Version 1.1, 27 July 2016

Rhinoceros Auklet
Salish Sea Unusual Mortality Event
2016

Who:

Rhinoceros Auklet, *Cerorhinca monocerata*, is a medium-small (500-600 grams) fish-eating seabird that breeds across the North Pacific arc, from California north to Alaska and southwest down into Japan. Easy to recognize, breeding Rhinoceros Auklets have a chalky white horn on their orange bill, and white wispy whiskers and matching eye brows. In non-breeders and juveniles, the bill is dull orange-brown, and the horn is reduced to a bump (almost like a nose "breathing strip"). A relative of the more colorful, clown-like Tufted Puffin, Rhinoceros Auklets are actually puffins, and possess the signature "true puffin" characteristic - a pale (worn couch edge) stripe of feathers on the leading (forward) edge of the wing, above the wrist.

Population Size: ~2-3 Million

Population Center: Over 95% of the North American population occurs on eight islands in Washington, British Columbia, and southeast Alaska. In the Salish Sea, an estimated 72,000 Rhinoceros Auklets breed on Protection Island, making it the largest breeding colony in the region and one of the largest in the world.

Longevity: 20-25 years, max 28

Clutch Size: 1 egg annually

Diet: Rhinoceros Auklets are diving birds that specialize on small schooling fish. On Protection Island, their diet is dominated by sandlance. Most birds forage within a 50 km range of the colony.

Conservation: Rated "low concern" by most groups due to population size, distribution and positive trends in many locations, Rhinoceros Auklets are nevertheless susceptible to net-based fishery bycatch, coastal oil spills and introduced mammalian predators on some colonies.

What, Where and How Many:

Starting in late May 2016, the Coastal Observation and Seabird Survey Team (COASST), the British Columbia Beached Bird Survey (BCBBS) and Washington Maritime National Wildlife Refuge Complex (NWRC) personnel have reported Rhinoceros Auklets washing ashore on beaches ringing the eastern end of the Strait of Juan de Fuca, with a concentration of carcasses close to Protection Island (see Map). Several moribund (close to death) birds on the water and onshore have also been reported. To date (27 July 2016), almost 320 carcasses - both adults and juveniles - have been recorded.

The COASST baseline for this region (eastern Strait of Juan de Fuca) suggests that over the May-July season, only one (1) Rhinoceros Auklet would be found across all monitored beaches. During this same period in 2016, upwards of 40 carcasses have been found on COASST beaches.

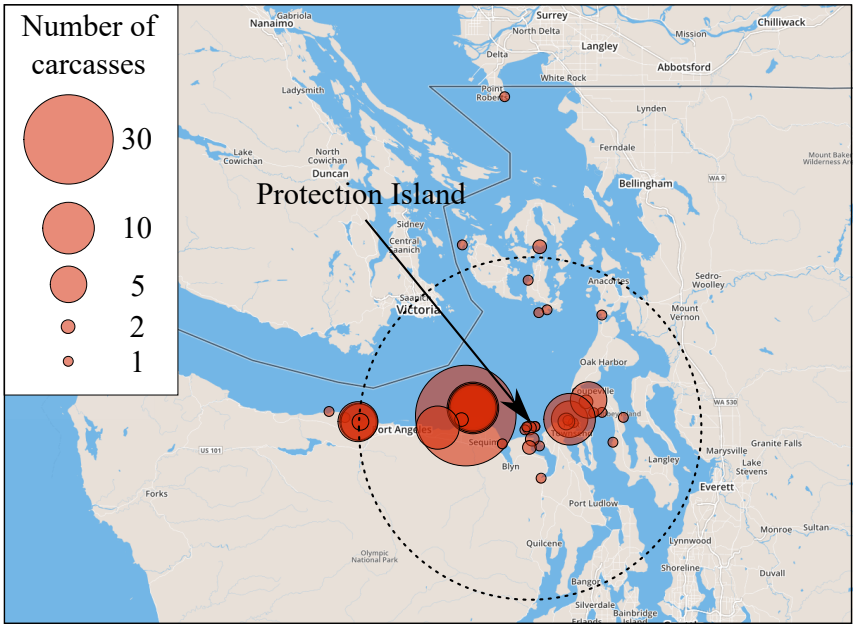

Figure 1. Map of the affected area, showing sites where Rhinoceros Auklet carcasses have been reported. Arrow points to Protection Island, the largest breeding colony of Rhinoceros Auklets in the region. Dashed circle indicates a 50km foraging range. Canadian data not included.

Data Collectors:

Two citizen science organizations totaling dozens of trained coastal residents linked to marine biologists at major scientific institutions working in the Salish Sea collect data on more than 80 beach sites monthly.

British Columbia Beached Bird Survey (BCBBS) – British Columbia, Canada
Contact: Karen Devitt, BCBBS, BCvolunteer@bcs-eoc.org; David Bradley, Bird Studies Canada, dbradley@bsc-eoc.org

Coastal Observation and Seabird Survey Team (COASST) – Washington State
Contact: COASST@uw.edu; Julia Parrish, Executive Director, jparrish@uw.edu; Hillary Burgess, Science Coordinator, hkb10@uw.edu

Additional data have been collected by tribal, state and federal agency personnel.

Washington Maritime National Wildlife Refuge Complex, USFWS
Contact: Sue Thomas, Wildlife Biologist, Sue_Thomas@fws.gov

Breeding Success:

Rhinoceros auklets are burrow-nesters that breed primarily on islands devoid of mammalian predators. Monitoring of the 2016 nesting season on Protection Island suggests lower than normal breeding success and a breeding season delayed by several weeks. Monitoring continues through August.

Contact Information:

Scott Pearson, Washington Department of Fish and Wildlife: Scott.Pearson@dfw.wa.gov

Cause of Death:

Rhinoceros Auklet carcasses were recovered from Dungeness Spit and sent to the USGS Wildlife Health Center for necropsy. Diagnostic findings include severe emaciation, bacterial pneumonia and likely starvation as the proximate cause of death. Successful breeding on Protection Island by tens of thousands of Rhinoceros Auklets suggests that a wholesale lack of food is not the problem. Tests for avian influenza and poisoning due to harmful algae (saxitoxin and domoic acid) are pending.

As always, untrained individuals should leave carcasses in place, and not try to bury, or remove, them.

Updates from previous version (1.0):

1. Body count increased as additional data were collected.
2. Map (Figure 1) reflects these additions.
3. Breeding season information updated. Status is negative relative to previous version.