



Shorebird surveys 2004-2008
Citizen Science Program
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Aspects of shorebird biology

- **Low reproductive rates**
- **Migrate long distances and depend on specific stopover areas to refuel**
- **Concentrate in large flocks during migration**
- **Are in direct competition with people for habitat**

Declines of shorebird species

- Documented since the 80s
- Several programs have dealt with the international declines (WHSRN, North American Shorebird Initiative, PRISM)

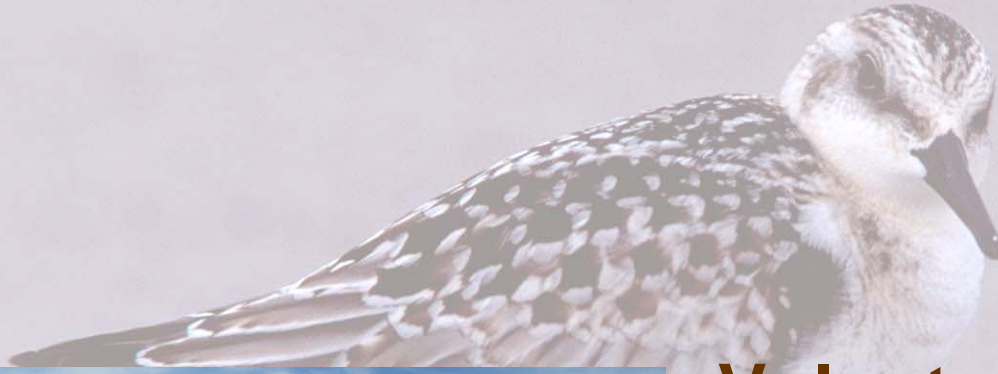
- **International Shorebird Survey (ISS)**
 - Manomet Center for Conservation Sciences, initiated 1974
- **The Maritimes Shorebird Survey (MSS)**
 - covers areas in Southeast Canada, initiated 1970s
- **PRISM (Program for Regional and International Shorebird Monitoring)- initiated in 2000s**
 - initiative to coordinate and expand existing shorebird survey efforts throughout North America.
 - designed to meet the monitoring goals of the U.S. and Canadian Shorebird Plans
 - gathers reliable information on the distribution, abundance and population trends of shorebirds in North America.



Why a Fall migration shorebird survey?

- **Monitor trends in shorebird populations**
- **Determine distribution and abundance of shorebirds in New Jersey**
- **Monitor habitat use at stopover sites**

Fall Survey



Volunteers have been conducting shorebird migration surveys three times per month, from the middle of July until the end of October, at 25 sites since 2004.



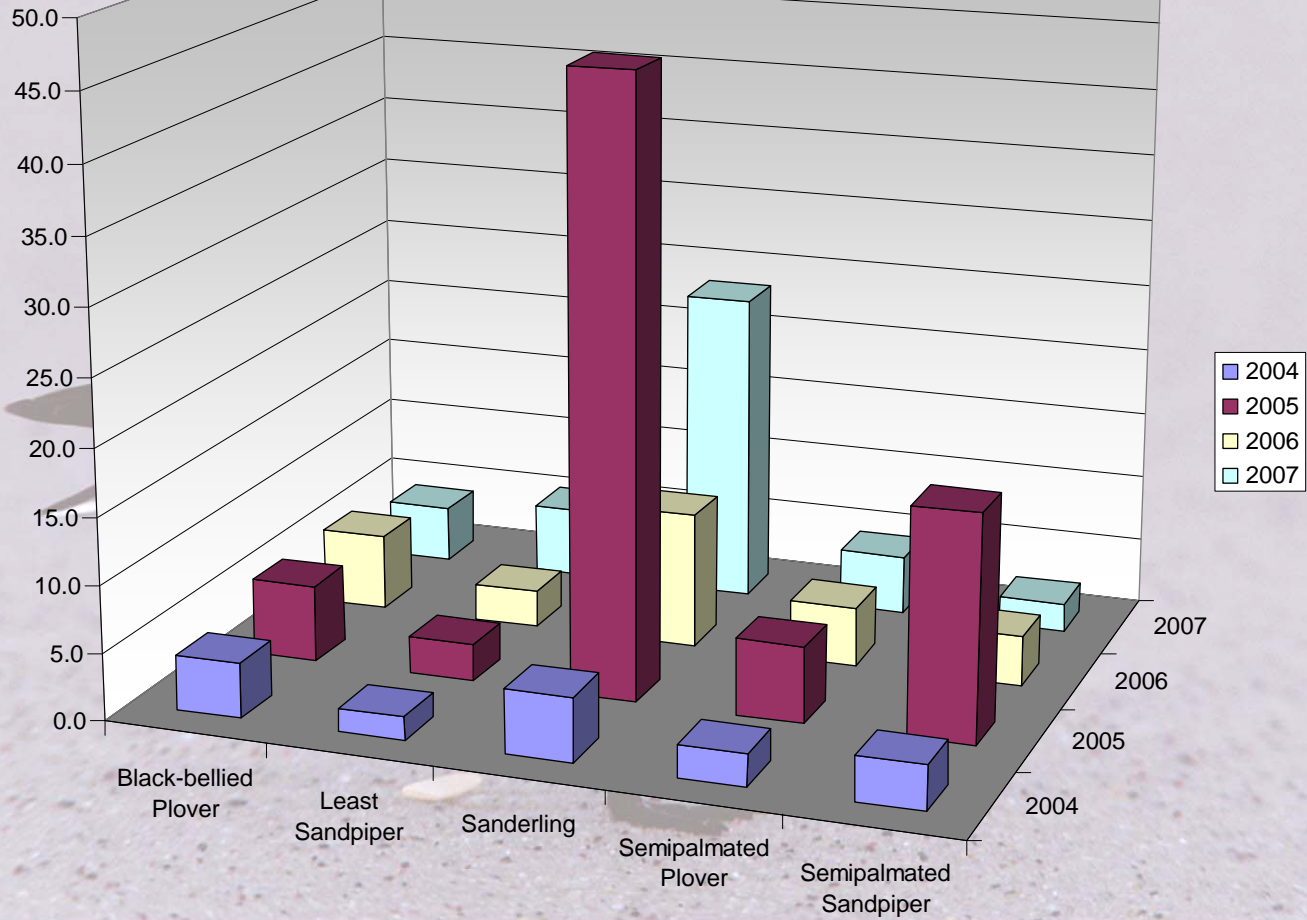
Data collected

- **General information (time, date, tide level, weather, location)**
- **Numbers of individuals of each species**
- **Disturbance within 100 m (300 ft)**
- **Numbers of adults and juveniles**
- **Behavioral information**

Results

- **Average count of most common species by year**
- **Total counts of common species by date**
- **Total number of species by year**

Average Counts Per Fall Visit By Year For Most Observed Species

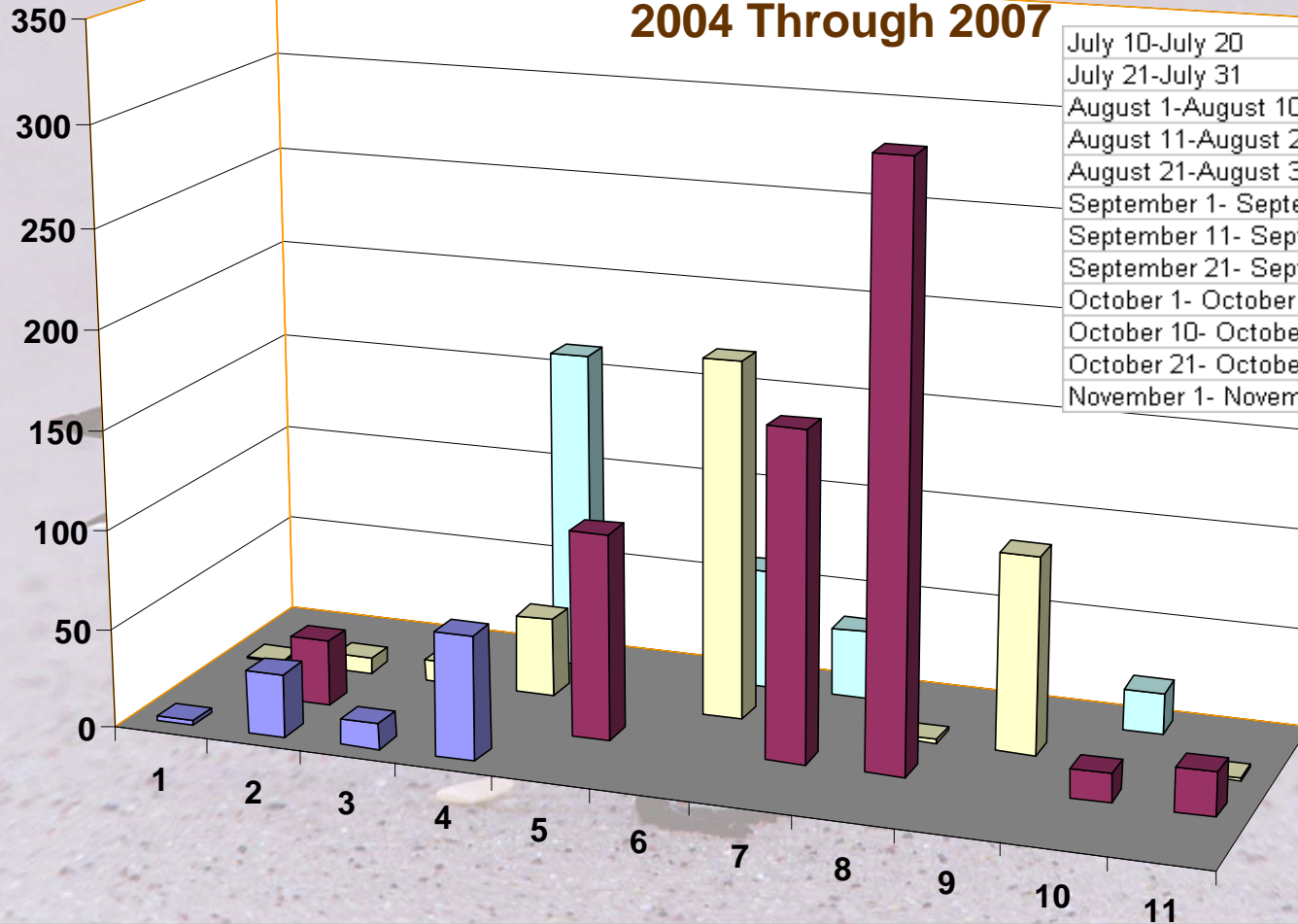


Sanderling Fall Counts

10 Day Periods from July to November

2004 Through 2007

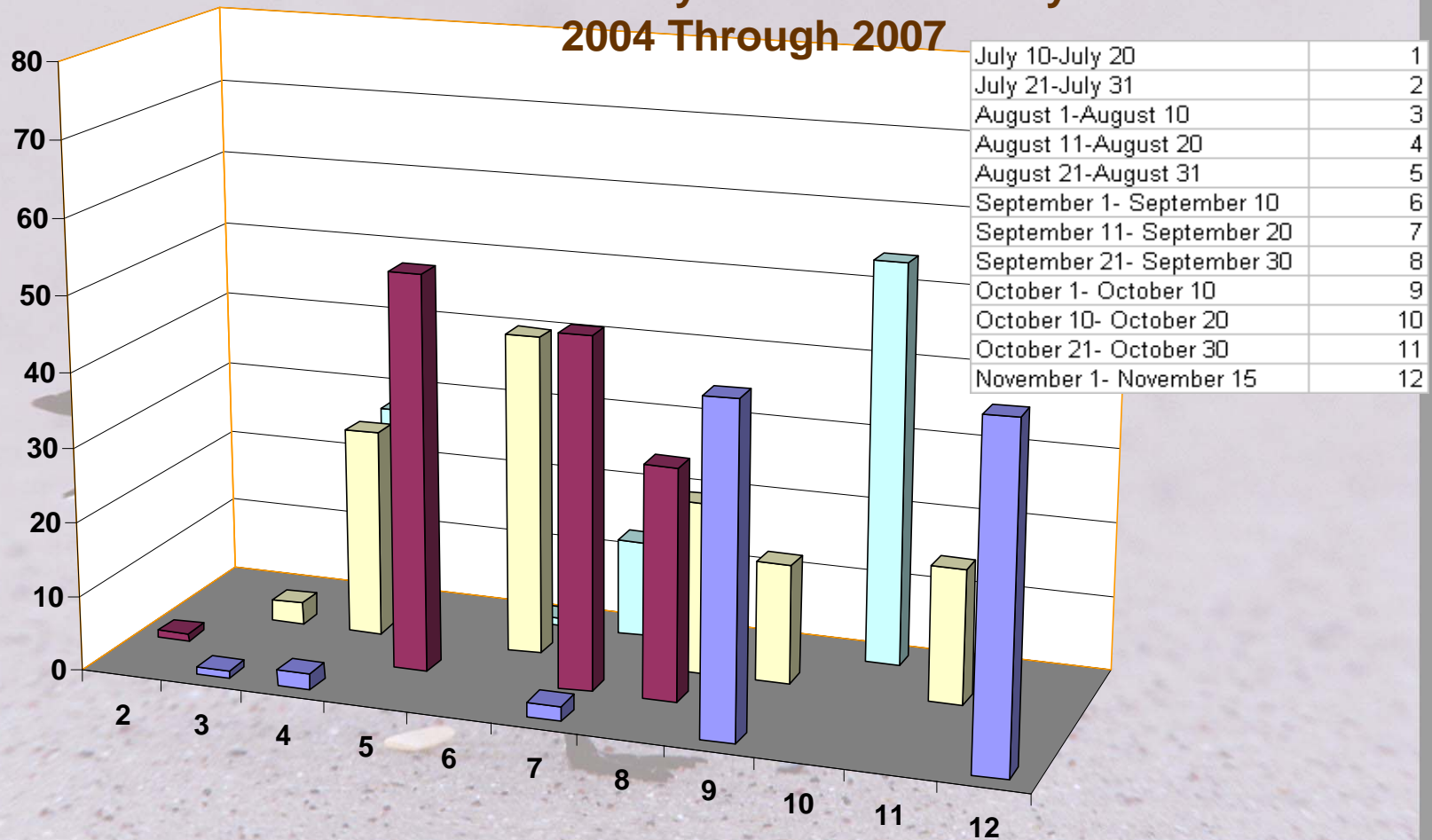
July 10-July 20	1
July 21-July 31	2
August 1-August 10	3
August 11-August 20	4
August 21-August 31	5
September 1- September 10	6
September 11- September 20	7
September 21- September 30	8
October 1- October 10	9
October 10- October 20	10
October 21- October 30	11
November 1- November 15	12



■ 2004 ■ 2005 ■ 2006 ■ 2007



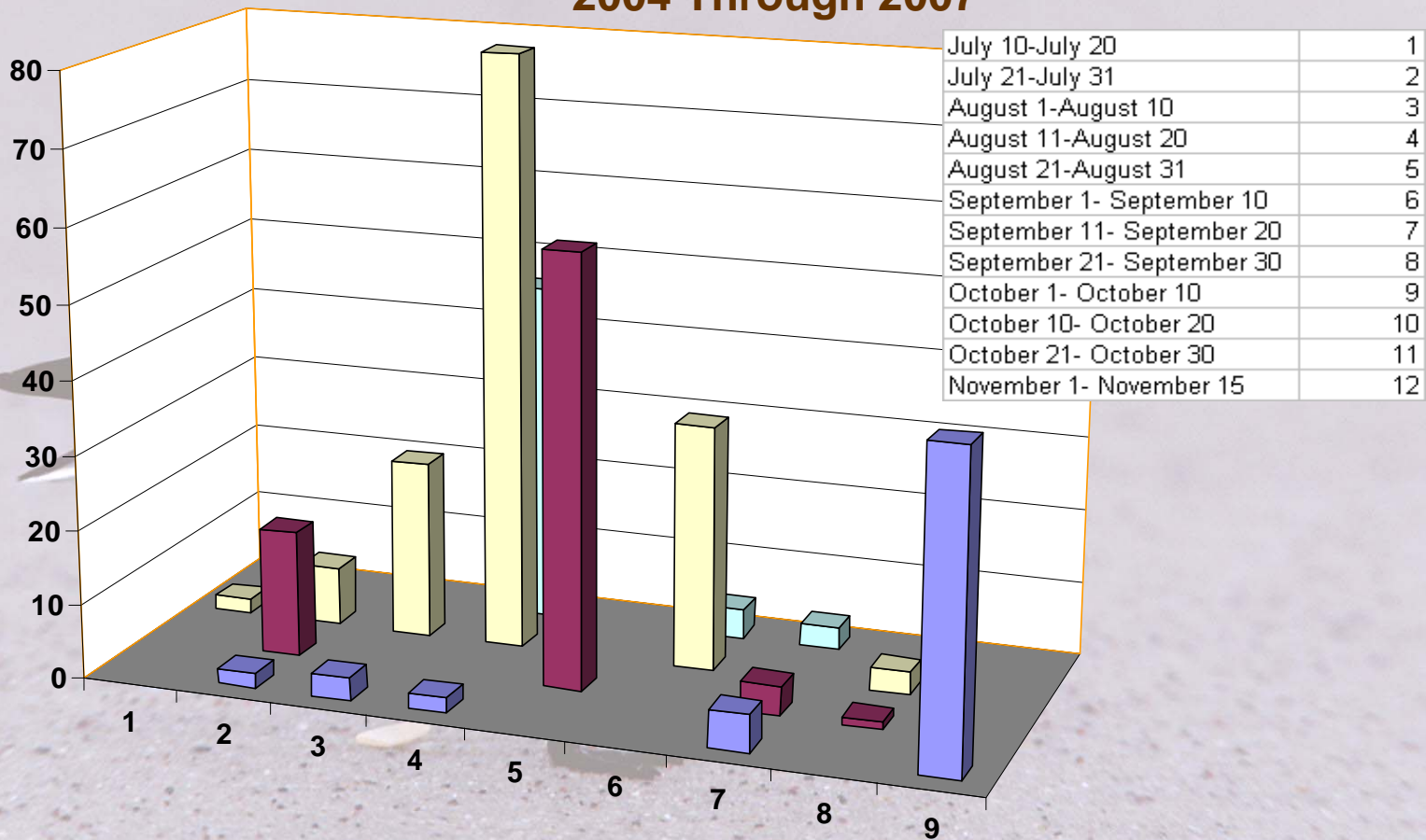
Black-bellied Plover Fall Counts 10 Day Periods from July to November 2004 Through 2007



■ 2004 ■ 2005 ■ 2006 ■ 2007



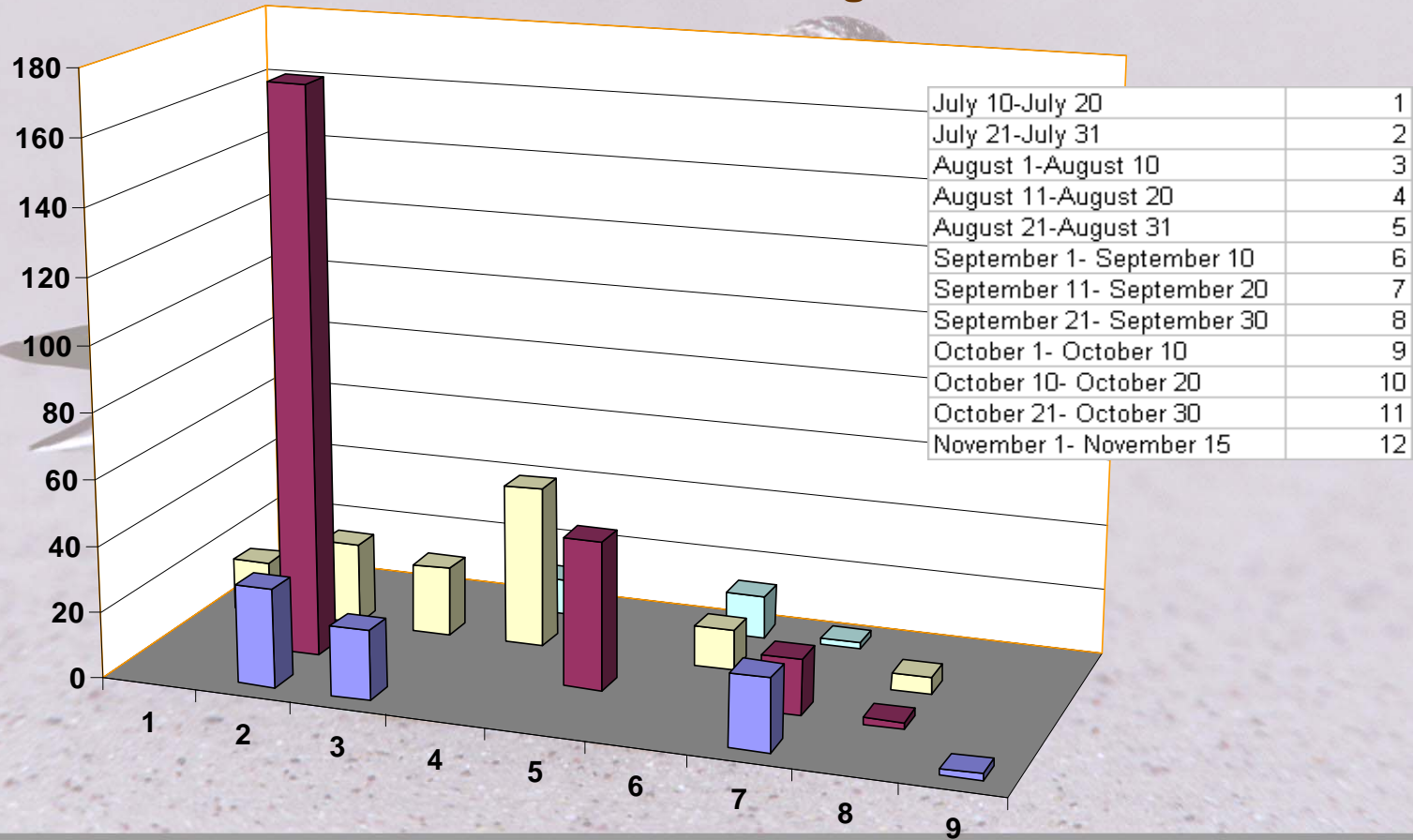
Semipalmated Plover Fall Counts 10 Day Periods from July to November 2004 Through 2007



■ 2004 ■ 2005 ■ 2006 ■ 2007



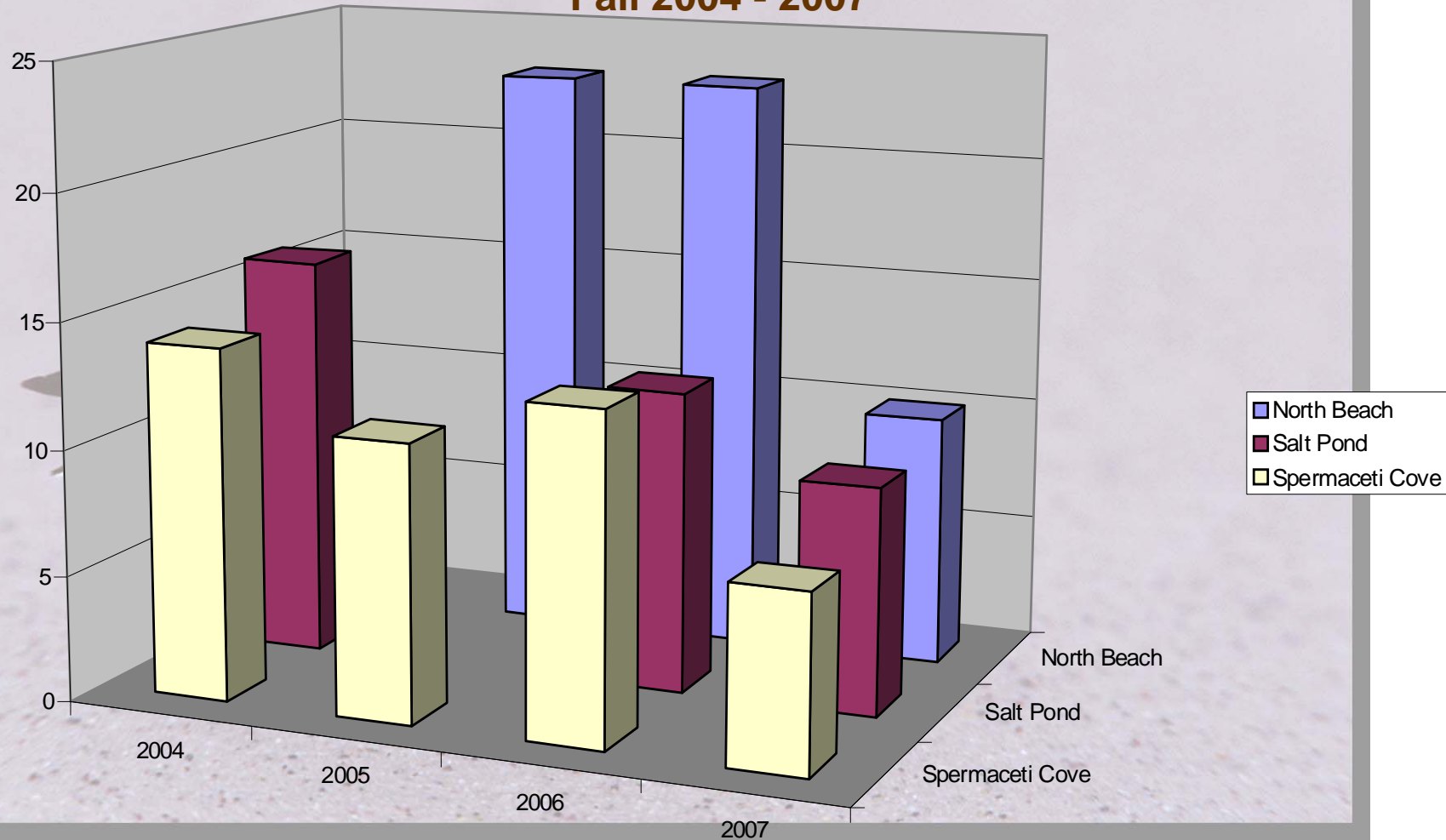
Semipalmated Sandpiper Fall Counts 10 Day Periods from July to November 2004 Through 2007



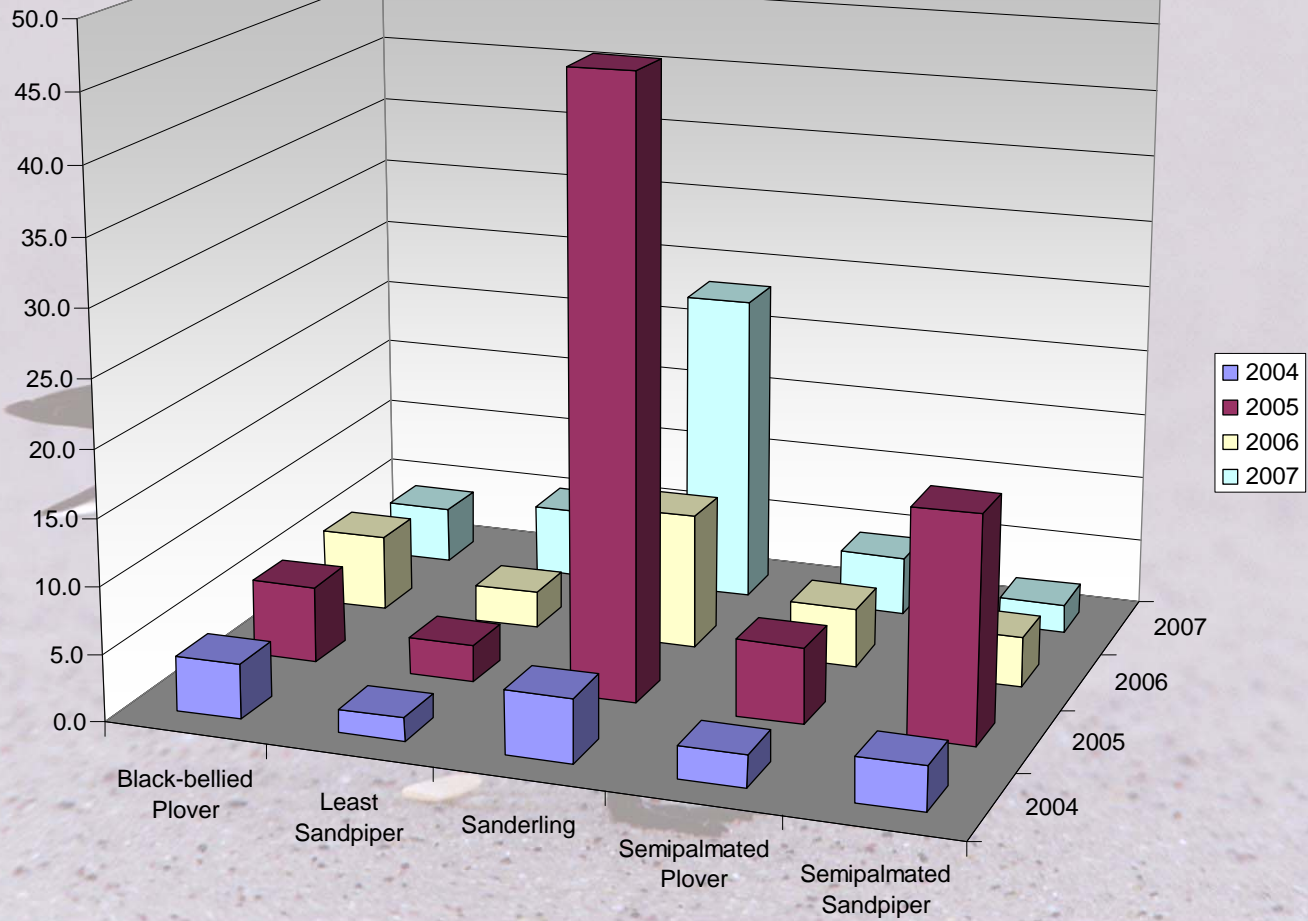
■ 2004
 ■ 2005
 ■ 2006
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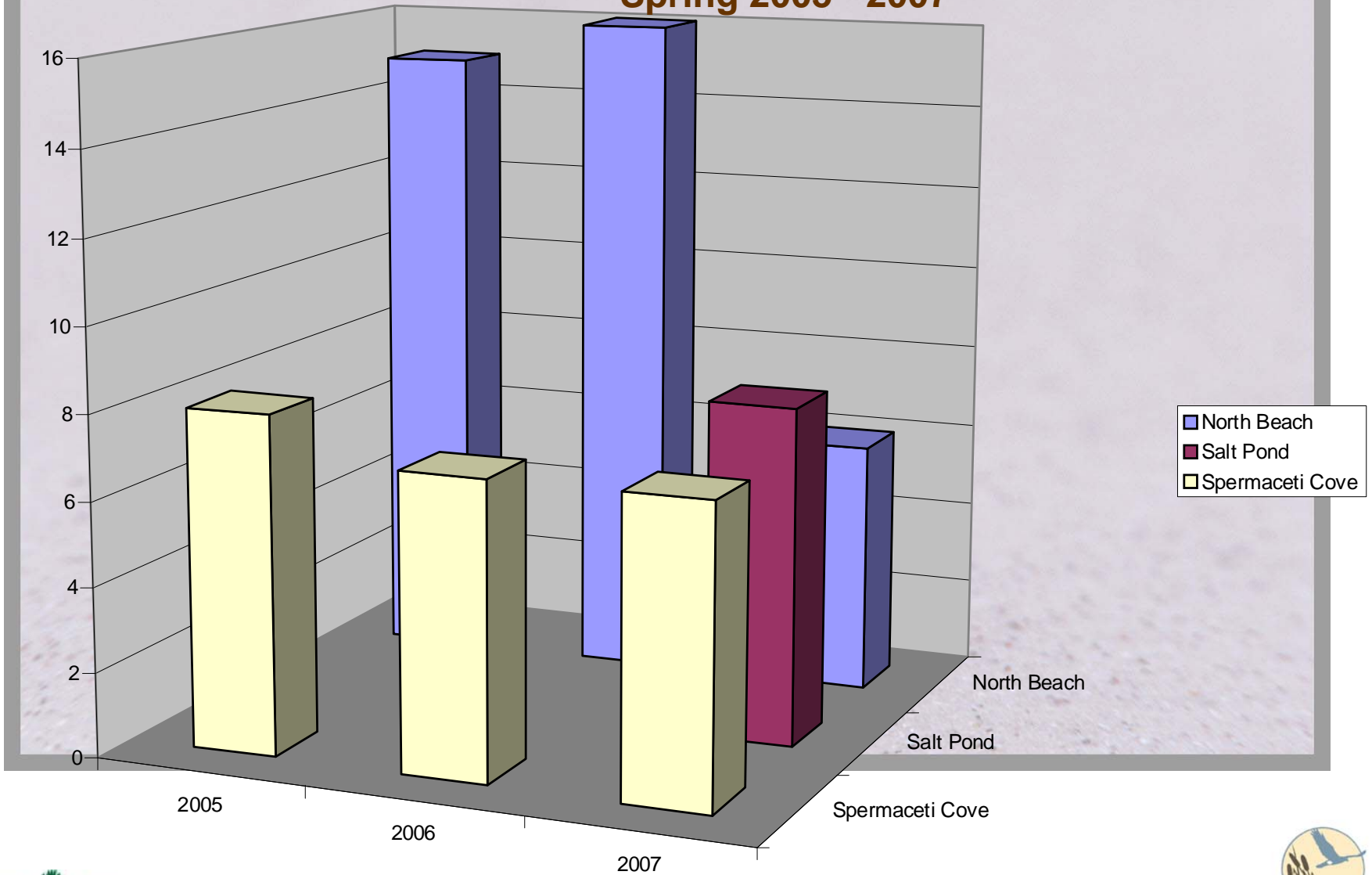
Number of Species by Year and Site Fall 2004 - 2007



Average Counts Per Fall Visit By Year For Most Observed Species



Number of Species by Year and Site Spring 2005 - 2007



Conclusions

- **Surveys to continue through 2009**
- **NJAS would like to collaborate with NY in developing shorebird survey programs through citizen science**