



United States Department of the Interior



U.S. FISH AND WILDLIFE SERVICE
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Federal Subsistence Activity Report Kodiak National Wildlife Refuge, September 2020 – January 2021

Subsistence Permit Summary

Federal subsistence regulations afford opportunity for rural residents of the Kodiak area to harvest Sitka black-tailed deer, Roosevelt elk, and brown bear on Kodiak Refuge lands. Harvest opportunity for bear is restricted to residents of selected village communities. In complement, federal subsistence regulations afford opportunity to harvest fish and shellfish. Most fish permittees target sockeye and coho salmon of inshore marine waters under jurisdiction of Alaska Maritime Refuge. Federal subsistence permits can be obtained at the Refuge’s headquarters office. Permittees are required to carry their Federal subsistence permits, current state licenses, harvest tickets (deer), and locking tags (bear) while hunting or fishing.

Table 1. Federal subsistence permits issued and reported harvest (#), Kodiak Area, 2012-2020 regulatory years.

Species	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 ²
Bear	2(0)	4(0)	3(0)	6(3)	3(0)	3(1)	0(0)	1 (0)	2 (1)
Deer ¹	20(11)	46(21)	48(39)	39(51)	50(66)	66(15)	25(12)	40 (19)	45 (19)
Elk	2(0)	5(2)	9(1)	4(2)	6(0)	7(1)	8(0)	5 (1)	11 (5)
Fish	2(0)	8(36)	20(117)	19(63)	51(241)	56(560)	30(55)	43 (153)	42 (153)

¹Multiple deer eligible to be harvested per permit.

²Preliminary permits issued and harvest reported.

Brown Bear

Population Assessment

No surveys were conducted in 2020 due to Covid-19 restrictions. In 2021, the Refuge will resume field action pending review and approval of survey plans—including Covid mitigation measures—by the Service’s Regional Office. Proposed surveys include assessment of bear density in the Shearwater-Kiliuda area in May, in cooperation with the Alaska Department of Fish and Game (ADF&G), and assessment of bear composition during July-August in SW Kodiak Island.

Bear-Berry Monitoring

Among the berries we monitor are blueberry and salmonberry—species of dietary importance to brown bear and resident peoples. In 2021, our monitoring was restricted mainly to road and trail accessible sites of northeastern Kodiak Island. Over the years, we have documented considerable

variation in the timing of berry availability (Figures 1 & 2), as well as the abundance of berries (Figures 3 & 4). In general, variation in availability has corresponded to variation in soil temperature the preceding winter and early spring. In contrast, berry abundance seems to be affected by winter temperatures and other factors. In 2017, we attributed berry crop loss to the combination of extreme cold and dry conditions that apparently top-killed shrub stems. Additionally, with salmonberry, we observed variation in fruit quality. Larger sizes, those sought by people and bears (i.e., ‘good’ quality), were very limited in some years. Differences in fruit quality within and among years appears to be tied to the extent of flower pollination. We suspect, moreover, that fewer good-sized fruit are produced in years where incomplete pollination is prevalent.

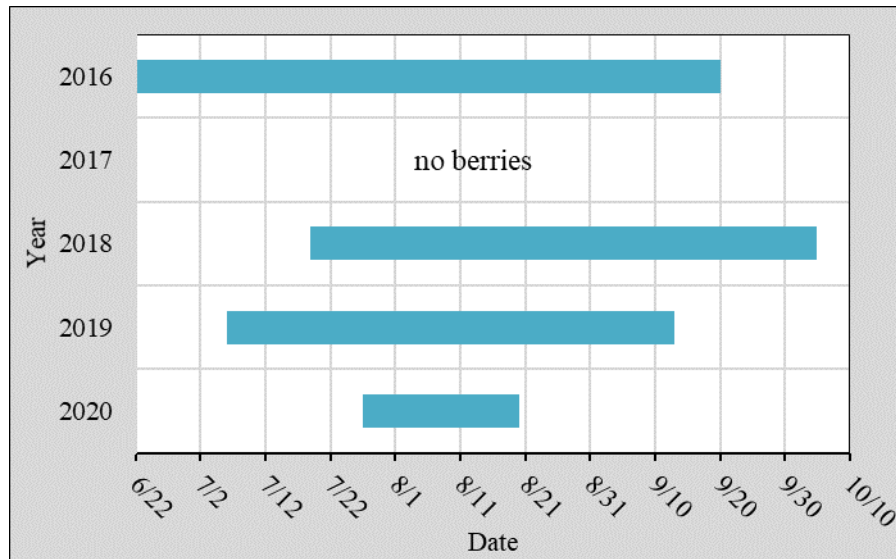


Figure 1. Variation in timing of ripe blueberry availability during 2016-2020 at trail camera sites, northeastern Kodiak Island.

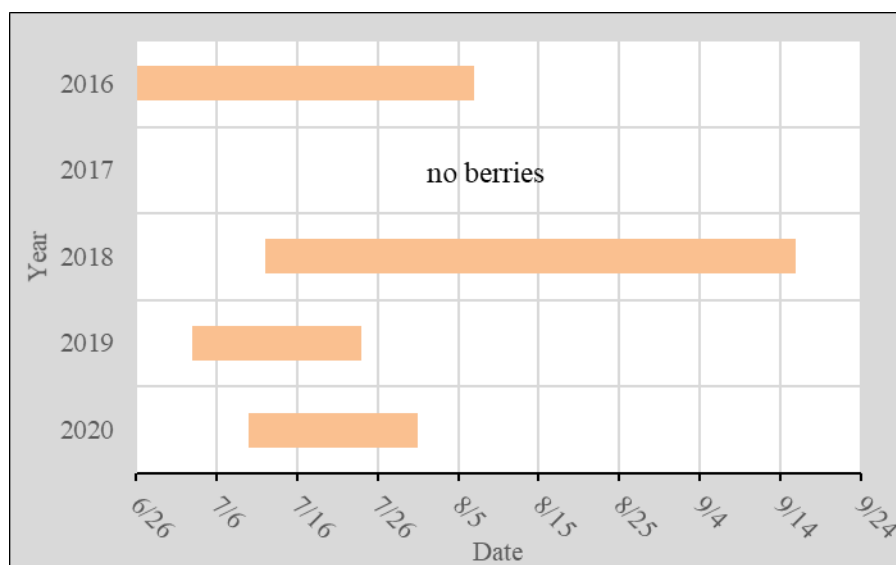


Figure 2. Variation in timing of ripe salmonberry availability during 2016-2020 at trail camera sites, northeastern Kodiak Island.

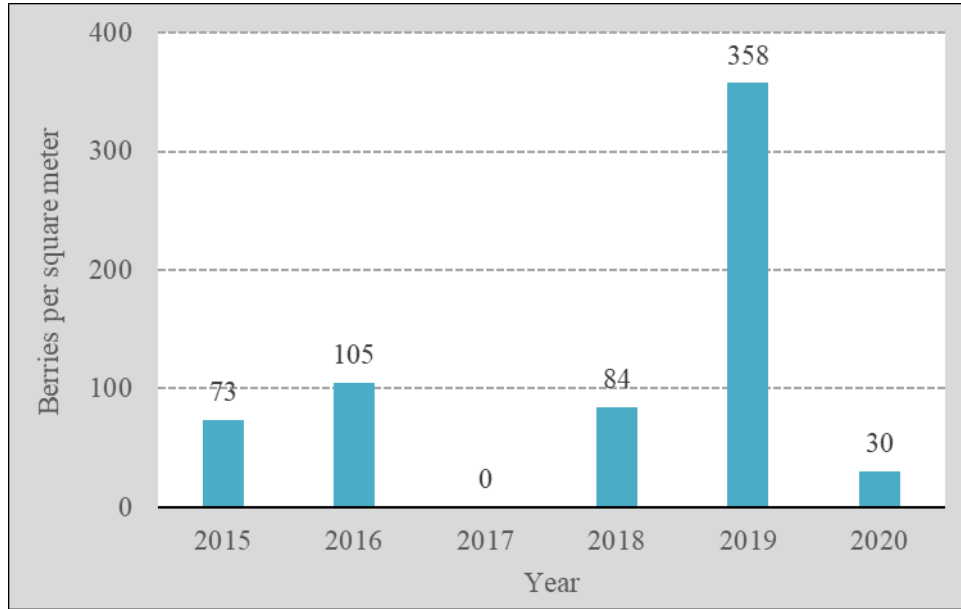


Figure 3. Variation in blueberry abundance during 2015-2020 on monitoring plots, northeastern Kodiak Island.

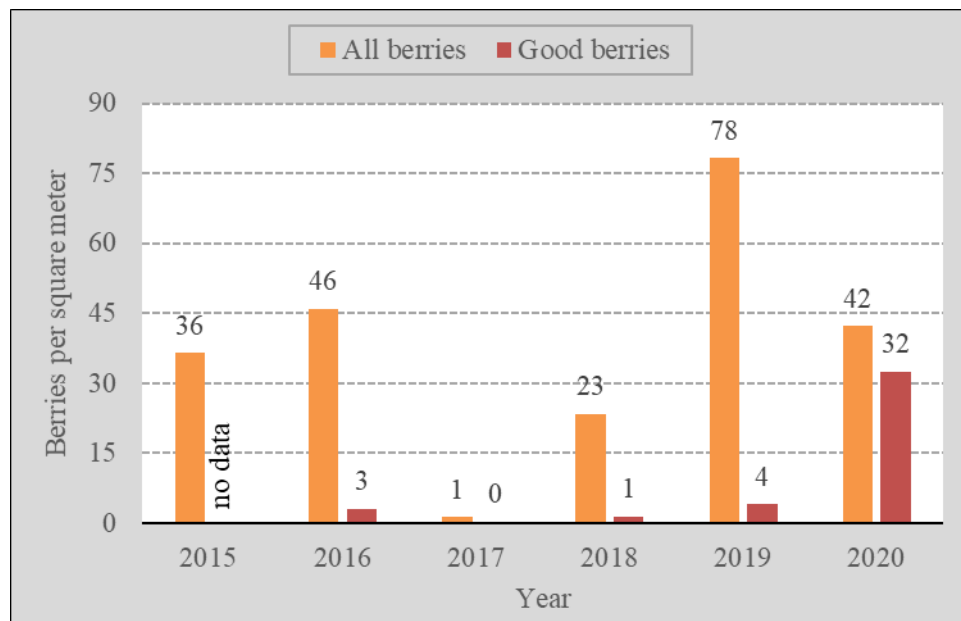


Figure 4. Variation in salmonberry abundance during 2015-2020 on monitoring plots, northeastern Kodiak Island. ‘Good’ quality berries exceed a minimum size sought by bears and people.

Sitka Black-tailed Deer

Preliminary assessment suggests that winter 2020-2021 weather conditions could foster over-winter deer survival, increased populations, and improved harvest opportunities. The last severe winter and substantial over-winter mortality occurred in western and northern Kodiak Island in winter 2019-2020. Archipelago deer populations are regulated primarily by variation in winter severity.

Roosevelt Elk

Radio-collared elk provide a basis for the ADF&G's efforts to track herd locations and to estimate herd composition and population size in late summer prior to hunting season operation. Results from the ADF&G's 2020 elk survey indicated a population size of 950 elk including 100 in the Waterfall herd, which summers in the vicinity of Refuge lands on Afognak Island. Post-hunt analysis indicated that 105 elk were harvested in 2020 including 10 animals from the Waterfall herd.

Reindeer (feral caribou)

Distribution of reindeer is restricted to southwestern Kodiak Island where suitable habitat occurs. Over the past 20 years, herd size has fluctuated between 300 and 350 animals. Analysis indicated that 10 reindeer were harvested in 2020.

Mountain Goat

In 2020, biologists with the Refuge and the ADF&G surveyed approximately 70% of known goat summer range on Kodiak Island during August. Of the 2,392 goats counted, 1,868 were adults and 524 were kids. The ADF&G issued 338 drawing permits and 1,079 registration permits. To date (2 Feb 2021), 151 goats have been harvested by drawing hunts, and 163 goats have been harvested by registration hunt. Some additional harvest may occur in registration hunt 480 before the March 31 close of the hunting season.

Northern Sea Otter

The Service's Marine Mammal Division provided the following hunter harvest data for the Kodiak Area.

Table 2. Native Alaska hunter harvest of northern sea otter by village community and calendar year in Kodiak Area, 1989-2020.

Village	1989-2015	2016	2017	2018	2019	2020	Total
Afognak	0	17	8	7	2	3	37
Akhiok	4	0	0	0	1	0	5
Kodiak	1,241	111	51	14	39	10	1,466
Larsen Bay	259	2	4	11	0	0	276
Old Harbor	171	6	4	0	1	2	184
Ouzinkie	40	0	112	262	19	29	462
Port Lions	667	63	32	58	10	25	855
Total Kodiak	2,382	199	99	90	53	69	2,892
Total Statewide	24,644	1,603	1,531	1,519	1,104	710	31,111

Migratory Birds

Aleutian and Arctic Tern Research

Jill Tengeres, graduate student at Oregon State University, and Robin Corcoran, the Refuge's Bird Biologist, presented "*The Diet Composition of Aleutian Tern Chicks in the Kodiak Archipelago*" at the

Alaska Marine Science (Virtual) Symposium on 26 January 2021. Jill and Robin also will present results from monitoring Aleutian and Arctic terns at the annual Pacific Seabird Group (Virtual) Meeting from 24-26 February 2020. Jill will present “*Does Pre-Laying Diet Influence Nesting Propensity and Success In Aleutian Terns?*” Robin will present “*Lemons into Lemonade: Tern Surveys in the Time of COVID-19*”, and both are coauthors on a presentation by Patty Szczys “*Genetic Diversity and Population Structure of Aleutian Terns in Alaska: A Preliminary Assessment*”.

Nearshore Marine Bird and Mammal Survey

We are currently recruiting interns to assist with the June and August 2021 re-surveys of Afognak and Shuyak Islands which was postponed in 2020 due to safety concerns and restrictions associated with the Covid-19 pandemic.

Education, Outreach, and Other Noteworthy Activity

Alaska Migratory Bird Calendar Contest

The Refuge sent an invitation to teachers and liaisons for students in Akhiok, Old Harbor, Ouzinkie, Port Lions, Larsen Bay and Karluk to participate in the 2022 Migratory Bird Calendar Contest. This year's theme is: “Birds in Languages and Stories”- in celebration of the ways birds communicate, ways people communicate about birds, and how we connect with each other.

The 2021 calendars are late in distribution, unfortunately, but rest assured we’ll mail them to rural communities of the Kodiak Archipelago when they arrive from Fairbanks. The Fish and Wildlife Service apologizes for the delayed calendar distribution, and sincerely appreciates all the teachers and students who worked so hard on their entries.

Two students, Demi Alexanderoff, Old Harbor, and Elijah McElewain, Port Lions, are among the many students that will be featured in the special 2021 poster calendar (Figures 5 & 6).



Figure 5. Demi Alexanderoff’s first-place entry for art in the 2nd-3rd grade category.

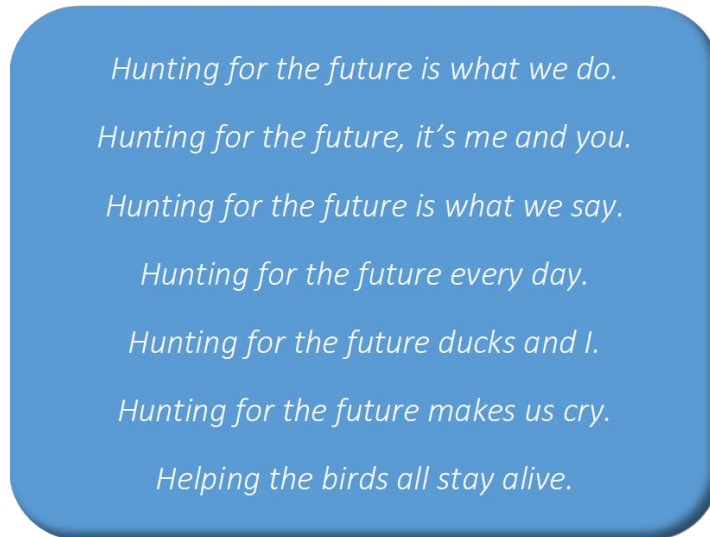


Figure 6. Elijah McElwain’s first-place entry for literature in the 3-5th grade category.

Kodiak Refuge Science and Summer Salmon Camp

In 2020, Kodiak Refuge staff did not visit any communities after March, and did not host its Salmon Camp program. Nonetheless we were able to send out camp shirts to students! Provided by camp partner Alaska Geographic, the shirts—featuring the phrase: “*Kodiak Salmon Camp ~ Together Apart, Together at Heart*”—were sent to all elementary school aged students in rural communities. If any student that wants a shirt did not receive one, please let us know (Michelle.Lawson@fws.gov).

Junior Duck Stamp Art Contest

In January, the Kodiak Rural School office invited the refuge to lead a program (by distance) for the Kodiak Rural Afterschool Art Club. Shelly Lawson, Education Coordinator, led a watercolor and bird drawing exercise and shared information about the nationwide Junior Duck Stamp Art Contest with students from Old Harbor, Ouzinkie, Chiniak and Akhiok.

Update on Refuge Personnel Vacancies

We regret to report that the RIT recruitment process has been suspended. Specifically, the Refuge was prepared to release the job announcement but the Service’s Regional Office said it needed to be deferred to October 2021 due to budget shortfalls.

We are pleased to announce the hiring of Erin Strand as the Refuge’s Volunteer and Outreach Coordinator. Originally from Washington State, Erin has also lived in Japan and the San Francisco bay area. She graduated from the University of Washington in 2019 with a degree in environmental science. Erin enjoys travel, origami, snowboarding, and anything that gets her out into nature.

Natalie Fath has been selected to fill the Refuge’s Visitor Center Manager position. This position has been vacant for several years, and Refuge staff are very much looking forward to having someone take the helm at the VC. Natalie comes from the National Elk Refuge in Jackson, WY where she co-managed a very popular inter-agency Visitor Center. Natalie's start date is still undefined, but she's expected to be on the job by early spring.

New Refuge Cabin Available for Public Use

Kodiak Refuge has opened a new Public Use Cabin on the west side of Kodiak Island (Figure 7). The property where the cabin is situated was purchased from a private party several years ago, and Refuge staff have been steadily making improvements on the existing structures. The Chief Cove Public Use Cabin is now available to the public, including rural residents of the Kodiak area. Reservations can be made at <https://www.recreation.gov/>.



Figure 7. Views of Kodiak Refuge’s public use cabin at Chief Cove located along the coast of western Spiridon Peninsula, Kodiak Island.