



Protection Island Aquatic Reserve Implementation Committee Meeting Summary

Prepared by: Jamie Kilgo

Tuesday October 4th, 2016, 9:30 a.m. – 12:00 p.m.

Port Townsend Marine Science Center

PARTICIPANTS: Craig Wester (Admiralty Audubon); **Anne Murphy** (Jefferson MRC); **Torbin Blichfeld** (Sequim Bay Yacht Club & North Olympic Power Squadron); **Bob Boekelheide** (Olympic Peninsula Audubon); **Bob Steelquist** (local resident); **Penny Jensen** (Cape George); **Ross Anderson** (Cape George); **Jennifer Brown-Scott & Lorenz Sollmann** (Washington Maritime NWRC); **Betsy Carlson, Karlisa Callwood, Janine Boire** (Port Townsend Marine Science Center); **Megan Black** (Diamond Point); **Birdie Davenport, Kathy Jacobson, Betty Bookheim, Jamie Kilgo** (DNR).

9:30 a.m.

Introductions & Meeting Agenda

9:40 a.m.

A Tale of Two Puffins

Scott Pearson, Ph.D., WDFW Senior Research Scientist

Overview

- Rhinoceros auklets and tufted puffins are both burrow nesting puffins
- Destruction Island, Smith Island and Protection Island are all managed by US Fish and Wildlife Service

How many Rhinoceros Auklets (RHAU) burrows and how many are occupied?

- Protection Island – Difficult to compare 2010 to previous studies because there aren't enough details to replicate study. In 2010 there were 35000 burrows.
- Destruction Island – Number of burrows much higher in 1980 than in 2010, possibly due to rabbits
- Smith Island – Large increase in burrows from the 1970s to 2010, rabbits were removed

Rhinoceros Auklet diet

- In bad El Nino years, RHAU extend time in the burrow
- Protection Island – Diet less diverse than Tatoosh and Destruction Island populations
 - 1st Sand lance, 2nd Herring, some chum and pink salmon
 - Diet hadn't changed much since 1970s
- Destruction Island – Diverse diet, but some years anchovies become very important (2009, 2010)
- Tatoosh Island – Diverse diet

Rhinoceros Auklet diet comparisons & quality (Protection, Destruction, Tatoosh Islands)

- Quality – No big difference between islands (calories/gram)
- Prey size differences – Protection Island RHAU consume more fish because they depend on sand lance, which are much smaller

Rhinoceros Auklet breeding success

- Protection Island – In 2016 burrow occupancy was normal, good hatching success, then a decrease of fledging success (chicks emaciated and also diseased)
- Destruction Island – Normal burrow occupancy, hatching and fledging success

Tufted Puffins overview

- Species of concern
- Population declines in CA, OR, WA
- In Washington - listed as endangered
 - 14% decline outer coast
 - 17% decline Tatoosh Island
- Most colonies in Washington are located in National Wildlife Refuge (except Tatoosh Island)
- Very small percent of global population (.8%)
- Monitoring methods Tatoosh Island – burrow monitoring, colony attendance patterns, and historical boat based surveys

Overall Tufted Puffin and Rhinoceros Auklet summary

- Population – RHAU increase, Tufted Puffins decrease
- Reproductive success - RHAU increase, Tufted Puffins decrease
- Diet quality - RHAU neutral, Tufted Puffins unknown

* Tufted Puffins are scared away more easily, so you have to take that into account

Possible mechanisms for decline

- Avian predators, such as bald eagles
- Avian kleptoparasites, such as frigate birds and gulls
- Diet
- Human disturbance
- Contaminants and pollution
- More and more harmful algal blooms

Future directions

- Refine methods for assessing trends
- Resume and expand breeding season monitoring
- Assess role of the diet
- Work with partners on range-wide meta-analysis
- Disease

Unusual mortality event in 2016

- Dead bird event in Puget Sound June to August (RHAU when breeding)
- Dead birds event moved to outer coast July to September
- Sometimes see die offs in the outer coast (2012), but never seen in Puget Sound
- Necropsies showed:
 - US: Many birds were emaciated and had pneumonia
 - BC: Not emaciated, but did find pneumonia
 - Disease screening may be more important in the future

Discussion of several effective citizen science bird surveys

- COASST is very well done with effective training and materials
- Puget Sound seabird surveys by Seattle Audubon
- Pigeon Guillemot surveys on Whidbey Island and expanded to South Sound

11:00 a.m.

Aquatic Reserves Program Update

Birdie Davenport, Betty Bookheim, Kathy Jacobson, Jamie Kilgo

- **Outreach and Education** – DNR hosted a booth at the Dungeness River Festival Sept. 23 – 24
- **Kelp monitoring** – The Aquatic Reserve program will continue to work closely with the DNR Nearshore group and support their work in the Protection Island Aquatic Reserve.
- **Protection Island CSC contract and work plan** – The Port Townsend Marine Science Center is the committee fiscal sponsor. Contract has been signed and preliminary work plan developed. There is currently about \$19,000 in the grant for Protection Island Citizen Committee
- **All-reserve Citizen Stewardship Committee meeting** is November 10th, 2016 at North City Water District, 1519 NE 177th St. Shoreline, WA
- **Data Sharing** - Aquatic Reserves Program public map viewer is currently in the demo stage and hope it will be publicly available in October or November.
- **Lake Kapowsin** was designated as the first freshwater aquatic reserve on September 22nd, 2016
- DNR is considering closing terminal 'cutout' at Cherry Point Aquatic Reserve
- Protection Island Aquatic Reserve will be added to the Citizen Stewardship Committee website and we will be looking for input on content www.aquaticreserves.org

11:00 a.m.

Summary of citizen science project planning discussion

Betsy Carlson, Port Townsend Marine Science Center

First Steps:

- Decide two projects that are realistic this year
 - Suggestion: instead of 2 projects, perhaps just add more dimensions to the boat surveys
- What are the essential questions that we want answered? May want to think of this as planting a seed since there is only \$19,000.
- What is the purpose? Baseline data?
- What are the management issues and questions? What are the most important questions from a management perspective?

Things to consider:

- Make sure that protocols are rigorous enough to replicate or use existing methods so that changes over time can be monitored.
- Do we have a reliable pool of volunteers?
 - Yes, Port Townsend Marine Science Center and the Refuge have 150 active volunteers that always looking for more opportunities to get involved in science
- Training is extremely important, for example the Cherry Point citizen group has extensive training and limits identification to a suite of 11 seabird species
- Future funding is directly connected to the quality of the question
- Would be good to tie in with WDFW since they look at broad questions

Project discussion:

- Boat-based surveys to monitor bait balls, feeding flocks, and marine mammals
 - Objective: Bait balls act as concentrators, what is the size and frequency of bait balls over time?
 - WDFW does boat-based transect surveys
 - Estimates distance of bird from the boat to measure of abundance –
 - Rigorous protocols that require testing observers weekly on estimating distances
 - For citizen science projects it is better to have distance and group size bins
 - Could do a transect, but may not have enough volunteers able to identify species, could narrow the groups down to small or large gulls
 - Determine presence/absence and abundance, then model species. This helps in the event of an oil spill. Must have good transects, the bigger the better.
 - Frequency: 3 visits/winter
 - WDFW does aerial pinniped population surveys. May be hard to monitor haul outs from a boat.
 - Explore possibility of using the sanctuary vessel in the winter
- Could we study the gull die-offs?
 - COASST surveys would be useful and could do more frequent surveys during die-off event
- Green crab monitoring is currently done at Dungeness Spit. Very useful project.
- Outreach and education
 - The other half of the grant is education and outreach and training.
 - USFWS receives requests to give presentations all the time. Citizen group could put together a presentation about the reserve and give presentations upon request.
 - Give presentation to the power squadron and the yacht club to recruit volunteers.
 - Message: "Protection Island is the most important island for birds in the Salish Sea"

Action Items & Next Steps:

- DNR determine what sort of insurance and boat operator training would be required. Can the grant provide funds for fuel?
- Email grant to the group
- Get the boat transect survey protocols from WDFW
- Form a caucus that meets more regularly to plan citizen science projects (contact Betsy Carlson to get involved)

11:55 a.m.

Partner updates

- Jefferson MRC has been conducting WDFW forage fish beach spawning along with restoration monitoring
- Sequim High School student is currently doing a light and turbidity project in Sequim Bay
- USFWS Northwest Maritime:
 - Green crabs monitoring at Dungeness Spit
 - Leaping Frog Films working on a documentary of Elwha restoration and can share the trailer - there is a short clip with Eleanor
 - Able to get some aerial video of Protection Island

Noon- Adjourn