Kachemak Bay Shorebird Monitoring Project: 2011 Report

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With much support from Kachemak Bay Birders
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I. Executive Summary

The general belief among birders who have a long history with Alaska's Kachemak Bay is that spring shorebird concentrations are not what they use to be. But, it would be useful to have some sort of monitoring data to verify that perception. Hence the origin of this citizen science project which was conceived in the winter of 2008-2009 by members of the newly organized Kachemak Bay Birders based in Homer, Alaska.

In May 2011, the Kachemak Bay Birders completed its third consecutive shorebird monitoring project. The main purpose of this project is to gain a better understanding of shorebird populations that stopover at Kachemak Bay, particularly the Homer Spit area, during spring migration. Fortunately, we are able to compare our results to the shorebird surveys done at the Homer Spit by George West from 1986-1994. This comparison provides some insight into shorebird population trends over the past couple of decades. Secondary purposes of this project are; 1) to contribute information that might be useful to others who are assessing shorebird populations across the entire Pacific Flyway, and 2) to use, when needed, the monitoring data to help protect Kachemak Bay/Homer Spit shorebird habitat.

In 2011, between April 14 and May 24, a total of 18 volunteers monitored four sites on Homer Spit, one site at nearby Beluga Slough, and by boat the Islands and Islets on the south side of the Bay. Weather conditions were typical for the season; lows near freezing in April and warming up to 50°F in May. The protocol we followed is a modification of the International Shorebird Survey (ISS) protocol. We monitored two hours once every five days when the outgoing tide reached 15.0 feet (or at high tide if less). We observed 25 species of shorebirds and counted a total of approximately 16,007 individual birds. Fifty four percent of the birds counted were mixed flocks of Western Sandpipers and Dunlin, mostly at the Mud Bay site. Thirty two percent of the count was Red-necked Phalaropes seen by boat on the open waters of Kachemak Bay. There were no significant disturbances from either humans or predators (e.g. raptors).

The number of shorebird species seen in 2011 (25) was higher than in 2009 (24) or 2010 (23). The total number of individual shorebirds counted in 2011 (16,007) was also higher than in 2009 (7,406) or 2010 (9,845). The biggest increase was with Western Sandpipers, Dunlin, Red-necked Phalarope, Surfbirds, and Rock Sandpipers (which overwinter at Kachemak Bay). Despite the increase, the 2011 count was still substantially less than that observed by West. Adjusting West's daily counts to match our five day counts, he saw an average of 18,436 individual shorebirds during his seven years of survey. Including only the Homer Spit sites and matching dates, we counted 8,858 individual shorebirds in 2011. The adjusted count for 2009 was 4,994 individual birds and in 2010 it was 7,314.

II. Introduction

A. Overview of Homer Spit Environment

In 2011 the City of Homer completed its final draft of an update to the Homer Spit Comprehensive Plan (City of Homer, 2011). Given the importance of this document and its recognition of the natural environment, including birdlife it was deemed appropriate to use parts of this plan as the introduction for this report, which follows.

Figure 1. View of Homer Spit from downtown Homer, facing south. (Photo credit; Homer Spit Comprehensive Plan).

Homer Spit Comprehensive Plan Goal: Wise land management of the Spit and its resources to accommodate natural processes, while allowing fishing, tourism, other marine related development, and open space/recreational uses.

The Homer Spit is an intriguing natural phenomenon. It is one of the longest occupied natural sand spits in the world, extending southeast from the City of Homer, approximately 4.5 miles into Kachemak Bay. The Spit is a natural, dynamic system, which is constantly being shaped by deposition and erosion of sediments. The Spit is sensitive to changes in the natural environment and to human activities, both on the Spit itself and in the uplands of the mainland.

The Homer Spit is a lot of things to a lot of different and diverse groups of people. The Spit is unusual in that so much of it is owned by the City of Homer. The Spit was the site of the town's first settlement and survived the 1964 Good Friday earthquake. In more recent times, it has emerged as the centerpiece for Homer's tourism industry. It is a working port and harbor, a wildlife refuge, a place for outdoor recreation, and a place for employment and business. An economic engine for the region, it is the center of Homer's thriving fishing industry and has become one of Alaska's most popular tourism destinations.

As one enters the City from the north and experiences the view of Kachemak Bay, the surrounding mountains and glaciers, the focus of attention is naturally drawn to the Spit as a place to investigate. This update of the City of Homer Spit Comprehensive Plan is similar to that view, focusing attention on current issues, defining a vision, and setting a course of action for the future.

Natural Environment

The coastal area of the Spit is a marine and tidal environment, attracting numerous shorebirds and marine animals. The Spit is a nationally recognized birding area, and has international recognition due to the number of birds that pass through the area during annual migrations.

The Mud Bay and Mariner Lagoon areas are part of the Western Shorebird Reserve Network (WSRN). With a tidal range greater than 28 feet, Kachemak Bay has expansive tidal flats and provides a rich shore environment for wildlife. Kachemak Bay is also a State of Alaska designated Critical Habitat Area, which was supported by Alaskans statewide.

Much of the Spit's upland environment has been altered over time. The Spit was severely impacted by the 1964 earthquake as the elevation dropped significantly, although some of that displacement has rebounded over time. Material from the subsequent excavation of the existing boat harbor and annual dredging was used to fill the Spit and raise the elevation of some of the land to the present level.

B. Review of Kachemak Bay Shorebird Monitoring Project

For the past three years Kachemak Bay Birders (a network of birders who live in the Homer, Alaska area) have been monitoring the spring migration of shorebirds that stopover at Kachemak Bay every year from late April to mid May. This effort has focused on the Homer Spit portion of Kachemak Bay because of its easy accessibility and excellent habitat for shorebirds. The purpose of this citizen science monitoring project is to provide a better understanding of the status of shorebird populations in the area. By comparing our current data to monitoring data collected by former Homer resident George West, who conducted counts of Homer Spit shorebird species and numbers during the 1980s and 1990s, we should be able to better understand population trends. These trends will be of local interest and could contribute to other monitoring efforts at shorebird stopover and wintering areas that have similar objectives.

The first year of this project began during the 2008-2009 winter, soon after Kachemak Bay Birders was formed. A committee was set up to draft a strategic plan and seek advice on the selection of proper protocol. We were advised to use the International Shorebird Survey (ISS) protocol but found it needed some modification, primarily because it called for monitoring once every 10 days. While this may be suitable in areas where shorebirds overwinter, it wasn't

suitable for the Kachemak Bay area where some species of shorebirds stay no more than a couple of days at most.

The project got underway in the spring of 2009. A team of 16 volunteers were assigned sites on or near the Homer Spit. The teams recorded shorebird observations once every five days, starting April 16 and ending May 28. Monitoring times were based on having consistent tide levels. It was decided that the best time for monitoring was when the outgoing tide was approaching 15.0 feet. Also, since this was a team effort rather than individual effort, monitoring was done simultaneously at all but one site which monitored nearby waters by boat. A caucus after each session reviewed observations. A total of 24 species of shorebirds and approximately 7,406 individual birds were observed. Data was logged in on eBird. A report entitled *Kachemak Bay Shorebird Monitoring Project: Report for 2009 Spring Survey* (Matz 2009) gives further explanation on the protocol as well as a presentation and analysis of the data. The report also compares 2009 data to that obtained by George West about two decades earlier. The Appendix includes a Kachemak Bay species list, the forms used by observers, data by session for each site, and maps as well as aerial photos of each monitoring site. This report is only available in electronic form and can be downloaded from http://kachemakbaybirders.org/.

The second year of monitoring (2010) followed a similar protocol. What was notable this year was a slow start to the spring migration, perhaps because of abnormally cold weather for the whole region. However, disappointing results were saved by a late surge of Western Sandpipers and Dunlin between May 10 and 15, creating a bimodal distribution in counts for these species. This surge resulted in more birds being observed in 2010 than in 2009. In 2010 we recorded 9,845 shorebirds during the 2010 project but one less species (23). We noted that the total number of birds observed for 2009 and 2010 was significantly less than surveys done in the late 1980s and early 1990s.

A concern we had last year was that migrating shorebirds might be passing through Homer Spit between scheduled monitoring dates, thus not included in our data. To test this possibility we did daily spot checks at Mud Bay for two weeks during the expected peak of the migration. Considering that scheduled monitoring for Mud Bay on May 5 reported 500 Western Sandpipers and spot checking the day before and after reported 1,100 and 700 Western Sandpipers respectively, it does appear that some flocks of shorebirds may be arriving and leaving between scheduled monitoring dates.

In addition to the spot checking, we sought out other shorebird observations at the time, such as list-serve birding reports. The supplemental data resulted in a total of 20 shorebird species being observed on the Homer Spit and approximately 8,600 individual shorebirds. While these supplemental data cannot be directly compared to the scheduled monitoring data, it does give us a more complete picture of the Homer Spit shorebird migration. Our scheduled monitoring dates may be missing some flocks of shorebirds, but it's not by orders of magnitude.

Since we were concerned about the disparity between our 2009 data set and West's data set, questions that we felt needed to be answered were whether: 1) the ground-based survey results

collected in 2009 represent a new "norm" or were they simply a low year, and 2) have shorebirds moved to other areas of the Bay given the increased level of activity present on the Homer Spit.

To gain insight into question #2, we obtained funding from a U.S. Forest Service Copper River International Migratory Bird Initiative (CRIMBI) grant for an aerial shorebird survey of Kachemak Bay. Its 320 mile long shoreline was flown five times at low elevation, once every three days starting May 1. Identification was by shorebird size, not species. While we couldn't identify species of shorebird, we could clearly distinguish between flocks of shorebirds, gulls and ducks. This survey is the only aspect of the shorebird monitoring project to receive funding.

Our first flight on the afternoon of May 1 observed only a couple of small flocks (tens) of shorebirds at the Homer Spit and other parts of Kachemak Bay. The next morning an email alert reported about a thousand newly arrived sandpipers near the Homer Spit. If these birds had first visited the upper part of the Bay we would have seen them the previous afternoon. While just one observation, it did indicate that shorebirds seen at the Homer Spit are not likely to be the same shorebirds seen in other parts of the Bay.

Our main purpose for doing the aerial surveys was to determine the spatial and temporal number of shorebirds that use Kachemak Bay during spring migration. Because of the late migration, our first four aerial surveys resulted in few observations. But the surge of shorebirds that finally arrived for the last aerial survey indicated that migratory shorebird concentrations were dispersed throughout Kachemak Bay where there were suitable beaches. While the Homer Spit is certainly an attractive area for shorebirds, it is not the only place in the Kachemak Bay area where migrating shorebirds concentrate. However, with the exception of Seldovia Bay where we saw nearly two thousand shorebirds, the flocks were not very large.

One of our objectives in 2010 was to attempt a rough estimate of the number of shorebirds that visit Kachemak Bay and Homer Spit during the spring shorebird migration. While the aerial surveys did observe more shorebirds in other parts of the Bay (3,440) than Homer Spit (1,403), we didn't find significantly larger concentrations. Based on our limited information, it appears that about 10,000 shorebirds visited Homer Spit in the spring of 2010 and at least that many visited other parts of Kachemak Bay. But this is substantially less than that mentioned in reports from a couple of decades ago which said that 100,000 to 1,000,000 shorebirds stopover in Kachemak Bay during spring migration.

Our online report for 2010, *Kachemak Bay Shorebird Monitoring Project:2010 Ground and Aerial Survey Report* (Matz 2010), provides an overview of the environmental features of Kachemak Bay, designated conservation areas within the Bay, a brief review of the earlier shorebird studies that were conducted in Kachemak Bay, protocols for both ground-based and aerial monitoring, observation details, trends with comparison to West's data, and public presentations of the data.

The 2011 project followed the Homer Spit protocol used the previous two years. Due to a lack of funding, this year there was no aerial survey of the greater Kachemak Bay. Details of the protocol, data, and interpretation follow.

III. 2011 Homer Spit Monitoring Protocol

A. ISS Modified Protocol

As in previous years, our shorebird monitoring protocol for 2011 used a modified version of the International Shorebird Survey (ISS) protocol (www.shorebirdworld.org/). Differences are:

1. Rather than collect data individually from one site, our protocol used a team effort to simultaneously cover five sites on or near Homer Spit. Four sites are actually on Homer Spit and one site (Beluga Slough) is nearby. In addition we obtained observations the same day from a charter boat that volunteered its effort to monitor the islands and islets on the other side (south) of the Bay during scheduled trips. This site is called Islands and Islets.

2. Since each monitoring site has different habitat, data from each site should be recorded individually as well as collectively. Accordingly, the project coordinator, in addition to writing a combined report for each session, gathered the individual site reports and entered each in the ISS portal for eBird.

3. The ISS protocol states that monitoring frequency should be once every 10 days. However, migrating shorebirds tend to spend less time at Alaska stopover sites than in the Lower-48. Studies of radio-tagged migrating shorebirds that stage in the Cooper River Delta found that these birds stay only 2 to 4 days (Warnock et al 2005). Other studies of radio-tagged shorebirds migrating through the Yakutat Forelands found that the stopover duration was just one day for 14 out 15 (93.3%) radio-tagged Western Sandpipers and two days for one (6.7%) bird (Andres et al 1998). Considering both the need to monitor more frequently than once every 10 days, yet to avoid double-counting by monitoring too often, we settled on monitoring once every five days. This also agreed with the level of effort that volunteers were willing to commit; always an important factor with citizen science projects.

B. Monitoring Sites

Homer Spit Area - Monitoring sites and how the count was conducted (stationary, walking, or by boat) are listed below. The 2009 report on Kachemak Bay Birders web site has aerial photos of each monitoring site.

- Homer Spit (see Figure 2)
  - ✓Mud Bay - stationary
  - ✓Mariner's Park Lagoon - stationary
  - ✓Mid-spit area - walking
  - ✓Boat harbor and Lands End - walking
- Beluga Slough (just north of the Spit)- walking
- Islands and Islets on Kachemak Bay's south side - boat
  - ✓Gull Island
  - ✓Sixty-foot Rock
  - ✓Cohen Island
  - ✓Lancashire Rocks near Neptune Bay

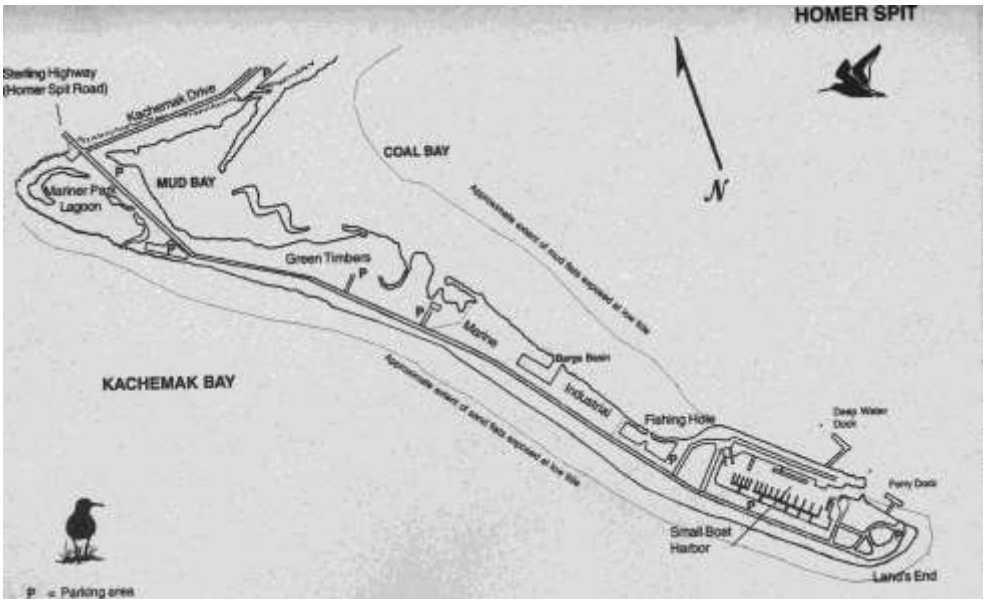


Figure 2. Graphical illustration of the Homer Spit showing primary survey areas mentioned in the text. Map courtesy of George West.

C. Volunteers and Monitoring Dates

At least two birders, all with local experience, were assigned to each team. A total of 18 volunteers monitored the four sites on Homer Spit and the site at Beluga Slough. One person monitored the Islands and Islets site.

Table 1. Monitoring schedule for the 2011 spring shorebird migration.

		Monitoring Dates								
Monitoring Site	**Volunteers**	**14-Apr**	**19-Apr**	**24-Apr**	**29-Apr**	**4-May**	**9-May**	**14-May**	**19-May**	**24-May**
Mud Bay	Betty Siegel	X	X	X	X	X	X	X	X	
	Carla Stanley	X		X	X	X	X			
	Jason Sodergren	X	X	X	X		X	X	X	X
	George Matz					X				
Mariner Park Lagoon	George Matz	X	X	X	X		X	X		
	Michael Craig		X	X	X	X	X	X	X	X
Mid-Spit	Lani Raymond	X		X	X	X	X	X		X
	Gary Lyon		X	X	X	X	X	X	X	X
	Aaron Lang	X								
	Lee Post								X	
Boat Harbor area	Michelle Michaud	X	X	X	X	X		X		
	Victoria Winne					X	X	X		
	Sharon Baur	X	X	X		X	X			
	George Matz								X	
	Carla Stanley								X	X
Beluga Slough	Nina Daley	X		X						
	Phil Cowan	X		X				X	X	X
	Kim Cooney				X	X				
	Kathy Eagle	X	X							
	Aaron Lang				X	X	X			
	Owen Meyer						X			
	George Matz									X
Islands & Islets	Karl Stoltzfus	X	X		X	X	X	X	X	X

D. Monitoring Times

The most important factor in establishing survey times was the tide. The highest and lowest tide during this year's project (but not the year) was on the same morning; April 19 when the highest tide was 22.4 feet at 3:38 am and the lowest tide was -5.5 feet at 10:04 am. These tides are based on the Seldovia District tide tables. The correction factor for the Homer Spit is inconsequential.

Monitoring is not conducted during higher than average high tides since shorebirds often leave the intertidal area at this time. Conversely, low tides put shorebirds out of viewing range. Based on our previous experience, the best time to begin monitoring is when the outgoing tide is approaching 15.0 feet, or at high tide in cases when high tide doesn't reach this level. The times used to begin monitoring are based on the quarter hour.

Table 2. Homer Spit 2011 Shorebird Monitoring Times and Tides

	Starting Time		High Tide	
Date	**Time**	**Tide (ft.)**	**Time**	**Tide (ft.)**
Thursday, April 14th	1:15 pm	15.3	12:14 pm	16.1
Tuesday, April 19th	6:15 pm	16.0	4:30 pm	20.3
Sunday, April 24th	8:00 am	15.0	7:36 am	15.1
Friday April 29th	1:30 pm	14.8	1:23 pm	15.0
Wednesday May 4th	5:45 pm	15.4	4:26 pm	17.4
Monday May 9th	7:30 am	15.3	6:49 am	15.6
Saturday May 14th	2:00 pm	15.4	12:57 pm	16.5
Thursday May 19 th	6:45 pm	15.5	5:07 pm	18.7
Tuesday May 24th	8:30 am	13.5	8:12 am	13.6

E. Observations

Appendix A provides a Kachemak Bay shorebird checklist extracted from *A Birders Guide to Kachemak Bay*. There are 39 species on the list of which 31 species are either common or uncommon at some season of the year (mostly spring and/or fall) and 8 are either rare or accidental.

Using the form illustrated in Appendix B, monitors noted species and abundance as well as when they first observed individual birds or flocks and when these birds left the monitoring site. The latter is used or to eliminate duplicate counts. Monitors also noted on the form any disturbances to shorebirds by people or predators (e.g. raptors).

The coordinator obtained the current weather data for each monitoring period (including temperature, wind speed and direction, cloud cover, and precipitation) from the NOAA Homer Airport web site (http://weather.noaa.gov/weather/current/PAHO.html). Weather records are also available for the Homer Harbor but have a shorter history.

Volunteers caucused after each monitoring session to compare notes. If we determined that a flock of shorebirds had been counted at more than one site, a corresponding adjustment was made to the total count record. While the cumulative site counts for each monitoring deducts any double counting, the record for the site does not.

Monitoring data by site was entered in the ISS eBird database. A report for each monitoring session was also posted on Kachemak Bay Birders (birding@kachemakbaybirders.org) and AKBirding AKBirding@yahoogroups.com) list servers. These reports are included in this report under Appendix D.

IV. 2011 Monitoring Results

A. Total Counts

The 2011 Kachemak Bay Shorebird Project observed 25 species of shorebirds and counted a total of approximately 16,007 individual birds. Table 3 presents a breakdown of this count by species for the four monitoring sites on Homer Spit, Beluga Slough, and Islands and Islets as well as the totals for all six sites. All Sites includes reductions when the same shorebirds were seen at more than one site. Therefore, All Sites is less than the total for the other three columns. This breakdown illustrates the wide variations between sites and allows a more accurate comparison to West's data which covered just the Homer Spit.

Table 3. Number of shorebirds seen by species for all 2011 survey dates, sorted by abundance for All Sites.

	Homer Spit	Beluga	Islands	
SPECIES	**Sites**	**Slough**	**& Islets**	**All Sites**
Red-necked Phalarope	2	-	5,150	5,152
Western Sandpiper	3,910	190	-	4,100
LESA/WESA/SESA	2,990	346	-	3,336
Dunlin	1,219	64	-	1,283
Rock Sandpiper	980	-	2	482
Surfbird	249	-	325	574
Black-bellied Plover	283	1	-	282
Least Sandpiper	169	50	-	219
Semipalmated Plover	192	5	-	197
Black Turnstone	89	-	32	121
Greater Yellowlegs	19	40	-	59
Dowitcher sp.	57	-	-	57
Short-billed Dowitcher	32	1	-	33
Wandering Tattler	25	-	5	30
Whimbrel	25	2	-	27
Long-billed Dowitcher	-	15	-	15
Black Oystercatcher	-	-	13	13
Sanderling	8	-	-	8
Pacific Golden Plover	2	3	-	5
Lesser Yellowlegs	3	-	-	3
Semipalmated Sandpiper	3	-	-	3
Hudsonian Godwit	2	-	-	2
Red Knot	-	-	2	2
American Golden-Plover	-	1	-	1
Marbled Godwit	1	-	-	1
Ruddy Turnstone	-	-	1	1
Wilson's Snipe	-	1	-	1
Total	10,260	719	5,530	16,007

The table below provides a breakdown by species and date of the All Sites data given above. As previously mentioned, this data does not include duplicate observations.

Table 4. Shorebirds counted, including all six sites, during 2011monitoring by species and date.

	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	**Total**
Semipalmated Plover	-	-	-	1	18	21	64	43	50	197
Killdeer	-	-	-	-	-	-	-	-	-	-
American Golden-Plover	-	-	-	-	-	-	1	-	-	1
Pacific Golden Plover	-	-	-	-	2	3	-	-	-	5
Black-bellied Plover	-	38	11	35	127	60	9	-	2	282
Black Oystercatcher	2	2	-	-	-	2	3	2	2	13
Greater Yellowlegs	6	-	12	10	11	12	3	2	3	59
Lesser Yellowlegs	-	-	-	1	1	1	-	-	-	3
Yellowlegs sp.	-	-	-	-	-	-	-	-	-	-
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-
Whimbrel	-	-	-	-	-	2	10	4	11	27
Bar-tailed Godwit	-	-	-	-	-	-	-	-	-	-
Hudsonian Godwit	-	-	-	-	-	-	1	1	-	2
Marbled Godwit	-	-	-	-	-	1	-	-	-	1
Wandering Tattler	-	-	-	-	-	4	12	8	6	30
Surfbird	-	-	-	-	133	290	84	56	11	574
Ruddy Turnstone	-	-	-	-	-	-	1	-	-	1
Black Turnstone	-	-	-	-	1	7	113	-	-	121
Western Sandpiper	-	-	-	-	84	2,125	1,850	39	2	4,100
Least Sandpiper	-	-	-	13	47	105	38	15	1	219
Semipalmated Sandpiper	-	-	-	-	-	2	1	-	-	3
LESA/WESA/SESA	-	-	-	-	79	315	2,934	5	3	3,336
Sanderling	-	-	-	-	-	-	-	8	-	8
Pectoral Sandpiper	-	-	-	-	-	-	-	-	-	-
Dunlin	250	29	-	-	350	157	484	11	2	1,283
Rock Sandpiper	251	230	-	-	1	-	-	-	-	482
Baird's Sandpiper	-	-	-	-	-	-	-	-	-	-
Red Knot	-	-	-	-	-	-	2	-	-	2
Short-billed Dowitcher	-	-	-	-	22	1	-	10	-	33
Long-billed Dowitcher	-	-	-	-	-	12	2	-	1	15
Dowitcher sp.	-	-	-	-	30	2	10	-	15	57
Wilson's Snipe	-	-	-	-	-	1	-	-	-	1
Red Phalarope	-	-	-	-	-	-	-	-	-	-
Red-necked Phalarope	-	-	-	-	-	-	3,000	2,001	151	5,152
Other	-	-	-	-	-	-	-	-	-	-
Total	509	299	23	60	906	3,123	8,622	2,205	260	16,007

B. Data Analysis

The graph below illustrates the arrival and departure of shorebirds during this spring's migration.

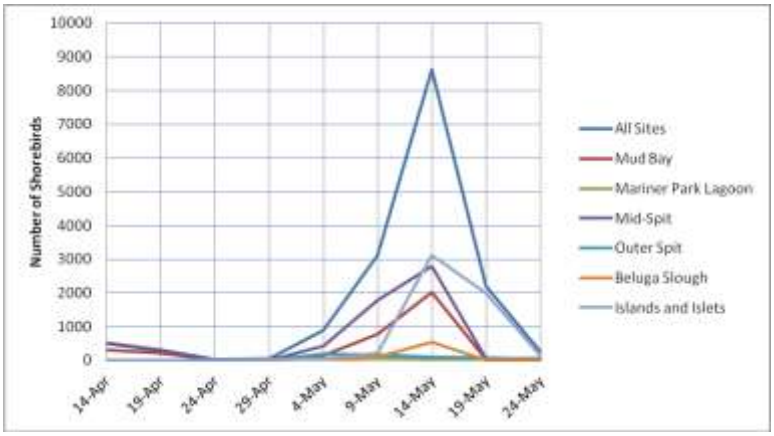


Figure 3. Number of shorebirds counted during 2011 by date and site.

The small peak at the beginning of the count is due to the presence of Rock Sandpipers and Dunlin that spent at least part of last winter in Kachemak Bay. They begin their spring migration by leaving the area starting in early April. Birds present at the time of our first count represent just a fraction of those in the area in previous weeks. Last winter, Kachemak Bay seemed to have an unusually high number of both Rock Sandpipers and Dunlin. This attracted the attention of scientists from the USGS Alaska Science Center in Anchorage who visited the Homer Spit on March 18. They were able to photograph the entire flock while roosting at high tide. Based on a count from these photos, they estimate that there were 236 Dunlin and 3,648 Rock Sandpipers (Ruthrauff 2011). Most of these birds had left by the time we started on surveying on April 14, but some were still present.

The table below provides further breakdown of this data, giving the dates when 19 species of shorebirds were observed at Mud Bay, Mariner Park Lagoon, Mid-Spit, and Outer Spit sites.

Table 5. Combined total, by date, for shorebirds counted at all four Homer Spit sites during the 2011monitoring project.

	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	**Total**
Semipalmated Plover	-	-	-	1	13	21	64	43	50	192
American Golden-Plover	-	-	-	-	-	-	-	-	-	-
Pacific Golden Plover	-	-	-	-	2	-	-	-	-	2
Black-bellied Plover	-	38	11	35	126	60	9	-	4	283
Black Oystercatcher	-	-	-	-	-	-	-	-	-	-
Greater Yellowlegs	-	-	6	2	3	6	1	1	-	19
Lesser Yellowlegs	-	-	-	1	1	1	-	-	-	3
Whimbrel	-	-	-	-	-	-	10	4	11	25
Hudsonian Godwit	-	-	-	-	-	-	1	1	-	2
Marbled Godwit	-	-	-	-	-	1	-	-	-	1
Wandering Tattler	-	-	-	-	-	3	12	5	5	25
Surfbird	-	-	-	-	92	90	-	56	11	249
Ruddy Turnstone	-	-	-	-	-	-	-	-	-	-
Black Turnstone	-	-	-	-	-	-	89	-	-	89
Western Sandpiper	-	-	-	-	84	2,085	1,700	39	2	3,910
Least Sandpiper	-	-	-	-	46	71	36	15	1	169
Semipalmated Sandpiper	-	-	-	-	-	2	1	-	-	3
LESA/WESA/SESA	-	-	-	-	62	315	2,605	5	3	2,990
Sanderling	-	-	-	-	-	-	-	8	-	8
Dunlin	250	29	-	-	349	154	424	11	2	1,219
Rock Sandpiper	550	430	-	-	-	-	-	-	-	980
Red Knot	-	-	-	-	-	-	-	-	-	-
Short-billed Dowitcher	-	-	-	-	22	-	-	10	-	32
Long-billed Dowitcher	-	-	-	-	-	-	-	-	-	-
Dowitcher sp.	-	-	-	-	30	2	10	-	15	57
Wilson's Snipe	-	-	-	-	-	-	-	-	-	-
Red-necked Phalarope	-	-	-	-	-	-	-	1	1	2
Total	800	497	17	39	830	2,811	4,962	199	105	10,260

It appears that some species seen in smaller numbers have a longer presence in the area than some of the sandpipers (genus *Calidris*) that are more obvious but have a short stopover period. The two graphs below try to sort that out.

Figure 4 shows the arrival and departure for all sites for just the Western Sandpiper, Least Sandpiper, Dunlin and LESA/WESA/SESA. The latter is the lumping code we used when identification between these species wasn't certain. Rock Sandpipers are not included since they

are not spring arrivals. Also *Calidris* species with a count less than 10 (Semipalmated Sandpiper, Sanderling, and Red Knot) were not included since they barely show up as a blip on the graph.

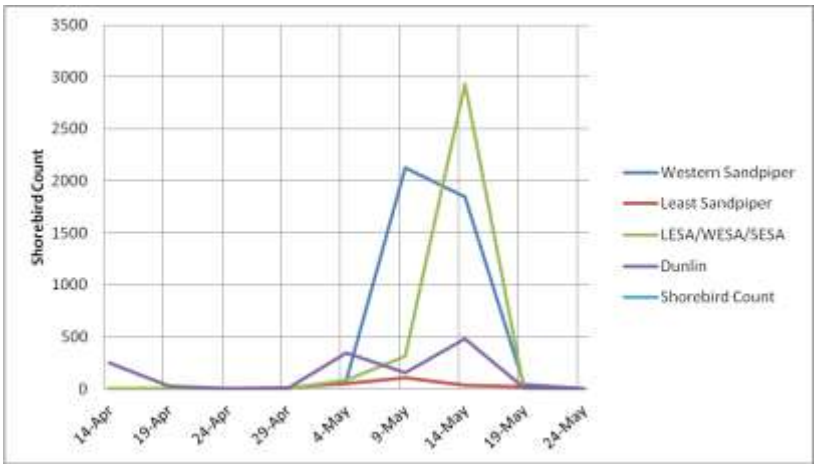


Figure 4. Cumulative counts by date for predominant sandpipers for all sites.

The figure below shows those species other than sandpipers that had a cumulative count of greater than 10 for all sites. Black Oystercatchers were not included (total count of 13) since it is likely that the same pair were seen on several counts.

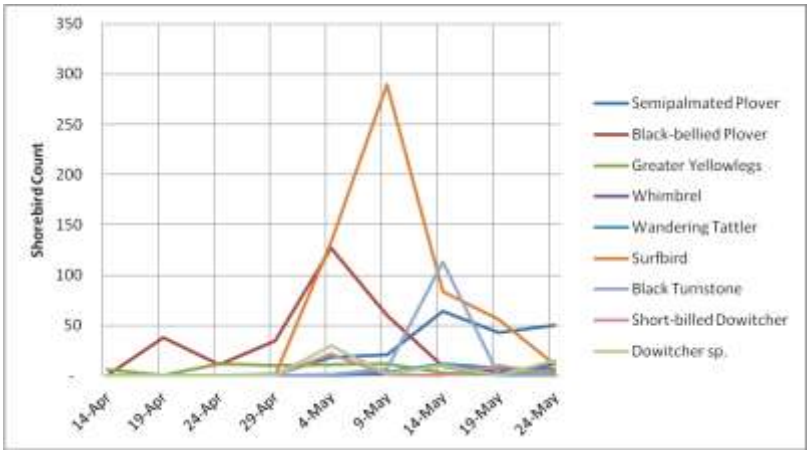


Figure 5. Shorebirds, other than sandpipers, arrival and departures including data for all sites.

Although the peak of the shorebird migration for Kachemak Bay during the 2011 spring may have been a couple of days later than normal, the weather was fairly typical for the season. Also, there did not appear to be any human disturbance out of the usual. Small planes taking off from the Homer airport sometimes cause flocks of shorebirds to take flight and unleashed dogs occasionally chase birds roosting on the beach. While a Merlin or two buzzed the area when

shorebirds were around, this is fairly typical and did not seem to be a significant disturbance to resting/ foraging shorebirds.

C. Supplemental Monitoring

During our first monitoring year (2009) it seemed as if flocks of shorebirds, particularly Western Sandpipers and Dunlin, were arriving at the Homer Spit after a scheduled monitoring date and leaving before the next date. In 2010 we monitored Mud Bay for shorebirds daily for most of the first two weeks of May. There were substantial day-to-day variances. For example, on May 4th, our observer counted 1,100 Western Sandpipers and 92 Dunlin after high tide. On May 5th, a scheduled monitoring day, 500 Western Sandpipers and 100 Dunlin were counted. The following day, there were 700 Western Sandpipers and 89 Dunlin.

From the supplemental monitoring we were able to establish that we probably were missing some flocks of sandpipers and get some estimate as to the amount of leakage. Looking at all the data, the amount of leakage is probably no more than 2-3 times our monitoring count.

In 2011, the situation was similar as noted by the following report for our sixth monitoring session. (See Appendix D for all monitoring reports.)

> Last report (Wednesday) I mentioned that conditions should be good for bringing in migrating shorebirds. Sure enough, early on Friday morning Aaron reported "around 4,000 shorebirds at Mud Bay, mostly Western Sandpipers and Dunlin."
>
> Late Saturday afternoon, around high tide, the numbers of shorebirds were noticeably greater. I estimated that there were about 6,000 Western Sandpipers and Dunlin, with about 15-20 percent being Dunlin. Unlike Friday afternoon, when most of the mixed flock of Westerns and Dunlin took a nap during high tide, many of the birds on Saturday afternoon seemed restless. Then, as if on cue, flocks of hundreds took to the air, circled around a bit, and headed across the Spit Road (literally stopping traffic in one case), disappearing over Cook Inlet; presumably to continue their journey. Within the next half hour, about two thirds of the shorebirds were gone. I guess these birds were the 4,000 that arrived early Friday morning and the ones still at Mud Bay arrived later, needing more rest and food. Soon afterwards I saw another flock of shorebirds coming in from the east. This flock of a few hundred skimmed over Mud Bay Spit and settled in with the shorebirds foraging in the mud flats. This was truly an exciting event.
>
> On Sunday morning, on my way to Seldovia for the day, I stopped to count shorebirds at Mud Bay, getting 2,500 the first time and 2,600 the second. It appears that not many, if any, left overnight.
>
> Our monitoring on Monday morning found 600 Westerns and 100 Dunlin at Mud Bay. In addition, there was a large flock of 1,000-1,250 Western's and about 135 more at

Green Timbers in the Mid-Spit area as well as a flock of 315 peeps, most likely Westerns, near Louie's Lagoon. Also, there were 54 Dunlin. The Outer Spit had a flock of 65 Western's that stayed only about 10 minutes. Beluga Slough had a flock of 40 Western's and 3 Dunlin that hung around all through the monitoring session.

On Tuesday morning I did a quick check of some of these sites. There were about 2,500 shorebirds in the Mud Bay area; about 90% Western's, 10% Dunlins and a few plovers and dowitchers that were too far away to identify. Mariner Park Lagoon had about 170 Least Sandpipers and 1 Greater Yellowlegs. So it looks like the shorebirds from Sunday morning may still be around. But on the other hand, those arriving may be about the same as those leaving; a project for another year.

The report for the seventh monitoring session on May 14 included the following information.

Friday morning there were 12-15,000 shorebirds in the Mud Bay area, the largest flock seen here in year's according to some long-time residents. The composition was about 90% Western Sandpipers, >5% Dunlin, and a few dowitchers and plovers. Several birders watched as the incoming tide herded thousands of foraging sandpipers up the mud flats to the rocky upper beach. But rather than roost at the tide line, as they did on previous days, flocks of hundreds would rise up and then head west. It would be interesting to know if they continued on to their breeding grounds or stopped on the west side of Cook Inlet or Bristol Bay. When I left, about 2/3 of the sandpipers had moved on. I don't include the barometric pressure from the weather report, but maybe I should since a change in barometric pressure may have contributed to the shorebirds departure. The weather was sunny and calm at the time, but there was an approaching low pressure system moving in from the SE.

On Saturday we were all anxious to see how many shorebirds would be at the Spit. Large numbers were still around, but identification by species was difficult because of the gusty winds. Mud Bay observers reported 2,000 Dunlin and LESA/WESA/SESA (lumping of Least, Western, and Semipalmated Sandpipers) which is the ID we use when species can't be confirmed, though the likelihood is that these were mostly Western's. Six birds near observers were identified as Least Sandpipers. Mariner Park Lagoon also had a flock of 40 LESA/WESA/SESA quickly fly by a couple of times. A flock of 15 Least Sandpipers spent some time foraging in pools of water. The Mid-Spit area had lots of action with approximately 1,700 Western Sandpipers, 15 Least Sandpipers, 1 Semipalmated Sandpiper, a flock of 500 LESA/WESA/SESA that flew by, and several flocks of Dunlins totaling about 422 birds. The Outer Spit had 65 LESA/WESA/SESA and 2 Dunlin. Beluga Slough added 150 Western Sandpipers, 2 Least Sandpipers, 329 LESA/WESA/SESA and 50-60 Dunlin. This totals 5,307 shorebirds.

The number of sandpipers seen on Friday that left that morning was about 2-3 times greater than the number of shorebirds counted on Saturday during a scheduled monitoring session.

Since the supplemental observations did not follow our monitoring protocol, it cannot be added to the data. However, it does give some perspective regarding the number of sandpipers that our protocol is missing. This, however, may not be the same with other shorebirds, such as Surfbirds and Black-bellied Plovers, which seem to stay around longer.

Supplemental observations yielded two shorebird species that were not seen during by observers who participated in the 2011 monitoring project. During the Kachemak Bay Shorebird Festival, which was held May 5-8, birders are scouring virtually every part of the Homer Spit for a few days during the peak of the spring migration. This year's tally reported a Bar-tailed Godwit and a Solitary Sandpiper, neither seen during our scheduled monitoring dates.

V. Trends

A. Comparing 2009-2011

Our three years of monitoring have followed the same protocol. The only minor changes have been dates, times, and volunteers. Our baseline date is centered on the Monday after the Kachemak Bay Shorebird Festival so that our monitoring schedule doesn't conlict with the festival where many of us also volunteer. Consequently, monitoring dates change slightly from year-to-year. Monitoring times are based on the ever changing tide tables. Volunteers have been fairly consistent, but there have been some small changes.

The table below illustrates the shorebird count by species for each year of the Kachemak Bay Shorebird Monitoring Project.

Table 6. Total shorebird count for each year of monitoring sorted by Average abundance.

Species	2009	2010	2011	Average
Western Sandpiper	3,229	4,996	4,100	4,108
Red-necked Phalarope	1,630	1,500	5,152	2,761
LESA/WESA/SESA	104	803	3,336	1,414
Dunlin	1,097	561	1,283	980
Rock Sandpiper	141	405	482	343
Surfbird	292	110	574	325
Black-bellied Plover	179	315	282	259
Least Sandpiper	136	245	219	200
Semipalmated Plover	194	203	197	198
Black Turnstone	81	373	121	192
Dowitcher sp.	99	82	57	79
Short-billed Dowitcher	125	-	33	53
Greater Yellowlegs	24	36	59	40
Wandering Tattler	13	56	30	33
Whimbrel	10	22	27	20
Pacific Golden Plover	5	42	5	17
Black Oystercatcher	11	11	13	12
Lesser Yellowlegs	-	26	3	10
Yellowlegs sp.	2	18	-	7
Hudsonian Godwit	18	-	2	7
Marbled Godwit	3	12	1	5
Long-billed Dowitcher	-	-	15	5
Ruddy Turnstone	1	10	1	4
Semipalmated Sandpiper	1	5	3	3
Sanderling	-	1	8	3
Pectoral Sandpiper	-	7	-	2
Wilson's Snipe	1	5	1	2
American Golden-Plover	3	1	1	2
Spotted Sandpiper	3	-	-	1
Bar-tailed Godwit	3	-	-	1
Red Knot	-	-	2	1
Baird's Sandpiper	1	-	-	0
Total Individuals	7,406	9,845	16,007	11,086
Total Species	24	23	25	24

The figure below illutrates the date when shorebirds were most abundant for each year of monitoring.

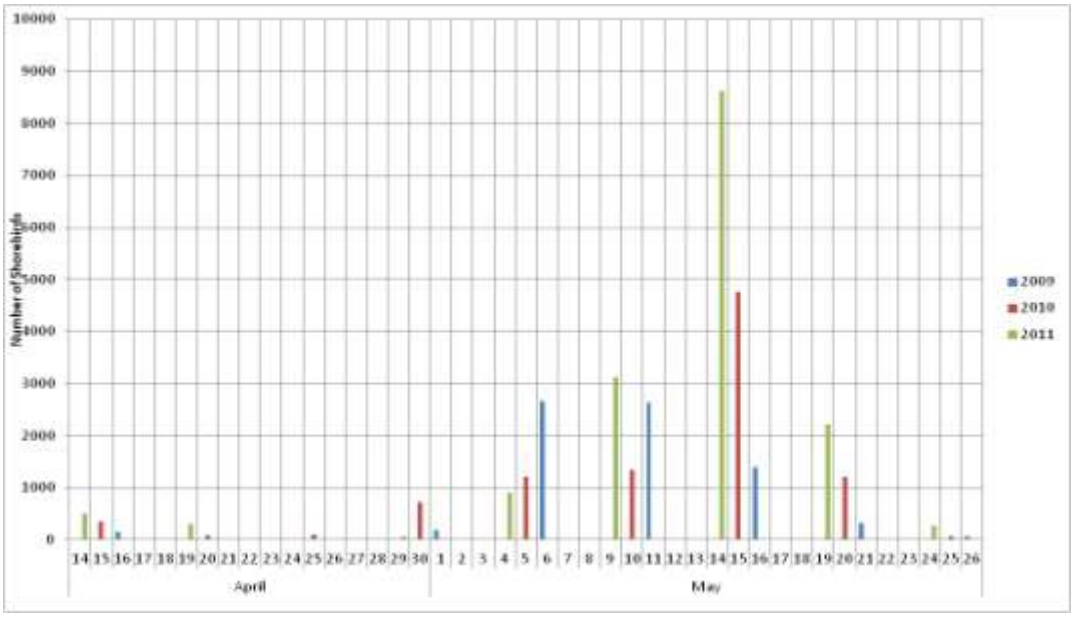


Figure 6. Dates and total counts for all three years of Kachemak Bay shorebird monitoring.

B. Comparing Recent Data to West's Data

As in previous years, this report compares the Kachemak Bay Shorebird Monitoring Project data to George West's shorebird monitoring data from two decades ago. Not all of West's years of monitoring are useful for comparison purposes. There were not consistent observations in 1987 and 1988. Also, after 1994 West's data includes observations by a variety of local birders which didn't follow any protocol. Consequently, only the years 1986 and 1989-1994 are being used for comparison. This is consistent with West's presentation of his shorebird counts (West 1996). Table 7 provides a summary of the West data being used.

With the exception of frequency, the protocol used by West is reasonably similar to the Kachemak Bay Birders protocol. West says "Estimates, or actual counts when possible, of all shorebirds encountered in Mud Bay, Mariner Park Lagoon, and along the north side of the Homer Spit were made daily at or just after high tide from 22 April to 18 May (West 1996). " However, West's shorebird counts were done daily and the protocol being followed by Kachemak Bay Birders is to monitor once every five days. Therefore, adjustments to the data are needed before making any comparisons. To provide a more direct match, the only West data being used in the comparison below is for the six dates that match our 2009 monitoring dates. As mentioned earlier, our monitoring dates advance by one day every year to avoid conflict with the shorebird festival so the dates for 2010 and 2011 don't exactly match the West dates.

Table 7. Summary of George West' shorebird counts by species and year from 1986-1994 and sorted according to the Average.

Species	1986	1989	1990	1991	1992	1993	1994	Average
Western Sandpiper	72,325	58,025	29,745	74,972	94,154	54,800	80,227	66,321
Surfbird	6,450	1,355	16,449	3,908	40,506	6,130	5,168	11,424
Dunlin	2,325	7,275	1,820	4,097	12,653	4,393	3,422	5,141
Black Turnstone	3,060	1,338	7,097	3,376	6,306	3,328	1,155	3,666
Short-billed Dowitcher	3,100	2,605	327	731	7,710	2,313	827	2,516
Red-necked Phalarope				12,350			101	1,779
Black-bellied Plover	2,000	7	221	148	3,098	176	422	867
Rock Sandpiper					14	4	502	74
Least Sandpiper	164	80		23	89	112	43	73
Semipalmated Plover	40	30	4	39	90	164	143	73
American Golden-Plover		30	24	49	72	2	2	26
Whimbrel	2	9	3	15	82	24	10	21
Ruddy Turnstone	5	3	5	13	36	8	17	12
Greater Yellowlegs					36	14		7
Wandering Tattler				12	7	13	10	6
Pacific Golden-Plover						5	33	5
Red Knot				8		11	8	4
Marbled Godwit		4		3	4	2	11	3
Pectoral Sandpiper	16			1	1		1	3
Bar-tailed Godwit				5	5			1
Sanderling						9		1
Baird's Sandpiper		1			1	5	1	1
Bristle-thighed Curlew				7				1
Hudsonian Godwit					1	3	1	1
Wilson's Snipe			2		2			1
Lesser Yellowlegs				2			1	0
Long-billed Dowitcher					2			0
Semipalmated Sandpiper							2	0
Black Oystercatcher						1		0
Solitary Sandpiper							1	0
Total Individual birds	89,487	70,762	55,697	99,759	164,869	71,517	92,108	92,028
Total Species	11	13	11	19	21	21	23	17

Note: This table includes 30 species.

A closer look at West's data reveals that 1990 might be a bit of an anomaly. Although total shorebird populations were less in 1990 than other years, particularly with Western Sandpipers, the count for the days used in the comparison miss most of a pulse of shorebirds that occurred within a day or two (for spreadsheet details see 2011 Monitoring Data.xls at http://kachemakbaybirders.org/). On the other hand, our monitoring dates for 2009, 2010, and 2011also appear to have missed the peak of a pulse.

When we compared our 2009 data to West's data it was apparent that there might be a substantial decline the past decade or two in the total Kachemak Bay shorebird populations during spring migration (but not necessarily all species). Although we had more volunteers and more intensive coverage than West, our 2009 count for the Homer Spit was 68% of West's lowest year (1990) and only 13% of his highest year (1992). If populations were stable, our count would more likely have been higher. But diversity in 2009 was better than in 1986-1994, perhaps due to more complete coverage. In 2009 we observed 24 species of shorebirds which exceeds West's average (17species) and even his best year (23 species). Diversity in 2010 (23 species) and 2011 (25 species) was close to 2009.

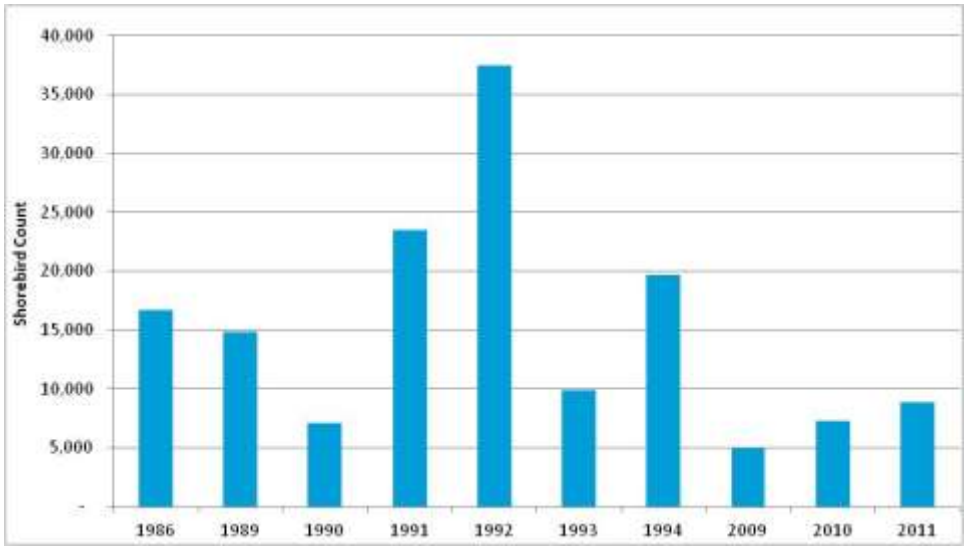
Table 8. Comparison of six days of West shorebird monitoring data to six comparable days of Kachemak Bay Birders data for similar survey sites.

SPECIES	1986	1989	1990	1991	1992	1993	1994	Homer Spit Sites 2009	Homer Spit Sites 2010	Homer Spit Sites 2011
Semipalmated Plover	6	8	1	9	27	22	28	159	158	142
American Golden-Plover			5	26	9		1	3		
Pacific Golden Plover							7	4	39	2
Black-bellied Plover	275	1	86	52	244	51	79	170	307	241
Black Oystercatcher									1	
Greater Yellowlegs					17	4		7	13	19
Lesser Yellowlegs									20	3
Yellowlegs spp.									3	
Whimbrel				1	9	1		2	6	14
Bar-tailed Godwit				1	2			3		
Hudsonian Godwit							1	18		2
Marbled Godwit		4		1	1		2	3	10	1
Wandering Tattler				5	2	1	2	3	37	20
Surfbird	1,000	75	3,015	602	10,010	1,200	830	69	39	238
Ruddy Turnstone	1		3		7	1	8		6	
Black Turnstone	600	451	1,812	766	1,730	500	262	46	294	89
Western Sandpiper	14,000	12,025	2,010	20,510	20,725	7,200	17,469	3,071	4,935	3,908
Least Sandpiper	50			2	21	2	20	121	195	168
Semipalmated Sandpiper								1	4	3
LESA/WESA/SESA								103	640	2,987
Sanderling									1	8
Pectoral Sandpiper	2			1	1					
Dunlin	130	1,760	133	1,219	3,271	562	642	1,091	535	938
Rock Sandpiper					7	2				
Baird's Sandpiper								1		
Red Knot						1	2			
Short-billed Dowitcher	600	525	58	183	1,354	325	175	22		32
Long-billed Dowitcher										
Dowitcher spp.								97	71	42
Wilson's Snipe										
Red-necked Phalarope				100			100			1
Total	16,664	14,849	7,123	23,478	37,437	9,872	19,628	4,994	7,314	8,858

As Table 8 illustrates, the 2011 surveys show some improvement in total shorebird populations compared to the 2009 and 2010. However, the numbers, with the exception of 1990, are still substantially less than that presented by West. Using West's daily counts to match our five day counts, he saw an average of 18,436 individual shorebirds during his seven years of survey. Including only the Homer Spit sites and matching dates, we counted 8,858 individual shorebirds in 2011. Our average for three years of monitoring (based on Table 8 data) is 7,055.

Figure 7 provides a graphic illustration of trends for total shorebird counts.

Figure 7. Total shorebird counts by year for the Homer Spit



The analysis above is based mostly on total counts, including all species. There are some interesting points when looking at just species. For instance, while most species seem to be declining, the count for Semipalmated Plovers in recent years is substantially higher than before. Perhaps there is some habitat change on the Homer Spit that favors Semipalmated Plovers. While this may be worth exploring, the data from this project is not sufficient to provide much insight. A long term goal of the Kachemak Bay Birders is to assess Homer Spit habitat. Maybe then we can look at these changes.

VI. Other Activities

A. Outreach

The information obtained as a result of the 2011 Kachemak Bay Shorebird Monitoring Project was reported to local birders via the Kachemak Bay Birders (birding@kachemakbaybirders.org) list serve and the AKBirding AKBirding@yahoogroups.com) list serve.

B. Presentations

The results from the Kachemak Bay Shorebird Project were presented at the following.

- *Kachemak Bay Shorebird Monitoring Project*. George Matz. Alaska Bird Conference, Anchorage, Alaska, Dec. 16-18, 2010
- *Kachemak Bay Shorebird Monitoring Project: 2010 Spring Ground and Aerial Survey Report*. Matz et al. Summaries of ongoing or new studies of Alaska shorebirds during 2010; compiled by Joe Liebezeit of the Alaska Shorebird Group.
- Kachemak Bay Research Reserve - What's New in the Bay: Homer, Alaska, March, 2011.

VII. Future Efforts

Now that we have three years of data, our results are starting to become interesting. We plan to continue this effort next year as well. We plan to coordinate our efforts with other Pacific Flyway sites that are organizing a long-term survey of Western Sandpipers and Dunlin.

VIII. Acknowledgements

The Kachemak Bay Shorebird Monitoring Project is a citizen science effort that could not exist without good volunteer support. Volunteers for this year's effort are listed in Table 1. We also want to thank the Islands and Ocean Visitors Center who provided us with meeting facilities for our caucus after monitoring sessions. We have also had the support of the Alaska Maritime National Wildlife Refuge and the Kachemak Bay Research Reserve, both based in Homer. Again, a special thanks to Richard Lanctot, PhD who is the Alaska Region Shorebird Coordinator, for the US Fish and Wildlife Service. Rick continues to provide us with important advice and assistance.

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X. **Appendices**

Appendix A: Birds of Kachemak Bay, Alaska: Shorebird Checklist

Appendix B: Kachemak Bay Shorebird Project Monitoring Report Form

Appendix C: Spreadsheets with observation data for each site and monitoring date.

Appendix D: Email reports to bridling list-serves.

Appendix A
Birds of Kachemak Bay, Alaska: Shorebird Checklist

This Checklist covers the Anchor River drainage, the watersheds draining into Kachemak Bay including all of Kachemak Bay State Park and the Bay itself between Anchor Point and Point Pogibshi.

Abundance

C - Common: Easily found in small to large numbers in appropriate habitat.
U - Uncommon: Occasionally, but not always, found in small number with some effort in appropriate habitat.
R - Rare: Occurs in very small numbers or in very limited number of sites and may not be found every year or even with concentrated effort. There are more than a few records of these species in appropriate habitats.
A - Accidental: Represents an exceptional occurrence of birds outside their normal range that might not be repeated again for decades.

Status

r - resident b - confirmed breeder s - summer resident w - winter resident
m - migrant, passing through on way to summer or winter grounds, may only be found in narrow periods of time
v - visitor, not on normal migration route, may stay for one day or all season i - introduced
Sp - spring: March - May **Su** - summer: June - Aug. **F** - fall: Sept. - Nov. **W** - winter: Dec. - Feb.

Species	Sp	Su	F	W	Status
Black-bellied Plover	C	C	C	A	m
American Golden-plover	U	R	U	-	m
Pacific Golden-plover	C	R	U	-	m
Semipalmated Plover	C	C	C	-	smb
Killdeer	R	R	-	-	v
Black Oystercatcher	C	C	U	U	sb
Greater Yellowlegs	C	C	C	-	sb
Lesser Yellowlegs	U	U	U	-	sb
Solitary Sandpiper	R	U	R	-	sb
Wandering Tattler	C	C	C	-	s
Spotted Sandpiper	C	C	C	-	sb
Whimbrel	C	C	C	-	sm
Bristle-thighed Curlew	A	-	-	-	m
Hudsonian Godwit	U	R	-	-	m
Bar-tailed Godwit	U	A	R	-	m
Marbled Godwit	U	R	A	-	m
Ruddy Turnstone	U	R	R	-	m
Black Turnstone	C	U	U	-	m
Surfbird	C	C	C	-	sm
Red Knot	U	R	R	-	m
Sanderling	U	U	U	R	m
Semipalmated Sandpiper	U	R	U	-	m
Western Sandpiper	C	C	C	-	m
Red-necked Stint	A	A	-	-	v
Temminck's Stint	A	-	-	-	v
Least Sandpiper	C	C	U	-	smb
Baird's Sandpiper	R	R	U	-	m
Pectoral Sandpiper	C	U	C	-	m
Sharp-tailed Sandpiper	-	-	U	-	m
Rock Sandpiper	C	R	U	C	w
Dunlin	C	U	U	R	m
Stilt Sandpiper	-	-	R	-	m
Ruff	A	-	-	-	v
Short-billed Dowitcher	C	C	U	-	m
Long-billed Dowitcher	U	U	U	-	sm
Jack Snipe	-	-	A	-	v
Wilson's Snipe	C	C	C	R	sb
Red-necked Phalarope	C	C	C	-	sb
Red Phalarope	A	A	A	-	v

Appendix B

Kachemak Bay Birders
2011 Shorebird Monitoring Project

Site: **Time Started:** **Monitor #1**
Date: **Time Ended:** **Monitor #2**
Distance Covered: **Monitor #3**
Disturbance:

Name of Species	Estimate	Actual Count	Total Count & Estima te	Time Observed	Time Left Site
Semipalmated Plover					
Killdeer (R)					
American Golden -Plover (U)					
Pacific Golden Plover (U)					
Black-bellied Plover					
Black Oystercatcher (U)					
Greater Yellowlegs					
Lesser Yellowlegs					
Yellowlegs spp.					
Spotted Sandpiper					
Whimbrel					
Bar-tailed Godwit (U)					
Hudsonian Godwit (U)					
Marbled Godwit (U)					
Wandering Tattler					
Surfbird					
Ruddy Turnstone (U)					
Black Turnstone					
Western Sandpiper					
Least San dpiper					
Semipalmated Sandpiper					
LESA/WESA/SESA					
Sanderling (U)					
Pectoral Sandpiper					
Dunlin					
Rock Sandpiper (U)					
Baird's Sandpiper (R)					
Red Knot (U)					
Short-billed Dowitcher					
Long-billed Dowitcher (U)					
Dowitcher spp.					
Wilson's Snipe					
Red-necked Phalarope					

Appendix C

2011 Shorebird Monitoring Project										
SITE : **Mud Bay**										
Stationary Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	**Total**
Semipalmated Plover				1	7	2	9	10	1	30
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover		21	2	35	26	50	5		2	141
Black Oystercatcher										-
Greater Yellowlegs			1		2	1				4
Lesser Yellowlegs				1						1
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel							1		5	6
Bar-tailed Godwit										-
Hudsonian Godwit								1		1
Marbled Godwit						1				1
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper					24	600				624
Least Sandpiper						25	6			31
Semipalmated Sandpiper						2				2
LESA/WESA/SESA							2,000	5	3	2,008
Sanderling										-
Pectoral Sandpiper										-
Dunlin					75	100		5		180
Rock Sandpiper	300	200								500
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher					22			10		32
Long-billed Dowitcher										-
Dowitcher sp.						2			7	9
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope								1	1	2
Other										-
Total	300	221	3	37	156	783	2,021	32	19	3,572

2011 Shorebird Monitoring Project										
SITE : **Mariner Park Lagoon**										
Stationary Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	Total
Semipalmated Plover							1	8	9	18
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher										-
Greater Yellowlegs			3	2	1	2	1	1		10
Lesser Yellowlegs					1	1				2
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel							1			1
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper						35		5		40
Least Sandpiper					46	41	15	15		117
Semipalmated Sandpiper										-
LESA/WESA/SESA							40			40
Sanderling										-
Pectoral Sandpiper										-
Dunlin										-
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other										-
Total	-	-	3	2	48	79	58	29	9	228

2011 Shorebird Monitoring Project										
SITE : **Mid-Spit**										
Travelling Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	Total
Semipalmated Plover					6	19	47	19	37	128
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover					2					2
Black-bellied Plover		17	9		100	10	4		2	142
Black Oystercatcher										-
Greater Yellowlegs			2			3				5
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel							4	2	6	12
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler									1	1
Surfbird										-
Ruddy Turnstone										-
Black Turnstone							89			89
Western Sandpiper					60	1,385	1,700	34	2	3,181
Least Sandpiper						5	15		1	21
Semipalmated Sandpiper							1			1
LESA/WESA/SESA					60	315	500			875
Sanderling										-
Pectoral Sandpiper										-
Dunlin	250	29			174	54	422	6	2	937
Rock Sandpiper	250	230								480
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.					30		10		8	48
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other										-
Total	500	276	11	-	432	1,791	2,792	61	59	5,922

2011 Shorebird Monitoring Project										
SITE : **Outer Spit**										
Travelling Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	25	Total
Semipalmated Plover							7	6	3	16
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher										-
Greater Yellowlegs										-
Lesser Yellowlegs										-
Yellowlegs spp.										-
Spotted Sandpiper										-
Whimbrel							4	2		6
Bar-tailed Godwit										-
Hudsonian Godwit							1			1
Marbled Godwit										-
Wandering Tattler						3	12	5	4	24
Surfbird					92	90		56	11	249
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper						65				65
Least Sandpiper										-
Semipalmated Sandpiper										-
LESA/WESA/SESA					2		65			67
Sanderling								8		8
Pectoral Sandpiper										-
Dunlin					100		2			102
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other										-
Total	-	-	-	-	194	158	91	77	18	538

2011 Shorebird Monitoring Project										
SITE : **Beluga Slough**										
Travelling Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	Total
Semipalmated Plover					5					5
Killdeer										-
American Golden-Plover							1			1
Pacific Golden Plover						3				3
Black-bellied Plover					1					1
Black Oystercatcher										-
Greater Yellowlegs	6		6	8	8	6	2	1	3	40
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel						2				2
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper						40	150			190
Least Sandpiper				13	1	34	2			50
Semipalmated Sandpiper										-
LESA/WESA/SESA					17		329			346
Sanderling										-
Pectoral Sandpiper										-
Dunlin					1	3	60			64
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher						1				1
Long-billed Dowitcher						12	2		1	15
Dowitcher sp.										-
Wilson's Snipe						1				1
Red Phalarope										-
Red-necked Phalarope										-
Other										-
Total	6	-	6	21	33	102	546	1	4	719

2011 Shorebird Monitoring Project										
SITE : **Islands and Islets**										
Travelling Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	Total
Semipalmated Plover										-
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher	2	2				2	3	2	2	13
Greater Yellowlegs										-
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel										-
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler						1		3	1	5
Surfbird					41	200	84			325
Ruddy Turnstone							1			1
Black Turnstone					1	7	24			32
Western Sandpiper										-
Least Sandpiper										-
Semipalmated Sandpiper										-
LESA/WESA/SESA										-
Sanderling										-
Pectoral Sandpiper										-
Dunlin										-
Rock Sandpiper	1				1					2
Baird's Sandpiper										-
Red Knot							2			2
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope							3,000	2,000	150	5,150
Other										-
Total	3	2	-	-	43	210	3,114	2,005	153	5,530

2011 Shorebird Monitoring Project										
SITE : **Mariner Park Lagoon**										
Stationary Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	Total
Semipalmated Plover							1	8	9	18
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher										-
Greater Yellowlegs			3	2	1	2	1	1		10
Lesser Yellowlegs					1	1				2
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel							1			1
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper						35		5		40
Least Sandpiper					46	41	15	15		117
Semipalmated Sandpiper										-
LESA/WESA/SESA							40			40
Sanderling										-
Pectoral Sandpiper										-
Dunlin										-
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other										-
Total	-	-	3	2	48	79	58	29	9	228

2011 Shorebird Monitoring Project										
SITE : **Mid-Spit**										
Travelling Count										
	April				May					
SPECIES	14	19	24	29	4	9	14	19	24	Total
Semipalmated Plover					6	19	47	19	37	128
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover					2					2
Black-bellied Plover		17	9		100	10	4		2	142
Black Oystercatcher										-
Greater Yellowlegs			2			3				5
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel							4	2	6	12
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler									1	1
Surfbird										-
Ruddy Turnstone										-
Black Turnstone							89			89
Western Sandpiper					60	1,385	1,700	34	2	3,181
Least Sandpiper						5	15		1	21
Semipalmated Sandpiper							1			1
LESA/WESA/SESA					60	315	500			875
Sanderling										-
Pectoral Sandpiper										-
Dunlin	250	29			174	54	422	6	2	937
Rock Sandpiper	250	230								480
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.					30		10		8	48
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other										-
Total	500	276	11	-	432	1,791	2,792	61	59	5,922

Appendix D

Session Reports Sent to Birding Lists

Homer Rocks!

Kachemak Bay Shorebird Monitoring Project; Session #1

On Thursday, April 14th the Kachemak Bay Birders had its first shorebird monitoring event for this season. This is our third season. From now until May 24th we will be observing shorebirds in the Homer Spit area for two hours every five days, starting when the outgoing tide is at 15.0 feet (or at high tide if it doesn't reach 15.0 feet). Twelve observers participated.

In mid-April the Homer Spit shorebird population usually consists of some overwintering Rock Sandpipers who are still around and a few early migrants, like yellowlegs. This year was no exception. Today, there was a fairly large flock of sandpipers between Mud Bay and the Green Timbers (mid-Spit area) that included about 250 Rock Sandpipers and 250 Dunlin. At Beluga Slough there were six Greater Yellowlegs.

Our interest in Rock Sandpipers has increased this winter because we often observed flocks of thousands when the intertidal area wasn't totally covered with ice. Bob Gill and Dan Ruthrauff of the USGS Alaska Science Center in Anchorage visited Homer in March to get a more definitive count. They photographed and then counted 3,648 Rock Sandpipers as well as 236 Dunlin. (email me if you want a copy of the report). It appears that most of the Rock Sandpipers may have now left the area, but Dunlin remain; an interesting sidebar to our shorebird monitoring project.

While it is not uncommon during the winter to have a couple of Dunlin mixed in with the Rock Sandpipers, the number reported by Bob and Dan was a complete surprise. Either there now are more overwintering Dunlin in Kachemak Bay or they were previously counted as Rock Sandpipers, which is easy to do when in basic plumage and compounded by the poor light conditions we usually have in winter. It will be interesting to see if the Dunlin that overwintered here stick around until the migrants arrive.

A Rock Sandpiper was seen at Sixty-foot Rock as well as two Black Oystercatchers at Cohen Island from a charter boat (Bay Excursions) that went by the islands and islets on the south side of the Bay.

In addition to shorebirds, there were a number of Mallards (but not as many as in the winter), Northern Shoveler, Northern Pintail, Brant and, at the far end of Mariner Park Lagoon, four Eurasian Widgeons (three males and one female). A Peregrine Falcon was seen at mid-Spit.

Weather conditions at the airport were 36° at 1:00 pm and 40° at 3:00 pm with winds first calm and then increasing to 6 mph from the SW. The sky was partly cloudy and there was still snow on the upper beach.

George Matz

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Session #2
Kachemak Bay Shorebird Monitoring Project

On Tuesday, April 19th the Kachemak Bay Birders had its second shorebird monitoring event for this season. Nine observers made observations for two hours (6:15-8:15 pm) at six sites in the Homer Spit area. Sites on the Spit included Mud Bay, Mariner Park Lagoon, Mid-Spit, Outer Spit (boat harbor area), Beluga Slough and by boat the Islands and Islets (Gull Island, Neptune Bay, Sixty-foot Rock, and Cohen Island) on the south side of the Bay.

The only shorebirds seen on land were between Mud Bay and the mid-Spit area. There was a count of 230 Rock Sandpipers, 29 Dunlin , and 21 Black-bellied Plovers. These are the FOS plovers for the Homer area. Karl saw 2 Black Oystercatchers at Cohen Island.

In addition to shorebirds, there were a number of waterfowl including Mallards, Northern Pintail, Goldeneye, Bufflehead, Common and Red-breasted Merganser, American and Eurasian Widgeons. There were also the ever present gulls, crows, and eagles as well as a pheasant.

Weather conditions at the airport were clear with 41° at 6:00 pm and 38° at 9:00 pm. Winds started out gusty (WSW at 16 mph) and died down to W at 5 mph. Snow is all gone.

George Matz

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Session #3
Kachemak Bay Shorebird Monitoring Project

On Sunday, April 19th the Kachemak Bay Birders had its third shorebird monitoring session for this season. Eleven observers made observations for two hours (8:00-10:00 am) at five sites in the Homer Spit area. The islands and islets on the south side of the Bay were not monitored.

Both the Rock Sandpipers and Dunlin that spent at least part of the winter at the Homer Spit seem to have left. Some were seen during session #2, but none today. That answers a question we had as to whether the Dunlin that overwintered on the Homer Spit would hang around and mix with the arriving migrants.

Other migrant shorebirds are starting to show up. There were two Black-bellied Plovers at Mud Bay and nine in the mid-Spit area. In addition there were three Greater Yellowlegs foraging at Mariner Park Lagoon. One left Mariner Park about 9:15 and flew over to Mud Bay. Since we

keep track of when shorebirds arrive or leave, we are able to detect double-counting. Two more Greater Yellowlegs were at the mid-Spit area and six more at Beluga Slough.

A Common Eider was seen close to the beach on the west side of the Spit.

Weather conditions at the airport were clear with 42° at 8:00 am and 44° at 10:00 am. Skies were cloudy and threatened rain, but no precipitation occured during our monitoring. Winds started out light at 4 mph from the E and ending at 13 mph from the NE.

George Matz

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Session #4
Kachemak Bay Shorebird Monitoring Project

On Friday, April 29th the Kachemak Bay Birders had its fourth shorebird monitoring session for this season. A high tide of 15.0 feet was at 1:23 pm based on the Seldovia tide tables. Applying the Homer correction, this translates to a high tide of 15.2 feet at 1:28 at the Spit. Eleven observers made observations for two hours (1:30-3:30 pm) at five sites in the Homer Spit area, as well as a boat tour that morning on the south side of the Bay between 9:00-12:00.

As usual, plovers were the predominant Homer Spit shorebird at this early stage of the spring migration. While Mud Bay tends to be the place that attracts the most plovers, there usually are several also at Mariner Park Lagoon and the mid-Spit area, but not Friday. They were all at Mud Bay where 35 Black-bellied Plovers were counted along with 1 Semipalmated Plover (FOS). However, the previous day right after high tide there were 38 Black-bellied Plovers, 4 Dunlin, and 1 Western Sandpiper. These were joined by a flock of newly arriving plovers (19 Black-bellied and 3 Pacific Golden-Plovers including 1 in juvenile plumage). Later, 9 more Pacific Golden-Plovers arrived. The plovers generally moved between Mud Bay and the mid-Spit area. The fact that we didn't see any of Thursday's Pacific Golden-Plovers on Friday may indicate that small flocks of plovers are continually coming, resting and feeding, and then going within a day.

Other observations include 2 Greater Yellowlegs at Marine Park Lagoon and 8 at Beluga Slough. A Lesser Yellowlegs was heard flying over Mud Bay. Observers at Beluga Slough saw 13 Least Sandpipers, which is also a FOS. No shorebirds were seen on the other side of the Bay.

Besides the usual waterfowl, gulls, crows and eagles, on Thursday a Eurasian Green-winged Teal, or Common Teal, was among hundreds of Green-winged Teal at Mud Bay. Photographs of this subspecies can be seen at http://kachemakbaybirders.org/phpBB3/viewforum.php?f=2. Also, on Friday at Green Timbers (mid-Spit), there was a Short-eared Owl and Lapland Longspur. A pair of Sandhill Cranes returned to the exact spot on Mariner Park Lagoon that they were seen last year.

Weather conditions at the airport were cloudy with light rain and 43° at 1:00 pm and 42° at 4:00 pm. Winds started out at 10 mph from the E and died down to 6 mph from the ESE.

George Matz

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Session #5
Kachemak Bay Shorebird Monitoring Project

On Wednesday, May 4th the Kachemak Bay Birders had its fifth shorebird monitoring session for this season. Ten observers made observations for two hours (5:45-7:45 pm) at five sites in the Homer Spit area, as well as a boat tour that morning on the south side of the Bay between 9:00-12:00. The high tide was 17.4 feet at 4:26 pm (Seldovia tide tables). As earlier stated, our protocol is that we begin monitoring 15 minutes before the outgoing tide is at 15.0 feet. At this point, shorebirds are no longer roosting and tend to be actively foraging on marine invertebrates now exposed by the receding water, which makes for more consistent observation.

Weather conditions at the airport (http://weather.noaa.gov/weather/current/PAHO.html) were partly cloudy towards clearing after a light rain. The temperature was 44° at 5:00 pm and 43° at 8:00 pm. Winds were light, starting out at 9 mph from the SW and ending at 6 mph, also from the SW. Seems like good conditions to bring in migrating birds.

Sure enough, lots of new shorebirds have checked in. While there are lots of Black-bellied Plovers still around (26 at Mud Bay, 100 at mid-Spit, and 1at Beluga Slough) and some Pacific Golden-Plovers (2 at mid-Spit), more Semipalmated Plovers have shown up. Five were seen at Mud Bay, 6 at mid-Spit, and 5 at Beluga Slough. Unlike their cousins, some may stick around and nest here.

Mud Bay also had a pair of Greater Yellowlegs and there were 8 more at Beluga Slough. One each of Greater and Lesser Yellowlegs were next to each other at Mariner Park Lagoon, making a nice comparison. If you are here for the Shorebird Festival, it's worth checking out.

Right on schedule, more Dunlin and Western Sandpipers are showing up. Mud Bay had 75 Dunlin and 24 Western's that followed the tide out the entire two hours. The mid-Spit had 174 Dunlin, 60 Western's and 60 that were lumped as LESA/WESA/SESA (Least, Western, and Semipalmated). The outer Spit (boat harbor) also had 2 LESA/WESA/SESA and two flocks of about 50 Dunlin each flying overhead that didn't seem to be counted in the other areas. Beluga Slough had 17 LESA/WESA/SESA, 1 Least Sandpiper and 1 Dunlin that was heard. In addition, the grassier area of Mariner Park Lagoon had 46 Least Sandpiper.

Short-billed Dowitchers are also arriving in numbers. Observers at Mud Bay counted 22, and 30 at the mid-Spit site were lumped as just Dowitchers.

The rocky areas of the Bay attract different species of shorebirds. The breakwater at the entrance to the harbor had 92 Surfbirds. Also, from a boat, 40 more were seen at Lancashire Rock and 1 more on Cohen Island. Lancashire Rock also had 1 Rock Sandpiper and 1 Black Turnstone.

Should be a good festival this weekend. So far, the weather is cooperating. Bring tee-shirts that you can wear under your parka.

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Session #6
Kachemak Bay Shorebird Monitoring Project

On Monday, May 9th the Kachemak Bay Birders had its sixth shorebird monitoring session for this season. Twelve volunteers made observations for two hours (7:45 - 9:45 am) at five sites in the Homer Spit area, as well as a boat tour on the south side of the Bay the previous day between 9:00-12:00. The high tide was 15.6 feet at 6:49 am (Seldovia tide tables).

Weather conditions at the airport (http://weather.noaa.gov/weather/current/PAHO.html) were overcast. The temperature was 38° at 7:00 am and 42° at 10:00 am. Winds started out as calm and increased to 9 mph from the SW.

Last report (Wednesday) I mentioned that conditions should be good for bringing in migrating shorebirds. Sure enough, early on Friday morning Aaron reported "around 4,000 shorebirds at Mud Bay, mostly Western Sandpipers and Dunlin. Other species here were a single Marbled Godwit, three Wimbrel, and handfuls of Black-bellied Plovers, Short-billed Dowitchers, Greater Yellowlegs and Least Sandpipers. There was also flock of about 100 Surfbirds on the gravel spit at Mud Bay and a few smaller flocks elsewhere along the spit." The numbers of shorebirds and diversity certainly contributed to another successful Kachemak Bay Shorebird Festival last weekend.

Late Saturday afternoon, around high tide, the numbers of shorebirds were noticeably greater. I estimated that there were about 6,000 Western Sandpipers and Dunlin, with about 15-20 percent being Dunlin. Unlike Friday afternoon, when most of the mixed flock of Westerns and Dunlin took a nap during high tide, many of the birds on Saturday afternoon seemed restless. Then, as if on queue, flocks of hundreds took to the air, circled around a bit, and headed across the Spit Road (literally stopping traffic in one case), disappearing over Cook Inlet; presumably to continue their journey. Within the next half hour, about two thirds of the shorebirds were gone. I guess these birds were the 4,000 that arrived early Friday morning and the ones still at Mud Bay arrived later, needing more rest and food. Soon afterwards I saw another flock of shorebirds coming in from the east. This flock of a few hundred skimmed over Mud Bay Spit and settled in with the shorebirds foraging in the mud flats. This was truly an exciting event.

On Sunday morning, on my way to Seldovia for the day, I stopped to count shorebirds at Mud Bay, getting 2,500 the first time and 2,600 the second. It appears that not many, if any, left overnight.

Our monitoring on Monday morning found 600 Westerns and 100 Dunlin at Mud Bay. In addition, there was a large flock of 1,000-1,250 Western's and about 135 more at Green Timbers in the Mid-Spit area as well as a flock of 315 peeps, most likely Westerns, near Louie's Lagoon. Also, there were 54 Dunlin. The Outer Spit had a flock of 65 Western's that stayed only about 10 minutes. Beluga Slough had a flock of 40 Western's and 3 Dunlin that hung around all through the monitoring session.

On Tuesday morning I did a quick check of some of these sites. There were about 2,500 shorebirds in the Mud Bay area; about 90% Western's, 10% Dunlins and a few plovers and dowitchers that were too far away to identify. Mariner Park Lagoon had about 170 Least Sandpipers and 1 Greater Yellowlegs. So it looks like the shorebirds from Sunday morning may still be around. But on the other hand, those arriving may be about the same as those leaving; a project for another year.

Least Sandpipers tend to be in smaller flocks apart from the Western's and Dunlin. There were 25 in Mud Bay. Thirteen were initially foraging with 35 Western's at Mariner Park Lagoon, but an hour later the Western's headed off towards Cook Inlet. Soon another flock of 28 Least's arrived. Five more Least's were seen at the Mid-Spit. Beluga Slough monitors had a flock of 30 Least's that were later joined by 4 more.

Two Semipalmated Sandpipers were seen at Mud Bay.

Black-bellied Plovers, one of the earlier arrivals, were still present in good numbers. There were 50 at Mud Bay and 10 at Mid-Spit. Only 3 Pacific Golden-Plovers were seen, all at Beluga Slough. More Semipalmated Plovers were seen in the drier areas. Mid-Spit had 19 and there were 2 more at Mud Bay.

Beluga Slough Observers saw 1 Short-billed Dowitcher and 12 Long-billed Dowitchers. Mud Bay observers also reported 2 Dowitchers, plus 1 Godwit.

Mud Bay had 1 Greater Yellowlegs, Mariner Park Lagoon had 2, Mid-Spit had 3, and Beluga Slough had 6. Mariner Park lagoon also had 1 Lesser Yellowlegs.

Beluga Slough also had 2 Whimbrel fly over and they heard 1 Wilson's Snipe.

The rocky area around the boat harbor attracted 3 Wandering Tattler and 90 Surfbirds. The rocky islands and islets on the south side of Kachemak Bay had 1 Wandering Tattler, 100 Surfbirds, and 5 Black Turnstone at Gull Island. There were 60 Surfbirds at Lancashire Rocks. Cohen Island had 40 Surfbirds, 2 Black Turnstone, and 2 Black Oystercatchers.

The totals for this session are:
Semipalmated Plover - 21
Pacific Golden-Plover - 3
Black-bellied Plover - 60

Black Oystercatcher - 2
Greater Yellowlegs - 9
Lesser Yellowlegs - 1
Whimbrel - 2
Godwit - 1
Wandering Tattler - 4
Surfbird - 290
Black Turnstone - 7
Western Sandpiper - 2,440
Least Sandpiper - 105
Semipalmated Sandpiper - 2
Dunlin - 157
Short-billed Dowitcher - 1
Long-billed Dowitcher - 12
Dowitcher - 2
Wilson's Snipe - 1

This is a total of 18 species. Despite our fairly intensive coverage, we did not have as many species as the Kachemak Bay Shorebird Festival, which reported 24 species of shorebirds. The Festival also reported Solitary Sandpiper, Hudsonian Godwit, Bar-tailed Godwit, Marbled Godwit, Ruddy Turnstone, Rock Sandpiper, and Red-necked Phalarope.

George Matz

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Session #7
Kachemak Bay Shorebird Monitoring Project

On Saturday, May 14th the Kachemak Bay Birders had its seventh shorebird monitoring session for this season. Ten volunteers made observations for two hours (2:00-4:00 pm) at five sites in the Homer Spit area, as well as a boat tour on the south side of the Bay between 1:00-2:30 pm. The high tide was 16.5 feet at 12:57 pm (Seldovia tide tables).

Weather conditions at the airport (http://weather.noaa.gov/weather/current/PAHO.html) were overcast. The temperature held at 43° from 2:00 pm until 4:00 pm. When we started, winds were at 12 mph from the SSE and lowered to 9 mph by the end of the session. However, as usual, it was a lot gustier and colder out on the Spit.

Friday morning there were 12-15,000 shorebirds in the Mud Bay area, the largest flock seen here in year's according to some long-time residents. The composition was about 90% Western Sandpipers, >5% Dunlin, and a few dowitchers and plovers. Several birders watched as the incoming tide herded thousands of foraging sandpipers up the mud flats to the rocky upper beach. But rather than roost at the tide line, as they did on previous days, flocks of hundreds

would rise up and then head west. It would be interesting to know if they continued on to their breeding grounds or stopped on the west side of Cook Inlet or Bristol Bay. When I left, about 2/3 of the sandpipers had moved on. I don't include the barometric pressure from the weather report, but maybe I should since a change in barometric pressure may have contributed to the shorebirds departure. The weather was sunny and calm at the time, but there was an approaching low pressure system moving in from the SE.

On Saturday we were all anxious to see how many shorebirds would be at the Spit. Large numbers were still around, but identification by species was difficult because of the gusty winds. Mud Bay observers reported 2,000 Dunlin and LESA/WESA/SESA (lumping of Least, Western, and Semipalmated Sandpipers) which is the ID we use when species can't be confirmed, though the likelihood is that these were mostly Western's. Six birds near observers were identified as Least Sandpipers. Mariner Park Lagoon also had a flock of 40 LESA/WESA/SESA quickly fly by a couple of times. A flock of 15 Least Sandpipers spent some time foraging in pools of water. The Mid-Spit area had lots of action with approximately 1,700 Western Sandpipers, 15 Least Sandpipers, 1 Semipalmated Sandpiper, a flock of 500 LESA/WESA/SESA that flew by, and several flocks of Dunlins totaling about 422 birds. The Outer Spit had 65 LESA/WESA/SESA and 2 Dunlin. Beluga Slough added 150 Western Sandpipers, 2 Least Sandpipers, 329 LESA/WESA/SESA and 50-60 Dunlin. This totals 5,307 shorebirds. While that may seem like a lot compared to the last few years, it is just slightly above average for the 4,503 individual birds per day (79% Western's and Dunlin) seen on the Homer Spit by George West from 1986-1994.

Our report for plovers includes 5 Black-bellied Plovers at Mud Bay and 4 at Mid-Spit, and 1 Pacific Golden-Plover at Beluga Slough, substantially less than our last monitoring session. However, Semipalmated Plovers appeared in larger numbers with 9 at Mud Bay, 1 at Mariner Park Lagoon, 47 at Mid-Spit, and 7 at the Outer Spit for a total of 64. Some of these may nest on the Spit.
Yellowlegs are also on the wane. Mariner Park Lagoon had 1 Greater Yellowlegs and Beluga Slough had 2.

One Whimbrel went from Mariner Park Lagoon to Mud Bay and there were 4 more at Mid-Spit and another 4 on the Outer Spit. Observers at the Outer Spit also saw 12 Wandering Tattler.

There were 10 Dowitchers at Mid-Spit and 2 Long-tailed Dowitchers at Beluga Slough.

At Mid-Spit there were 2 flocks of Black Turnstone totaling 89 birds. In addition 24 more were seen on Cohen Island as well as 1Ruddy Turnstone at Sixty-foot Rock. One Surfbird was at the Outer Spit, 70 at Cohen Island, and 14 at Sixty-foot Rock.

Other sightings includes 3 Black Oystercatchers at Cohen Island, 2 Red Knot at Sixty-foot Rock (FOS), and 2-3,000 Red-necked Phalarope spread out on the water of Kachemak Bay.

This was one of our best sessions from the perspective of both diversity and abundance. We saw 19 species and 8,621 individual birds. This is more individual birds than we saw for the whole 2009 season (7,406). The next session (May 19) will be interesting.

On another note, I bought this clam call that, it is claimed, attracts shorebirds. Supposedly, it sounds like the mating call of a clam; kind of a trill with a thrill. The instructions say that it has a high pitch that is beyond the hearing range of humans, but not shorebirds. I bought it over the Internet from this guy in Nigeria who said the call was developed by expert ornithologists at the University For Ornithological Observation and Learning, which is somewhere in the jungle. But I haven't found that the clam call works very well and would not recommend it to any birders. I haven't tested it yet with clamming. The call is also supposed to bring those elusive razor clams closer to the surface. We will see.

George Matz

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Session #8
Kachemak Bay Shorebird Monitoring Project

On Thursday, May 19th the Kachemak Bay Birders had its eighth shorebird monitoring session for this season. Nine volunteers made observations for two hours (6:45-8:45 pm) at five sites in the Homer Spit area, as well as a boat tour on the south side of the Bay between 8:00-11:00 am. The high tide was 18.7 feet at 5:07 pm (Seldovia tide tables).

Weather conditions at the airport (http://weather.noaa.gov/weather/current/PAHO.html) were overcast. The temperature held at 46° from 6:00 pm until 9:00 pm. Winds were E at 9 mph when we started and became calm nar the end of the session.

The spring shorebird migration is definitely coming to an end. Mud Bay only had 5 LESA/WESA/SESA and 5 Dunlin. Five days ago there were thousands. Mariner Park Lagoon had 5 Western's and 15 Least. The Mid-Spit area had 34 Western's and 6 Dunlin.

Semipalmated Plovers were abundant, many will probably breed here. Mud Bay had 10, Mariner Park 8, Mid-Spit 19, and Outer Spit (the fishing hole and boat harbor) had 6. No other plovers were seen.

Mud Bay also had 1Hudsonian Godwit, 10 Short-billed Dowitchers, and 1 Red-necked Phalarope. There are thousands of phalaropes on the open water, but they are seldom on the mud flats. Mariner Park Lagoon and Beluga Slough each had 1 Greater Yellowlegs.

There were 2 Whimbrel at Mid-Spit and 2 more on the outer beach near the Fishing Hole.

Observers at the Outer Spit saw 8 Sanderling which included a mix of juveniles and adults in breeding plumage. These high Arctic breeders are seldom seen in Kachemak Bay. On the rocks at the entrance to the boat harbor were 56 Surfbirds and 5 Wandering Tattler.

Karl continues to see lots of red-necked Phalaropes on the water on the south side of the Bay (about 2,000) as well as 2 Black Oystercatchers and 2 Wandering Tattler on Cohen Island plus 1 Wandering Tattler at 60 Foot Rock. It would be interesting to know whether these phalaropes are coming and going or essentially the same birds from before.

We have one more session left to close out what has been another successful monitoring season.

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Session #9
Kachemak Bay Shorebird Monitoring Project

On Tuesday, May 24th the Kachemak Bay Birders had its ninth and final shorebird monitoring session for this season. Eight volunteers made observations for two hours (8:30 am -10:30 am) at five sites in the Homer Spit area, as well as a boat tour on the south side of the Bay between 9:00 am and noon. The high tide was only 13.6 feet at 8:12 am (Seldovia tide tables).

Weather conditions at the airport (http://weather.noaa.gov/weather/current/PAHO.html) were mostly clear. The temperature warmed from 45° at 8:00 am to 49° at 11:00 am. Winds were calm earlier but increased from 5 mph out of the NE to 6 mph from the S. Good day for going to the beach.

The spring shorebird migration is essentially over. There are a few stragglers, but most of the shorebirds that are around will probably be here through most of the summer.

In terms of stragglers, there were 3 LESA/WESA/SESA at Mud Bay as well as 2 Western Sandpipers, 1 Least Sandpiper and 2 Dunlin at the Mid-Spit area. Also, 2 Black-bellied Plovers left Mud Bay and were reported minutes later at the Mid-Spit area.

Semipalmated Plovers top the breeding birds list with 1 at Mud Bay, 9 at Mariner Park Lagoon, 37 at Mid-Spit, and 3 on the Outer Spit (boat harbor and the fishing hole) for a total of 50. There were only 3 Greater Yellowlegs at Beluga Slough. Since they breed in the area, perhaps there are more at some of the nearby inland muskeg bogs. Mud Bay had 7 Dowitchers, the Mid-Spit had 8, and there was 1 Long-billed Dowitcher at Beluga Slough that hung out with some yellowlegs for awhile.

Whimbrels, which are common in the area through the summer, are still around with 5 at Mud Bay and 6 at Mid-Spit. There was 1 Wandering Tattler at the Mid-Spit, 4 at the Outer Spit, and 1 seen at Sixty-foot Rock. The breakwater on the Outer Spit also had 11 Surfbirds.

About 150 Red-necked Phalarope were still on the water near Sixty-foot Rock. If you have been following these reports you know that there can be thousands floating around in Kachemak Bay. When asked if the phalaropes come and go or just hang around, Karl said "that the Phalaropes come and go rather quickly. They seem to come in waves. I will see large numbers for a couple days then they seem to drop. Then more come through. That happens 4 or 5 times then they taper off rather quickly." There was also 1 Red-necked Phalarope at Mud Bay, not their usual habitat.

To wrap things up, there are still 2 Black Oystercatchers on Cohen Island; obviously nesting there. Hopefully they will not be too disturbed by beachcombers and kayakers coming ashore and succeed in raising their young.

This has been an interesting monitoring season; no two are alike. Our observations should give us a better understanding of the status of shorebirds that migrate through Kachemak Bay in the spring.