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Kachemak Bay Shorebird Monitoring Project: 2013 Report

By

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http://kachemakbaybirders.org

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Cover photo of Bristle-thighed Curlews taken May 21, 2013 by George Matz at Anchor Point.

I. Executive Summary

In May 2013, Kachemak Bay Birders (based in Homer, Alaska) completed its fifth consecutive shorebird monitoring project. The main purpose of this citizen science project is to attain a better understanding of the status of shorebird populations in the Kachemak Bay area, particularly during spring migration. This year we extended our efforts to also include monitoring at the nearby Anchor Point/River and the Kasilof River. By comparing our current data to monitoring data collected by former Homer resident George West, who conducted counts of Homer Spit shorebirds during the 1980s and 1990s, we will have a better understanding of population trends. Secondary purposes for this project are: 1) to contribute information that might be useful to others assessing shorebird populations across the entire Pacific Flyway: and 2) to use the monitoring data to help protect Kachemak Bay/Homer Spit shorebird habitat.

Between April 13, 2013 and May 23, 2013 a total of 33 volunteers (including 9 teenagers) monitored four sites on the Homer Spit, one site at nearby Beluga Slough, and by boat the Islands and Islets on the south side of the Bay. The protocol we followed is a modification of the International Shorebird Survey (ISS) protocol. We simultaneously monitor for two hours once every five days when the outgoing tide reached 15.0 feet (or at high tide if less). These tidal conditions optimize shorebird viewing opportunity for this area. In nine monitoring sessions we observed 23 species of shorebirds and counted a total of approximately 18,623 individual shorebirds. Top ten taxa seen include Western Sandpiper (7,964), LESA/WESA/SESA which is a lumping of *Calidris* species (5,305), Dunlin (2,548), Surfbird (748), Red-necked Phalarope (703 with all but three seen by boat), Dowitcher *sp*. (344 of which most were probably Short-billed), Black-bellied Plover (221), Pectoral Sandpiper (146), Least Sandpiper (128), and Pacific Golden Plover (96). We noted some minor disturbances of shorebird flocks from loose dogs and low-flying aircraft.

The number of shorebird species we counted this year (23) was less than most previous years; 24 in 2009, 23 in 2010, 25 in 2011, and 27 in 2012. However, this year for the first time we saw Bristle-thighed Curlew, which is considered accidental for Kachemak Bay, on two successive monitoring sessions. The total number of individual shorebirds counted this year (18,623) was above average (15,171) for our five years of effort: 7,406 in 2009, 9,845 in 2010, 16,007 in 2011, and 23,972 in 2012. But it seemed like there were about as many shorebirds this year as last year. A review of our daily spot check data taken at prime sites during the peak of migration revealed that unlike 2012, when three of our scheduled monitoring dates happened to coincide with the peak of a pulse of shorebird arrivals, this year only the shoulder, not the peak, of the largest pulse was during a scheduled monitoring date.

As in previous years, we compared our data to George West's seven years of shorebird monitoring data (1986, 1989-1994). West saw a total of 23 shorebird species. Over the past five years of monitoring we have seen 30 species. Perhaps our more intense coverage explains our higher number of species. West's average annual count was 90,326 shorebirds. But comparison of this data with ours requires some adjustment. West monitored daily and our protocol calls for monitoring once every five days. Consequently, for the comparison we included only every fifth day of West's data. Also, since West's observations were only on the Homer Spit, we needed to exclude data from the Beluga Slough and Islands and Islets sites. Based on these adjustments,

West's average shorebird count was 18,436. Our average for five years was 11,458 shorebirds; or 62% of West's

In addition to the Homer Spit area we also conducted shorebird monitoring for the first time at the mouths of the Anchor and Kasilof Rivers. The Anchor River is located at the northern edge of Kachemak Bay about 15 miles north of Homer. The four volunteers that monitored here followed the same protocol used at the Homer Spit. They reported seeing a total of 21 species of shorebirds and counted 1,065 individual birds. The top ten taxa for this site were: Western Sandpiper (606), Whimbrel (75), Dunlin (67), yellowlegs sp. (45), Greater Yellowlegs (44), Black-bellied Plover (40), LESA/WESA/SESA (29), Lesser Yellowlegs (20), Dowitcher sp. (19), and Long-billed Dowitcher (18). Although several Bristle-thighed Curlews were frequently seen at the Anchor River this spring, none were observed during monitoring.

The Kasilof River empties into Cook Inlet about 40 miles north of the Anchor River. Five volunteers there followed a different protocol. They monitored the incoming tide and not necessarily on the same days as our effort at the Homer Spit. Nevertheless, with nine monitoring sessions, they had about the same level of effort. They saw a total of 18 species of shorebirds and counted approximately 21,363 individuals. The count for the Kasilof River is high enough to be considered a Western Hemisphere Shorebird Reserve Network Site of regional importance. The top ten taxa seen were Western Sandpiper (16,950), Dunlin (3,338), Short-biller Dowitcher (620), Least Sandpiper (209), Black-bellied Plover (59), Whimbrel (43), Long-billed Dowitcher (42), Greater Yellowlegs (34), Hudsonian Godwit (25), and Lesser Yellowlegs (8).

Plans are to continue this effort next year. Since all monitoring is based on volunteer effort, the possibility of agency budget cuts is not a threat to us.

I. Introduction

A. Overview of Kachemak Bay

Kachemak Bay is a unique and biologically rich portion of Alaska's Cook Inlet. The recent Management Plan for the Kachemak Bay National Estuarine Research Reserve (KBNERR) provides a good overview of this bountiful environment (KBNERR 2012). Excerpts below, with minor edits, emphasize portions that pertain to shorebirds. Note that KBNERR is a conservation designation that does not include actual ownership of land or water or regulatory authority.

> The Bay is 63 km (39 mi.) long and 39 km (24 mi.) wide at its entrance between Anchor Point and Point Pogibshi, with more than 515 km (320 mi.) of shoreline. The Homer Spit projects 7.2 km (4.5 mi.) out into the Bay, dividing it into an 'inner' and 'outer' Bay. The inner Bay is east of Homer Spit to the head of Kachemak Bay, and the outer Bay is west of Homer Spit to the mouth of Kachemak Bay. The Bay is bordered on the north by the rolling hills and bluffs of the Kenai lowlands, and on the south by the Kenai Mountains, with the watershed encompassing more than 2,658 km2 (1,026 mi.2).

Kachemak Bay has two State Critical Habitat Areas: Kachemak Bay CHA (926 km2 or 226,400 ac.) and Fox River Flats CHA (27 km2 or 7,200 ac.). The bay also has parts of two state parks; Kachemak Bay State Park and Kachemak Bay State Wilderness Park.

The climate in the Kachemak Bay watershed is maritime and characterized by a relatively moderate seasonal range of temperatures, high humidity, and ample rain and snow. The Bay and the Pacific Ocean minimize large extremes in the air temperature, resulting in mild winters and cool summers. Annually, the mean Homer temperatures vary from the high of 15ºC (60ºF) in summer to the low of 5ºC (30ºF) in winter. Surface

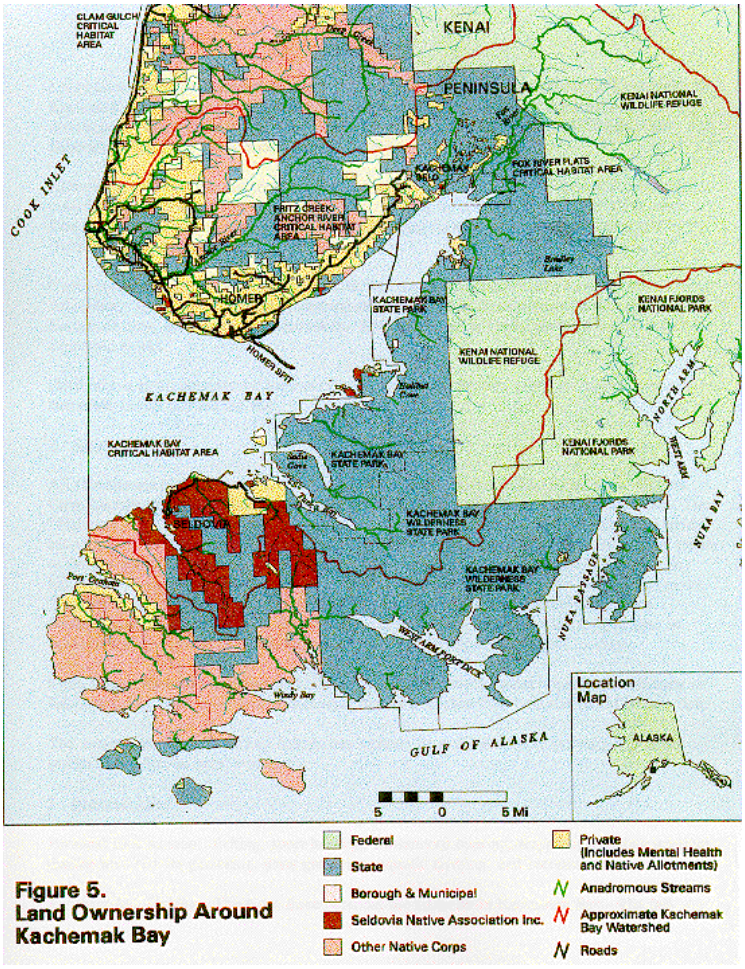


Figure 2. Kachemak Bay Land Ownership

water temperatures in the Bay range between a high of 12.8ºC (55°F) in the summer, and a low of -2ºC (28°F) in the winter. Most of the 0.7 m (25 in.) of annual precipitation occurs in late summer and fall. The majority of snow falls from November to March.

The head of Kachemak Bay is characterized by extensive tidal flats, braided drainages, and marshlands. The northern shore consists of cliffs composed mostly of sand and clay leading down to shallow mud flats. The southern shoreline consists of hard rock cliffs and deep embayments. Many islands are also found along the southern shore. Several major glacial streams discharge into inner Kachemak Bay: Fox, Martin, Wosnesenski, and Bradley rivers; and Sheep, Battle, Halibut, Portlock and Grewingk Creeks. In addition, several minor nonglacial streams discharge into Kachemak Bay along the southern shore. The northern coast is drier, and only eight small nonglacial streams of limited drainage enter the inner Bay from that side.

Kachemak Bay and the adjacent Cook Inlet are known for their amazing tidal ranges. Kachemak Bay has an 8.7 m (28.5 ft.) tidal range that results from the complex geomorphology of the Gulf of Alaska and adjacent Cook Inlet. Tides in Kachemak Bay and Lower Cook Inlet are semi-diurnal with a significant inequality between successive low waters. This means there are two high tides within a lunar (24 hour 50 minute) day, one of which will generally exceed the other by several feet. The mean diurnal range in Kachemak Bay is 4.7 m (15.4 ft.) at Seldovia. Highest tides exceed 6.9 m (22.5 ft.) and the lowest tides are about -1.8 m (-6.0 ft.).

The Homer Spit is a striking geologic feature of Kachemak Bay, and it also has a dramatic impact on the Bay's circulation. The Spit bisects the Bay into inner and outer zones. These zones differ in freshwater influence and in wave action. The outer Bay is a mixing basin for the cold, saline, nutrient-rich Alaska Coastal Current (ACC) which enters from the southeast via Cook Inlet, and the fresh glacial water that drains from the Bay's tributaries.

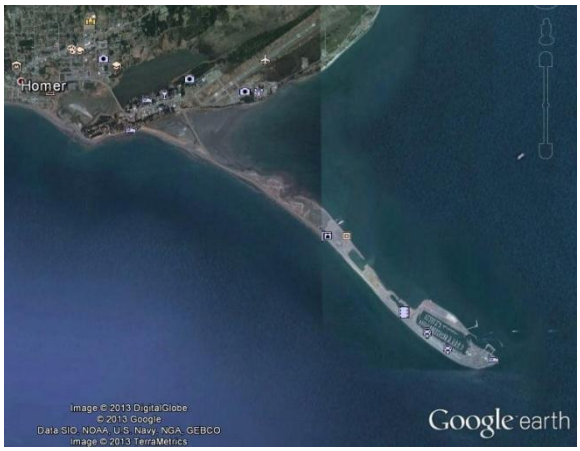


Figure 2. Aerial view of the Homer Spit

It is an environment typified by high wave energy that receives the full force of swells from across the Inlet. The inner Bay has a lower salinity because the influence of freshwater tributaries is stronger in the semi-contained water found behind the Homer Spit. The inner Bay also remains calmer because the Homer Spit blocks the swells from the Inlet. Water masses from the inner and outer zones of the Bay meet at the end of the Spit during the daily tidal cycle.

From 1500-m (5,000 ft.) high alpine peaks to 176-m (576 ft.) deep sea trenches, Kachemak Bay is home to a diversity of flora and fauna. In Kachemak Bay and its watershed, the following species have been documented: 11 species of marine mammals, 36 species of terrestrial mammals, 244 species of birds, 1 species of amphibian, 120 species of fish, 404 species of marine invertebrates, 125 species of marine algae, and 663 species of vascular plants. There are undoubtedly additional species that have yet to be documented, especially fish, invertebrates, marine algae and plants. Kachemak Bay's varied coastline, numerous freshwater sources, and diverse geomorphology create a microcosm of Southcentral Alaskan habitat types.

Rocky habitats support the most diverse aquatic communities. Invertebrates are most abundant and diverse where currents are high, and least abundant and diverse in slow currents. Jakolof Bay supports the most robust subtidal macroinvertebrate communities known in Southcentral Alaska. Most of the macroinvertebrates are sedentary filter feeders, such as clams. Grazers, such as chitons and sea urchins, are abundant. Abundant predatory macroinvertebrates are primarily sea stars, snails, and hermit crabs.

Invertebrate abundance in sand and mud substrates is strongly influenced by seasonal conditions, and dominance patterns are influenced by tidal exposure. Most invertebrates in sand and mud substrates are deposit or suspension feeders. Many species are more abundant at lower tidal levels; however, species composition does not appear to be affected by tide stage. Mud flats have greater species richness, biomass, and diversity of perennial species than sand beaches and, consequently, attract the highest numbers of shorebirds and ducks.

Kachemak Bay has several populations of clams, including Pacific littlenecks, butter clams, surf clams, various cockles, razor clams, and several *Macoma* (Baltic, stained, chalky, oblique, and bent-nosed). Hard-shelled clams can be found in the lower intertidal region on protected gravel-sand-mud beaches. Soft-shelled clams are usually found in areas of mixed sand and mud, or mud and gravel.

Two hundred forty-four species of birds have been identified on and around Kachemak Bay. Kachemak Bay is the most important marine bird habitat in Lower Cook Inlet, with no comparable areas in Upper Cook Inlet. During winter months over 90% of the marine birds in Lower Cook Inlet are found in Kachemak Bay. Kachemak Bay is also important for avian feeding, nesting, rearing, and migratory staging throughout the year.

In 1996, Kachemak Bay was dedicated as an international site of the Western Hemisphere Shorebird Reserve Network. An international site designation indicates that the site hosts greater than 100,000 shorebirds or 10% of a flyway population.

B. Overview of Anchor River and Kasilof River

1. Anchor River

The Anchor River flows into Cook Inlet about a mile north of Anchor Point, the most northern extent of Kachemak Bay. This area is popular for sport fishing and beach walks. Beach walks provide excellent opportunity to observe a diversity of waterbirds, especially shorebirds.

Located here is the State of Alaska-owned Anchor River State Recreation Area (SRA) which includes 213 acres of forested riparian habitat, estuary, and campgrounds. In addition, the Kachemak Heritage Land Trust owns about 146 acres of river front property on the lower Anchor River

Between the mouth of the river and Anchor Point is an uninhabited but road accessible barrier beach. This public beach is considered a hotspot by local birders. The intertidal area and estuary behind the barrier beach attract a diversity of migrating shorebirds as well as a few breeding shorebirds.

Shorebird monitoring began at the SRA parking lot where the road ends (lower left hand corner of Figure 2). Monitors walked north on the ocean side to the mouth of the river watching for shorebirds in the intertidal area and then returned on the inland side which is mostly wetlands.

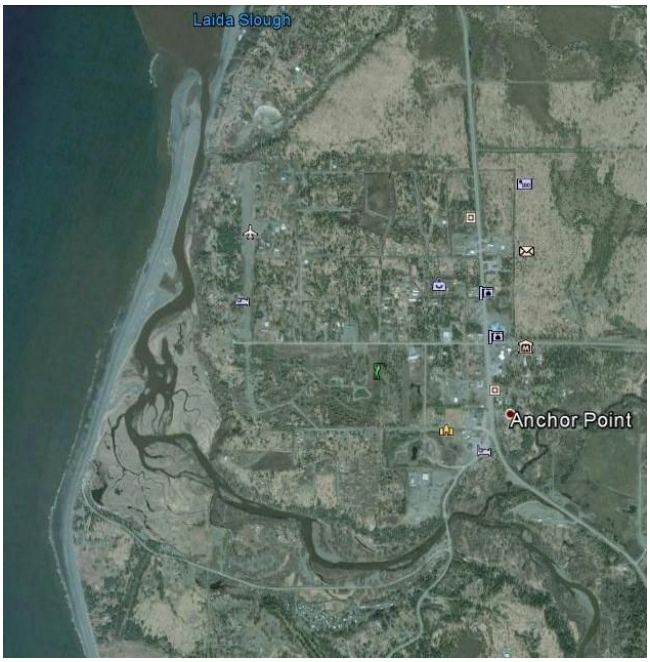


Figure 3. Aerial view of Anchor Point/ River

2. Kasilof River

The Kasilof River is 62 miles north of Homer. It begins at Tustumena Lake, the largest lake on the Kenai Peninsula, and drains into Cook Inlet. All of the mouth of the river is owned by the Alaska Department of Natural resources and classified as a Special Use Area

The shorebird survey area is a very rich estuarine delta where the Kasilof River meets Cook Inlet. The inland section of this area is riddled with small ponds and sloughs. These areas provide important stopover feeding areas for migrant waterfowl and shorebirds. They also support a healthy breeding area for waterfowl in the summer months.

Figure 4. Aerial view of the mouth of the Kasilof River

The saltwater mud flats on the north bank of the river are a critical feeding area for wintering rock sandpipers and for migrating shorebirds in the spring and fall. At low water the waterline often retreats over one mile out into the Cook Inlet exposing silty, muck laden with small clams and polychaete worms.

The survey area consisted of these mud flats on the north bank of the river. Survey protocol was to be on site at mid-flooding tide and count feeding shorebirds, until the north bank mud flats were covered by water. At this point, the survey was terminated as shorebirds would be forced to move far inland and not available for counting.

C. History of Kachemak Bay Shorebird Monitoring Project

For the past five 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 arrive at a better understanding of current population trends. These trends will be of local interest and could contribute as well to other monitoring efforts at shorebird stopover and wintering areas with 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 that some modification was needed, 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 monitoring the Kachemak Bay spring shorebird migration where some species stay no more than a couple of days at most.

2009 - 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 entered into eBird-ISS. 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 compared 2009 data to obtained by George West about two decades earlier. The report included 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 (and all others) is only available in electronic form and can be downloaded from http://kachemakbaybirders.org/.

2010 – The second year of monitoring followed a similar protocol. We experienced a slow start with 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 monitoring effort but one less species (23). Nevertheless, 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 was whether migrating shorebirds were passing through the Homer Spit area between scheduled monitoring dates, thus not being 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 did 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 did give us a more complete picture of the Homer Spit shorebird migration. Our scheduled monitoring dates missed some flocks of migrating shorebirds, but not by an order of magnitude or more.

We were also 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.

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. Concurrent with our ground-based monitoring, four volunteers flew the 320 mile long shoreline of the Bay 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.

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 most shorebirds seen at the Homer Spit are not likely 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 using 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. Observers estimated that during the aerial surveys there were more shorebirds in other parts of the Bay (3,440) than at the Homer Spit (1,403), but not 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. Though just a rough estimate at best, this is substantially less than that mentioned in reports from a 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.

2011 - The 2011 project followed the ground-based monitoring protocol used the previous two years. Due to no funding, there was no aerial survey of the Kachemak Bay shoreline this year.

In 2011, between April 14 and May 24, a total of 18 volunteers participated in monitoring four sites on Homer Spit, plus nearby Beluga Slough, and by boat the Islands and Islets on the south side of the Bay. The number of shorebird species observed in 2011 (25) was higher than 2009 (24) or 2010 (23). The total number of individual shorebirds counted in 2011 (16,007) was also higher than 2009 (7,406) or 2010 (9,845). The biggest increase was Western Sandpipers and Dunlin, as well as 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 per year 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.

Supplemental monitoring continued in 2011. From daily spot checks on the Homer Spit during the two week peak of migration we were able to establish that we did miss some flocks of sandpipers, but were able to 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. The report for this year (Matz 2011) provides detailed spreadsheets of the count for each site. A review of

our three years of monitoring appeared in a peer reviewed journal, the *Wader Study Group Bulletin* (Matz et al 2012).

2012 - The 2012 project followed the monitoring protocol used in previous years for the Homer Spit area. Weather conditions this spring were ideal despite a severe winter; mild temperatures with no strong storms.

Between April 14 and May 24 a total of 28 volunteers monitored four sites on the Homer Spit, one site at nearby Beluga Slough, and by boat the Islands and Islets on the south side of Kachemak Bay. We observed 27 species of shorebirds and counted a total of approximately 23,972 individual shorebirds. The top 10 species included Western Sandpiper (16,375), Surfbird (2,919), Red-necked Phalarope (1,501 all but one seen by boat), Dunlin (1,205), a lumping of unidentified *Calidris* (844), Black-bellied Plover (354), Dowitcher (153 of which almost all were Short-billed), Semipalmated Plover (142), Least Sandpiper (103), and Pacific Golden Plover (95). There were no significant disturbances from humans, dogs or predators (e.g. raptors).

The number of shorebird species we counted this year was higher than in 2009 (24), 2010 (23), or 2011 (25). Also, the total number of individual shorebirds counted was significantly higher than in 2009 (7,406), 2010 (9,845), or 2011 (16,007). A review of our daily spot check data taken at prime sites during the peak of migration revealed a significant reason; in 2012 the peak of three large pulses of migrating shorebirds occurred on the same day as our monitoring date. In previous years, the relatively short pulse never peaked on a scheduled monitoring date thereby not including in the count a significant percentage of shorebirds that stopped at the Homer Spit.

As in previous years, we compared this year's data to George West's shorebird monitoring data from two decades ago. This comparison required some adjustment since West monitored daily and our protocol calls for monitoring once every five days. West's seven year average for total shorebird count was about three times greater than our average from 2009-2011. However, our 2012 total count was higher than some of the low count West years (Matz 2012).

III. 2013 Monitoring Protocol

A. ISS Modified Protocol

As in previous years, our shorebird monitoring protocol for 2013 used a modified version of the 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 the Homer Spit. Four sites were actually on the Homer Spit and one site (Beluga Slough) was nearby. In addition we obtained observations the same day from a charter boat captain (Karl Stoltzfus) who volunteered to monitor the other side (south) of the Bay during scheduled trips. This site is called Islands and Islets.

2. Based on the ISS protocol 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 these birds stayed 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 and 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.

3. This year we began monitoring the mouth of the Anchor River. Monitoring there was on at the same day and time as monitoring on the Homer Spit, thereby assuring no double-counting.

4. This year we also began monitoring the mouth of the Kasilof River using volunteer birders who live in the Soldotna area. Based on their familiarity with the area, they decided that the optimal time to begin monitoring was mid-tide on a rising tide. Also, not all their monitoring efforts were on the same day as the Homer spit effort, but they had as many days of monitoring days (9) including one day when there were two monitoring sessions.

5. Since each monitoring site has different habitat, data from each site was 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.

B. Kachemak Bay Monitoring Sites

Monitoring sites and how the count was conducted (stationary, walking, or by boat) are listed below with a brief description of the primary type of habitat. Our 2009 report on Kachemak Bay Birders web site has aerial photos of each monitoring site.

- Homer Spit
  - ✓ Mud Bay – stationary. Shallow, intertidal area with extensive mudflats protected by the Spit from storm surges.
  - ✓ Mariner's Park Lagoon – stationary. An upper intertidal area that floods only at higher than average tides.
  - ✓ Mid-spit area including Green Timbers and Louie's Lagoon – walking. Mostly a grassy upper intertidal area that floods only at high tides.
  - ✓ Boat harbor and Lands End – walking. The rock armor protecting the harbor creates an environment favored by birds such as Surfbirds.
- Beluga Slough – walking. An estuary with a stream that originates from artificially created Beluga Lake.
- Islands and Islets on south side of Kachemak Bay – boat. All these areas are essentially rock outcroppings with little or no beach.
  - ✓ Gull Island
  - ✓ Sixty-foot Rock
  - ✓ Cohen Island
  - ✓ Lancashire Rocks near Neptune Bay

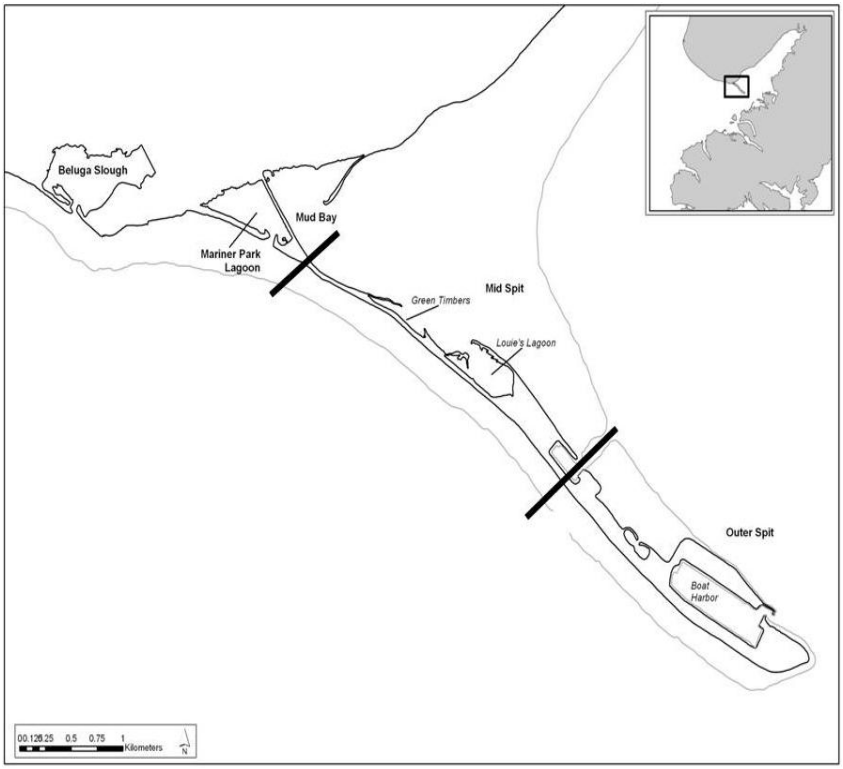


Figure 5. Illustration of Homer Spit shorebird monitoring sites for 2013.

C. Monitoring Dates and Times

The most important factor in establishing survey times is the state of the tide. 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.

Tide data is taken from the Seldovia District tide tables. The correction factor for the Homer Spit is inconsequential.

Table 1. 2013 Homer Spit shorebird monitoring times and tides

	Starting Time		High Tide	
Date	**Time**	**Tide (ft.)**	**Time**	**Tide (ft.)**
Saturday, April 13	6:45 PM	15.4	5:27 PM	17.1
Thursday, April 18	8:15 AM	13.1	8:16 AM	13.1
Tuesday, April 23	3:15 PM	15.0	1:49 PM	`17.1
Sunday April 28	7:15 PM	15.5	5:34 PM	18.9
Friday May 3	9:30 AM	14.6	9:41 AM	14.6
Wednesday May 8	4:00 PM	15.5	2:44 PM	17.1
Monday May 13	6:45 PM	15.3	5:48 PM	16.1
Saturday May 18	7:45 AM	12.1	8:54 AM	12.7
Thursday May 23	3:45 PM	15.0	2:14 PM	17.5

Starting times are from http://www.tidesandcurrents.noaa.gov/data_menu.shtml?stn=9455500 Seldovia, AK&type=Tide+Data

As usual, the highest and lowest tides during this year's project (but not the year) were on the same morning; April 27 when the high tide was 21.5 feet at 3:51 am and the low tide was -5.08 feet at 10:30 am.

D. Volunteer Schedule

On most monitoring dates, at least two observers, all having local birding experience, were assigned to each team. This year, a total of 41individual volunteers participated in one or more or the monitoring sessions: 33 in the Homer Spit area, 4 at Anchor Point (including one who volunteered at both Anchor Point and Mud Bay), and 5 at the Kasilof River. Table 2 provides a list of the individuals. Besides having a record number of volunteers this year we also had nine teenagers participate in one or more monitoring sessions. Learning shorebird identification and protocols encouraged them to form their own birding club, which was assisted by two mothers.

Table 2. Dates and volunteers for the 2013 shorebird monitoring project.

		Monitoring Dates								
Monitoring Site	**Volunteers**	**13-Apr**	**18-Apr**	**23-Apr**	**28-Apr**	**3-May**	**8-May**	**13-May**	**18-May**	**23-May**
Mud Bay	Betty Siegel	X	X	X	X	X	X	X	X	X
	Jason Sodergren		X	X	X		X	X	X	X
	BJ Hitchcock		X				X			
	Joanne Thordarson	X	X	X	X	X	X		X	X
	Michelle Michaud				X					
Mariner Park Lagoon	George Matz	X	X	X	X	X	X	X	X	X
	Bette Seaman				X			X	X	
	Glenn Seaman	X	X			X		X	X	X
	Jeannie Woodring	X	X	X					X	X
	Paula Robertson		X							
Mid-Spit	Lani Raymond	X	X	X	X	X	X	X	X	X
	Gary Lyon		X	X	X	X	X	X	X	X
	Jack Wiles		X	X	X	X	X	X	X	
	Osi Kaspi	X			X		X	X	X	X
	Carol Harding	X	X	X	X		X	X		
Boat Harbor area	Sharon Baur					X	X			
	Stan White	X	X	X	X	X	X	X	X	X
	Victoria Wilson Winne	X	X							
	BJ Hitchcock			X	X			X	X	X
Beluga Slough	Nancy Lord	X		X	X	X	X		X	
	Nolan Bunting	X		X	X		X	X	X	X
	Susan Bunting	X			X			X	X	X
	Landon Bunting				X		X	X	X	X
	Devry Garity	X	X	X			X		X	X
	Griffin Downey	X	X				X		X	X
	Dale Chorman		X	X	X	X	X	X		
	Diane Chorman				X					
	Zach Nelson				X					
	Owen Meyer				X					
	Stacy Buckelew					X				
	Iris Downey									X
	Ethan Benedetti									X
	Rebecca Siegel									X
Islands & Islets	Karl Stoltzfus						X	X		X
Anchor Point	Michelle Michaud		X	X		X	X	X	X	
	Michael Craig	X	X	X	X	X	X	X	X	X
	Lori Paulsrud			X		X	X	X	X	X
	Erick Paulsrud			X		X		X	X	X
		26-Apr	**30-Apr**	**2-May**	**4-May**	**8-May**	**10-May**	**13-May**	**17-May**	**23-May**
Kasilof River	Connie Tarbox	X	X			X	X			
	Ken Tarbox	X	X			X	X			X
	Laura Burke				X			X	X	
	Toby Burke			X	X			X	X	
	George Kirtch									X

Considering that there were 155 days of volunteer effort in the Homer Spit area and that each volunteer day amounted to 2 hours of field effort, this year's project included 310 hours of monitoring effort. This doesn't include the time spent in caucusing after each session to compare notes, which would last a half hour to an hour.

Volunteer effort for the Anchor Point amounted to 26 volunteer days and 2 hours per day not including travel time for a total of 52 hours. The Kasilof River monitors did not always spend two hour monitoring. Their total effort amounted to 20 hours.

E. Recording Observations

Appendix A provides a Kachemak Bay shorebird checklist extracted from *Checklist of Birds of Kachemak Bay, Alaska 2011* (CACS 2011). 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 eight are either rare or accidental.

Monitors used a one page form listing common and uncommon shorebirds (Appendix B) to record observations. On this form, they noted the species observed and abundance as well as when they first observed individual birds or flocks and when these birds left the monitoring site. The latter was used to match times with other sites in order to eliminate duplicate counts. Monitors also noted on the form any disturbance to shorebirds by people, dogs, 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 were 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 deducted any double counting, the record for the site did not.

Monitoring data was entered in the ISS eBird database by site. 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. 2013 Monitoring Results

A. Total Counts

The 2013 Kachemak Bay Shorebird Monitoring Project observed 23 species of shorebirds and counted a total of approximately 18,623 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 total for all six sites. This sort of breakdown allows a more accurate comparison with West's data (discussed later) which covered just the Homer Spit.

Table 3. Number of shorebirds seen by species for all 2013 survey dates, sorted by abundance for All Sites.

SPECIES	Homer Spit Sites	Beluga Slough	Islands & Islets	All Sites
Western Sandpiper	7,732	232	-	7,964
LESA/WESA/SESA	5,272	33	-	5,305
Dunlin	2,539	9	-	2,548
Surfbird	280	-	468	748
Red-necked Phalarope	-	3	700	703
Dowitcher sp.	304	40	-	344
Black-bellied Plover	220	1	-	221
Pectoral Sandpiper	139	7	-	146
Least Sandpiper	74	54	-	128
Pacific Golden Plover	92	4	-	96
Semipalmated Plover	86	6	-	92
Greater Yellowlegs	30	61	-	90
Whimbrel	59	6	-	65
Wandering Tattler	61	-	1	62
Long-billed Dowitcher	19	3	-	22
Black Turnstone	8	-	13	21
Short-billed Dowitcher	16	2	-	18
American Golden-Plover	2	8	-	10
Lesser Yellowlegs	3	6	-	9
Ruddy Turnstone	8	1	0	9
Bar-tailed Godwit	3	3	-	6
Other; Bristle-thighed Curlew	5	-	-	5
Rock Sandpiper	2	-	2	4
Hudsonian Godwit	-	3	-	3
Black Oystercatcher	-	-	2	2
Yellowlegs sp.	2	-	-	2
Total	16,956	482	1,186	18,623

Note: LESA/WESA/SESA lumps Least Sandpipers, Western Sandpipers, and Semipalmated Sandpipers when the observer couldn't identify by species. It likely includes Dunlin as well.

This year, results from the Islands and Islets site were lower than usual because there were only three monitoring sessions. Cold weather delayed finishing the painting of the boat for the first five sessions and stormy conditions prevented monitoring for the eight session.

The table below provides a breakdown by species and date for all Kachemak Bay sites monitored. Appendix C has a similar spreadsheet for each site. Cells with red tabs have further Information (e.g. weather, tides, and observers) when viewed in Excel. An Excel file of this data is available through the Kachemak Bay Birders web site.

Table 4. Shorebirds counted by species and date for all six sites during 2013 monitoring.

	April				May					
SPECIES	13	18	23	28	3	8	13	18	23	**Total**
Semipalmated Plover	-	-	-	-	-	14	36	14	28	92
Killdeer	-	-	-	-	-	-	-	-	-	-
American Golden-Plover	-	-	-	-	-	-	-	10	-	10
Pacific Golden Plover	-	-	3	2	14	38	25	14	-	96
Black-bellied Plover	-	-	16	21	52	95	4	15	18	221
Black Oystercatcher	-	-	-	-	-	-	2	-	-	2
Greater Yellowlegs	1	11	24	27	8	8	2	3	6	90
Lesser Yellowlegs	-	-	-	2	1	1	2	3	-	9
Yellowlegs sp.	-	-	-	2	-	-	-	-	-	2
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-
Whimbrel	-	-	-	-	12	3	11	12	27	65
Bar-tailed Godwit	-	-	-	-	-	-	-	6	-	6
Hudsonian Godwit	-	-	-	-	-	-	3	-	-	3
Marbled Godwit	-	-	-	-	-	-	-	-	-	-
Wandering Tattler	-	-	-	-	-	1	25	36	-	62
Surfbird	-	-	-	-	-	22	165	205	356	748
Ruddy Turnstone	-	-	-	-	-	1	2	-	6	9
Black Turnstone	-	-	-	-	-	2	4	8	7	21
Western Sandpiper	-	-	-	-	1	110	5,254	2,529	70	7,964
Least Sandpiper	-	-	-	-	-	-	48	18	62	128
Semipalmated Sandpiper	-	-	-	-	-	-	-	-	-	-
LESA/WESA/SESA	-	-	-	1	-	56	5,066	120	62	5,305
Sanderling	-	-	-	-	-	-	-	-	-	-
Pectoral Sandpiper	-	-	-	-	-	-	1	9	136	146
Dunlin	-	-	108	4	14	84	1,658	655	25	2,548
Rock Sandpiper	-	2	-	-	-	-	2	-	-	4
Baird's Sandpiper	-	-	-	-	-	-	-	-	-	-
Red Knot	-	-	-	-	-	-	-	-	-	-
Short-billed Dowitcher	-	-	-	-	-	-	4	14	-	18
Long-billed Dowitcher	-	-	-	-	-	-	19	3	-	22
Dowitcher sp.	-	-	-	-	-	6	155	142	41	344
Wilson's Snipe	-	-	-	-	-	-	-	-	-	-
Red Phalarope	-	-	-	-	-	-	-	-	-	-
Red-necked Phalarope	-	-	-	-	-	500	-	200	3	703
Other; Bristle-thighed Curlew	-	-	-	-	-	-	-	2	3	5
Total	1	13	151	59	102	941	12,488	4,018	850	18,623
Note: The combined total is 89 less than the total for all six sites because double counting between sites was eliminated										

B. Data Analysis

As previously mentioned, each site has a different type of habitat and, accordingly, different attraction for shorebirds. Figure 6 and Table 5 illustrates arrival and departure dates by site for all species.

Figure 6. Number of shorebirds counted during 2013 by date and site.

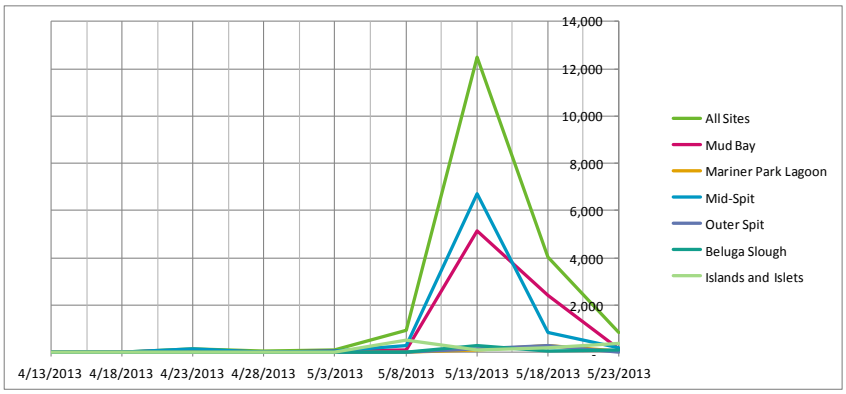


Table 5. Number of shorebirds counted during 20132 by date and site

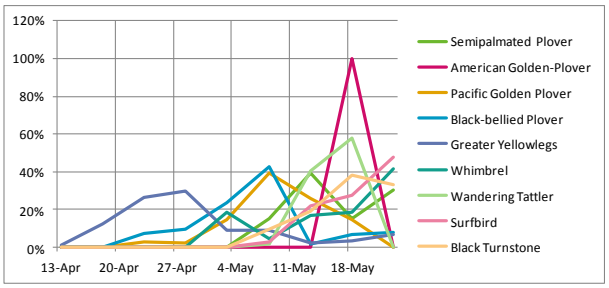
	4/13/2013	4/18/2013	4/23/2013	4/28/2013	5/3/2013	5/8/2013	5/13/2013	5/18/2013	5/23/2013	Total
All Sites	1	13	151	59	102	941	12,488	4,018	850	18,623
Mud Bay	-	1	94	11	57	108	5,131	2,396	165	7,963
Mariner Park Lagoon	1	1	-	3	3	4	80	276	42	410
Mid-Spit	-	1	129	26	33	288	6,730	850	177	8,234
Outer Spit	-	2	-	-	-	1	155	259	20	437
Beluga Slough	1	8	16	19	9	16	293	37	83	482
Islands and Islets	-	-	-	-	-	524	99	200	363	1,186

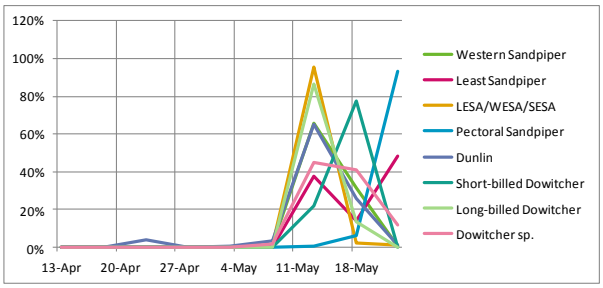
As can be seen from Figure 6, the majority of shorebirds arrived within less than a two week span with May 13th being the peak. In previous monitoring years, the peak ranged from May 6th to May 19th. This year, unlike previous years, the Mid-Spit site attracted the most shorebirds.

Migrating shorebirds species arrive in Kachemak Bay at different times. Typically, yellowlegs and plovers are the first wave followed by sandpipers, and then tattlers, etc. However, the first shorebird present in Kachemak Bay is the Rock Sandpiper; often thousands overwinter here. But this last winter Rock Sandpipers were scarce for reasons unknown with only a few still around when we began monitoring.

Figures 7 and 8 illustrate arrival and departure dates for the more abundant Kachemak Bay shorebird species. This data is based on the number of birds seen by species for a monitoring date divided by the total number of birds of that species counted this year. Using this percentage rather than the actual number of birds allows comparisons on a scale that easily fits the chart.

Figure 7 & 8. Percentage of shorebird arrivals and departures by species for 2013.





C. Supplemental Monitoring

In our first year of monitoring (2009) it appeared as if large flocks of shorebirds (particularly Western Sandpipers and Dunlin) arrived at the Homer Spit after a scheduled monitoring date but left before the next monitoring date, thus not being included in the count. To get a better handle on turn-over rates, in 2010 we monitored Mud Bay daily for shorebirds during the two weeks of peak migration. From this effort we verified that there were substantial day-to-day variances in shorebird presence. For instance, 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. Obviously, we needed to get some idea as to how many shorebirds we might be missing.

Since then, every year one or two volunteers have monitored the Spit every day during the peak of the migration. But since this data doesn't follow our protocol it can't be added to our monitoring data. Nevertheless, it does assist us in making reasonable estimates as to what we missed. This was demonstrated in 2012 when we had three distinct pulses of shorebirds pass through the area and all three were on scheduled monitoring dates. The result was record high counts. But knowing that the peak of these pulses coincided with scheduled monitoring dates, and that this didn't happen in previous years, we were able to deduce that the increase in count from previous years was not as significant as it might otherwise appear (Matz, 2012).

The combined data for this year's supplemental monitoring (Table 6) seems to indicate that there was one prolonged pulse of Western Sandpipers and Dunlin from May 10-16 that peaked on May 14 and a smaller pulse that peaked on May 18 and 19. Scheduled monitoring dates (May 13 and 18) caught about 82% of the May 14 peak (of which we have photos) and all of the second pulse. But given that it is unlikely that these shorebirds stayed for more than a day or two, birds probably came and left within that pulse.

Appendix D has spreadsheets for each site.

Table 6. Supplemental and protocol monitoring data for 2013 for four Homer Spit sites.
(Scheduled monitoring dates are in blue)

	May																						
SPECIES	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**Total**
Semipalmated Plover	-	1	-	-	-	9	-	14	-	3	1	-	36	-	-	-	-	14	10	-	-	-	28	116
Killdeer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
American Golden-Plover	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	8	-	19
Pacific Golden Plover	-	13	14	-	19	23	19	38	6	1	-	-	25	-	-	-	-	14	-	-	-	-	-	172
Black-bellied Plover	15	34	52	-	70	54	50	95	20	-	8	-	4	-	-	-	-	15	-	-	14	-	18	449
Black Oystercatcher	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Greater Yellowlegs	-	2	8	-	3	-	1	8	-	-	1	-	2	-	-	-	-	3	1	-	-	-	6	35
Lesser Yellowlegs	-	-	1	-	-	-	-	1	-	-	-	-	2	-	-	-	-	3	-	-	-	-	-	7
Yellowlegs sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Whimbrel	12	-	12	69	6	3	-	3	-	-	-	-	11	-	-	1	-	12	4	-	7	-	27	167
Bar-tailed Godwit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	6
Hudsonian Godwit	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	-	-	-	1	-	-	5
Marbled Godwit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	3	-	7
Wandering Tattler	-	-	-	-	-	2	-	1	-	-	-	-	25	-	-	-	-	36	-	-	-	-	-	64
Surfbird	-	-	-	-	60	-	-	22	-	-	170	-	165	-	200	-	-	205	-	-	-	-	356	1,178
Ruddy Turnstone	-	1	-	-	1	-	-	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	6	11
Black Turnstone	-	-	-	-	1	-	-	2	-	-	8	-	4	-	5	-	-	8	-	-	-	-	7	35
Western Sandpiper	-	-	1	-	40	59	70	110	15	4,000	3,600	3,000	5,254	13,500	1,100	1,300	-	2,529	3,150	-	250	-	70	38,048
Least Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	48	-	-	-	-	18	24	-	-	-	62	152
Semipalmated Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3
LESA/WESA/SESA	-	-	-	-	-	7	-	56	-	-	-	-	5,066	-	-	-	-	120	-	3,000	-	-	62	8,311
Sanderling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pectoral Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	9	25	-	1	-	136	172
Dunlin	-	24	14	-	90	102	50	84	-	1,000	400	500	1,658	1,500	1,700	400	-	655	700	-	300	-	25	9,202
Rock Sandpiper	-	-	-	-	-	-	-	-	-	-	2	-	2	-	1	-	-	-	-	-	-	-	-	5
Baird's Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Red Knot	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Short-billed Dowitcher	-	-	-	-	-	3	1	-	-	8	4	-	4	-	20	-	-	14	104	-	-	-	-	158
Long-billed Dowitcher	-	-	-	-	-	-	-	-	-	-	2	-	19	-	-	-	-	3	-	-	-	-	-	24
Dowitcher sp.	-	-	-	-	-	-	-	6	6	-	-	-	155	100	-	70	-	142	-	-	10	-	41	530
Wilson's Snipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Red Phalarope	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Red-necked Phalarope	-	-	-	-	-	-	-	500	-	-	-	-	-	-	-	-	-	200	-	-	-	-	3	703
Other; Bristle-thighed Curlew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	3	5
Total	27	76	102	69	290	262	191	941	47	5,012	4,196	3,500	12,488	15,100	3,026	1,772	-	4,018	4,018	3,000	587	14	850	59,586
Total Less Protocol Dates																								41,187
Total Only Protocol Dates																								18,399

The total count for shorebirds (protocol and supplemental) from May 1-23 was 59,586. Subtracting the protocol count (18,399) leaves 41,187 in the supplemental count. This seems to imply that we missed more than twice as many shorebirds as we counted. However, it is likely that some of these shorebirds were on the Spit for more than one day, hence were double-counted. How much can only be guessed, but at least we have order of magnitude idea as to the total number of shorebirds that used the Homer Spit as a stopover.

Another approach to getting some idea as to how many shorebirds were in the Homer Spit area between scheduled monitoring dates is eBird reports, which are becoming more frequent from the Kachemak Bay area, particularly during the Kachemak Bay Shorebird Festival in early May. Table 7 provides eBird data for Homer Spit hot spots for the same timeframe as the supplemental reports. There weren't many reports for April. While our count estimates are mostly educated guesswork, it appears as if different estimates are at least within a factor of two.

Table 7. eBird reports for Homer Spit during the peak of the 2013 migration.

SPECIES	**1-May**	**2-May**	**3-May**	**4-May**	**5-May**	**6-May**	**7-May**	**8-May**	**9-May**	**10-May**	**11-May**	**12-May**	**13-May**	**14-May**	**15-May**	**16-May**	**17-May**	**18-May**	**19-May**	**20-May**	**21-May**	**22-May**	**23-May**	**Totals**
Semipalmated Plover				--	1	--	--	--	--	3	6	2	--	--	--	--	--	--	2	--	9	5	5	33
Killdeer																								-
American Golden-Plover																						8	--	8
Pacific Golden Plover				--	8	--	--	--	6	1	14	3	--	--	--	--	10							45
Black-bellied Plover				--	21	--	--	--	12	25	6	6	--	--	--	--	--	--	--	--	17	4	--	112
Black Oystercatcher																		--	--	1	--	--	--	1
Greater Yellowlegs				--	1	--	--	--	2	12	5	4	--	--	--	--	X	--	--	--	1	--	--	31
Lesser Yellowlegs				--	--	--	--	--	--	1	--	2	--	--	--	--	--							3
Yellowlegs sp.				--	2	--	--	--	--	--														2
Spotted Sandpiper																								-
Whimbrel				--	1	--	--	6	6	--	5	--	--	--	--	--	3	--	--	14	8	3	--	46
Bar-tailed Godwit																								-
Hudsonian Godwit											1	3	--	--	--	--	--							4
Marbled Godwit																		--	--	1	--	3	--	4
Wandering Tattler				--	--	--	4	1	--	--	3	1	24	--	--	--	--	--	--	--	1	--	16	50
Surfbird				2	60	--	75	--	--	20	200	150	75	--	--	--	--	--	--	350	--	--	--	932
Ruddy Turnstone				--	1	--	--	--	--	--							--	--	--	4	--	--	--	5
Black Turnstone				--	1	--	--	--	--	3	20	--	--	--	--	--	--	--	--	9	4	--	--	37
Western Sandpiper				--	1	--	--	--	400	5,000	2,000	1,000	--	--	--	--	2,000	--	--	300	42	100	--	10,843
Least Sandpiper				--	--	--	--	--	--	20	50	20	--	--	--	--	X	--	14	--	--	3	--	107
Semipalmated Sandpiper											1	1	--	--	--	--	--	--	--	--	7	3	--	12
LESA/WESA/SESA				--	1	--	--	--	400	--							--	--	--	--	X	--	--	401
Sanderling																								-
Pectoral Sandpiper											4	--	--	--	--	--	--	--	--	--	--	35	--	39
Dunlin				--	20	--	--	--	100	2,500	250	1	--	--	--	--	30	--	--	600	30	163	--	3,794
Rock Sandpiper																								2
Baird's Sandpiper																								-
Red Knot																								-
Short-billed Dowitcher				--	--	--	--	--	--	9	75	--	--	--	--	--	--	--	--	10	10	15	--	119
Long-billed Dowitcher				--	4	--	--	--	3	10	6	--	--	--	--	--	4	--	--	--	--	12	--	39
Dowitcher sp.																								-
Wilson's Snipe																								-
Red Phalarope																								-
Red-necked Phalarope											50	--	--	--	--	--								50
Other; Bristle-thighed Curlew																								-
Total	-	-	-	2	122	-	79	7	929	7,604	2,696	1,193	99	-	-	-	2,047	-	16	1,289	129	354	21	16,719

V. Trends

A. Comparing 2013 to Previous Years

As demonstrated by Table 8, the number of species in 2013 was less than most years and tied the year (2010) with the least number of species. This certainly can't be attributed to volunteers. We had more volunteers last year than any previous year of monitoring plus many volunteers now have a couple of years of experience and are more familiar with where to locate shorebirds at their respective site. Where this year came up short seems to be with species that we have seen before but only in low numbers.

Table 8. Annual shorebird count by species sorted by average abundance.

Species	2009	2010	2011	2012	2013	Average
Western Sandpiper	3,229	4,996	4,100	16,375	7,964	7,333
Red-necked Phalarope	1,630	1,500	5,152	1,501	703	2,097
LESA/WESA/SESA	104	803	3,336	844	5,305	2,078
Dunlin	1,097	561	1,283	1,205	2,548	1,339
Surfbird	292	110	574	2,919	748	929
Black-bellied Plover	179	315	282	354	221	270
Rock Sandpiper	141	405	482	6	4	208
Least Sandpiper	136	245	219	103	128	166
Semipalmated Plover	194	203	197	142	92	166
Black Turnstone	81	373	121	71	21	133
Dowitcher sp.	99	82	57	76	344	132
Greater Yellowlegs	24	36	59	68	90	55
Short-billed Dowitcher	125	-	33	76	18	50
Pacific Golden Plover	5	42	5	95	96	49
Wandering Tattler	13	56	30	18	62	36
Pectoral Sandpiper	-	7	-	1	146	31
Whimbrel	10	22	27	28	65	30
Lesser Yellowlegs	-	26	3	15	9	11
Black Oystercatcher	11	11	13	8	2	9
Semipalmated Sandpiper	1	5	3	34	-	9
Long-billed Dowitcher	-	-	15	1	22	8
Yellowlegs sp.	2	18	-	2	2	5
Marbled Godwit	3	12	1	7	-	5
Hudsonian Godwit	18	-	2	-	3	5
Ruddy Turnstone	1	10	1	2	9	5
Sanderling	-	1	8	8	-	3
American Golden-Plover	3	1	1	1	10	3
Bar-tailed Godwit	3	-	-	4	6	3
Wilson's Snipe	1	5	1	1	-	2
Baird's Sandpiper	1	-	-	6	-	1
Bristle-thighed Curlew	-	-	-	-	5	1
Spotted Sandpiper	3	-	-	1	-	1
Red Knot	-	-	2	-	-	0
Total Individuals	7,406	9,845	16,007	23,972	18,623	15,171
Total Species	24	23	25	27	23	24

A highlight this year was having a couple of Bristle-thighed Curlews appear that apparently stopped over at the Homer Spit as well as several that were observed at the Anchor River (though not during monitoring) where they were seen last year. We will certainly be more alert to the possibility of Bristle-thighed Curlews in future years. What we don't know is if there have always been some Bristle-thighed Curlews mixed in with Whimbrels but never noticed, or whether this is a new occurrence.

What was unusual this year was the number of Pectoral Sandpipers seen. In two of the four previous years, there weren't any. This year we counted 146 on the Homer Spit. In addition, there were flocks of tens in fields around Homer. Other parts of Southcentral Alaska have also reported numerous Pectoral Sandpipers this spring.

Table 8 also shows that we saw more individual birds last year than any previous year except 2012. However, as previously mentioned, 2012 was a year in which three major pulses of migrating shorebirds arrived on a day scheduled for monitoring. Taking that into consideration, this year was about the same as last year. Hopefully, we will be able to compare our data with data from other parts of the Pacific Flyway to see if others have also noticed a rebound in shorebird populations.

B. Comparing Recent Data to West's Data

As in previous years, this year's 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. Observations in 1987 and 1988 were not consistent. Also, after 1994 West's data included 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 data (West 1996). Table 9 includes a summary of the West data being used.

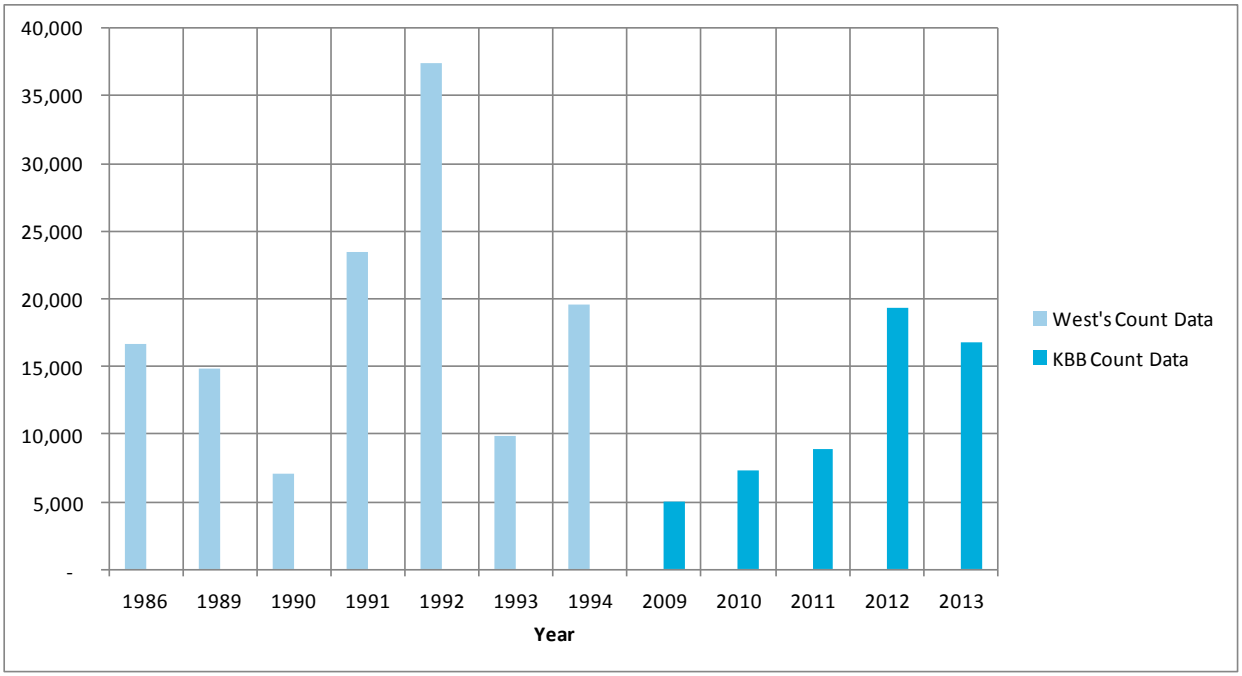
With the exception of frequency, the protocol used by West is reasonably similar to the Kachemak Bay Birders protocol. West says "Estimates, or actual counts when possible, of all shorebirds encountered in Mud Bay, Mariner Park Lagoon, and along the north side of the Homer Spit were made daily at or 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 from 2010 - 2013 don't exactly match the West dates.

As can be seen from the Table 9 and Figure 9, there appears to be fewer shorebirds visiting the Homer Spit now during spring migration than two decades ago. West's adjusted data for seven years had an average shorebird count of 18,436. Our average count for the past five years is 11,458. There has been an increase in the number of shorebirds over the past two years, but not enough to approach the numbers registered by West.

Table 9. Comparison of six days of West shorebird monitoring data to six comparable days of Kachemak Bay Birders data for similar survey sites.

								Spit Sites	Spit Sites	Spit Sites	Spit Sites	Spit Sites
SPECIES	**1986**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**2009**	**2010**	**2011**	**2012**	**2013**
Semipalmated Plover	6	8	1	9	27	22	28	159	158	142	118	86
American Golden-Plover			5	26	9		1	3			1	2
Pacific Golden Plover							7	4	39	2	90	89
Black-bellied Plover	275	1	86	52	244	51	79	170	307	241	351	204
Black Oystercatcher									1			
Greater Yellowlegs					17	4		7	13	19	44	18
Lesser Yellowlegs									20	3	3	3
Yellowlegs spp.									3		2	2
Whimbrel				1	9	1		2	6	14	11	59
Bar-tailed Godwit				1	2			3			4	3
Hudsonian Godwit							1	18		2		
Marbled Godwit		4		1	1		2	3	10	1	7	
Wandering Tattler				5	2	1	2	3	37	20	7	61
Surfbird	1,000	75	3,015	602	10,010	1,200	830	69	39	238	541	280
Ruddy Turnstone	1		3		7	1	8		6		1	8
Black Turnstone	600	451	1,812	766	1,730	500	262	46	294	89	27	8
Western Sandpiper	14,000	12,025	2,010	20,510	20,725	7,200	17,469	3,071	4,935	3,908	16,040	7,732
Least Sandpiper	50			2	21	2	20	121	195	168	100	74
Semipalmated Sandpiper								1	4	3	33	
LESA/WESA/SESA								103	640	2,987	617	5,272
Sanderling									1	8	8	
Pectoral Sandpiper	2			1	1						1	139
Dunlin	130	1,760	133	1,219	3,271	562	642	1,091	535	938	1,157	2,431
Rock Sandpiper					7	2					1	
Baird's Sandpiper								1			6	
Red Knot						1	2					
Short-billed Dowitcher	600	525	58	183	1,354	325	175	22		32	63	16
Long-billed Dowitcher											1	19
Dowitcher spp.								97	71	42	75	304
Wilson's Snipe												
Red-necked Phalarope				100			100			1		
Other; Bristle-thighed Curlew												5
Total	16,664	14,849	7,123	23,478	37,437	9,872	19,628	4,994	7,314	8,858	19,309	16,815
West Average (7 years)	18,436											
KBB Average (5 years)	11,458											

Figure 9. Total shorebird counts by year for the Homer Spit



VI. Other Activities

A. Outreach

The information obtained as a result of the 2013 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. The data was also entered in eBird under the ISS portal, listing observations for each site and date.

B. Presentations

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

- KBRR's What's New in the Bay Discovery Lab, March, 2013.
- KBBI Coffee Table interview on birds. April, 2013.

C. Publications

- Alaska Shorebird Group. *Ongoing or new studies of Alaska shorebirds; Annual Summary Compilation. Kachemak Bay Shorebird Monitoring Project:2012*, George Matz and Kachemak Bay Birders

VII. Future Efforts

Now that we have five years of shorebird monitoring data our results are becoming more valuable and the reason to continue is more imperative. Plans are to complete a Kachemak Bay Shorebird Monitoring Project in 2014 using the same protocol as previous years.

VIII. Acknowledgements

The Kachemak Bay Shorebird Monitoring Project is a citizen science effort that could not exist without strong volunteer support. A list of our many volunteers is included in Table 1. We want to thank the Islands and Ocean Visitors Center who provided us with meeting facilities for our caucus after monitoring sessions. We 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.

IX. Literature Cited

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X. Appendices

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

Appendix B: Kachemak Bay Shorebird Project Monitoring Report Form.

Appendix C: Observation Data for Kachemak Bay Sites.

Appendix D: Supplemental Monitoring Data for 2012.

Appendix E: Email reports to birding list-serves.

Appendix A

Birds of Kachemak Bay, Alaska: Shorebird Checklist

This checklist was derived from the *Checklist of Birds of Kachemak Bay, Alaska 2011* published by the Center for Alaskan Coastal Studies (www.akcoastalstudies.org). It covers all watersheds draining into Kachemak Bay (the area between Anchor Point and Point Pogibshi) as well as the Anchor River drainage.

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

Note: Cells with Comments (red flags) have information that can only be viewed in Excel. For the Excel version of these spreadsheets go to http://kachemakbaybirders.org/

2013 Shorebird Monitoring Project										
SITE : Mud Bay										
Stationary Count										
	April				**May**					
SPECIES	13	18	23	28	3	8	13	18	23	**Total**
Semipalmated Plover						7	2		2	11
Killdeer										-
American Golden-Plover								1		1
Pacific Golden Plover				2				2		4
Black-bellied Plover			4		42	39	4	15		104
Black Oystercatcher										-
Greater Yellowlegs		1	2	3	1		1			8
Lesser Yellowlegs				1						1
Yellowlegs sp.				2						2
Spotted Sandpiper										-
Whimbrel					1			12	8	21
Bar-tailed Godwit								3		3
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper					1	51	3,504	1,725	25	5,306
Least Sandpiper									7	7
Semipalmated Sandpiper										-
LESA/WESA/SESA										-
Sanderling										-
Pectoral Sandpiper							1		102	103
Dunlin			88	3	12	6	1,500	525	1	2,135
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.						5	119	113	20	257
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other; Bristle-thighed Curlew										-
Total	-	1	94	11	57	108	5,131	2,396	165	7,963

2013 Shorebird Monitoring Project										
SITE : Mariner Park Lagoon										
Stationary Count										
	April				**May**					
SPECIES	13	18	23	28	3	8	13	18	23	Total
Semipalmated Plover							8			8
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher										-
Greater Yellowlegs	1	1		3	3	4				12
Lesser Yellowlegs							1			1
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel										-
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone										-
Black Turnstone										-
Western Sandpiper							2	250		252
Least Sandpiper							36	11		47
Semipalmated Sandpiper										-
LESA/WESA/SESA										-
Sanderling										-
Pectoral Sandpiper								3	33	36
Dunlin										-
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher							4	12		16
Long-billed Dowitcher							19			19
Dowitcher sp.							10		9	19
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other; Bristle-thighed Curlew										-
Total	1	1	-	3	3	4	80	276	42	410

2013 Shorebird Monitoring Project										
SITE : Mid-Spit										
Travelling Count										
	April				**May**					
SPECIES	13	18	23	28	3	8	13	18	23	Total
Semipalmated Plover						6	23	14	19	62
Killdeer										-
American Golden-Plover								1		1
Pacific Golden Plover			3		14	38	25	8		88
Black-bellied Plover			12	21	10	55			18	116
Black Oystercatcher										-
Greater Yellowlegs		1	6	3						10
Lesser Yellowlegs								1		1
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel					7	1	11		4	23
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler										-
Surfbird								5		5
Ruddy Turnstone							2		6	8
Black Turnstone								7		7
Western Sandpiper						59	1,510	553	45	2,167
Least Sandpiper							6	6	7	19
Semipalmated Sandpiper										-
LESA/WESA/SESA				1		50	5,000	100	51	5,202
Sanderling										-
Pectoral Sandpiper										-
Dunlin			108	1	2	78	149	130	24	492
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.						1	4	23		28
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other; Bristle-thighed Curlew								2	3	5
Total	-	1	129	26	33	288	6,730	850	177	8,234

2013 Shorebird Monitoring Project										
SITE : Outer Spit										
Travelling Count										
	April				**May**					
SPECIES	13	18	23	28	3	8	13	18	23	Total
Semipalmated Plover									5	5
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher										-
Greater Yellowlegs										-
Lesser Yellowlegs										-
Yellowlegs spp.										-
Spotted Sandpiper										-
Whimbrel									15	15
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler						1	24	36		61
Surfbird							75	200		275
Ruddy Turnstone										-
Black Turnstone								1		1
Western Sandpiper							6	1		7
Least Sandpiper								1		1
Semipalmated Sandpiper										-
LESA/WESA/SESA							50	20		70
Sanderling										-
Pectoral Sandpiper										-
Dunlin										-
Rock Sandpiper		2								2
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope										-
Other; Bristle-thighed Curlew										-
Total	-	2	-	-	-	1	155	259	20	437

2013 Shorebird Monitoring Project										
SITE : Beluga Slough										
Travelling Count										
	April				**May**					
SPECIES	13	18	23	28	3	8	13	18	23	Total
Semipalmated Plover						1	3		2	6
Killdeer										-
American Golden-Plover								8		8
Pacific Golden Plover								4		4
Black-bellied Plover						1				1
Black Oystercatcher										-
Greater Yellowlegs	1	8	16	18	4	4	1	3	6	61
Lesser Yellowlegs				1	1	1	1	2		6
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel					4	2				6
Bar-tailed Godwit								3		3
Hudsonian Godwit							3			3
Marbled Godwit										-
Wandering Tattler										-
Surfbird										-
Ruddy Turnstone						1				1
Black Turnstone										-
Western Sandpiper							232			232
Least Sandpiper							6		48	54
Semipalmated Sandpiper										-
LESA/WESA/SESA						6	16		11	33
Sanderling										-
Pectoral Sandpiper								6	1	7
Dunlin							9			9
Rock Sandpiper										-
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher								2		2
Long-billed Dowitcher								3		3
Dowitcher sp.							22	6	12	40
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope									3	3
Other; Bristle-thighed Curlew										-
Total	1	8	16	19	9	16	293	37	83	482

2013 Shorebird Monitoring Project										
SITE : Islands and Islets										
Travelling Count										
	April				**May**					
SPECIES	13	18	23	28	3	8	13	18	23	Total
Semipalmated Plover										-
Killdeer										-
American Golden-Plover										-
Pacific Golden Plover										-
Black-bellied Plover										-
Black Oystercatcher							2			2
Greater Yellowlegs										-
Lesser Yellowlegs										-
Yellowlegs sp.										-
Spotted Sandpiper										-
Whimbrel										-
Bar-tailed Godwit										-
Hudsonian Godwit										-
Marbled Godwit										-
Wandering Tattler							1			1
Surfbird						22	90		356	468
Ruddy Turnstone										-
Black Turnstone						2	4		7	13
Western Sandpiper										-
Least Sandpiper										-
Semipalmated Sandpiper										-
LESA/WESA/SESA										-
Sanderling										-
Pectoral Sandpiper										-
Dunlin										-
Rock Sandpiper							2			2
Baird's Sandpiper										-
Red Knot										-
Short-billed Dowitcher										-
Long-billed Dowitcher										-
Dowitcher sp.										-
Wilson's Snipe										-
Red Phalarope										-
Red-necked Phalarope						500		200		700
Other; Bristle-thighed Curlew										-
Total	-	-	-	-	-	524	99	200	363	1,186

2013 Shorebird Monitoring Project										
SITE : Homer Spit (all 4 sites)										
Combined Total										
	April				May					
SPECIES	13	18	23	28	3	8	13	18	23	Total
Semipalmated Plover	-	-	-	-	-	13	33	14	26	86
Killdeer	-	-	-	-	-	-	-	-	-	-
American Golden-Plover	-	-	-	-	-	-	-	2	-	2
Pacific Golden Plover	-	-	3	2	14	38	25	10	-	92
Black-bellied Plover	-	-	16	21	52	94	4	15	18	220
Black Oystercatcher	-	-	-	-	-	-	-	-	-	-
Greater Yellowlegs	1	3	8	9	4	4	1	-	-	30
Lesser Yellowlegs	-	-	-	1	-	-	1	1	-	3
Yellowlegs sp.	-	-	-	2	-	-	-	-	-	2
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-
Whimbrel	-	-	-	-	8	1	11	12	27	59
Bar-tailed Godwit	-	-	-	-	-	-	-	3	-	3
Hudsonian Godwit	-	-	-	-	-	-	-	-	-	-
Marbled Godwit	-	-	-	-	-	-	-	-	-	-
Wandering Tattler	-	-	-	-	-	1	24	36	-	61
Surfbird	-	-	-	-	-	-	75	205	-	280
Ruddy Turnstone	-	-	-	-	-	-	2	-	6	8
Black Turnstone	-	-	-	-	-	-	-	8	-	8
Western Sandpiper	-	-	-	-	1	110	5,022	2,529	70	7,732
Least Sandpiper	-	-	-	-	-	-	42	18	14	74
Semipalmated Sandpiper	-	-	-	-	-	-	-	-	-	-
LESA/WESA/SESA	-	-	-	1	-	50	5,050	120	51	5,272
Sanderling	-	-	-	-	-	-	-	-	-	-
Pectoral Sandpiper	-	-	-	-	-	-	1	3	135	139
Dunlin	-	-	108	4	14	84	1,649	655	25	2,539
Rock Sandpiper	-	2	-	-	-	-	-	-	-	2
Baird's Sandpiper	-	-	-	-	-	-	-	-	-	-
Red Knot	-	-	-	-	-	-	-	-	-	-
Short-billed Dowitcher	-	-	-	-	-	-	4	12	-	16
Long-billed Dowitcher	-	-	-	-	-	-	19	-	-	19
Dowitcher sp.	-	-	-	-	-	6	133	136	29	304
Wilson's Snipe	-	-	-	-	-	-	-	-	-	-
Red Phalarope	-	-	-	-	-	-	-	-	-	-
Red-necked Phalarope	-	-	-	-	-	-	-	-	-	-
Other; Bristle-thighed Curlew	-	-	-	-	-	-	-	2	3	5
Total	1	5	135	40	93	401	12,096	3,781	404	16,956

Appendix D

Supplemental Monitoring Data for 2013 for Homer Spit Sites

To enlarge the spreadsheet click on Format Object and then Size.

SITE : **Mud Bay**
Supplemental Observations

									May																				
SPECIES	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	**Totals**
Semipalmated Plover										1								3	1													5
Killdeer																																-
American Golden-Plover																														8		8
Pacific Golden Plover										4								1														5
Black-bellied Plover									15	34			70	50	50		20		8										14			261
Black Oystercatcher																																-
Greater Yellowlegs										1			1		1				1													4
Lesser Yellowlegs																																-
Yellowlegs sp.																																-
Spotted Sandpiper																																-
Whimbrel													6											1					7			14
Bar-tailed Godwit																																-
Hudsonian Godwit																								1					1			2
Marbled Godwit																													4			4
Wandering Tattler																																-
Surfbird																																-
Ruddy Turnstone										1																						1
Black Turnstone																																-
Western Sandpiper													40	59	70		15	4,000	2,700	3,000		13,500	1,100	1,300			3,000		250			29,034
Least Sandpiper																																-
Semipalmated Sandpiper																																-
LESA/WESA/SESA																												3,000				3,000
Sanderling																																-
Pectoral Sandpiper																											20		1			21
Dunlin										24			90	100	50			1,000	300	500		1,500	1,700	400			700		300			6,664
Rock Sandpiper																																-
Baird's Sandpiper																																-
Red Knot																																-
Short-billed Dowitcher														3	1			8	4					20			46					82
Long-billed Dowitcher																			2													2
Dowitcher sp.																	6					100		70					10			186
Wilson's Snipe																																-
Red Phalarope																																-
Red-necked Phalarope																																-
Other																																-
Total	-	-	-	-	-	-	-	-	15	65	-	-	207	212	172	-	41	5,012	3,016	3,500	-	15,100	2,820	1,772	-	-	3,766	3,000	587	8	-	39,293

SITE : **Mariner Park Lagoon**
Supplemental Observations

									May																					
SPECIES	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	**Totals**
Semipalmated Plover														9													8					17
Killdeer																																-
American Golden-Plover																																-
Pacific Golden Plover																																-
Black-bellied Plover																																-
Black Oystercatcher																																-
Greater Yellowlegs													2														1					3
Lesser Yellowlegs																																-
Yellowlegs sp.																																-
Spotted Sandpiper																																-
Whimbrel									1	12		15	69		3																	100
Bar-tailed Godwit																																-
Hudsonian Godwit																																-
Marbled Godwit																																-
Wandering Tattler																																-
Surfbird																																-
Ruddy Turnstone																																-
Black Turnstone																																-
Western Sandpiper																											150					150
Least Sandpiper																											10					10
Semipalmated Sandpiper																														3		3
LESA/WESA/SESA														7																		7
Sanderling																																-
Pectoral Sandpiper																											5					5
Dunlin																																-
Rock Sandpiper																																-
Baird's Sandpiper																																-
Red Knot																																-
Short-billed Dowitcher																											58					58
Long-billed Dowitcher																																-
Dowitcher sp.																																-
Wilson's Snipe																																-
Red Phalarope																																-
Red-necked Phalarope																																-
Other																																-
Total	-	-	-	-	-	-	-	-	1	12	-	15	69	2	19	-	-	-	-	-	-	-	-	-	-	-	232	-	-	3	-	353

SITE : **Mid-Spit**																															
Supplemental Observations																															
	April																	May													
SPECIES	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	**Totals**
Semipalmated Plover																											2					2
Killdeer																																-
American Golden-Plover										1																						1
Pacific Golden Plover										9			19	23	19		6										4					76
Black-bellied Plover		12												4																		16
Black Oystercatcher																																-
Greater Yellowlegs										1																						1
Lesser Yellowlegs																																-
Yellowlegs sp.																																-
Spotted Sandpiper																																-
Whimbrel																											4					4
Bar-tailed Godwit																																-
Hudsonian Godwit																																-
Marbled Godwit																														3		3
Wandering Tattler																																-
Surfbird																																-
Ruddy Turnstone													1																			1
Black Turnstone																																-
Western Sandpiper																			900													900
Least Sandpiper																											14					14
Semipalmated Sandpiper																																-
LESA/WESA/SESA																																-
Sanderling																																-
Pectoral Sandpiper																																-
Dunlin														2					100													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	-	12	-	-	-	-	-	-	-	11	-	-	20	29	19	-	6	-	1,000	-	-	-	-	-	-	-	20	-	-	3	-	1,120

SITE : **Outer Spit**																															
Supplemental Observations																															
									May																						
SPECIES	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	**Totals**
Semipalmated Plover																																-
Killdeer																																-
American Golden-Plover																																-
Pacific Golden Plover																																-
Black-bellied Plover																																-
Black Oystercatcher																																-
Greater Yellowlegs																																-
Lesser Yellowlegs																																-
Yellowlegs sp.																																-
Spotted Sandpiper																																-
Whimbrel																																-
Bar-tailed Godwit																																-
Hudsonian Godwit																																-
Marbled Godwit																																-
Wandering Tattler														2																		2
Surfbird													60						170				200									430
Ruddy Turnstone																																-
Black Turnstone													1						8				5									14
Western Sandpiper																																-
Least Sandpiper																																-
Semipalmated Sandpiper																																-
LESA/WESA/SESA																																-
Sanderling																																-
Pectoral Sandpiper																																-
Dunlin																																-
Rock Sandpiper																			2				1									3
Baird's Sandpiper																																-
Red Knot																																-
Short-billed Dowitcher																																-
Long-billed Dowitcher																																-
Dowitcher sp.																																-
Wilson's Snipe																																-
Red Phalarope																																-
Red-necked Phalarope																																-
Other																																-
Total	-	-	-	-	-	-	-	-	-	-	-	-	61	2	-	-	-	-	180	-	-	-	206	-	-	-	-	-	-	-	-	449

Appendix E

2013 Kachemak Bay Shorebird Monitoring Project
Session #1

On Saturday, April 13th the Kachemak Bay Birders had its first shorebird monitoring session for this season. Sixteen volunteers made observations for two hours (6:45-8:45 pm) at five sites on the Homer Spit as well as Anchor Point, which is a new site added this year. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area).

The only shorebird seen on the Spit was one **Greater Yellowlegs** that first landed at Mariner Park Lagoon, stayed about five minutes and then flew west. About 20 minutes later the team at Beluga Slough (which is to the west of Mariner Park Lagoon) also reported a Greater Yellowlegs which we assume is the same one. A medium-sized shorebird was seen flying over the boat harbor, but too quick to be identified. At Anchor Point, 12 **Rock Sandpipers** were seen during the entire monitoring session. None were seen at the Spit. This winter observations of Rock Sandpipers has been more sporadic and in smaller flocks than last year. Last year we routinely had thousands at Mud Bay whenever it wasn't totally iced over.

This year April has been clear and cold with afternoon temperatures remaining below freezing the past several days and strong winds driving the wind chill below zero at times; not very inviting conditions for a shorebird. However, yesterday the temperature shot up to the mid-30s and the wind died down a bit. Maybe spring has finally sprung and the Greater Yellowlegs we saw, which is our first report of a shorebird arrival this spring, was its harbinger.

Weather conditions at the Homer Airport were as follows based on NOAA data. At 6:53, shortly after we started, the temperature was 34° with a NW wind of 10 mph, creating a wind chill of 26°. Skies were clear and the barometric pressure was 30.35 inches. At 8:53, when our session ended, the temperature was 31° with a NW wind of 10 mph, creating a wind chill of 22°. Skies were still clear and the barometric pressure increased to 30.37 inches. This year I am keeping track of changes in barometric pressure because last year it seemed as if the arrival of pulses of shorebirds correlated with incoming high pressure.

Other than the usual gulls, crows, and eagles, there were no other birds seen at the Homer Spit; not even waterfowl. There were some ducks at Mariner Park Lagoon about two weeks ago, before the latest cold spell, but apparently the ice cover kept them away. However, there were some ducks at Beluga Slough where there is more open water. The report there includes 3 **Northern Pintail**, 17 **Mallards**, 3 **Buffleheads**, 6 **Goldeneye**, and 4 **Eurasian Widgeons**. Also 1 **Lapland Longspur**. Birds seen at Anchor Point were **Snow Bunting, Lapland Longspur, Herring Gull, Glaucous Gull,** a couple of not for sure sparrows, possibly **Savannah**.

What created the biggest excitement were the dead animals that were seen. An intact 11 foot salmon shark was seen on the beach at Green Timbers (mid-Spit). Also the skeleton of a sea otter and a harbor seal were seen near the barge that is grounded just north of the boat harbor,

Next report in 5 days.

George Matz

2013 Kachemak Bay Shorebird Monitoring Project
Session #2

On Thursday, April 18th the Kachemak Bay Birders had its second shorebird monitoring session for this season. Nineteen volunteers made observations for two hours (8:15-10:15 am) at five sites on the Homer Spit as well as Anchor Point. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit, and the Outer Spit (boat harbor area).

The only shorebirds seen on the Spit were 2 **Greater Yellowlegs** (1 that visited Mariner Park Lagoon and Mud Bay and 1at Mid-Spit) and 2 **Rock Sandpipers** at the boat harbor. At Beluga Slough, 8 **Greater Yellowlegs** were seen. Shorebirds are starting to arrive. At Anchor Point, which is a new site for this year, no shorebirds were seen.

None of the Spit sites had many birds but Belugas Slough had a lot of waterfowl in the slough and on the bay. This includes many **Mallards, 3 Canvasback,** 4 **Green-winged Teal, Northern Pintail** and **American Widgeon,** 2 **Eurasian Widgeon,** 1 **Northern Shoveler, Black Scoters,** 3 **Long-tailed Duck,** 1 **Common Goldeneye** 2 **Common Loons,** 1 **Yellow-billed Loon,** 1 **Red-necked Grebe,** 3 **Horned Grebe.**

Birds seen at Anchor Point include a flock of 16 **Lapland Longspurs. B**irds working offshore included **White-winged Scoters, Long-tail Ducks, Common Mergansers, Red-necked Grebes,** and **Common Goldeneye.** Among the gulls were the normal **Glaucous Winged** and **Mew** along with quite a few **Herring Gulls**. There were large numbers of **Bald Eagles** hanging out in the area, almost all immature.

Weather conditions at the Homer Airport (http://w1.weather.gov/obhistory/PAHO.html) were as follows. At 7:53 am skies were clear and the temperature was 29°. Wind was out of the NE at 6 mph and the barometric pressure was 30.16 inches. At 10:53 am skies were still got above freezing at 36°. Wind shifted to the E at 6 mph and the barometric pressure stayed the same.

Correction: last time we reported an intact 11 foot salmon shark on the beach at Green Timbers (mid-Spit). Further investigation revealed that it was actually a sleeper shark. The carcass is still on the beach providing a tasty buffet for the eagles.

Next report in 5 days.

George Matz

Session #3

Shorebirds Are Here!!

On Thursday, April 23rd the Kachemak Bay Birders had its third shorebird monitoring session for this season. Nineteen volunteers made observations for two hours (3:15pm - 5:15 pm) at five sites on the Homer Spit as well as Anchor Point. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit (Green Timbers and Louie's Lagoon) and the Outer Spit (fishing hole and the boat harbor area). The Islands and Islets site (south side of Kachemak Bay) was not covered since Karl's boat is not yet in the water due to lingering ice. All of these sites are now eBird "Hotspots".

Weather conditions at the Homer Airport (http://w1.weather.gov/obhistory/PAHO.html) during monitoring were as follows. At 2:53 pm skies were cloudy with light rain and the temperature was 41°. Wind was calm and the barometric pressure read 30.37 inches. At 5:53 pm the cold drizzle was tapering off and the temperature was 42°. Winds were from the SW at 5 mph and the barometric pressure was a bit lower at 30.35 inches.

Wednesday was a warm, sunny, calm spring day by Homer standards. Nevertheless, in making a quick trip to the Spit I saw no shorebirds. But the change to unpleasant weather seems to have brought in lots of arriving shorebirds. Perhaps they rather feed and rest than continue to fly.

Monitors at Mud Bay counted 88 **Dunlin** in breeding plumage. The flock was there for an hour and then flew south. Monitors at the Mid-Spit site picked up this flock and noted about 20 more. Mud Bay also reported 4 **Black-bellied Plovers** and 2 **Greater Yellowlegs**. The Mid-Spit area also had 3 **Pacific Golden Plovers**, 12 **Black-bellied Plovers**, and 6 **Greater Yellowlegs**. No shorebirds were seen at the Outer Spit or Mariner park lagoon sites.

Beluga Slough reported 16 **Greater Yellowlegs.** Monitors at the Anchor River saw 1 **Black Oystercatcher**, 9 **Greater Yellowlegs**, 3 **Lesser Yellowlegs**, 18 **Yellowlegs sp**., and 4 **Rock Sandpipers** still in the area.

Other birds seen by site are as follows,

Mud Bay;
Bonaparte's Gull – 2

Mariner Park Lagoon
Trumpeter Swan – 3
Mallard – 6
Northern Shoveler – 2
American Widgeon – 2
Mew Gull – 5
NW Crow – 4

Mid-Spit

Black Scoter – 104
White-winged Scoters – 5
Bald Eagle – 3
Common Loon – 2
Red-breasted Merganser – 3
Grebe – 3
Common Goldeneye – 3
American Pipit – 2

Outer Spit
Long-tailed Duck
Common Loon
Red-necked Merganser
Rock Pigeon
Song Sparrow
Glaucous-winged Gulls
Black-legged Kittiwake
Bald Eagle
NW Crow
Barrow's Goldeneye
Harbor seal

Beluga Slough
Cackling Goose – 40
American Widgeon – 6
Eurasian Widgeon – 2
Northern Pintail – 24
Mallard – x
Green-winged Teal – 36
Bufflehead – 10
Common Merganser – 4
Common Goldeneye – 6
Long-tailed Duck – 6 on bay
Common Loon – 3 on bay
Greater Scaup – 6
Canvasback – 2
Sandhill Crane – 2
NW Crow – x
Bald Eagle – x
Rock Dove – x
Glaucous-winged Gull – x
Mew Gull – x
Herring Gull - ?
Black Scoter – 3 on bay

Anchor River

NW Crow – x
Greater White-fronted Goose – x
Cackling goose – x
Mallard – x
Northern Pintail – x
Common Goldeneye – x
Common Merganser – x
Sandhill Crane – 40
Merlin – 1
Herring Gull – x
Glaucous Gull – 2
Glaucous-winged Gull – x
Mew Gull- x

Things are getting g busy. We are having fun.

Next report in 5 days.

George Matz

2013 Kachemak Bay Shorebird Monitoring Project
Session #4

Shorebirds are trickling in.

On Sunday, April 28th the Kachemak Bay Birders had its fourth shorebird monitoring session for this season. Twenty-two volunteers made observations for two hours (7:15pm - 9:15 pm) at four sites on the Homer Spit as well as nearby Beluga Slough and Anchor Point (mouth of the Anchor River), which is about 15 miles away. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit (Green Timbers and Louie's Lagoon) and the Outer Spit (fishing hole and the boat harbor area). The Islands and Islets site (south side of Kachemak Bay) was not covered since Karl's boat is not yet in the water.

The Beluga Slough site had 8 volunteers, including 4 teenagers. This year's project is turning out to be an incubator for a local youth birding club. This year project has brought together teenagers who have an interest in birding who want to add birding to Homer high school programs.

Weather conditions at the Homer Airport (http://w1.weather.gov/obhistory/PAHO.html) during monitoring were as follows. At 6:53 pm skies were clear and the temperature was 42°. Wind was from the NW at 14 mph with gusts to 20 mph and the barometric pressure read 30.11 inches. At 9:53 pm the skies were still clear, the temperature was 38° and the wind died down to 8 mph from the N. The barometric pressure had increased slightly to 30.14 inches. Overnight temperatures are still dropping below freezing.

Five species of shorebirds were observed this session. **Pacific Golden Plovers** were seen at Mud Bay (2), and the Anchor River (2). **Black-bellied Plovers** were seen at the Mid-Spit (21) and Anchor Point ((6). **Greater Yellowlegs** were seen at Mud Bay (3), Mariner Park Lagoon (3), Mid-Spit (3), Beluga Slough (18), and the Anchor River (11). Our FOS **Lesser Yellowlegs** were seen at Mud Bay (1), Beluga Slough (1), and Anchor Point (8). **Yellowlegs sp.** was reported at Mud Bay (2), and Anchor River (21). There were fewer **Dunlin** than last time including Mud Bay (3), Mid-Spit (1), and Anchor River (1).

Birding opportunities the past few days has been dominated by large numbers of waterfowl. A **Common Teal** seen Saturday was not seen Sunday. Other birds seen, in addition to waterfowl, are as follows.

Mud Bay:
Sandhill Crane – 2

Mariner Park Lagoon:
Trumpeter Swan – 3
Green-winged Teal – 26
Northern Pintail – 21
Mallard – 11
Northern Shoveler – 28
American Widgeon – 2
Greater White-fronted Goose – 105
Cackling Goose – 12

Mid-Spit:
Harlequin Duck – 4
Black Scoter – x
Mallard – x
Scaup – x
Sandhill Crane – 2
Greater White-fronted Goose – 26
Cackling Goose – 6
Bald Eagle – 2

Outer Spit:
Harlequin Duck – 9
Black Scoter – 4
Red-necked Merganser – 11
Red-necked Grebe – 2
Pelagic Cormorants – 20
Common Loon – 1
Rock Pigeon – 1
Common Goldeneye – 1
Song Sparrow – 1
Glaucous-winged Gulls - x

Black-legged Kittiwake - x
Bald Eagle – x

Beluga Slough:
Cackling Goose – 80
Greater White-fronted Goose – 400
Snow Goose - 10
American Widgeon – 60
Eurasian Widgeon – 5
Northern Shoveler – 24
Green-winged Teal – 17
Sandhill Crane – 17
Bufflehead – 12
NW Crow – 2
Mallard – 6
Mew Gull – x
Northern Pintail – 3
Glaucous-winged Gull – 6
Red-necked Grebe – on bay
Greater Scaup – 2 on bay
Long-tailed Duck – 2 on bay
Black Scoter – on bay
Common Loon – on bay
Goldeneye – Beluga Lake
Scaup - Beluga Lake

Anchor River:
Mallard – x
Common Goldeneye – x
Green-winged Teal - x
Long-tailed Duck – x
Common Merganser – x
Black Scoter - x

Next report in 5 days.

George Matz

2013 Kachemak Bay Shorebird Monitoring Project
Session #5

New Arrivals.

On Friday, May 3rd the Kachemak Bay Birders had its fifth shorebird monitoring session for this season. Sixteen volunteers made observations for two hours (9:30 am – 11:30 am) at four sites on the Homer Spit as well as nearby Beluga Slough and Anchor Point (mouth of the Anchor River) which is about 15 miles from Homer. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit (Green Timbers and Louie's Lagoon) and the Outer Spit (fishing hole and the boat harbor area). The inclement weather kept Karl from finishing the painting of his boat so he was not able to cover the Islands and Islets site (south side of Kachemak Bay). As a proxy, I am using shorebird observations from a field trip on Saturday morning. This note will also include the first report from the shorebird monitoring effort by Ken Tarbox and Toby Burke now underway at the mouth of the Kasilof River near Soldotna.

The weather has been nasty with little resemblance of spring. Conditions at the Homer Airport (http://w1.weather.gov/obhistory/PAHO.html) during monitoring were as follows. At 8:53 am skies were gray with a steady, cold drizzle and the temperature was 41°. Wind was from the W at 12 mph and the barometric pressure read 29.83 inches. By 11:53 pm fog and mist had rolled in and the temperature dropped to 39°. Wind was from the W at 9 mph and the barometric pressure increased to 29.89 inches. The temperature continued to drop through the day, down to freezing overnight. Rain turned to snow with 2-3 inches on the Spit by Saturday morning (more in the hills above town).

Though the inclement weather may be slowing down spring migration, it continues at a modest pace. Our last session recorded five species of shorebirds. This session we saw seven species of shorebirds at the Homer Spit and Beluga Slough, two more species were seen on the other side of the Bay on Saturday, and an additional two were seen at the Anchor River.

Plover numbers continue to increase from a total of 31 last session to 75 this session. **Pacific Golden Plovers** were seen at Mid-Spit (14), and the Anchor River (3). **Black-bellied Plovers** were seen at Mud Bay (42), Mid-Spit (10) and Anchor Point (6). In addition, our expanding network of observers who are watching shorebirds at other times report an **American Golden-Plover** at Green Timbers on May 1.

Greater Yellowlegs were seen at Mud Bay (1), Mariner Park Lagoon (3), Beluga Slough (4), and the Anchor River (4). Monitors at the Anchor River also reported 5 **Yellowlegs sp. Lesser Yellowlegs** were at Beluga Slough (1).

Whimbrel's made their FOS appearance. They were seen at Mud Bay (1), Mid-Spit (7), Beluga Slough (4), and the Anchor River (48). In addition, large flocks have been seen at various places around the Spit. One **Black Turnstone** (FOS) was seen at the Anchor River.

Dunlin's continue to trickle in. They were seen at Mud Bay (12), Mid-Spit (2), and the Anchor River (9). FOS sandpipers include **Western Sandpiper** at Mud Bay (1) and a **Least Sandpiper** (1) at the Anchor River.
The boat trip on Saturday saw 2 **Surfbirds** at the entrance to the boat harbor and 18 on Lancashire Rock. Two **Oystercatchers** were seen on the beach at Hesketh Island.

Monitoring on the Kasilof River took place on April 30th and lasted 1.5 hours. The protocol is to begin monitoring when the incoming tide is at mid-point. Shorebirds seen include;

Black-bellied plover - 11
Dunlin - 4
Greater Yellowlegs - 11
Lesser Yellowlegs - 2
Dowitcher sp.- 3

Other bird observations, by site, are as follows:

Mud Bay:
Trumpeter Swan – 3

Mariner Park Lagoon:
Green-winged Teal – x
Mallard – x
Northern Shoveler – 50
American Widgeon – x
Northwestern Crow - 10

Mid-Spit:
Harlequin Duck – 10
Northern Pintail - 24
Black Scoter – 52
Mallard – 10
Common Goldeneye – 1
Common Loon – 3
Bald Eagle – 1

Outer Spit:
Common Loon – 5
Red-breasted Merganser – 11
Common Merganser - 2
Red-necked Grebe – 1
Pelagic Cormorants – 8
Rock Pigeon – 5
Common Goldeneye – 1
Glaucous-winged Gull - x
Black-legged Kittiwake - x
Bald Eagle – 5
Common Raven – 3
Northwestern Crow - x

Beluga Slough:
Cackling Goose – 305
Greater White-fronted Goose – 119
Trumpeter Swan - 2
Green-winged Teal – 26

American Widgeon – 26
Northern Pintail - 24
Northern Shoveler – 1
Bufflehead – 6
Mallard – 6
Scaup – 1
Common Goldeneye - 2
Red-breasted Merganser – 4
Common Loon – 1 on bay
Bonaparte Gull - 1
Mew Gull – x
Glaucous-winged Gull – x
Bald Eagle – x
Rock Dove – 1

Anchor River:
Cackling Goose – x
Greater White-fronted Goose - x
Mallard - x
American Widgeon – x
Eurasian Widgeon - x
Common Goldeneye - x
Green-winged Teal - x
Bufflehead
Greater Scaup - x
Common Merganser – x
Harlequin Duck – x
Black Scoter – x
Surf Scoter – x
White-winged Scoter -x

Kasilof River
Mallards - 15
Green Winged Teal - 8
Northern Shoveler - 25
Bonaparte Gull - 1
Mew Gull - 5
Herring Gulls - 6
Gull sp - 100 - too far away at river mouth to clearly see
Arctic tern - 1

Next report in 5 days.

George Matz

2013 Kachemak Bay Shorebird Monitoring Project
Session #6

Still Waiting and a Big Alert.

On Wednesday, May 8th the Kachemak Bay Birders had its sixth shorebird monitoring session for this season. A total of 22 volunteers made observations for two hours (4:00 pm – 6:00 pm) at four sites on the Homer Spit as well as nearby Beluga Slough and Anchor Point (mouth of the Anchor River) about 15 miles from Homer. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit (Green Timbers and Louie's Lagoon) and the Outer Spit (fishing hole and the boat harbor area). Karl now has his boat in the water and submitted observations on Thursday morning. Though these observations weren't at the same time as scheduled, they are being added to the report since there is virtually no duplication between the Islands and Islets area and other sites, the primary reason for having simultaneous observations. There was also a team of monitors the same day at the mouth of the Kasilof River, but at 1:00 pm - 3:00 pm due the difference in tides.

The weather couldn't be better. At the Homer Airport conditions during monitoring were as follows (http://w1.weather.gov/obhistory/PAHO.html). At 3:53 pm skies were clear and the temperature was 47°. A light wind was out of the W at 8 mph and the barometric pressure read 30.25 inches. At 5:53 pm the sky was still sunny (but clouds beginning to form) and the temperature was 46°. The wind shifted to the SW at 8 mph and the barometric pressure dropped to 30.23 inches.

Given the good travelling weather, I expected a large pulse of sandpipers (*Calidris*) to show up today; but there were even less today than the past day or two. Perhaps new flocks were not within a day's range. Plover numbers are still up but most yellowlegs seem to have moved on. What is interesting is that the large number of geese and ducks that have been hanging out in the Kachemak Bay area has significantly diminished. Conditions to the north have been well below freezing this "spring" until a couple of days ago - nothing very attractive to a waterbird. But it seems that within a day of when the winter released its icy grip the waterfowl headed north. How do they know this?

Pacific Golden Plovers were seen in the grass at Mid-Spit (38). **Black-bellied Plovers** were seen in 3-4 flocks at Mud Bay (39), Mid-Spit (55 though it appears that about half were counted twice), Beluga Slough (1) and Anchor Point (22). In addition, we had **Semipalmated Plovers** at Mud Bay (7), Mid-Spit (6), and Beluga Slough (1).

Greater Yellowlegs were seen at Mariner Park Lagoon (4), Beluga Slough (4), and the Anchor River (4). A **Lesser Yellowlegs** was seen at Beluga Slough (1).

Whimbrel's were seen only at Mid-Spit (1) and Beluga Slough (2). However, flocks of several have been seen most days since the last monitoring session five days ago.

A FOS **Wandering Tattler** was seen at the boat harbor. On Thursday morning Karl saw **Surfbirds** (22) and **Black Turnstone** (2) at Sixty-foot rock. In addition, Stan White (who monitors the Outer Spit) reported on eBird seeing **Surfbirds** (60 on the 5th and 75 on the 7th) as

well as a **Black Turnstone** (on the 5th) at the entrance to the boat harbor. A **Ruddy Turnstone** was seen at Beluga Slough. This may be the same one that was seen by a couple of birders at Mid-Spit between sessions.

Anchor River reported one **Hudsonian Godwit.** Other godwits seen between sessions includes a **Bar-tailed Godwit** (1) and **Marbled Godwit** (3) at Mud Bay on the 6th.

Small flocks of **Western Sandpiper** and **Dunlin** have been seen every day on the Spit since the last session. The **Western Sandpiper** count includes Mud Bay (41), Mid-Spit (59), and Beluga Slough with 6 *Calidris sp*. **Dunlin** included Mud Bay (6), Mid-Spit (78), and Anchor River (26). Anchor River also had **Least Sandpiper** (2) and **Semipalmated Sandpiper** (1).

Also seen were **Dowitchers sp.** at Mud Bay(5), Mid-Spit (1), and Anchor River (1). The Anchor River crew also reported a **Long-billed Dowitcher** (1) and **Wilson's Snipe** (1).

Karl also about 500 **Red-necked Phalaropes** on the water in the Sixty-foot Rock area.

Now, after all this suspense, the "big alert". Two **Willets** were reported as fly-bys on the Anchor River. Knowing that there has only been one reported in Alaska (last June on the Kenai River flats) I asked for more verification. Here is Michael Craig's reply.

The 2 individual birds that we observed were flying north past our position on the beach. I believe that we or some other party may have flushed them off the beach somewhere just ahead of our position. The light was from behind, so the birds were very well lit. The first thing that was noted was their size, as they were distinctly larger than any of the other shorebirds that we had observed that day except the Hudsonian Godwit. The most distinctive mark was the very obvious, very white W pattern across the secondaries and leading margin of the primaries. The trailing edge of the primaries was the distinctive black. The greater primary coverts were black. The rump was distinctly white with some amount of discoloration to the tail feathers. Not having observed the breast area, I cannot say with certainty what stage of transition the birds were in between winter and breeding plumage, but the impression I got was of them still being in winter plumage. No vocalization was heard.

All 3 members of our group observed the birds, but I had the best and longest view. All 3 of us have previously observed Willets, and I am very familiar with them having lived on the Central California coast for a number of years where they were one of the primary winter shorebirds.

Given that these birds were headed north, there is a good likelihood that they will be in the Kasilof/Kenai River area. Keep an eye out.

Speaking of the Kasilof River, here is their report. Connie and Ken Tarbox spent two hours (1:00 pm – 3:00 pm) starting when the tide was at half way. By 3:00 the birds were leaving the area because of the high tide. Shorebirds seen include;
Hudsonian Godwit - 1
Whimbrel - 9
Short-billed Dowitcher – 33
Peeps – 50 in one fly-by flock.

Other bird observations, by site, are as follows:

Mariner Park Lagoon:
Green-winged Teal – 28
Mallard – 2
Northern Shoveler – 15
Northwestern Crow - 6

Mid-Spit:
Brant - 31
Red-breasted Merganser - 4
Arctic Tern - 12

Outer Spit:
Glaucous-winged Gull - x
Black-legged Kittiwake - x
Black Scoter - 1
Harlequin - 3
Common Loon – 3
Bald Eagle – 6
Merlin - 1
Rock Pigeon – 16
Pelagic Cormorants – 16
Red-necked Grebe – 1
Red-breasted Merganser – 6
Common Raven – 5
Northwestern Crow - 8

Beluga Slough:
Sandhill Crane - 4
Northern Pintail - 24
Green-winged Teal – 6
American Widgeon – 60
Northern Shoveler – 8
Bufflehead – 1
Red-breasted Merganser – 2
Mallard – 36
Red-necked Grebe – 1
Common Goldeneye - 1
Lesser Scaup – 6
Mew Gull – 45
Common Loon – 1 on bay
Harlequin – 2 on bay
Scoter – 4 on bay
Horned Grebe – 1 on bay

Bald Eagle – 2
Murre – 20 flying over bay
Cackling Goose – 3
Ring-necked Pheasant -2
Boreal Chickadee – 1
American Pipit - 12
Common Teal -1

Greater White-fronted Goose – 119
Trumpeter Swan - 2
Bonaparte Gull - 1
Glaucous-winged Gull – x
Rock Dove – 1

Anchor River:
Northern Shoveler – x
Greater Scaup - x
Belted kingfisher -1
Merlin -1
Glaucous-winged Gull - x
Sandhill Crane - 1

Kasilof River
Mallards - 2
Green Winged Teal - 4
Northern Shoveler – 20
Bonaparte Gull - 2
Mew Gull - 2
Herring Gulls - 2
Gull sp – 25 too far away at river mouth to clearly see
Cackling Goose – 19
Canada Goose – 4
Common Raven – 2
Greater Scaup - 2

Next report in 5 days. Keep on birding.

George Matz

2013 Kachemak Bay Shorebird Monitoring Project
Session #7

WOW!

On Monday, May 13th the Kachemak Bay Birders had its seventh shorebird monitoring session for this season. A total of 21volunteers made observations for two hours (6:45 pm – 8:45 pm) at four sites on the Homer Spit, nearby Beluga Slough, the Islands and Islets on the south side of Kachemak, Bay, and the Anchor Point/River. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit (Green Timbers and Louie's Lagoon) and the Outer Spit (fishing hole and the boat harbor area).

This year's spring migration was slow in starting but is making up for lost time. This was a banner monitoring session. Last session (May 8th) we saw 14 shorebird species (less the Willet) and 306 individual birds. This session (May 13th) we saw 20 shorebird species and a total of 10,519 individual birds, give or take a few. What a difference a spring makes - now that it really is here. We saw more shorebirds this session than we did our entire first year of monitoring in 2009 when we reported only 7,406 individual shorebirds (which didn't include the Anchor River site). Are shorebird populations on the rebound?

To add to this, we have another possible rare bird alert. Our experienced team of Anchor River birders were stumped by a plover which they concluded might be a European Golden-Plover. The University of Alaska Museum Checklist of Alaska Birds for 2013 considers the European Golden-Plover an "Accidental" meaning that there are one or two Alaska records. We are only mentioning that this might be a possibility and birders who visit the Anchor River might be on the lookout in order to provide further documentation, or lack thereof. Michael Craig will be writing up a description of what they saw which will be attached as a comment to our eBird submission. If the observation is not accepted in review, it will be withdrawn.

The weather during monitoring was stable. Conditions, based on the Homer Airport (http://w1.weather.gov/obhistory/PAHO.html), were as follows. At 6:53 pm skies were overcast with scattered showers in the area and the temperature was 43°. The wind was from the SW at 8 mph and the barometric pressure read 29.45 inches. At 8:53 pm conditions were still cloudy and the temperature remained 43°. The SW wind was at 5 mph and the barometric pressure stayed at 29.45 inches.

Here is a summary of shorebird observations followed by all other birds.

Golden and black-bellied plovers seem to have moved on. Some **Pacific Golden Plovers** were seen in the grass at Mid-Spit (18) and the Anchor River (5). A few **Black-bellied Plovers** were seen at Mud Bay (4) and the Anchor River (6). But more **Semipalmated Plovers,** which breed locally**,** were seen at Mud Bay (2), Mariner Park Lagoon (8), Mid-Spit (23), Beluga Slough (3), and Anchor River (4).

Black Oystercatchers (2) were seen at Gull Island.

Yellowleg counts are also declining**. Greater Yellowlegs** were seen at Mud Bay (1), Beluga Slough (1), and the Anchor River (4). **Lesser Yellowlegs** were at Mariner Park Lagoon (1), Beluga Slough (1), and Anchor River (2).

Whimbrel were seen at Mid-Spit (11) and Anchor River (21).

A group of **Wandering Tattler** (24) were seen at the boat harbor and also at Gull Island (1). **Surfbirds,** as usual, were at the entrance to the boat harbor (75) and Lancashire Rocks (80). **Black Turnstone** showed up at Gull Island (1), Lancashire Rock (3), and Anchor River (2). **Ruddy Turnstone** was seen at Mid-Spit (2) and Anchor River (1).

Hudsonian Godwit was seen only at Beluga Slough (3)**.**

The big news is the arrival of our first big pulse of sandpipers. Our previous session on Wednesday observed only about 190 shorebirds in the *Calidris* genus. This session on Monday counted over 10,000 sandpipers. Fortunately, most of them arrived on Friday afternoon (approximately 5,000 Westerns and Dunlin at Mud Bay) just in time for the Kachemak Bay Shorebird Festival. While daily counts seem to indicate some leaving the area, it is obvious that more have arrived. In fact, on a trip out to the Spit on Tuesday night I saw 10,000-15,000 sandpipers just in Mud Bay including about 90% Western's, about 10% Dunlin, as well as about 100 Dowitchers. Another birder there agreed with the count. It was a spectacular sight as huge flocks would take to the air, twist and turn, flashing brown and white, and then land on the beach again. At one point, two flocks of thousands of birds flew right into each other in what looked like a major head-on. But miraculously, they all came out the other side. Obviously, the birds don't need FAA controllers.

The details for sandpipers are as follows: **Western Sandpipers** were at Mud Bay (3,504), Mariner Park Lagoon (2), Mid-Spit (1,510), the boat harbor (6), Beluga Slough (232), and the Anchor River (179). **Dunlin** were at Mud Bay (1,500), Mid-Spit (149), Beluga Slough (9), and Anchor River (+40). In addition there were lots of "peeps" including Mid-Spit (+5,000), boat harbor (50), Beluga Slough (16), and Anchor River (500). The peeps were about 90% **Western Sandpipers** and 10% **Dunlin**. Other sandpipers include **Least Sandpiper** at Mariner Park Lagoon (36), Mid-Spit (6), Beluga Slough (6), and Anchor River (5). **Semipalmated Sandpiper** (5) was seen at Anchor River (5). **Pectoral Sandpiper** were at Mud Bay (1), and Anchor River (3). **Rock Sandpiper** (2) were seen on Lancashire Rock.

Mixed in with the big flocks of sandpipers were a lot of Dowitchers. Most observers didn't venture to determine whether the birds were short or long-billed and just lumped their sightings by recording **Dowitcher sp**. ; Mud Bay (119), Mariner Park Lagoon (10), Mid-Spit (4), Beluga Slough (22), and Anchor River (13). However, some observations were more specific with **Short-billed Dowitchers** at Mariner Park Lagoon (4), and Anchor River (4). **Long-billed Dowitchers** were seen and photographed at Mariner Park Lagoon (19) and reported at Anchor River (3).

There was just 1 **Wilson's Snipe** at Anchor River.

Other bird observations, by site, are as follows:

Mariner Park Lagoon:
Green-winged Teal – 14
Northern Shoveler – 18

Bald Eagle – 4
Sandhill Crane - 2

Mid-Spit:
Lapland Longspur - 2
Bonaparte's Gull - 1
Common Murre - x

Outer Spit:
Black-legged Kittiwake - x
Common Loon – 2
Bald Eagle – x
Herring Gull - 2
Rock Pigeon – 2
Common Murre – 5,000
Pelagic Cormorant – 8
Red-breasted Merganser – 6
Pigeon Guillemot - 2
Lapland Longspur - 1
Savanna Sparrow – 3
Song Sparrow – 1

Beluga Slough:

Greater White-fronted Goose - 40
Cackling Goose – 18
Northern Pintail - 5
Green-winged Teal – 37
American Widgeon – 34
Eurasian Widgeon - 1
Northern Shoveler – 7
Mallard – 6
Common Loon – 2 on bay
Harlequin – 2 on bay
Common Murre – x on bay
Sandhill Crane - 7
Mew Gull – 30
Glaucous-winged Gull - 4
Bald Eagle – seen eating a duck
Peregrine Falcon – seen catching a sandpiper in the air

Merlin – 1 heard
Ring-necked Pheasant -1
Lapland Longspur -1

Next report in 5 days. Keep on birding.

George Matz

2013 Kachemak Bay Shorebird Monitoring Project
Session #8

Another pulse of sandpipers – and winter.

On Saturday, May 18th the Kachemak Bay Birders had its eighth shorebird monitoring session for this season. A total of 22 volunteers made observations for two hours (7:45 am – 9:45 am) at four sites on the Homer Spit, nearby Beluga Slough, and Anchor Point/River. There were no observations at Islands and Islets (south side of the bay) because of rough water. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit (Green Timbers and Louie's Lagoon) and the Outer Spit (fishing hole and the boat harbor area).

The weather during monitoring was stable. Conditions, based on Homer Airport data (http://w1.weather.gov/obhistory/PAHO.html) were as follows. At 7:53 am skies were overcast with scattered snow showers and the temperature was 35°. The wind was from the NW at 8 mph and the barometric pressure read 29.70 inches. At 9:53 pm conditions were still overcast and it was still snowing. The temperature remained at 35°, the wind was now out of the N at 3 mph, and the barometric pressure stayed at 29.77 inches.

Despite the unseasonably cold weather, a new pulse of sandpipers arrived at the Homer Spit. These intrepid creatures are not waiting for fair weather to complete their migration. Not to be outdone, our intrepid monitors were out there with them, at least for two hours. After that we retreated to the I&O Visitor Center to warm-up, have cookies, and discuss our observations for the day. But if it weren't for our obligation to follow protocol, few of us (maybe none) would have even been out birding that wet, cold, snowy morning and unique opportunities (as discussed below) would have been lost without our even knowing it.

To continue our string of rare bird reports, we are reporting another "accidental" bird sighting. On our sixth session we reported the possibility of a **Willet** at Anchor Point. On our seventh session we reported a possible **European Golden-Plover** at the same site; both without photo documentation. But neither had any further sightings nor has there been any expert support for these possible observations. So it looks like we may need to amend our eBird submission.

Now we are reporting on two **Bristle-thighed Curlews** seen at Louie's Lagoon (which is in the middle of Homer spit). According to the *Checklist of Birds of Kachemak Bay, Alaska*, the Bristle-thighed Curlew is "accidental" for the area, meaning "an exceptional occurrence of birds outside their normal range that might not be repeated again for decades." But this time we have two sets of photos as well as the support of two local experts.

The Bristle-thighed Curlew observation was made by Gary Lyon who flushed two whimbrel-type birds while monitoring and noticed their pale buffy rump as they flew away. He followed them down the beach and got within photo range. Gary, following our new policy to "shoot first

and ask questions later," was able to get some decent shots which he posted on the AKBirding list serve. After hearing Gary's report I went to Louie's Lagoon with Jeannie and the Buntings. Following Gary's instructions we were able to locate one Bristle-thighed Curlew and I was able to get some distant digiscope shots which I posted immediately on the KB birders list-serve. The low light due to heavy snow at the time forced me to use a slow shutter speed, so the images aren't that sharp, but some detail can be seen – maybe even the bristles. I added these shots to AKBirding in the George Matz folder. I also heard the flight call of the curlew when we got back to the car as it flew overhead heading west of the spit.

Jeannie and I went back on high tide Sunday morning, but didn't see the Bristle-thighed Curlew. My hunch is that it may have moved on to the mouth of the Anchor River where Bristle-thighed Curlews were seen this time last year. Since conditions still may not be hospitable up north, maybe they will stay around awhile.

Our caucus after this monitoring session was more spirited than usual. Not only did we have lots of interesting observations, but two controversial ones. One was the Bristle-thighed Curlew as described above. The were also three reports of **American Golden-Plovers**. George West says in *Shorebird Guide for Kachemak Bay and Homer, Alaska* that he observed an average of 20 American Golden-Plovers annually during his monitoring of the Homer Spit (1986-1994). Nevertheless, some experienced birders question whether the American Golden-Plover does visit the Kachemak Bay area during spring migration.

Our discussion on how to report these observations centered around the conundrum of which is the worst mistake to make; to be venturous and report an American Golden-Plover even though there is some chance it might actually be a Pacific Golden-Plover, or to be cautious and go for the safe default (e.g., Pacific Golden-Plover) even though it seems that there is some chance that the bird observed may be something unusual or even rare (e.g., American Golden-Plover). On one hand, the venturous choice can be corrected if wrong by the vetting that usually takes place by expert birders. But the cautious choice, if wrong, loses forever an opportunity to enjoy something rare. (Aren't these choices a lot like life itself?) We choose a modified venturous approach. First we posted photos of the plover on list-serves, calling it an American Golden-Plover. We got feedback within hours which supported our call. So now we are entering the information in our report and eBird.

Here is a summary of our shorebird observations from this session. In addition to these observations, birders in the Kenai/Soldotna area have been following our schedule to monitor shorebirds at the Kasilof River. Their reports have appeared as separate emails but will be included in our report for this spring.

There are still some plovers around. **Pacific Golden-Plovers** were seen at Mud Bay (2), Mid-Spit (8) and Beluga Slough (4). **American Golden-Plovers** were reported at Mud Bay (1 with photo), Mid-Spit (1 with photo) and Beluga Slough (8). **Black-bellied Plovers** were seen at Mud Bay (15), and Mid-Spit (18). **Semipalmated Plovers,** which breed locally**,** were seen at Mid-Spit (14), and Anchor River (7). Beluga Slough also reported a flock of 28 **Plover sp.** flying overhead.

Greater Yellowlegs were seen at Beluga Slough (3), and the Anchor River (4). **Lesser Yellowlegs** were at Mid-Spit (1), Beluga Slough (2), and Anchor River (4). The Anchor Rover also reported 1 **Yellowlegs sp.**

Whimbrel were seen at Mud Bay (12), and Anchor River (1). **Bristle-thighed Curlew** (2) were seen and photographed at Mid-Spit.

Bar-Tailed Godwits were seen at Mud Bay (3) and Beluga Slough (3). A **Marbled Godwit** had also been reported the day before at Mud Bay.

Wandering Tattlers are here in numbers**.** They were seen at the boat harbor (36) and Anchor Point (1). **Surfbirds** were seen at Mid-Spit (5) and, as usual, the entrance to the boat harbor (266). **Black Turnstones** were at Mid-Spit (7) and the boat harbor (1).

Sandpipers staged a second pulse. Our daily supplemental monitoring saw numbers drop off from the first pulse last week to another quick pulse of about 5,000 birds on the Spit that seemed to peak on Friday, the day before our scheduled monitoring. But numbers were down considerably by Saturday indicating a hurried stopover. The details for sandpipers are as follows: **Western Sandpipers** were at Mud Bay (1,725), Mariner Park Lagoon (250), Mid-Spit (553), the boat harbor (1), and the Anchor River (427). **Dunlin** were at Mud Bay (525), Mid-Spit (130), and Anchor River (20). **Least Sandpipers** were at Mariner Park Lagoon (11), Mid-Spit (6), and the boat harbor (1), and Anchor River (5). **Semipalmated Sandpipers** were the seen at Anchor River (2). **Pectoral Sandpipers** were at Mariner Park Lagoon (3), Beluga Slough (6) and many more in the area over the past couple of days. **Peeps**, a lumping of unidentified sandpipers that tend to be mostly Western's and Dunlin, were reported from Mid-Spit (100), boat harbor (20), Beluga Slough (118), and Anchor River (19).

Short-billed Dowitchers were seen at Mariner Park Lagoon (12), Beluga Slough (2) and Anchor River (4). **Long-billed Dowitchers** were seen at Beluga Slough (3). Lumping of **Dowitcher sp**. was reported at Mud Bay (113), Mid-Spit (23), Beluga Slough (6), and Anchor River (5).

Given that the late spring seems to have delayed spring migration and that it is still underway, we may have to consider an additional session after the last one we have scheduled on May 23. That might not be necessary if we see few shorebirds on May 23.

Other bird observations, by site, are as follows:

Mud Bay:
Bonaparte's Gull – 3
Northern Harrier – 1
Sandhill Cranes - 6

Mariner Park Lagoon:
Green-winged Teal – 10
Northern Shoveler – 2
American Widgeon – 1

Sandhill Crane - 2
Northern Harrier – 1
Northwestern Crow – 7
Fox Sparrow – 1
Ring-necked Pheasant - 1

Mid-Spit:
Harlequin Duck -2
Brant – 12
Common Loon - 4
Merlin - 1

Outer Spit:
Harlequin Duck – 2
Cackling Goose - 8
White-winged Scoter - 1
Black-legged Kittiwake - x
Common Loon – 8
Bald Eagle – x
Glaucous-winged Gull - x
Herring Gull - 2
Rock Pigeon – 8
Marbled Murrelet – 1
Pelagic Cormorant – 3
Northwestern Crow - 8
Lapland Longspur - 1
Savanna Sparrow – 1
Song Sparrow – 1

Beluga Slough:
Greater White-fronted Goose - 20
Cackling Goose – 14
Goose - 210
Black Brant - 4
Green-winged Teal – 6
American Widgeon – 20
Eurasian Widgeon - 1
Northern Shoveler – 4
Northern Pintail – 7
Mallard – 4
Harlequin – 1
Common Merganser – 4
Sandhill Crane - 4
Mew Gull – x
Bonaparte's Gull - 1
Merlin – 1

Ring-necked Pheasant -1
Fox Sparrow – x
Swallow sp. – x
Northwestern Crow – x

Anchor Point/River
Green-winged Teal – x
Northern Pintail – x
Northern Shoveler – x
Mallard – x
Greater Scaup –x
Harlequin Duck – x
Common Merganser – x
Red-breasted Merganser – x
Bald Eagle – x
Northern Harrier – x
Merlin – x
Lapland Longspur – x
Glaucous-winged Gull – x
Glaucous Gull – x
Mew Gull –x
Bonaparte's Gull – x
Arctic Tern - x

Next report in 5 days. Keep on birding.

George Matz

2013 Kachemak Bay Shorebird Monitoring Project
Session #9

The Grand Finale.

On Thursday, May 23rd the Kachemak Bay Birders had its ninth and final shorebird monitoring session for this season. A total of 22 volunteers made observations for two hours (3:45 pm – 5:45 pm) at four sites on the Homer Spit, Beluga Slough, Islands and Islets (south side of the bay) and Anchor Point/River. Sites on the Spit include Mud Bay, Mariner Park Lagoon, Mid-Spit (Green Timbers and Louie's Lagoon) and the Outer Spit (fishing hole and the boat harbor area).

The weather has improved considerably with temperatures staying above freezing. Conditions, based on Homer Airport data (http://w1.weather.gov/obhistory/PAHO.html) were as follows. At 3:53 pm skies were mostly cloudy and the temperature was 50°. The wind was from the W at 6 mph and the barometric pressure read 30.14 inches. At 5:53 pm skies were still mostly overcast, the temperature was 49°, wind was from the W at 6 mph, and the barometric pressure was 30.13 inches.

This was an unpredictable season. It demonstrated that a monitoring program with a good protocol can expect unexpected results. It started out with more geese in the Homer area than old-timers ever remember. Hundreds of geese, particularly the Greater White-fronted Goose, foraged in the Beluga Slough/Lake area and many fields around Homer. Shorebirds were late due to the cold spring but arrived in force once temperatures got above freezing. The initial pulse of shorebirds stayed around for a couple of days but it seemed that once weather on their breeding grounds in Western Alaska also got above freezing the birds boogied. Then new pulses of sandpipers that stopped at Kachemak Bay were here for maybe just one or two tides. An unexpected highlight of the season was the appearance of several Bristle-thighed Curlew at both the Homer Spit and Anchor Point/River. Our last session turned up another unexpected observation. This session we counted 136 Pectoral Sandpipers with many more were scattered around Homer (including on lawns) in flocks of up to 40. In previous years of shorebird monitoring we averaged only 2 Pectoral Sandpipers per year. And yet another unexpected result was the participation by several teenagers in our monitoring project. In fact, 6 of our 22 monitors for the last session were teenagers. This interest has inspired Susan Bunting, one of the mothers, to form a Youth Birders Group with support from the Alaska Maritime NWR and Kachemak Bay Birders. This fledgling group is off to a good start.

Following is a summary of our shorebird observations for this session. A detailed report will follow this summer which will combine all the results and provide some analysis.

Only 18 **Black-bellied Plovers** were seen at Mid-Spit. **Semipalmated Plovers,** which breed locally**,** were seen at Mud Bay (2), Mariner Park Lagoon (1), Mid-Spit (19), the boat harbor (5), Beluga Slough (2), and Anchor River (3).

Greater Yellowlegs were seen at Beluga Slough (6), and **Lesser Yellowlegs** were at Anchor River (2). These early arrivals are probably nesting.

Whimbrel were seen at Mud Bay (8), Mid-Spit (4), and Anchor River (5). Once again Gary Lyon observed and photographed 3 **Bristle-thighed Curlew** at Mid-Spit. But none were seen by the Anchor River team during our monitoring session even though as many as 11 were seen there a day or two earlier. There have been reports of disturbances from loose dogs and shooting at the Anchor River, but we don't know if this precipitated an early departure by the curlews.

One **Marbled Godwit** was seen at the Anchor River.

As usual, **Wandering Tattler** were at the boat harbor (15) and Anchor Point (1). **Surfbirds** were seen at Gull Island (300), Lancashire Rock (12) and Cohen Island (42). **Ruddy Turnstone** (6) were at Mid-Spit. **Black Turnstone** were at Cohen Island (2) and Lancashire Rock (5).

After last session on Saturday there were still thousands on sandpipers in the Mud Bay and Mid-Spit sites. As late as Monday Michael Armstrong reported at least 3,000 sandpipers at Mud Bay. By the next day there were only hundreds. Our last session of monitoring found the following for **Western Sandpiper;** Mud Bay (25), Mid-Spit (45), Beluga Slough (48). **Dunlin** were only at Mud Bay (1), Mid-Spit (24), and Anchor River (1). **Least Sandpipers** were at Mid-Spit (7) and the Anchor River (2). **Peeps**, a lumping of unidentified sandpipers that tend to be mostly

Western's and Dunlin, were at Mid-Spit (51), Beluga Slough (2), and Anchor River (10). As mentioned above, the real surprise was the **Pectoral Sandpiper** which were seen at Mud Bay (102), Mariner Park Lagoon (33), and Beluga Slough (1). There was a brief view of possibly a **Red Knot** at Beluga Slough but not enough to include in the record.

Dowitchers counts were also down. **Short-billed Dowitchers** were at Anchor River (9). **Long-billed Dowitchers** were also seen at Anchor Point (14). Lumping of **Dowitcher sp**. was reported at Mud Bay (20), Mariner Park Lagoon (9), Mid-Spit (23), and Beluga Slough (12).

Red-necked Phalarope were seen at Beluga Slough (3), on the south side of the bay (500) and Anchor River (1).

Other bird observations, by site, are as follows:

Mariner Park Lagoon:
Trumpeter Swan - 1
Green-winged Teal – 2
Bald Eagle - 1
Northwestern Crow – 3

Mid-Spit:
Swallow - 1
American Pipit – 12

Outer Spit:
Common Goldeneye - 1
White-winged Scoter - 1
Common Loon - 1
Black-legged Kittiwake - x
Bald Eagle – 3
Glaucous-winged Gull - x
Herring Gull - 2
Rock Pigeon – 8
Northwestern Crow - 9
Song Sparrow – 1

Beluga Slough:
Cackling Goose – 200
Green-winged Teal – 5
American Widgeon – 6
Northern Shoveler – 1
Mallard – 8
Ring-necked Pheasant -1
Sandhill Crane - 3
Rock Pigeon – 3
Fox Sparrow – x

Northwestern Crow – 1
Tree Swallow _ 9
Orange-crowned Warbler -x

Anchor Point/River
Greater White-fronted Goose - x
Glaucous Gull – 1
Bonaparte's Gull – 1
Yellow Warbler - x
Townsend Warbler - x

That's it!! Keep on birding.

George Matz