

Trip report: Cape Decision Lighthouse, August 10-19, 2012
Zac Hoyt, University of Alaska Fairbanks School of Fisheries and Ocean Sciences

“Fifty–one sea otters were re-introduced, approximately 50 km to the southeast of Cape Decision, in 1968. Almost immediately a small group of these otters moved north and began inhabiting the Spanish Island group, immediately southeast of Cape Decision. This area is ideal habitat for sea otters and was considered as a release site by biologist at that time. By 1973 over 30+ otters were observed in a skiff survey of the Spanish/Coronation Island area, and in 1975 48+ otters were present in the Spanish Islands. The population continued to expand in both distribution and numbers and by 1988 sea otters had distributed themselves as far north as Swaine Point on the western shore of Kuiu Island and throughout Afflack Canal to the east (see attached map). Sea otters have continued to expand their range in the region and it was estimated that in 2010 12,873 otters were distributed from Pt. Gardner to Cape Chacon in southern Southeast Alaska. This exponential increase in the sea otter population has led to conflicts with commercial and subsistence fisheries in the region as many of the sea otters preferred prey has a high commercial and subsistence value such as red sea urchins, California sea cucumbers and Dungeness crab.

To better inform this conflict a large collaborative study has been undertaken in southern Southeast Alaska with resources and funding coming from the University of Alaska Fairbanks, USFWS, Alaska Sea Grant, North Pacific Research Board, SARDF, ADF&G as well as other smaller groups such as the Cape Decision Lighthouse Association who have provided local help in a remote region. A portion of the larger study is to estimate and look at differences of sea otter diet along a gradient of sea otter persistence (how long otters have occupied an area). Therefore, Cape Decision and surrounding areas was an important location to access sea otter diet in areas in which otters have been present for nearly 40 years. It should be also noted that this area is not an area in which a significant history of shellfish fisheries existed.

During mid Aug. 2012, I lead a field crew comprised of Stena Troyer, Simone Barley-Greenfield and Sharon Tsetong to quantify sea otter diet on Coronation Island, the Spanish Islands, Afflack Canal and the southwest coast of Kuiu Island. We based ourselves at the Cape Decision Lighthouse Reserve during these field operations. Conditions were ideal for working on these exposed coastlines and we were able to collect 829 foraging dives in the area.

Foraging dives are recorded using a stop watch and high-powered spotting scopes from shore based vantage points. When a focal animal begins a foraging dive a stop watch is started and the dive is timed. When the otter returns to the surface the observer counts the number of prey items and size of the prey items in relation to the sea otters paw (see figure). The surface time is also recorded, or the time in which an otter takes to consume its prey and commence another foraging dive. This information allows us to calculate the biomass and energy recovered over time by a sea otter. Doing this on a population level allows us to identify differences in diet and energy recovery rate as it relates to the presence of commercial fisheries and sea otter persistence in the region.

The distribution of otters between Aug. 10th – Aug. 19th, 2012 was similar to the distribution from the last aerial survey flown by the USFWS in the summer of 2010. The density of sea otters is low in this region. Sea otters were observed in the embayment’s on the west and northern shore of Coronation island (only 1 otter was observed on the southern shoreline of Coronation Island), with only a few otters observed in the Spanish Island group and Cape Decision. The density of otter was very low from Cape Decision to Table Bay on the W coast of Kuiu Island, however the density of otters in Afflack Canal remained moderate with the largest concentrations observed near Point St. Albans (see attached map of location of foraging data). Although this data has not been analyzed as of yet the general consensus of the field crew is the diet was diverse and prey items were generally small and of low quality. Low prey availability may be a factor to the low density of otter in the area. A small mussel (<2 cm) that attaches itself to large kelps

was the most common prey item observed with many foraging dives resulting in 20-30 mussels consumed.