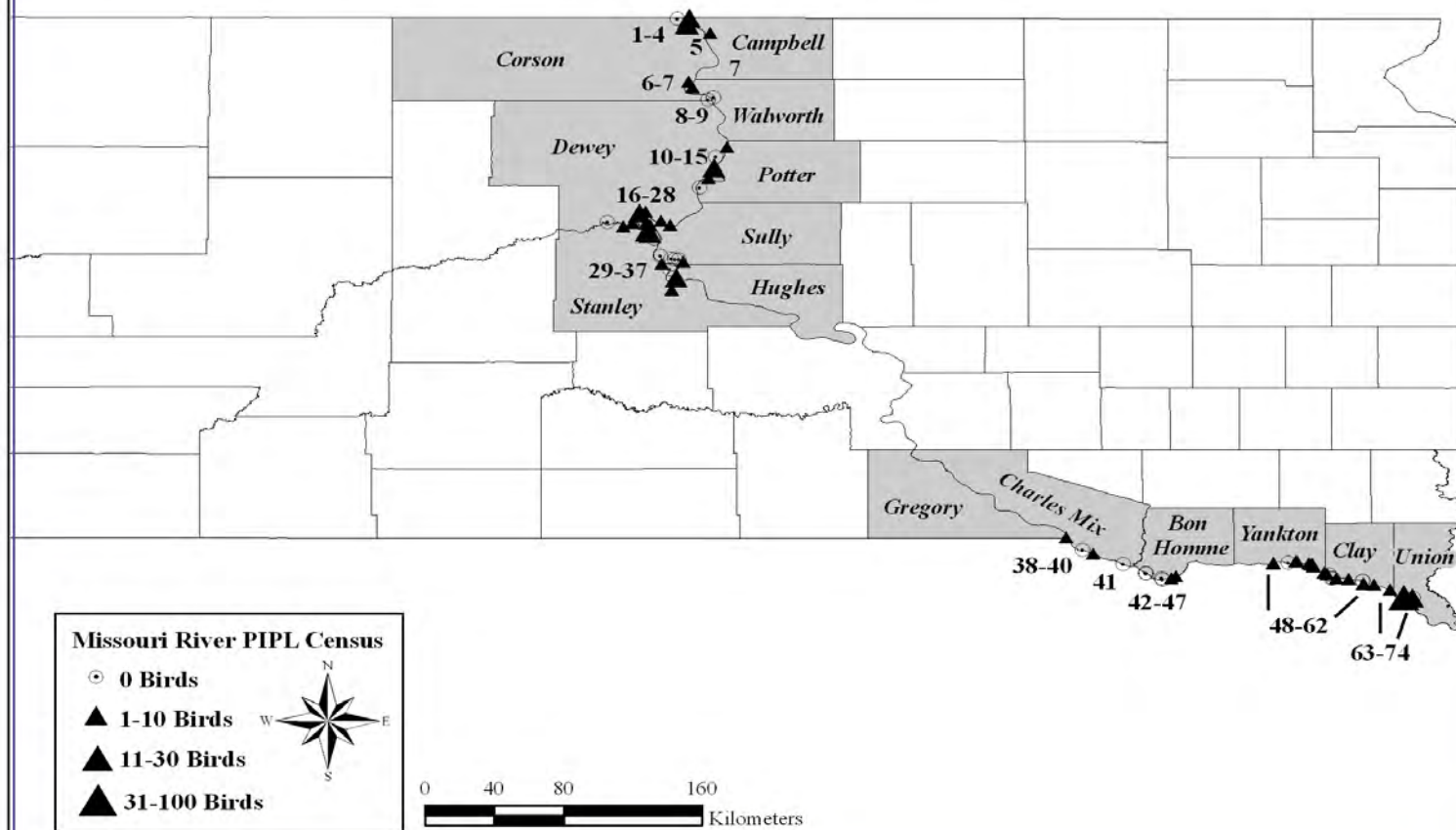
COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Boyd	Missouri River Mile 866.5	4	6/5	3	5	1.0	D 4	D 10	Yes	Yes	Yes	p
Boyd	Missouri River Mile 866.9	3	6/5	2	3	0.2	D 4	D 10	Yes	Yes	Yes	p
Boyd	Missouri River Mile 869.5	2	6/5	3	10	0.5	VI A 1	III F 5 13	Yes	Yes	Yes	p
Boyd	Missouri River Mile 870.2	1	6/5	3	5	0.2	III F 3 5 13	III F 5 13	Yes	Yes	Yes	p
Cedar	Missouri River Mile 781.5	20	6/13	3	8	1.0	III F 13	III F 13	Yes	Yes	Yes	p
Cedar	Missouri River Mile 788.5	19	6/5	7	25	1.6	III F 13	III F 13	Yes	Yes	Yes	f/p
Cedar	Missouri River Mile 791.5	18	6/9	3	6	0.1	III F 5 13		Yes	Yes	Yes	p
Cedar	Missouri River Mile 793.3	17	6/9	3	6	0.2	III F 3 5 13		Yes	Yes	Yes	p
Cedar	Missouri River Mile 793.6	16	6/9	1	6	0.6	III F 5 13	III F 13	Yes	Yes	Yes	p
Cedar	Missouri River Mile 795.5	15	6/9	1	2	0.2	III F 5 13	III F 13	Yes	Yes	Yes	p
Cedar	Missouri River Mile 799.0	14	6/19	1	5	0.5	III F 5 13	III F 5	Yes	Yes	Yes	p
Cedar	Missouri River Mile 802.1	13	6/7	0	2	0.3	III F 6	III F 6	No	No	No	p
Cedar	Missouri River Mile 802.5	12	6/7	2	4	0.1	III F 5	III F 5	Yes	Yes	Yes	p
Cedar	Missouri River Mile 804.5	11	6/07	7	16	1.3	III F 5 8 13	III F 13	Yes	Yes	Yes	s(p)
Cedar	Missouri River Mile 804.6	10	6/7	3	7	0.2	III F 8 13		No	No	No	p
Cedar	Missouri River Mile 807.4	9	6/7	3	6	0.3	III F 8	III F 8	Yes	Yes	Yes	p
Dixon	Missouri River Mile 754.5	30	6/8	1	2	0.3	III F 5	III F 5	No	No	No	n.r
Dixon	Missouri River Mile 755	29	6/8	2	4	0.5	III F 5	III F 5	No	No	No	n.r
Dixon	Missouri River Mile 764.2	27	6/8	0	0	0.1	III F 5		Yes	Yes	Yes	p
Dixon	Missouri River Mile 764.5	28	6/8	0	0	0.3	III F 5		Yes	Yes	Yes	p
Dixon	Missouri River Mile 769.9	25	6/6	0	6	0.5	III A 12	III A 12	Yes	Yes	Yes	p
Dixon	Missouri River Mile 770	23	6/6	13	36	1.2	III F 5	III F 5	Yes	Yes	Yes	p
Dixon	Missouri River Mile 770.1	24	6/5	2	5	0.3	III F 5	III F 5	Yes	Yes	Yes	p
Dixon	Missouri River Mile 770.2	22	6/5	3	15	0.4	III F 5	III F 5	Yes	Yes	Yes	p
Dixon	Missouri River Mile 774.5	21	6/6	0	0	0.4	III F 5		Yes	Yes	Yes	p
Dixon	Missouri River Mile 781	26	6/5	1	2	1.5	III F 5	III F 5	Yes	Yes	Yes	p
Knox	Missouri River Mile 848.0	8	6/6	0	0	0.2	III F 3 13		Yes	Yes	Yes	p
							III F 3 5 6 13 14					
Knox	Missouri River Mile 851.7	7	6/6	4	8	1.1	15	III F 5 13	Yes	Yes	Yes	p
Knox	Missouri River Mile 854.0	6	6/6	1	2	0.2	III F 5 13	III F 5	Yes	Yes	Yes	p

# **The 2006 International Piping Plover Breeding Census on the Missouri River in Nebraska (Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Knox	Missouri River Mile 855.5	5	6/6	0	0	0.3	III F 3 5 13		Yes	Yes	Yes	p
<b>Total</b>				<b>73</b>	<b>196<sup>1</sup></b>	<b>15.2</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

## 2006 International Piping Plover Breeding Census - Missouri River (South Dakota) -





## The 2006 International Piping Plover Breeding Census on the Missouri River in South Dakota

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Bon Homme	Lewis & Clark Lake, Missouri RM 839	47	6/7	1	1	0.4	III F 3 5 13	III F 5	Yes	Yes	Yes	f
Bon Homme	Lewis & Clark Lake, Missouri RM 841.8	44	6/7	0	0	0.3	III F 3 5 13		Yes	Yes	Yes	f
Bon Homme	Missouri River Mile 847.0	42	6/6	0	0	0.3	III F 3 13		Yes	Yes	Yes	s(p)
Bon Homme	Missouri River Mile 847.3	43	6/6	0	0	0.2	III F 3 13		Yes	Yes	Yes	s(p)
Bon Homme	Lewis & Clark Lake, Missouri RM 838.8 (Sand Fly Island)	46	6/7	1	2	0.6	III F 3 5 13	III F 5	Yes	Yes	Yes	f
Bon Homme	Lewis & Clark Lake, Missouri RM 842 (The Complex)	45	6/7	0	0	0.8	III F 3 5 13		Yes	Yes	Yes	f
Campbell	Lake Oahe (State Line WPA- south)	4	6/13	5	12	8.1	VI A 1	VI A 1	Yes	Yes	Yes	f
Campbell	Lake Oahe (Vanderlaan)	5	6/16	2	4	1.6	VI A 1	VI A 1	Yes	Yes	Yes	f
Charles Mix	Missouri River Mile 854.7	41	6/6	0	0	0.3	III F 3 5 13		Yes	Yes	Yes	s(p)
Charles Mix	Missouri River Mile 863.7	40	6/5	1	2	0.2	III F 5 6 13	III F 5 13	Yes	Yes	Yes	s(p)
Charles Mix	Missouri River Mile 866.8	39	6/5	0	0	0.1	III F 13		Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 768	69	6/6	2	4	0.2	III F 5	III F 5	Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 773	68	6/6	0	1	0.2	III F 5	III F 5	Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 777.5	67	6/6	1	2	0.1	III F 5	III F 5	Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 777.7	66	6/6	1	1	0.1	III F 13	III F 13	Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 778	64	6/6	0	0	0.1	III F 13		Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 778.5	65	6/6	0	0	0.1	III F 13		Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 782.5	63	6/5	1	4	0.5	III F 13	III F 13	Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 783	59	6/5	0	0	0.0	III F 5		Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 784.5	60	6/5	0	0	0.7	III F		No	No	No	s(p)
Clay	Missouri River Mile 785	61	6/5	0	0	1.0	III F 5		Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 785.9	62	6/5	0	1	1.0	III F 5	III F 5	Yes	Yes	Yes	s(p)
Clay	Missouri River Mile 789.6	58	6/5	2	6	0.1	III F 13	III F 13	Yes	Yes	Yes	s(p)
Corson	Lake Oahe (Demery Island) RM 1231.3	1	6/9	0	0	0.5	VI A 12		Yes	Yes	Yes	f
Corson	Lake Oahe (Kenel Flats- North) RM 1230.5	2	6/9	10	19	6.5	VI A 1	VI A 1	Yes	Yes	Yes	f

## The 2006 International Piping Plover Breeding Census on the Missouri River in South Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Corson	Lake Oahe (Kenel South) RM 1229	3	6/14	11	24	1.6	VI A 12	VI A 12	Yes	Yes	Yes	f
Corson	Lake Oahe (Le Compte Creek) RM 1188.5	8	6/15	0	0	0.3	VI A 12		Yes	Yes	Yes	f
Corson	Lake Oahe (N. Railroad Grande) RM 1200	6	6/5	1	2	0.8	VI A 1	VI A 1	Yes	Yes	Yes	f
Corson	Lake Oahe (S. Railroad Grande) RM 1199	7	6/5	1	2	1.6	VI A 1	VI A 1	Yes	Yes	Yes	f
Dewey	Lake Oahe (Bush's Landing) RM 1123.5	22	6/6	2	4	4.0	VI A 7	VI A 7	Yes	Yes	Yes	f
Dewey	Lake Oahe (Charlie Creek) RM 1114	19	6/5	7	15	4.8	VI A 15	VI A 15	Yes	Yes	Yes	f
Dewey	Lake Oahe (Cheyenne River - Fish Gut Creek) RM 1110	16	6/5	0	0	1.6	VIA 14		Yes	Yes	Yes	f
Dewey	Lake Oahe (Cheyenne River- NE) RM 1110	18	6/5	3	6	3.2	VI A 15	VI A 15	Yes	Yes	Yes	f
Dewey	Lake Oahe (Forest City)	14	6/7	4	8	4.8	VI A 6 7 15	VI A 7	Yes	Yes	Yes	f
Dewey	Lake Oahe (No Heart Creek) RM 1117	21	6/6	2	4	4.8	VI A 15		Yes	Yes	Yes	f
Dewey	Lake Oahe (Swift Bird South) RM 1159	12	6/13	10	20	4.8	VI A 15	VI A 15	Yes	Yes	Yes	f
Dewey	Lake Oahe (Swift Bird Bay) RM 1160	13	6/7	1	2	3.2	VI A 15		Yes	Yes	Yes	f
Dewey	Lake Oahe (Swiftbird North) RM 1161	11	6/7	0	0	2.4	VI A 15		Yes	Yes	Yes	f
Dewey	Lake Oahe (Tall Prairie Chicken Creek) RM 1115	20	6/6	2	5	1.6	VI A 15	VI A 15	Yes	Yes	Yes	f
Gregory	Missouri River Mile 875	38	6/6	1	2	0.2	III F 5 13	III F 5 VI A 5 7	Yes	Yes	Yes	s(p)
Hughes	Lake Oahe (Peoria Flats) RM 1083	36	6/6	6	13	4.8	VI A 5 7 15	15	Yes	Yes	Yes	f
Potter	Lake Oahe (N. Steamboat Creek) RM 1167	10	6/6	1	2		VI A 15		Yes	No	Yes	f

## The 2006 International Piping Plover Breeding Census on the Missouri River in South Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Potter	Lake Oahe (Stove Creek) RM 1143.5	15	6/7	0	0	2.4	VI A 6		Yes	Yes	Yes	f
Stanley	Lake Oahe (Agency Creek) RM 1102	28	6/8	0	0	3.2	VI A 6		Yes	Yes	Yes	f
Stanley	Lake Oahe (Chantier North) RM 1085	35	6/9	0	0	0.4	VI A 8		Yes	Yes	Yes	f
Stanley	Lake Oahe (Mission Point) RM 1103	37	1/8	5	10	0.8	VI A 7	VI A 7	Yes	Yes	Yes	f
Stanley	Lake Oahe (North Mission 1) RM 1106	25	6/8	9	17	1.6	VI A 7 12	VI A 7	Yes	Yes	Yes	f
Stanley	Lake Oahe (North Mission 2) RM 1106	26	6/8	8	16	0.8	VI A 7 12	VI A 7 12	Yes	Yes	Yes	f
Stanley	Lake Oahe (North Mission 3) RM 1106	27	6/08	7	15	2.4	VI A 7	VI A 7	Yes	Yes	Yes	f
Stanley	Lake Oahe (Snake Creek South) RM 1093	34	6/09	1	2	0.2	VIA 6	VI A 6	Yes	Yes	Yes	f
Stanley	Lake Oahe (South Cheyenne River Arm) RM 1110	17	6/05	1	2	4.8	VI A 7	VI A 7	Yes	Yes	Yes	f
Sully	Lake Oahe (Cow Creek) RM 1089	33	6/16	3	6	2.4	VI A 7	VI A 7	Yes	Yes	Yes	f
Sully	Lake Oahe (Dry Creek) RM 1091	30	6/09	0	0	1.5	VI A 7		Yes	Yes	Yes	f
Sully	Lake Oahe (Little Bend- East) RM 1111	24	6/06	3	6	2.4	VI A 7	VI A 7	Yes	Yes	Yes	f
Sully	Lake Oahe (Little Bend- West) RM 1111	23	6/12	0	1	1.2	VI A 15	VI A 15	Yes	Yes	Yes	f
Sully	Lake Oahe (Okobojo Point) RM 1089.5	32	6/09	0	0	3.2	VI A 7		Yes	Yes	Yes	f
Sully	Lake Oahe (Plum Creek) RM 1090	31	6/09	0	0	1.6	VI A 6 7		Yes	Yes	Yes	f
Sully	Lake Oahe (Sully Flats) RM 1095	29	6/09	0	0	5.6	VI A 7		Yes	Yes	Yes	f
Union	Missouri River Mile 756.6	74	6/08	1	2	0.6	III F 13	III F 13	Yes	Yes	Yes	s(p)
Union	Missouri River Mile 759.2	72	6/08	2	21	0.6	III F 5 13	III F 13	Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census on the Missouri River in South Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Union	Missouri River Mile 759.5	73	6/08	0	0	0.3	III F 5		Yes	Yes	Yes	s(p)
Union	Missouri River Mile 761.3	70	6/08	22	55	1.0	III F 5 13	III F 13	Yes	Yes	Yes	s(p)
Union	Missouri River Mile 763.7	71	6/08	0	2	0.3	III F 5	III F 5	No	No	No	s(p)
Walworth	Lake Oahe (Blue Blanket) RM 1189	9	6/10	0	0	4.0	VI A 12		Yes	Yes	Yes	f
Yankton	Missouri River Mile 795.9	55	6/16	0	5	0.1	III F 5	III F 5	Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 790.9	57	6/09	0	1	0.1	III F 4		Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 795.3	56	6/09	1	4	0.1	III F 5 13	III F 13	Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 796.7	54	6/09	1	2	0.2	III F 5 13	III F 13	Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 797.5	53	6/09	1	2	0.2	III F 5 13	III F 13	Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 801.1	52	6/09	3	6	0.3	III F 5	III F 5	Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 801.3	51	6/07	2	5	0.3	III F 5 13	III F 13	Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 803.4	50	6/07	0	0	0.3	III F 5		Yes	Yes	Yes	s(p)
Yankton	Missouri River Mile 807.6	49	6/07	1	2	0.4	III A 1 12	III A 12	No	No	No	p
Yankton	Missouri River Mile 808.2	48	6/07	3	8	0.4	III F 9 13	III F 13	No	No	No	s(p)
<b>Total</b>				<b>153</b>	<b>358<sup>1</sup></b>	<b>112.8</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

## The 2006 International Piping Plover Breeding Census in Montana (off-Missouri River)

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The 2006 International Piping Plover Census of Montana sites (off-Missouri River) was accomplished with the help of 21 observers from the U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, Montana Fish, Wildlife, and Parks, and others. Coverage of Montana sites was comprehensive; most of the sites surveyed in previous years were covered in 2006 in addition to a few new sites. In total, 63 sites were surveyed and 108 Piping Plovers were counted off the Missouri River (130 total).

In general, weather during the Census was good but a few surveys were conducted during strong winds. Water was high at a couple of sites this year, including the Yellow River, which left little exposed habitat. A few other sites were entirely dry and vegetation encroachment was a problem.

Overall numbers were a bit lower than previous Census years and Piping Plovers were confined to Sheridan County except at Missouri River sites. Generally, Piping Plovers are more abundant in Sheridan County in the northeastern corner of the state, but are also found at a few sites to the west. Neslon Reservoir in Phillips County (northcentral Montana) supported small numbers of birds during all previous Census years but none were found there during the 2006 Census. Alkali Lake in Pondera County

(northwestern Montana) had Piping Plovers during the 1991 and 1996 Census but we were not able to survey that site this year.

### Comparison of Census Numbers<sup>1</sup>

	1991	1996	2001	2006
Total Adults	308	153	137	130 <sup>2</sup>

<sup>1</sup>Missouri River data are included in all totals.

<sup>2</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

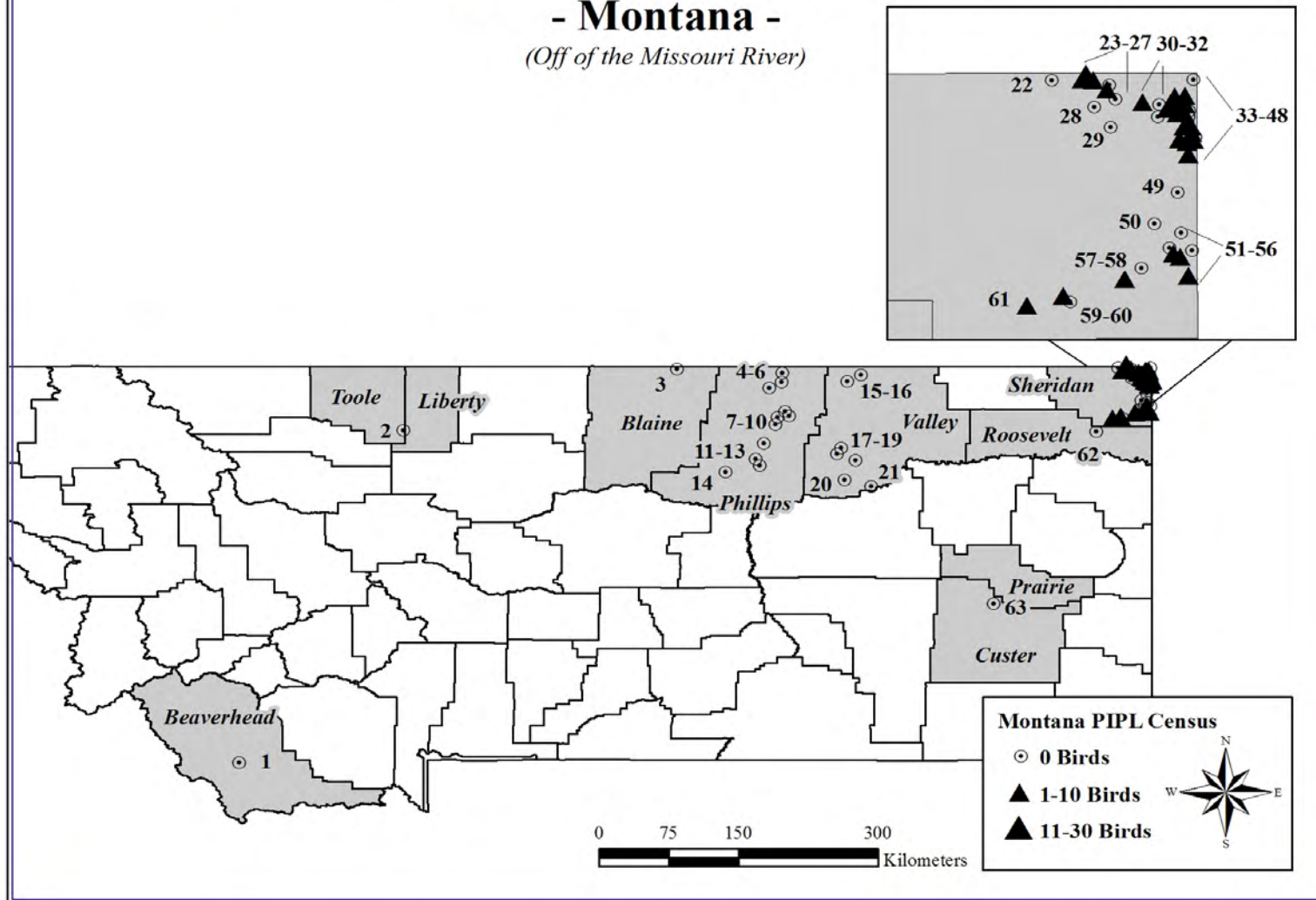
### Detectability Study

Sites Included	First Count	Second Count
Yellowstone River <sup>1</sup>	0	0
Bennett Lake	0	0
Clear Lake	0	0
Erickson WPA	0	0
Ferguson WPA	0	1
Justice Lake	2	0
Katy's Lake	3	2
State Line WPA	0	0
Hamm's Reservoir	0	0

<sup>1</sup>A second survey was conducted at transects 2, 3, and 5 as part of the detectability study.

*Summarized by E. Elliott-Smith*

# 2006 International Piping Plover Breeding Census - Montana - (Off of the Missouri River)



## The 2006 International Piping Plover Breeding Census in Montana

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Beaverhead	Clark Canyon Reservoir	1	n.r.	0	0	27.0	VI A 8		Yes	No	Yes	f/s
Blaine	Alkali Lake	3	6/7	0	0	4.9	IV H 10		Yes	Yes	Yes	f
Custer/Prairie/ Dawson/ Richland	Lower Yellowstone River	63	6/12	0	0	197.0	III 15		Yes	Yes	Yes	f/s/p
Liberty/Toole	Tiber Reservoir	2	6/14	0	0	20.0	VI A 1 7		Yes	Yes	Yes	m
Phillips	Bennett Lake	11	6/7	0	0	1.8	V H 1 6 7 12		Yes	Yes	Yes	f/p
Phillips	Bowdoin NWR	10	6/15	0	0	3.2	IV D E H 1 7 10		Yes	Yes	Yes	f
Phillips	Dibbler Reservoir	6	6/14	0	0	1.6	VI A 6 7 10 12		Yes	Yes	Yes	f
Phillips	Erphit Lake	9	6/13	0	0	2.9	IV A 6 7 10 12		No	No	No	p
Phillips	Hewitt Lake NWR	8	6/14	0	0	1.6	IV H 10		Yes	Yes	Yes	f
Phillips	Nelson Reservoir	7	6/14	0	0	8.0	VI D E		Yes	Yes	Yes	f
Phillips	Pea Lake	4	6/9	0	0	0.4	V H 12 14		Yes	Yes	Yes	f
Phillips	Spencer Reservoir	12	6/16	0	0	1.6	VI A 6		Yes	Yes	Yes	f/p
Phillips	Veseth Reservoir	14	6/16	0	0	0.8	VI A 6 7		No	No	No	f/p
Phillips	Whitcomb Lake	13	6/16	0	0	1.8	IV A 6 7 12		Yes	Yes	Yes	f
Phillips	Whitewater Lake	5	6/9	0	0	0.2	V H 2 6 7		Yes	Yes	Yes	f
Roosevelt	Johnson Lake WPA	62	6/19	0	0	3.2	IV A 10		Yes	Yes	Yes	n.r.
Sheridan	Anderson Lake	34	6/12	1	2	10.6	IV A H 7 10	IV A 10	Yes	Yes	Yes	s/p
Sheridan	Berger Pond WPA	57	6/6	0	0	5.9	VIII A 1		Yes	Yes	Yes	f/p
Sheridan	Big Slough WPA	49	6/14	0	0	7.9	IV A 1 7		Yes	Yes	Yes	f/s/p
Sheridan	Brush Lake	52	6/11	0	0	4.1	IV A 1		Yes	Yes	Yes	p
Sheridan	Chandler & Valpone WPA	22	6/16	0	0	0.0	V A 12		Yes	Yes	Yes	f/p
Sheridan	Clear Lake	50	6/11	0	0	4.8	V A 1		Yes	Yes	Yes	p
Sheridan	Deep Lake	60	6/6	1	4	3.1	IV A 1	IV A 1	Yes	Yes	Yes	f
Sheridan	Dog Leg WPA	35	6/7	0	1	2.8	IV A 10	IV A 10	Yes	Yes	Yes	f/p
Sheridan	Erickson WPA	53	6/11	0	0	2.7	IV A 10		Yes	Yes	Yes	f
Sheridan	Ferguson WPA	31	6/19	0	1	4.5	IV A 10	IV A 10	Yes	Yes	Yes	f/p
Sheridan	Flat Lake	38	6/13	6	15	13.6	IV A 7 10	IV A 7	Yes	Yes	Yes	s/p
Sheridan	Gaffney Lake	59	6/6	0	0	19.9	V A 1		Yes	Yes	Yes	f/p
Sheridan	Galloway's Lake	26	6/7	3	7	5.4	IV A 7	IV H 7 8	Yes	Yes	Yes	p
Sheridan	Gjesdal East WPA	36	6/16	1	2	3.5	IV A 7 10	IV A 7	No	Yes	Yes	f/p

## The 2006 International Piping Plover Breeding Census in Montana (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Sheridan	Goose Lake	48	6/16	2	6	25.8	IV A 10	IV A 10	Yes	Yes	Yes	f/p
Sheridan	Haugen Lutnes DSL	32	6/16	0	0	1.6	IV A 7 10		No	Yes	Yes	s/p
Sheridan	Justice Slough	56	6/15	0	2	1.0	IV A 10	IV A 10	Yes	Yes	Yes	p
Sheridan	Katy's Lake, Medicine Lake NWR	58	6/15	1	3	6.6	IV A 7	IV A 7	Yes	Yes	Yes	f/s
Sheridan	Lake North of Espen WPA	30	6/7	1	1	8.1	IV H 10	IV H 10	Yes	Yes	Yes	s/p
Sheridan	Lake North of Stateline WPA	39	6/5	0	0	1.8	IV A 10		Yes	Yes	Yes	f/p
Sheridan	Lake SE of Parry WPA	55	6/14	1	3	1.5	IV A 7	IV A 7	Yes	Yes	Yes	p
Sheridan	Lake SE of Salt	24	6/5	0	1	7.2	IV A 10	IV A 10	Yes	Yes	Yes	p
Sheridan	Lone Tree Lake	27	6/16	0	0	1.6	IV A 10		Yes	Yes	Yes	s/p
Sheridan	Marsh Wetland	28	6/7	0	0	n.r.	IV A 7 10		Yes	Yes	Yes	p
Sheridan	Medicine Lake	61	6/15	1	2	77.1	V A 1	V A 1	Yes	Yes	Yes	f
Sheridan	Melby WPA	51	6/19	0	0	3.2	IV A 12		Yes	Yes	Yes	f
Sheridan	Murphy Wetland (Upper Goose)	44	6/12	1	2	1.6	IV A 10	IV A 10	Yes	Yes	Yes	p
Sheridan	Nordhagen Wetland (Upper Goose)	46	6/12	0	1	1.0	IV A 10	IV A 10	Yes	Yes	Yes	p
Sheridan	North Lake	41	6/16	6	18	9.1	IV A 7 10		Yes	Yes	Yes	p
Sheridan	Northeast WPA	33	6/16	0	0	4.3	VIII A G 7		No	Yes	Yes	f/p
Sheridan	Parry WPA	54	6/14	2	5	8.1	IV A 7	IV A 7	Yes	Yes	Yes	f/p
Sheridan	Peterson Lake	29	6/16	0	0	5.8	IV A 7		No	No	No	p
Sheridan	Rabenberg Wetland (Upper Goose)	43	6/12	0	0	0.8	IV H 1 7		Yes	Yes	Yes	p
Sheridan	Salt Lake	23	6/5	3	13	12.8	IV A 10	IV A 10	Yes	Yes	Yes	s/p
Sheridan	Smith Wetland (Upper Goose)	45	6/12	0	0	1.0	IV A 10		Yes	Yes	Yes	p
Sheridan	State Line WPA	40	6/16	0	0	1.6	IV A 10		Yes	Yes	Yes	f
Sheridan	Throntveit Lake	37	6/11	5	11	16.3	IV A 1 7	IV D 7	No	Yes	Yes	p
Sheridan	Upper Goose Lake	42	6/12	0	3	1.0	IV A 10	IV A 10	Yes	Yes	Yes	p
Sheridan	West Goose Lake	47	6/12	2	5	9.3	IV A F 1 10	IV A H 1 10	Yes	Yes	Yes	s/p
Sheridan	Widgeon Slough WPA	25	6/5	0	0	3.4	IV A 10		Yes	Yes	Yes	f/p
Valley	Chambers Coulee Reservoir	16	6/15	0	0	2.4	VI 12		No	Yes	Yes	f
Valley	Flat Reservoir	21	6/16	0	0	2.4	VI 7 12		Yes	Yes	Yes	f
Valley	Grub Reservoir	19	6/14	0	0	3.2	VI 7 12		Yes	Yes	Yes	f



## The 2006 International Piping Plover Breeding Census in Montana (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Valley	Hamm's Reservoir	18	6/13	0	0	1.6	VI 13 15		Yes	Yes	Yes	f
Valley	Ichpair Slough (Lake Grable)	15	6/16	0	0	n.r.	n.r.		Yes	Yes	Yes	n.r.
Valley	Valley Reservoir	20	6/16	0	0	0.8	VI 12		Yes	Yes	Yes	f/p
Valley	VR-2 Reservoir	17	6/14	0	0	6.5	VI I 15		Yes	Yes	Yes	f
<i>Off-Missouri River Subtotal</i>				37	108 <sup>1</sup>	593.3						
<i>Missouri River Subtotal</i>				9	23	5.4						
<b>Total</b>				<b>46</b>	<b>131<sup>1</sup></b>	<b>598.7</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# The 2006 International Piping Plover Breeding Census in North Dakota (off-Missouri River)

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In North Dakota, most of the known breeding sites were surveyed with the exception of some sites we were not able to gain access to on private properties. We were able to cover about 95% of the known breeding sites.

Areas missed included Hapet Lake in Divide County, Turkey Island WPA in McIntosh County, Hertz Lake and Stony Slough in Burleigh County.

The census for the inland lakes of North Dakota recorded 337 more adults in 2006 (806 adults) than in 2001 (469 adults). On the Missouri River, 59 more adults were seen in 2006 (702 adults) than in 2001 (643 adults). Overall, there were 1508 adults seen in North Dakota in 2006 compared with 1112 adults seen in 2001 (396 more adults).

I believe the numbers are a good index to the population, however I do not believe every bird is always accounted for 100% of the time. The

adults appear to forage at places other than their main nesting territory and not all of the birds seem to be nesting. This may lead to very loose territories and birds moving around a lot. Other factors could include failed nesting attempts causing birds to leave the area before the census is even completed.

I believe wetland conditions would be one of the major factors driving the plover number in North Dakota. We had low water levels to begin the breeding season within many areas of North Dakota. Water levels on the Missouri River were higher this year because of a spring rise that was conducted by the Army Corps of Engineers which may have influenced the birds in establishing territories on some alkali lakes in the surrounding areas.

## Comparison of Census Numbers<sup>1</sup>

	1991	1996	2001	2006
Total Adults	992	1004	1112	1508 <sup>2</sup>

<sup>1</sup>Missouri River data are included in all totals.

<sup>2</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

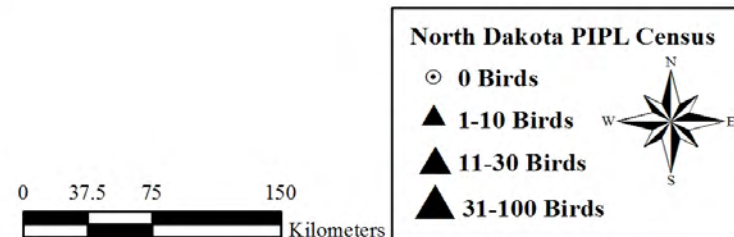
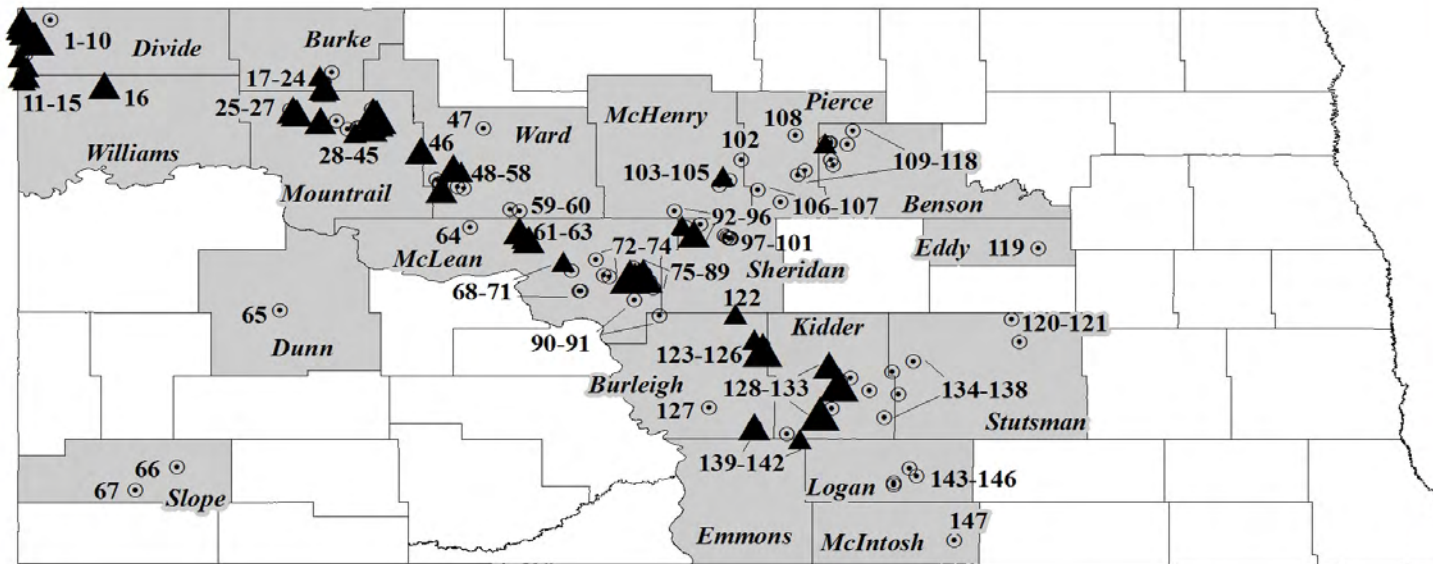
## Detectability Study

Sites Included	First Count	Second Count
Horseshoe Lake	0	0
Long Lake WPA	0	0
Lostwood NWR - Saltmarsh Wetland	0	0
No Name 01 (Divide Co.)	4	2
Baltzer WPA	0	0
Eberle Lake	0	0
Bromley Lake	0	0
Blue Lake	0	0
Cherry Lake	0	0
Fisher Lake (Laibs Marsh)	0	0
Mud Lake	0	0
Pelican Lake	30	42
Tractor Lake	5	6
Stessman Marsh	0	0

**Detectability Study – Continued**

Sites Included	First Count	Second Count
Palermo Lake SW	1	0
Piping Plover WPA	18	18
Kandt Lake	0	0
Moesner Lake	0	0
Danielson WPA	0	0
LGFR Pond	0	0
Appam Lake	16	22

# **2006 International Piping Plover Breeding Census** **- North Dakota -** *(Off of the Missouri River)*



## The 2006 International Piping Plover Breeding Census in North Dakota

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Benson	Cranberry Lake	111	6/13	0	0	1.6	IV D 1 15		Yes	Yes	No	f/p
Benson	Duchscher Lake	115	6/12	0	0	1.8	IV A 7 10 13		No	Yes	Yes	p
Benson	Horseshoe Lake	118	6/12	0	0	5.6	IV A 1 10		Yes	Yes	Yes	f/s/p
Benson	Long Lake WPA	116	6/19	0	0	9.5	IV A 1 7 10		Yes	Yes	Yes	f/s/p
Benson	Pfeifer Lake	113	6/15	0	0	5.0	IV A 7 10 12		Yes	Yes	Yes	f/p
Benson	Shively WPA	114	6/06	2	5	3.2	IV A 1 7 10	IV A 7	Yes	Yes	Yes	f/p
Benson	Simon WPA	112	6/15	0	0	5.3	IV A G 7 10		Yes	Yes	No	f/p
Benson	Volk WPA	117	6/12	0	0	1.9	IV A 10 15		Yes	Yes	Yes	f
Burke	Lostwood NWR - Knudson Slough	19	6/12	0	0	3.7	IV A 10		Yes	Yes	Yes	f
Burke	Lostwood NWR - School											
Burke	Section Lake	20	6/12	0	0	4.2	IV A 10		No	No	Yes	f
Burke	Lostwood NWR - Thompson Lake	17	6/12	0	0	4.8	IV A 10		No	No	No	f
Burke	Lostwood NWR - Upper											
Burke	Lostwood Lake	21	6/12	5	12	10.6	IV A 10	IV A 10	Yes	Yes	Yes	f
Burke/ Mountrail	Lostwood NWR - Phalarope Wetland	23	6/12	1	2	3.0	IV A 7 10	IV A 10	Yes	Yes	Yes	f
Burke/ Mountrail	Lostwood NWR - Saltmarsh Wetland	22	6/15	0	0	1.9	IV A 10		Yes	Yes	Yes	f
Burleigh	Hysterical 02	91	6/13	0	0	n.r.	V A 12		No	Yes	Yes	p
Burleigh	Lake Arena	126	6/7	15	32	19.4	IV D G 7 14	IV D 7	Yes	Yes	Yes	f/s/p
Burleigh	Long Lake Pool	139	6/13	0	0	36.2	IV D 8 12 13		Yes	Yes	Yes	f
Burleigh	Mckenzie Slough	127	6/9	0	0	2.4	V I 15		No	No	No	f
Burleigh	Rachel Hoff	123	6/5	0	0	8.7	IV D 7		Yes	Yes	Yes	f/p
Burleigh	Rath WPA	124	6/6	3	7	15.7	IV D 7	IV D 7	Yes	Yes	Yes	f/p
Burleigh	Salt Lake	122	6/07	1	2	12.9	IV D 7	IV D 8	No	Yes	Yes	p
Burleigh	Trusty	125	6/5	0	0	6.4	IV D 7		Yes	Yes	Yes	f/p
Burleigh/ Kidder	Long Lake NWR	140	6/12	7	14	107.5	IV D 7 10	IV D 7 10 IV A 7 10	Yes	Yes	Yes	f/p
Divide	Camp Lake	11	6/15	4	8	16.7	IV A 7 10 12	12	No	Yes	Yes	s/p
Divide	Daneville Lake	8	6/6	0	0	6.8	IV A 10		No	Yes	Yes	p
Divide	Daneville Lake SE	9	6/6	0	0	11.1	IV A 7 10		No	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in North Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Divide	Johnson WPA	10	6/13	2	5	4.1	IV A 7 10	IV A 7	No	Yes	Yes	f/p
Divide	Kreil Wetland	5	6/13	0	1	4.0	IV A 7		Yes	Yes	Yes	p
Divide	McCone Lake	2	6/12	6	19	8.3	IV A 7 8 10	IV A 7 10	No	Yes	Yes	p
Divide	Miller Lake	6	6/7	16	43	23.6	IV A G 7 8 10 12 14	IV A G 7 8 10 12 14	Yes	Yes	Yes	f/p
Divide	Mine Pond	13	6/14	0	0	0.5	IV A 7		No	No	No	p
Divide	No Name 01	4	6/7	2	4	9.3	IV A 7 12		No	Yes	Yes	p
Divide	North Lake	7	6/13	1	3	8.6	IV A G 7 10	IV A G 7	Yes	Yes	Yes	p
Divide	Radar WPA	1	6/12	0	0	9.6	IV A 7 10		No	No	Yes	f/p
Divide	Round/Westby Lake	3	6/12	4	10	11.8	IV A 7 10		Yes	Yes	Yes	f/s/p
Divide/ Williams	Africa Lake	14	6/14	5	11	16.0	IV A 7 10	IV A 7 10	No	Yes	Yes	p
Dunn	Lake Ilo NWR	65	6/14	0	0	0.8	VI D G 12		Yes	Yes	Yes	f
Eddy	Lake Coe	119	6/12	0	0	2.1	IV A I 6		Yes	Yes	Yes	s(p)
Emmons	Sisco-Fallgatter WPA	142	6/08	4	7	9.2	IV D 1	IV D 1	No	Yes	Yes	f/p
Kidder	Big Muddy Lake	131	6/12	26	54	21.7	IV D 1 2 7	IV D 1 2 7	Yes	Yes	Yes	f/p
Kidder	Dewald Slough	132	6/08	0	0	3.2	VI I 15		No	No	No	f/p
Kidder	Horsehead Lake	128	6/05	12	30	29.0	IV D 7 8	IV D 7	Yes	Yes	Yes	s/p
Kidder	Lake Etta	133	6/13	41	85	24.0	IV D 1 6	IV D 1 2 6	No	No	Yes	f/p
Kidder	Lake George	138	6/06	0	0	10.4	IV D 15		No	Yes	Yes	f
Kidder	McPhail WMA	136	6/12	0	0	7.2	IV D 12		No	No	Yes	p
Kidder	Mud Lake South	141	6/14	0	0	3.5	IV D 10		No	No	Yes	p
Kidder	Sibley Lake	129	6/12	0	0	10.3	IV D 7		Yes	Yes	Yes	p
Kidder	Spring Lake	130	6/07	0	0	10.7	IV D 7		Yes	Yes	Yes	f/s/p
Logan	Baltzer WPA	145	6/07	0	0	4.0	IV H 10		Yes	Yes	Yes	f/p
Logan	Eberle Lake	143	6/12	0	0	4.2	IV H 10		Yes	Yes	Yes	p
Logan	Logan County WMA	146	6/07	0	0	5.2	IV H 10		Yes	Yes	Yes	s/p
Logan	Schweigert WPA	144	6/07	0	0	14.7	IV H 10		Yes	Yes	Yes	f/p
McHenry	Bromley Lake	103	6/19	0	0	9.0	IV A 1 10		Yes	Yes	Yes	f/p
McHenry	Crooked Lake	105	6/06	0	0	2.4	IV A 1 7 10		Yes	Yes	Yes	f/p

## The 2006 International Piping Plover Breeding Census in North Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
McHenry	Lake Lemer	104	6/12	0	3	13.0	IV A G 1 10	IV G	Yes	Yes	Yes	f/p
McHenry	Smokey Lake <sup>1</sup>	102	7/07	0	0	4.0	IV I 1 7		No	No	Yes	f/p
McHenry	Spichke WPA	92	6/16	0	0	2.4	IV A 1		Yes	Yes	Yes	f/p
McIntosh	McIntosh 02	147	6/08	0	0	6.9	IV H 7		Yes	Yes	Yes	p
McLean	Amoeba Lake	77	6/07	1	3	0.9	IV 7		Yes	Yes	Yes	p
							IV D G 1 2 5 6 7					
McLean	Audubon Refuge (Lake Audobon)	68	6/05	1	5	40.3	8 12	VI D G 2 7	Yes	Yes	Yes	f
McLean	Blue Lake	85	6/12	0	0	8.7	IV I 1 8 10		Yes	Yes	Yes	f/s/p
McLean	Bluehill WPA	64	6/12	0	0	10.5	IV I 12		Yes	Yes	Yes	f/p
McLean	Cherry Lake	74	6/07	0	0	9.0	IV I 12		No	Yes	Yes	f/p
McLean	Crystal Lake	61	6/06	5	12	6.7	IV H 1 2 7	IV H 7 12	Yes	Yes	Yes	f/p
McLean	Day Lake	86	6/07	0	0	1.4	V 12 15		No	No	No	n.r.
McLean	Elbow Lake	81	6/07	8	19	2.5	IV 7		Yes	Yes	Yes	p
McLean	Engel Lake	63	6/06	9	20	6.0	IV I 1 2 7 10 12	IV H 12 13	No	Yes	Yes	p
McLean	Fischer Lake (Koenig Lake)	90	6/06	0	0	3.7	IV I 10		No	Yes	Yes	f/p
McLean	Fisher Lake (Laibs Marsh)	75	6/06	0	0	4.8	IV I 10 12					
McLean	Fox Lake	82	6/07	0	0	0.8	V 12		No	No	No	p
McLean	Gaub WPA	89	6/07	0	0	2.0	IV A 12		Yes	Yes	Yes	f/p
McLean	Lake Nettie	72	6/13	0	0	7.9	IV A 12		Yes	Yes	Yes	f/p
McLean	Lake Williams	76	6/07	17	36	14.6	IV 7		Yes	Yes	Yes	f/s/p
McLean	McGinnis WPA	62	6/03	3	6	4.0	IV H 10	IV H 10	No	No	Yes	p
McLean	Mud Lake	78	6/02	0	0	n.r.	IV 7		Yes	Yes	No	p
McLean	Paramecium Lake	79	6/07	1	2	0.7	IV 7		Yes	Yes	Yes	p
McLean	Pelican Lake	83	6/07	19	42	11.8	IV A 7		Yes	Yes	Yes	p
McLean	Peterson Lake	84	6/07	12	27	12.9	IV 7		Yes	Yes	Yes	p
McLean	Reclaimed Wetland R-23-2	70	6/14	0	0	0.5	VIII H 6		No	No	Yes	p
McLean	Reclaimed Wetland R-23-3	71	6/14	0	0	0.4	VIII H 6		No	No	Yes	p
McLean	Spot Lake	87	6/07	1	4	3.5	IV H 7		Yes	Yes	Yes	p
McLean	Stessman Marsh	69	6/05	0	0	5.2	VI D 12 15		Yes	Yes	Yes	f
McLean	Tractor Lake	80	6/14	3	6	2.7	IV 7		Yes	Yes	Yes	s/p

**The 2006 International Piping Plover Breeding Census in North Dakota  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
McLean	Turtle Lake	73	6/13	0	0	24.0	VII 12		Yes	Yes	Yes	f/p
McLean	Unnamed Wetland	88	6/08	0	0	0.4	VI 15		No	No	No	p
Mountrail	Lostwood District - USA 01	35	6/5	0	1	4.9	IV A 10	IV A 10	Yes	Yes	Yes	p
Mountrail	Lostwood NWR - Bieri Wetland	36	6/3	0	0	1.4	IV H 7		Yes	Yes	Yes	p
Mountrail	Lostwood NWR - BLM 01	30	6/12	0	0	3.3	IV H 7		No	Yes	Yes	f/p
Mountrail	Lostwood NWR – Cottonwood Lake East	27	6/5	5	11	8.8	IV H 7	IV A 10	Yes	Yes	Yes	f/s/p
Mountrail	Lostwood NWR – Cottonwood Lake West	26	6/7	7	14	15.9	IV H 7	IV A 10	Yes	Yes	Yes	f/p
Mountrail	Lostwood NWR - Goettle Wetland	42	6/6	3	6	1.2	IV H 7	IV A 10	No	No	No	p
Mountrail	Lostwood NWR – Halvorson WPA North	32	6/3	0	0	9.2	IV H 7		Yes	Yes	Yes	f/p
Mountrail	Lostwood NWR – Halvorson WPA South	33	6/3	0	0	3.1	IV H 7		Yes	Yes	No	p
Mountrail	Lostwood NWR – Little Cottonwood Lake	25	6/5	0	0	1.7	IV H 7		No	No	No	p
Mountrail	Lostwood NWR – Lower Lostwood Lake	18	6/12	1	3	9.9	IV H 7	VI A 10	Yes	Yes	Yes	f
Mountrail	Lostwood NWR - ND 02	29	6/5	0	0	9.6	IV H 7		Yes	No	Yes	f/s/p
Mountrail	Lostwood NWR - Palermo Lake	43	6/3	0	3	6.2	IV H 7	IV A 10	Yes	Yes	Yes	p
Mountrail	Lostwood NWR – Palermo Lake SW	31	6/5	0	1	8.0	IV A 7 10	IV A 10	Yes	Yes	Yes	f/p
Mountrail	Lostwood NWR – Piping Plover Wetland	24	6/12	4	8	1.0	IV A 10	IV A 10	Yes	Yes	Yes	f
Mountrail	Lostwood NWR – Piping Plover WPA	34	6/12	9	18	3.2	IV H 7	IV A 10	Yes	Yes	Yes	f/p
Mountrail	Lostwood NWR - Rued Wetland	44	6/6	0	0	0.5	IV A 10		Yes	Yes	Yes	p
Mountrail	Lostwood NWR - US1 F & G	46	6/5	8	17	9.6	IV A 10		Yes	Yes	Yes	f/p
Mountrail	Lostwood NWR - Redmond Lake	41	6/6	11	30	14.0	IV H 7		Yes	Yes	Yes	s/p
Mountrail	Lostwood NWR – Redmond Lake East	39	6/6	4	10	2.6	IV A 7 10		Yes	Yes	Yes	s/p



**The 2006 International Piping Plover Breeding Census in North Dakota  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Mountrail	Lostwood NWR – Redmond Lake North	45	6/6	1	2	5.6	IV A 10		Yes	Yes	Yes	p
Mountrail	Lostwood NWR – Redmond Lake SE	38	6/6	17	35	8.4	IV A 10		Yes	Yes	Yes	f/p
Mountrail	Lostwood NWR – Redmond Lake South	40	6/6	4	8	9.5	IV A 10		Yes	Yes	Yes	f/p
Mountrail	Lostwood NWR - USA 01 SE	37	5/6	0	0	0.6	IV A 10		Yes	Yes	Yes	f
Mountrail	Lostwood NWR - White Lake	28	6/13	15	30	25.5	IV A 10	IV A 10	Yes	Yes	Yes	p
Pierce	Little Antelope Lake	107	6/13	0	0	8.1	IV A 1		Yes	Yes	Yes	p
Pierce	Meyer WPA	108	6/06	0	0	7.2	IV A 1		Yes	Yes	Yes	f/p
Pierce	Orrin Lake	106	6/13	0	0	3.2	IV A 1		Yes	Yes	Yes	p
Pierce	Petrified Lake	110	6/07	0	0	n.r.	IV A 1		Yes	Yes	Yes	p
Pierce	Sandhill Crane WPA	109	6/07	0	0	n.r.	IV A 1		Yes	Yes	Yes	f/p
Sheridan	Kandt Lake	95	6/15	0	0	6.9	IV A 1 10		Yes	Yes	Yes	p
Sheridan	Krueger Lake	96	6/07	7	18	15.5	IV H 10	IV H 10	Yes	Yes	Yes	f/p
Sheridan	Lonetree WMA- Avocet Lake	97	6/03	0	0	0.0	VI A 1 12		Yes	Yes	Yes	s(p)
Sheridan	Lonetree WMA- Gadwall Lake	99	6/03	0	0	0.0	VI A 12 15		Yes	Yes	Yes	s(p)
Sheridan	Lonetree WMA- New Lake	98	6/04	0	0	5.5	VI A 1 12		Yes	Yes	Yes	s(p)
Sheridan	Lonetree WMA- Other Lake	100	6/03	0	0	0.0	VI A 12		Yes	Yes	Yes	s(p)
Sheridan	Lonetree WMA- Plover Pond	101	6/03	0	0	1.3	IV A 1 10		Yes	Yes	Yes	s(p)
Sheridan	Moesner Lake	94	6/13	0	0	9.7	IV B 1		Yes	Yes	Yes	p
Sheridan	Strasburg WPA	93	6/03	1	3	0.5	IV A 7	IV A 7	No	Yes	Yes	f/p
Slope	Stewart Lake NWR	67	6/14	0	0	11.3	VI D 12		Yes	Yes	Yes	f
Slope	White Lake NWR	66	6/14	0	0	8.1	VI D 12		Yes	Yes	Yes	f
Stutsman	Arrowwood NWR – Arrowwood Lake	120	6/12	0	0	6.5	VI VIII A 6		Yes	No	No	f
Stutsman	Arrowwood NWR - Jim Lake	121	6/12	0	0	43.6	VI VIII A G 6 7		Yes	No	No	f
Stutsman	Chase Lake NWR	135	6/14	0	0	18.5	IV A G 1 6 7		Yes	Yes	Yes	f
Stutsman	Mud Lake WPA	134	6/12	0	0	12.1	IV VIII A 6 7		Yes	Yes	Yes	f/s
Stutsman	Stink Lake 01	137	6/14	0	0	11.0	IV VIII A 6		Yes	Yes	Yes	s(p)

## The 2006 International Piping Plover Breeding Census in North Dakota (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Ward	Danielson WPA	60	6/8	0	0	10.3	VI A 12		No	Yes	Yes	f
Ward	Foss Lake	59	6/13	0	0	3.2	IV A 10 12		No	Yes	Yes	p
Ward	Galusha WPA	54	6/3	0	0	4.5	IV H 10		No	Yes	Yes	f/p
Ward	LGFR Pond	57	6/11	0	0	20.1	IV I 10 12		Yes	Yes	Yes	p
Ward	Middle Lake	51	6/6	0	2	7.2	IV H 10	IV H 10	Yes	Yes	Yes	p
Ward	One Legged Lake	50	6/13	0	0	2.4	IV H 10		Yes	Yes	Yes	p
								IV H 7 10				
Ward	Orlien WPA	56	6/7	7	17	7.4	IV H 1 7 10	12	No	Yes	Yes	f/p
Ward	Roberts Lake	58	6/11	0	0	3.0	IV H 10		Yes	Yes	Yes	p
Ward	Schaefer Lake	48	6/6	10	21	10.4	IV H 7 10 12	IV H 7 12	Yes	Yes	Yes	p
Ward	Simonson Lake	52	6/15	1	3	2.7	IV I 1 2 7 10	IV I 7	Yes	Yes	Yes	p
Ward	Upper Souris NWR	47	6/14	0	0	n.r.	VI A 1 7		No	Yes	Yes	f
Ward	Ward 01	55	6/13	0	0	2.6	IV H 10		Yes	Yes	Yes	p
Ward	Weltikol WPA	53	6/7	0	0	6.5	IV I 10		No	Yes	Yes	f/p
Ward	Wheeler Wetland	49	6/6	1	2	2.2	IV H 10	IV H 10	Yes	Yes	Yes	p
Williams	Appam Lake	16	6/16	11	22	16.4	IV A G 7 10	IV A 7 10	Yes	Yes	Yes	f/p
Williams	Stink Lake 02	12	6/5	0	0	4.7	IV A 7 10		No	Yes	Yes	p
Williams	Twin Lake	15	6/6	0	1	14.0	IV A 7 10		No	Yes	Yes	f/p
<i>Off-Missouri River Subtotal</i>				364	825 <sup>2</sup>	1235.3						
<i>Missouri River Subtotal</i>				282	733 <sup>2</sup>	363.5						
<b>Total</b>				<b>646</b>	<b>1558<sup>2</sup></b>	<b>1598.8</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census window.

<sup>2</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# **The 2006 International Piping Plover Breeding Census in South Dakota (off-Missouri River)**

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Piping Plovers were observed at four sites off the Missouri River during the 2006 census. Four plovers were observed on an alkali wetland on private land, and nineteen birds were observed on a reservoir that under normal water conditions is connected to Lake Oahe (Missouri River). Because of the current drought, this reservoir is currently separated from Lake Oahe by more than 4 miles (6.4 km). An additional two birds were observed in late May; one was on Belle Fourche Reservoir, and the second was seen on an unknown pond in Shannon County. There was a second sighting of two plovers at the Shannon County pond in mid-July. This is the first time that Piping Plovers have been observed in South Dakota off of the Missouri River since 1991.

All of the off-Missouri River sites surveyed in 1996 and 2001 were surveyed again in the 2006 survey effort. The amount of habitat available for nesting varied widely, with some lakes completely full, while others had shoreline available. There are a great many lakes in South Dakota with the potential for Piping Plover nesting, many of them on private land, which were not censused in this effort. It is not possible to determine how many of these may be used by Piping Plovers. While much of the state is in a severe drought, some of the alkali wetlands surveyed were full, with no appropriate shoreline for nesting plovers.

Others were completely dry, also not providing the appropriate conditions for nesting and brood rearing.

## **Comparison of Census Numbers<sup>1</sup>**

	1991	1996	2001	2006
Total Adults	295	29	390	375 <sup>2</sup>

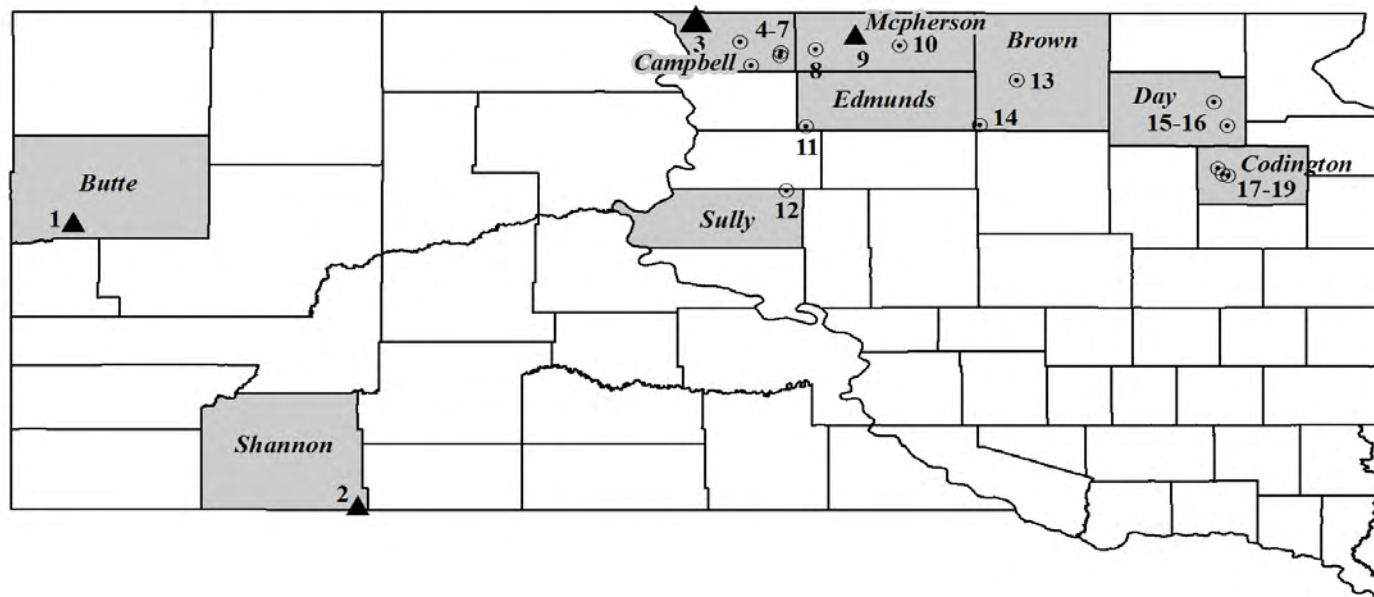
<sup>1</sup>Missouri River data are included in all totals.

<sup>2</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

## **Detectability Study**

Sites Included	First Count	Second Count
Melhoff Island WPA	0	0
Lake Nicholson	0	0
Salt Lake (Brown Co.)	0	0
Goetz WPA	0	0

# 2006 International Piping Plover Breeding Census - South Dakota - (Off of the Missouri River)



0 37.5 75 150  
Kilometers



## The 2006 International Piping Plover Breeding Census in South Dakota

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Brown	Proud Waterfowl Production Area	13	6/6	0	0	4.8	IV A 7 11		Yes	Yes	Yes	f
Brown	Salt Lake	14	6/13	0	0	4.8	IV A 11		Yes	Yes	Yes	p
Butte	Belle Fourche Reservoir <sup>1</sup>	1	5/25	0	1	0.8	VI A G	VIA 6	No	No	No	n.r.
Campbell	Goetz Waterfowl Production Area	6	6/7	0	0	2.4	IV A 7		Yes	Yes	Yes	f
Campbell	Hwy. 10	4	6/7	0	0	3.6	IV I 7		Yes	Yes	Yes	p
Campbell	Pocasse NWR	3	6/7	9	19	7.0	VI A 7	VIA 6	Yes	Yes	Yes	s(p)
Campbell	Salt Lake	5	6/5	0	0	15.0	IV		Yes	Yes	Yes	s(p)
Campbell	West Flat Lake	7	6/5	0	0	5.0	V 7		Yes	Yes	Yes	f
Codington	Horsehoe Lake	19	6/6	0	0	2.4	IV A 1 8 13		Yes	Yes	Yes	f/s/p
Codington	Lake Nicholson	17	6/14	0	0	6.5	IV A 1 8		Yes	Yes	Yes	s/p
Codington	Medicine Lake	18	6/5	0	0	1.6	IV A 8 13 16		No	No	No	p
Day	Bitter Lake	16	6/13	0	0	28.4	IV A I 1 7 13 16		Yes	Yes	Yes	s/p
Day	Waubay Lake	15	6/7	0	0	19.4	IV A I 1 8 13		Yes	Yes	No	f/s/p
Edmunds	Alkali Lake	11	6/5	0	0	3.3	IV E I		Yes	Yes	Yes	f
McPherson	Kempf Waterfowl Production Area	10	6/7	0	0	4.8	V I 8 13		Yes	Yes	Yes	f
McPherson	Melhoff Island Waterfowl Production Area	8	6/7	0	0	1.3	IV I 8 IV A G I 2 8 13		Yes	Yes	Yes	f
McPherson	Unnamed Alkali Wetland	9	6/12	2	4	1.2	14 15	IV A 8	No	No	No	p
Sully	Stone Lake / NE Sully GPA	12	6/5	0	0	6.8	V I 7		Yes	Yes	Yes	s(p)
Shannon	Unknown Pond <sup>1</sup>	2	5/27	0	1	0.2	IV A 11	IV A 10	No	No	No	n.r.
<i>Off-Missouri River Total</i>				11	25	119.3						
<i>Missouri River Subtotal</i>				160	358 <sup>2</sup>	112.8						
<b>Total</b>				<b>171</b>	<b>383<sup>2</sup></b>	<b>232.1</b>						

<sup>1</sup>Please note that these surveys were conducted outside the Census Window.

<sup>2</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# **The 2006 International Piping Plover Breeding Census in Iowa**

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All of the known sites for Piping Plovers were censused. The north pond at Council Bluffs was not surveyed due to construction activities; amounting to about 60% of the available habitat at this site. The 2006 numbers are similar to 2001 numbers, but with so few pairs and such restricted habitat, it is difficult to determine what represents a meaningful change. The results do represent the actual population in Iowa. The lack of suitable nesting habitat along the Missouri and inland rivers is probably the factor that most limits growth of the Piping Plover population.

## **Comparison of Census Numbers**

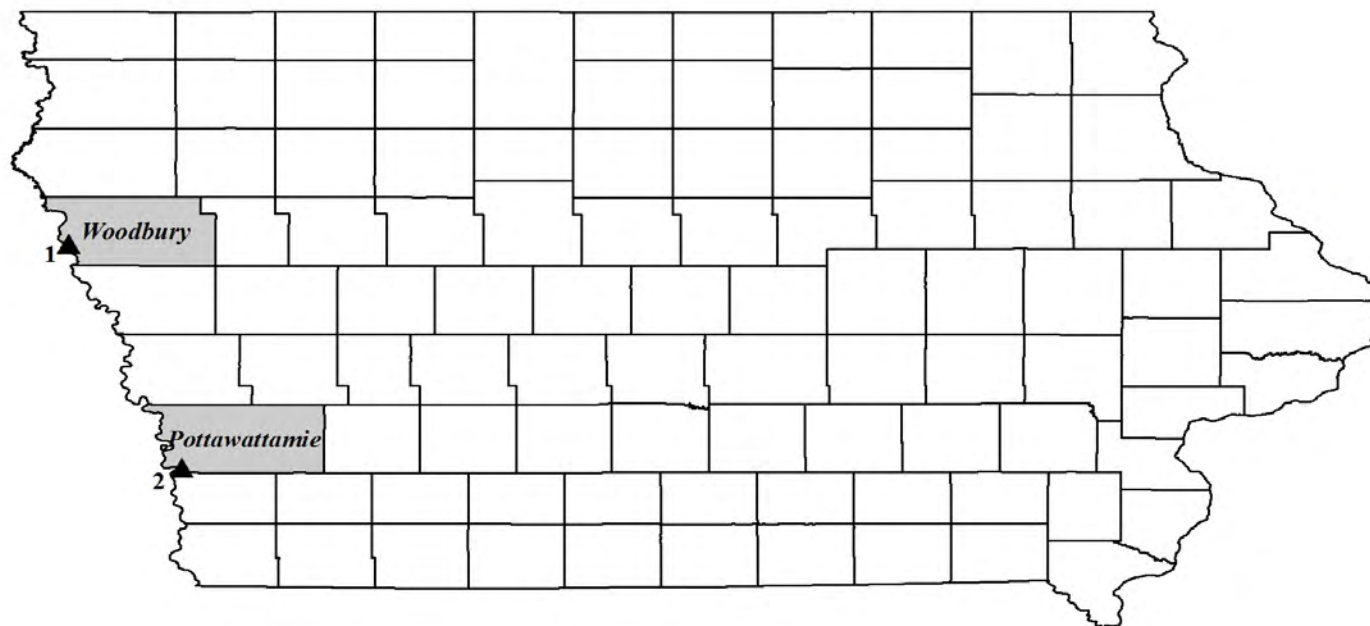
	1991	1996	2001	2006
Total Adults	13	14	11	9 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

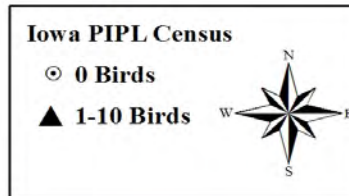
## **Detectability Study**

Sites Included	First Count	Second Count
MidAmerican Energy, Neal North	4	4

## 2006 International Piping Plover Breeding Census - Iowa -



0 50 100 200  
Kilometers



## The 2006 International Piping Plover Breeding Census in Iowa

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Pottawatomie	MidAmerican Energy Plant	2	6/9	2	4	0.6	VII D I 14 15	VII D I 14 15	Yes	Yes	Yes	Private
Woodbury	MidAmerican Energy, Neal North	1	6/8	2	5	2.7	VII D I 14 15	VII D I 14 15	Yes	Yes	Yes	Private
<b>Total</b>				<b>4</b>	<b>9</b>	<b>3.3</b>						



## **The 2006 International Piping Plover Breeding Census in Nebraska (off-Missouri River)**

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Long-term drought conditions greatly affected the 2006 International Piping Plover Census in Nebraska both by limiting habitat and access at certain sites and by concentrating and increasing birds elsewhere. The 2006 survey was conducted in a similar fashion to earlier IPPCs. All surveys were conducted 5-19 June.

Survey participants included personnel from the Nebraska Game and Parks Commission, U.S. Fish and Wildlife Service, Nebraska Public Power District, Central Nebraska Public Power and Irrigation District, the Tern and Plover Conservation Partnership, National Park Service, and several volunteers. A total of 423 kilometers of river were surveyed by airboat, 132 kilometers by canoe. A total of 61 sand and gravel pits and one large reservoir were surveyed. Two other large reservoirs (Lake Minatare and Calamus Reservoir) were monitored but not formally surveyed because it was determined that both lacked suitable habitat.

In 2006, 718 adult Piping Plovers were counted in Nebraska. This total reverses the trend of decreases recorded during previous International Piping Plover Censuses and represents increases of 133% from 2001 (308 adults), 96% from 1996 (366), and 80% (398) from 1991. The overall increase is likely both the result of an actual increase of birds at certain sites and better coverage at others.

The most notable increase in birds was at Lake McConaughy, Keith County, where 358 adults were counted. Lake McConaughy has consistently been at record or near record low water levels for the past several years as the result of long-term drought, exposing large expanses of suitable habitat. The reservoir, whose water is primarily used for irrigation, was markedly lower in 2006 than during the previous three IPPCs when 60, 69, and 73 adults were recorded in 1991, 1996, and 2001 respectively. It was not until 1978 that Piping Plover were even recorded at this western Nebraska reservoir and the previous high count was 143 in 1993 (Sharpe et al. 2001).

Plover numbers were also higher on the Niobrara River. The 204 total tallied this year is notably higher than previous years when 79, 107, and 87 were recorded in 1991, 1996, and 2001, respectively. Away from the Niobrara, on the Platte, Elkhorn, and Loup Rivers, only 27 adults were counted. Furthermore, 78% (562) of all plovers recorded in Nebraska during the 2006 Census were recorded on the Niobrara River and at Lake McConaughy.

Low water levels have positively affected Piping Plover numbers at Lake McConaughy, but the impacts of low water flows on bird numbers on the central Platte River have been negative. In fact, this year's scheduled airboat surveys for almost all of the central Platte were cancelled because of a lack of water. Only 2 adults were tallied on the 29 km stretch that was surveyed. Previous Censuses yielded totals of 46 in 1991, 25 in 1996, and 4 in 2001. Numbers recorded at sand and gravel pits that are associated with and often located adjacent to rivers, such as the Platte, appear to have remained relatively stable with 129 adults recorded this year.

In Nebraska, it appears that the vast majority of suitable Piping Plover habitat was surveyed. A

number of areas that possess very limited or marginal habitat were not included in the survey. These sites have generally been surveyed in the past and it has been determined that there is a low likelihood of birds occupying them. They include some isolated sandpits and minor river systems, such as the Little Blue River. It is believed that inclusion of these areas would have had minimal impact on totals recorded during the 2006 Census.

While it serves as a useful baseline, it is difficult to know whether the survey results represent the actual number of birds in Nebraska. While this year's effort to determine detection probability is a positive step forward, there is perhaps the need to standardize other portions of the survey so that long-term inferences can be made from the data. This may be difficult, given Nebraska's varied habitat types and the various methods (e.g. airboat, foot, canoe) used to survey areas. Standardization of some aspects would be useful, however, particularly when there are personnel changes.

All survey participants deserve a great deal of credit for the effort and time that they put into the 2006 survey. Participants include: Kari Andresen, Diane Beachly, Mark Czaplewski, Kathy DeLara, Leslie Farnham, Kristy Hajny, Robert Harms, Michael Hart, Renae Held, Jim Jenniges, Joel Jorgensen, Justin King, Elizabeth Murray, Sean O'Brien, Mark Peyton, Dan Roberts, Soren Rundquist, Matt Schwartz, Robin Smith, Dugan Smith, Martha Tacha, Chris Thody, Gareth Welke, Erica Wilson, Gabriel Wilson, and Stephen Wilson.

#### Comparison of Census Numbers<sup>1</sup>

	1991	1996	2001	2006
Total Adults	398	375	308	909 <sup>2</sup>

<sup>1</sup>Missouri River data are included in all totals.

<sup>2</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

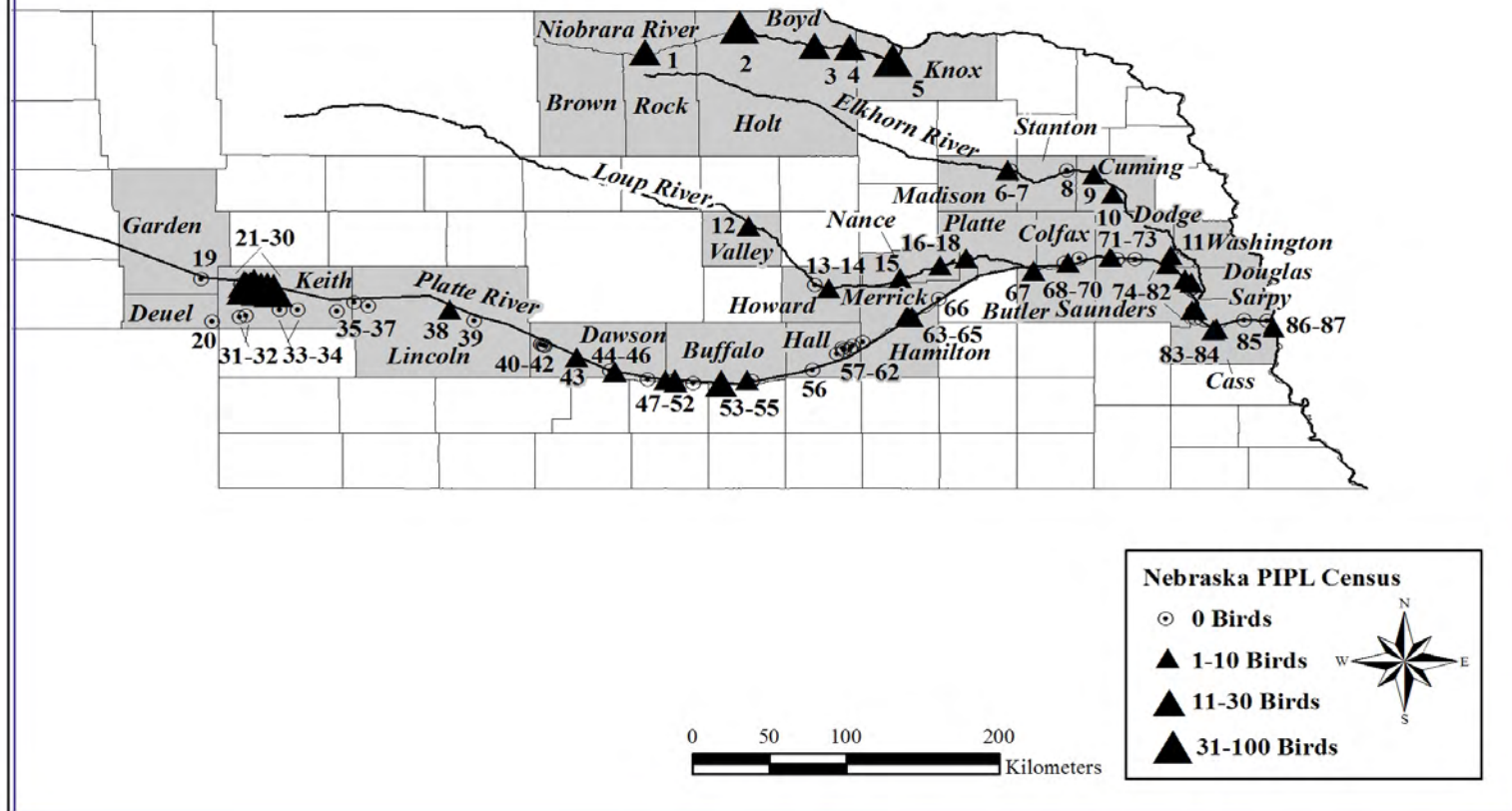
#### Detectability Study

Sites Included	First Count	Second Count
Central Platte River, Sandy Channels/Johnson Pit	6	6
Central Platte (RM 230-235)	2	2
Lower Platte River, Cullom (New Pit)	0	0
Lower Platte River, Plattsmouth Pit <sup>1</sup>	0	0
Lower Platte River, Arps East Pit	0	0
Lower Platte River, Arps West Pit	0	0
Lower Platte River, Lux S&G <sup>1</sup>	6	6
Lower Platte River, Western Fremont Pit <sup>1</sup>	6	5
Lower Platte River, Ginger Cove Pit (Valley #11) <sup>1</sup>	3	3
Lower Platte River, Mallard Pit at Valley <sup>1</sup>	1	2
Central Platte River, Central S&G, Grand Island	0	0
North Platte River, Lake McConaughy, Dam to Vans E	127	107
North Platte River, Lake McConaughy, Cedar View to W end	0	0
North Platte River, Lake McConaughy, S side Vans to W end	3	33
Elkhorn River, Central S&G Norfolk #92	2	2
Elkhorn River, Pilger S&G, Norfolk Pit	0	0
Central Platte River, Grigsby Pit	7	4
Lower Platte River, Dolezal Pit East	0	0

<sup>1</sup>Replicate survey was conducted first (outside of Census window) so second survey was used to calculate official state total.

# 2006 International Piping Plover Breeding Census - Nebraska -

(Off of the Missouri River)



## The 2006 International Piping Plover Breeding Census in Nebraska

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Boyd/Holt	Niobrara River, Spencer Dam to Redbird Bridge	3	6/12	10	21	8.8	III F 5		Yes	Yes	Yes	p
Boyd/Holt/ Knox	Niobrara River, Pischelville to Highway 12	5	6/14	26	54	12.5	III F 5	III F 5	Yes	Yes	Yes	n.r.
Boyd/Holt/ Knox	Niobrara River, Redbird Bridge to Pischelville Bridge	4	6/15	10	23	9.3	III F 5		Yes	Yes	Yes	p
Brown/Rock/ Keya Paha	Niobrara River, Norden Dam to Hwy 137 Bridge	1	6/13	5	11	49.8	III F 5	III F 5	Yes	Yes	Yes	p
Brown/Rock/ Keya Paha	Niobrara River, Spencer Dam to hwy 137	2	6/13	32	95	64.4	III F 5	III F 5	Yes	Yes	Yes	p
Buffalo	Central Platte River, Broadfoot's North of Minden - (Newark)	54	6/14	0	4	2.7	VII I 1 9 12	VII I 1 9 12	No	Yes	Yes	p
Buffalo	Central Platte River, Broadfoot's West (Kearney South)	53	6/14	1	11	3.9	VII I 1 10 13	VII I 1 9 12	Yes	Yes	Yes	p
Buffalo	Central Platte River, Elm Creek-Paulson/Bluehole Sandpit	50	6/14	5	7	2.0	VII I 2 9	VII I 2	Yes	Yes	Yes	p
Buffalo	Central Platte River, Mid-Nebraska Aggregate-Minden	55	6/14	0	0	0.3	VII I 1		Yes	Yes	Yes	p
Buffalo	Central Platte River, Sandy Channels/Johnson Pit	51	6/15	3	6	1.0	VII I 2	VII I 2	No	Yes	Yes	p
Buffalo	Central Platte River, T&F Elm Creek	49	6/15	0	0	0.4	VII I 2 10		No	No	No	p
Buffalo	Wells Pit	52	6/15	0	0	0.8			No	No	No	p
Buffalo/ Dawson	Central Platte River (RM 229-247)	48	6/9	0	2	29.0	III F 5	III F 5	Yes	Yes	Yes	p
Butler	Lower Platte River, Bellwood Central S&G	67	6/12	0	4	n.r.	VII A 9	VII A 9	No	No	No	p
Cass	Lower Platte River, Cullom (New Pit)	85	6/19	0	0	n.r.	VII A 9		Yes	Yes	Yes	p
Cass/Sarpy	Lower Platte River, Plattsmouth Pit	86	6/19	0	0	1.0	VII A 9		Yes	Yes	Yes	p
Cass/Sarpy	Lower Platte River, Plattsmouth to Salt Creek Mouth	87	6/12	0	2	41.9	III F 5	III F 5	Yes	Yes	Yes	p
Colfax	Lower Platte River, Arps East Pit	70	6/12	0	0	n.r.	VII A 9		Yes	Yes	Yes	p

**The 2006 International Piping Plover Breeding Census in Nebraska  
(Continued)**

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Colfax	Lower Platte River, Arps Pit	69	6/12	0	10	n.r.	VII A 9	VII A 9	Yes	Yes	Yes	p
Colfax	Lower Platte River, Arps West Pit	68	6/12	0	0	n.r.	VII A 10		Yes	Yes	Yes	p
Cuming	Elkhorn River, West Point (Stalp)	10	6/5	0	9	n.r.	VII A 9	VII A 9	Yes	Yes	Yes	p
Dawson	Central Platte River, Lexington Sandpit	45	6/15	2	7	0.5	VII A I 2 0	VII I 2	No	No	Yes	p
Dawson	Central Platte River, Overton S&G, Overton Pit	47	6/15	0	0	0.5	VII I 2 9		Yes	Yes	Yes	p
Dawson	Central Platte River, Paulsen Pit - Lexington	46	6/15	1	1	0.5	VII I 2 10	VII I 2	Yes	Yes	Yes	p
Dawson	Upper Platte River, Kirkpatrick's Sanpit	41	6/8	0	0	3.2	VIII E 1		Yes	Yes	Yes	p
Dawson	Upper Platte River, Koch's South - Cozad Pit	43	6/7	3	6	n.r.	VIII E 1		Yes	Yes	Yes	p
Dawson	Upper Platte River, Overton S&G, Lexington Pit	44	6/15	0	0	0.8	VIII		Yes	Yes	Yes	p
Dawson	Upper Platte River, Potter Pond	40	6/8	0	0	n.r.	VIII E 2		Yes	Yes	Yes	p
Dawson	Upper Platte River, Willow Island Sandpitt	42	6/7	0	0	n.r.	VIII E 1		No	Yes	No	p
Deuel	South Platte River, Big Springs Gravel pit	20	6/3	0	0	n.r.	n.r.		No	Yes	Yes	p
Dodge	Elkhorn River, Lyman - Richey Fremont Pit (#47)	11	6/13	0	1	0.2	VII A 9	VII A 9	No	No	Yes	p
Dodge	Lower Platte River, Lux S&G	71	6/12	1	6	0.2	VII A 9	VII A 9	No	Yes	Yes	p
Dodge	Lower Platte River, Western Fremont Pit	74	6/1	0	6	0.8	VII A 9	VII A 9	Yes	Yes	Yes	p
Douglas	Lower Platte River, All Spec (Venice Pit)	78	6/14	0	0	n.r.	VII A 9		No	No	Yes	p
Douglas	Lower Platte River, Ginger Cove Pit (Valley #11)	75	6/14	0	3	0.9	VII A 9	VII A 9	Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in Nebraska (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Douglas	Lower Platte River, Lyman- Richey S&G (Waterloo #40 Pit)	77	6/14	0	0	n.r.	VII A 9		No	Yes	Yes	p
Douglas	Lower Platte River, Mallard Pit at Valley	76	6/14	1	2	0.6	VII A 9	VII A 9	No	Yes	Yes	p
Garden	North Platte River, Lewellen Gravel Pit	19	6/14	0	0	0.8	VII A 9		No	Yes	Yes	p
Hall	Central Platte River, Central S&G, Grand Island	61	6/14	0	0	1.4	VII I 1 9		No	No	Yes	p
Hall	Central Platte River, Hooker Bros. S&G, Grand Island (South)	59	6/12	0	0	1.4	VII A I 1 9		No	Yes	Yes	p
Hall	Central Platte River, Hooker Bros. S&G, Grand Island (West)	58	6/12	0	0	1.0	VII A I 1 9		Yes	Yes	Yes	p
Hall	Central Platte River, Island S&G, Grand Island	60	6/12	0	0	0.8	VII A I 1 9		No	Yes	Yes	p
Hall	Central Platte River, Lilley's in Prosser	56	6/14	0	0	1.0	VIII I 1		No	No	Yes	p
Hall	Deweese- Alda	57	6/14	0	0	0.8	VII I 1		No	No	No	p
Hamilton	Central Platte River, Mowitz Pit	65	6/8	0	6	n.r.	VII A 9	VII A 9	No	No	No	p
Howard	North Loup River, St. Paul Pit	14	6/5	0	10	0.8	VII A 9	VII A 9	No	Yes	Yes	p
Howard	North Loup River, Tri-County S&G	13	6/5	0	0	0.5	VII A 9		No	Yes	Yes	p
Howard/ Nance/ Merrick	Loup River, Loup Diversion to North Loup Mouth	15	6/6	3	6	54.8	III F 5	III F 5	Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, Arthur Bay to Sandy Beach	21	6/12	10	32	6.4	VI A 1	VI A	Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, Cedar Vue to W end	22	6/5	0	0	6.4	VI A		Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, Dam to Arthur Bay	23	6/5	30	63	6.4	VI A 12	VI A	Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, Dam to Vans E	24	6/5	48	127	16.1	VI A	VI A	Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in Nebraska (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Keith	North Platte River, Lake McConaughy, Lemoyne to Spring Park	25	6/13	27	52	8.0	VI A 12	VI A	Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, S Dam to Ogallala Beach	26	6/7	0	0	11.3	VI A		Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, S side Vans to W end	27	6/7	16	33	5.3	VI A 1 12	VI A	Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, Sandy Beach to Lemoyne	28	6/12	13	31	6.4	VI A 12	VI A	Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, Spring Park to Cedar Vue	29	6/13	13	25	8.0	VI A 12	VI A	Yes	Yes	Yes	p
Keith	North Platte River, Lake McConaughy, Spring Park to Sandpit	30	6/13	7	25	5.6	VI A 12	VI A	Yes	Yes	Yes	p
Keith	South Platte River, Anderson S&G, Paxton Pit	35	6/8	0	0	0.3	VII A 9		No	No	Yes	p
Keith	South Platte River, Anderson S&G, Roscoe Pit	34	6/8	0	0	0.3	VII A 9		No	Yes	Yes	p
Keith	South Platte River, Brule Sand Pit	32	6/3	0	0	n.r.	VII A 9		No	Yes	Yes	p
Keith	South Platte River, Brule to Roscoe	31	6/3	0	0	24.1	III F 5		No	Yes	Yes	p
Keith	South Platte River, Ogallala Ready Mix/Paulson's S&G	33	6/6	0	0	0.3	VII A 9		No	No	Yes	p
Lincoln	South Platte River, Sutherland Pit (Anderson S&G)	37	6/8	0	0	0.4	VII A 9		No	Yes	Yes	p
Lincoln	South Platte River, Whitney S&G, Sutherland Pit	36	6/8	0	0	0.4	VII A 9		No	No	Yes	p
Lincoln	Upper Platte River, Lexington Bridge to N. Platte Diversion	38	6/8	1	2	1.6	III E 2		Yes	Yes	Yes	s(p)
Lincoln	Upper Platte River, Maxwell Pit	39	6/8	0	0	0.2	VIII E 2		Yes	Yes	Yes	p

## The 2006 International Piping Plover Breeding Census in Nebraska (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Madison	Elkhorn River, Central S&G Norfolk #92	6	6/5	1	2	1.4	VII A 9	VII A 9	No	Yes	Yes	p
Madison	Elkhorn River, Pilger S&G, Norfolk Pit	7	6/5	0	0	1.2	VII A 9		Yes	Yes	Yes	p
Merrick	Central Platte River, Clarks Pit	66	6/12	0	0	n.r.	VII A 9		No	No	No	p
Merrick	Central Platte River, Grigsby Pit	63	6/6	0	7	0.6	VII A 9	VII A 9	No	No	Yes	p
Merrick	Central Platte River, Hamilton County S&G	64	6/6	0	0	n.r.	VII A 9		No	No	No	p
Merrick	Central Platte River, Hooker Bros. S&G, Grand Island (East)	62	6/12	0	0	1.6	VII I 1 9		No	No	No	p
Nance	Loup River, Loup Diversion	16	6/6	0	4	1.6	VII A 9	VII A 9	Yes	Yes	Yes	p
Platte	Loup River, Central S&G, Genoa Pit	17	6/6	0	9	1.6	VII A 9	VII A 9	Yes	Yes	Yes	s/p
Platte	Loup River, Stempek Pit	18	6/6	0	0	0.1	VII A 9		No	No	Yes	p
Sarpy	Lower Platte River, Linoma Beach Pit	82	6/14	0	0	n.r.	VII A 9		No	No	No	p
Sarpy	Lower Platte River, Western S&G at Louisville Pit	84	6/13	0	4	0.4	VII A 9	VII A 9	Yes	Yes	Yes	p
Sarpy/Saunders/ Dodge/Colflax/ Douglas/Platte	Lower Platte River, Elkhorn River Mouth to Loup River Mouth	81	6/12	0	8	112.6	III F 5	III F 5	Yes	Yes	Yes	p
Saunders	Lower Platte River, Bluff Pit	73	6/12	0	0	0.2	VII A 9		Yes	Yes	Yes	s/p
Saunders	Lower Platte River, Dolezal Pit East	72	6/12	0	0	0.5	VII A 9		No	No	Yes	p
Saunders	Lower Platte River, Lyman- Richey S&G, Western Ashland Pit	80	6/13	0	0	2.0	VII A 9		No	No	Yes	p
Saunders/Sarpy/ Cass	Lower Platte River, Salt Creek Mouth to Elkhorn River Mouth	83	6/12	0	4	11.3	III F 5	III F 5	Yes	Yes	Yes	n.r.
Saunders	Lower Platte River, Western North Pit (Big Sandy)	79	6/12	0	3	4.0	VII A 9	VII A 9	Yes	Yes	Yes	p
Stanton	Elkhorn River, Pilger S&G, Pilger Pit	8	6/19	0	0	0.8	VII A 9		Yes	Yes	Yes	p



## The 2006 International Piping Plover Breeding Census in Nebraska (Continued)

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Valley	North Loup River, Ulrich S&G (East)	12	6/8	0	2	0.5	VII A 9	VII A 9	Yes	Yes	Yes	p
Washington/ Douglas/Sarpy/ Stanton/Dodge/ Cuming	Elkhorn River, Mouth to N Fork Elkhorn River Mouth	9	6/5	0	3	148.4	III F 5	III F 5	Yes	Yes	Yes	s/p
<i>Off-Missouri River Subtotal</i>				268	749 <sup>1</sup>	695.6						
<i>Missouri River Subtotal</i>				66	196 <sup>1</sup>	15.2						
<b>Total</b>				<b>334</b>	<b>945<sup>1</sup></b>	<b>710.8</b>						

<sup>1</sup>This total is the "high count"; since two surveys were conducted at some sites for the detectability study, this total includes the highest count at each site.

# The 2006 International Piping Plover Breeding Census in Colorado

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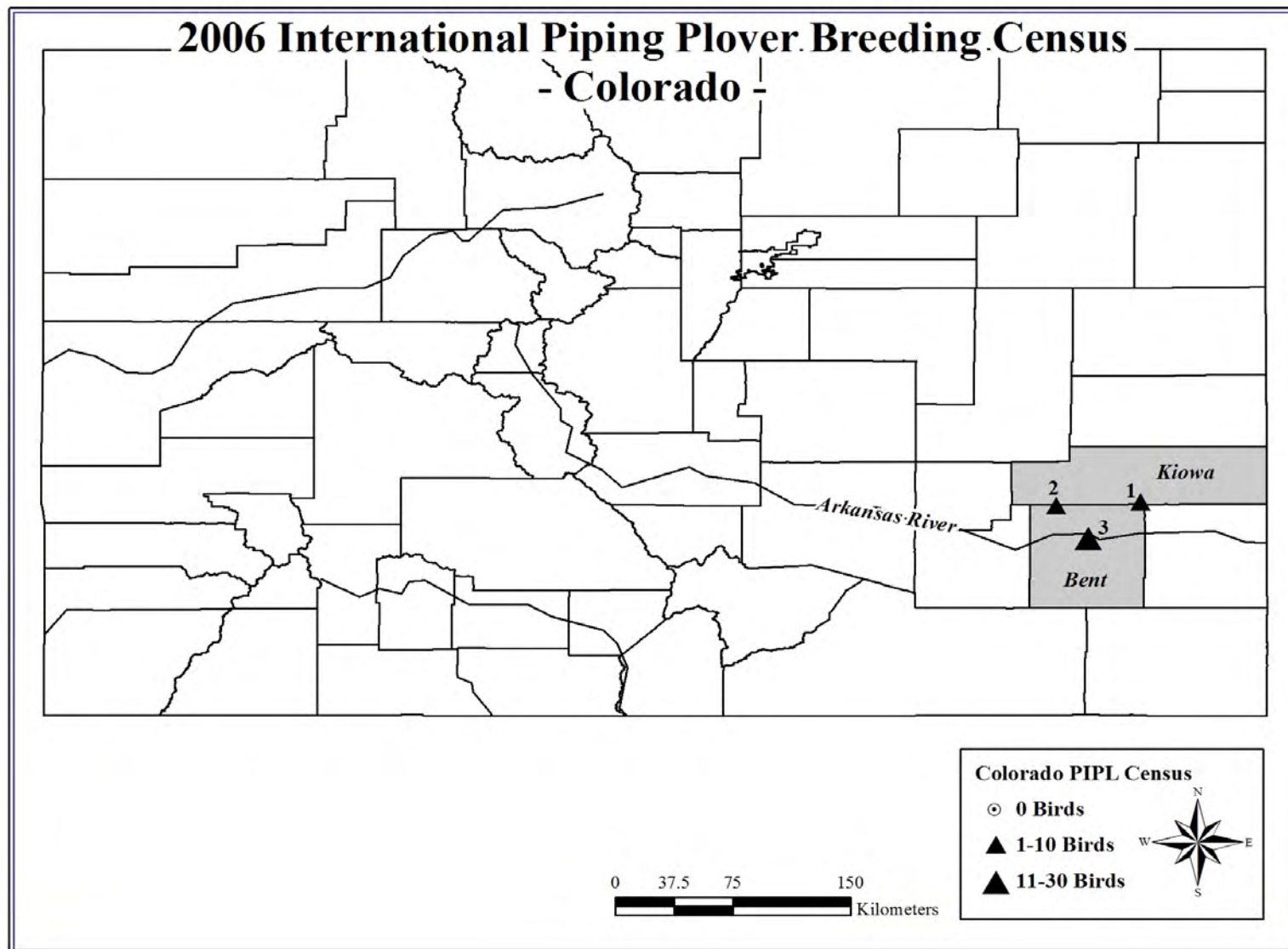
Only three sites were surveyed as part of the 2006 International Census. Many of the sites that were surveyed in previous years as part of the International Census were not covered this year, but most of them did not have plovers previously. Two of the three sites where Piping Plovers were found in 2001 were surveyed this year and found to have birds. Nee Noshe Reservoir had one pair in 2001 but was not surveyed this year. However, Nee Grande Reservoir had one breeding pair in 2006. This site has been surveyed during every International Census but has not had birds since 1991. Despite the reduced effort, more birds were recorded in 2006 than during any previous International Census

## Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	13	14	13	20 <sup>1</sup>

<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

*Summarized by E. Elliott-Smith*



## The 2006 International Piping Plover Breeding Census in Colorado

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Bent	John Martin Reservoir	3	6/06	6	15	9.7	VI A 7	VI A 7	Yes	Yes	Yes	f/p
Bent/Kiowa	Adobe Creek Reservoir	2	6/05	1	3	0.8	VI A 6 15	VI A 6 15	Yes	Yes	Yes	s(p)
Kiowa	Nee Grande Reservoir <sup>1</sup>	1	5/21	1	2	12.9	VI A 10	VI A 10	Yes	Yes	Yes	f/p
<b>Total</b>				<b>8</b>	<b>20</b>	<b>23.4</b>						

<sup>1</sup>Please note that this site was surveyed outside the Census window.

# The 2006 International Piping Plover Breeding Census in Kansas

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As in 2001, one site along the Kansas River was surveyed as part of the International Census. In 2001, 3 birds were observed at this site, whereas there were two pairs in 2006. Both of the pairs had active nests during the 2006 International Census. In 2001, it was reported that there were a half a dozen potential Piping Plover breeding sites depending on the water level of the Kansas River; however, other sites were not surveyed in 2006.

One of the birds observed at this site in 2006 was a banded individual from South Dakota that had been raised in captivity. It has attempted to nest at this site for the past four years.

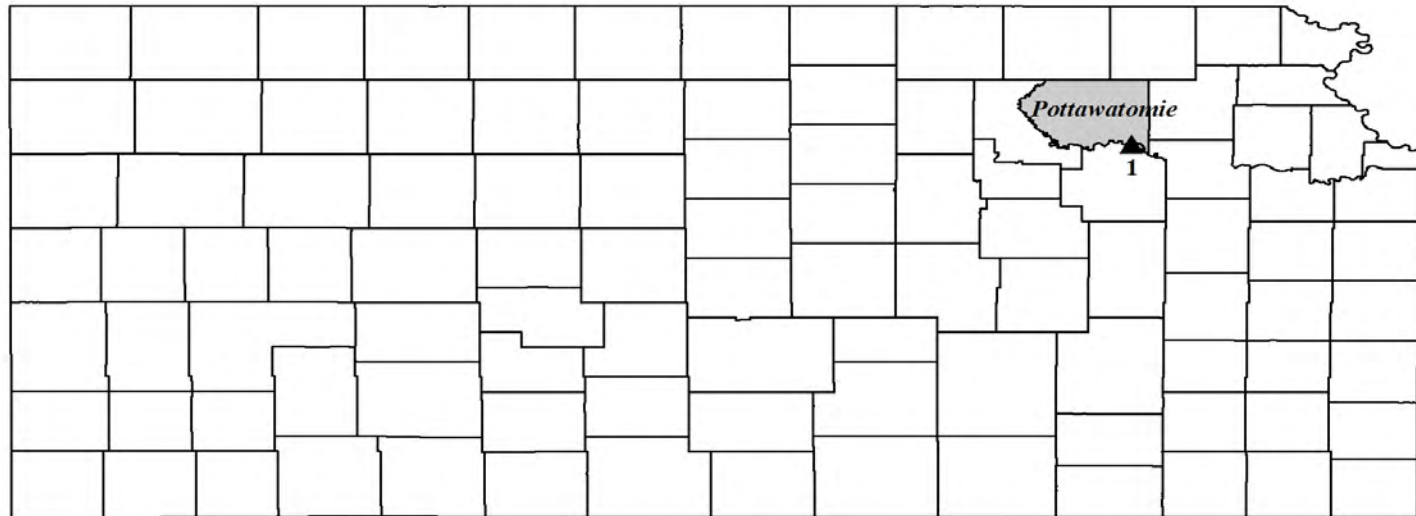
## Comparison of Census Numbers

	1991	1996	2001	2006
Total Adults	n.a.	1	3	4 <sup>1</sup>

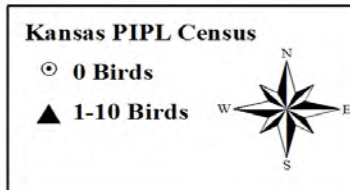
<sup>1</sup>This is the total from a single survey at each site; if more than one survey was conducted, we count only results from the first survey during the census window.

*Summarized by E. Elliott-Smith*

## 2006 International Piping Plover Breeding Census - Kansas -



0 50 100 200  
Kilometers



## The 2006 International Piping Plover Breeding Census in Kansas

COUNTY/ REGION	SITE NAME	MAP #	DATE	BR PAIRS	TOTAL ADULTS	KM	SITE DESCRIPTION	PIPL HABITAT	91 CENSUS	96 CENSUS	01 CENSUS	OWN
Pottawatomie	Belvue Colony	1	6/05	2	4	1.2	III A F 1 12	III A F 1 12	No	No	Yes	p
<b>Total</b>				<b>2</b>	<b>4</b>	<b>1.2</b>						

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