

# Uncovering the secret world of a secretive seabird

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OREGON MARBLED  
MURRELET PROJECT

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## DISCOVERY OF A NEST AND THE DOWNY YOUNG OF THE MARBLED MURRELET

LAURENCE C. BINFORD, BRUCE G. ELLIOTT, AND STEVEN W. SINGER



Andrew Theen/The Oregonian

## State reverses itself, declines to list marbled murrelet as endangered

Updated Jun 8, 2018; Posted Jun 8, 2018



A pair of marbled murrelets. (Aaron Barna/U.S. Fish and Wildlife Service)

# Three focal questions for today



**Why are Marbled Murrelets so peculiar?**



**How do you go about finding their nests?**



**What are we learning about Oregon murrelets?**

# Murrelets are widespread along the Pacific NW coast



Long-lived and lays only 1 egg/nest

Cruising speed is 60–70 mph

Eats forage fish and invertebrates



# The murrelet is a species of auk, an ecologically important group of seabirds



All auks forage in the ocean for their food

















# The murrelet nest cycle is long and they are very secretive at nests to reduce nest predation

Single egg incubated  
for ~4 weeks



Chick fledges from  
nest in ~4–6 weeks





# Corvids are thought to be the most important predators of murrelet nests



# Nesting data are limited, yet critical for recovering Oregon murrelet populations

>6,500,000 acres of “habitat-capable” forest lands in Oregon

Only 29 active nests located prior to 2018



**OREGON MARBLED  
MURRELET PROJECT**



# Science Team for the Oregon Marbled Murrelet Project



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**How do you go about finding murrelet nests?**





**R/V PACIFIC STORM**  
Oregon State University





Jaymi Heimbuch





USDA RESEARCH

US



















# Coastal telemetry stations

Pacific City → Florence (~85 miles)

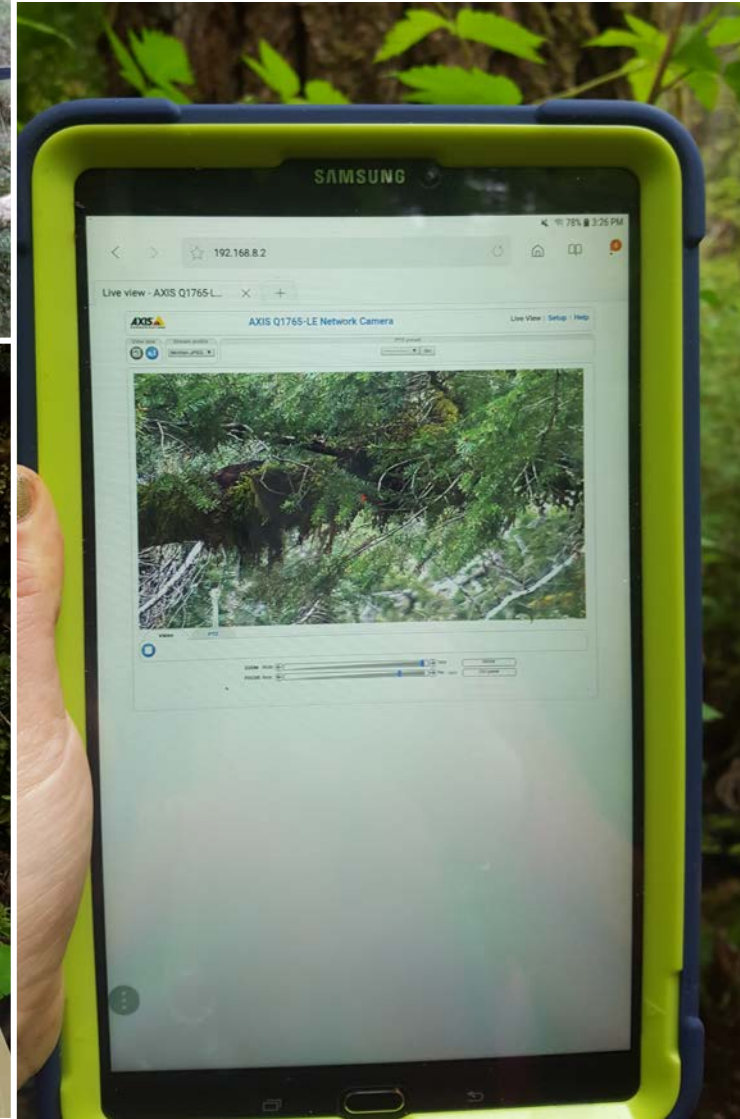












Brett Lovelace/OSU





**What are we learning about murrelets in Oregon?**

# Capture locations for mid-April through May 2017

Captured 73 murrelets

Tagged 61 with VHF tags





# Many tagged birds undertook unprecedented movements along the Pacific coast

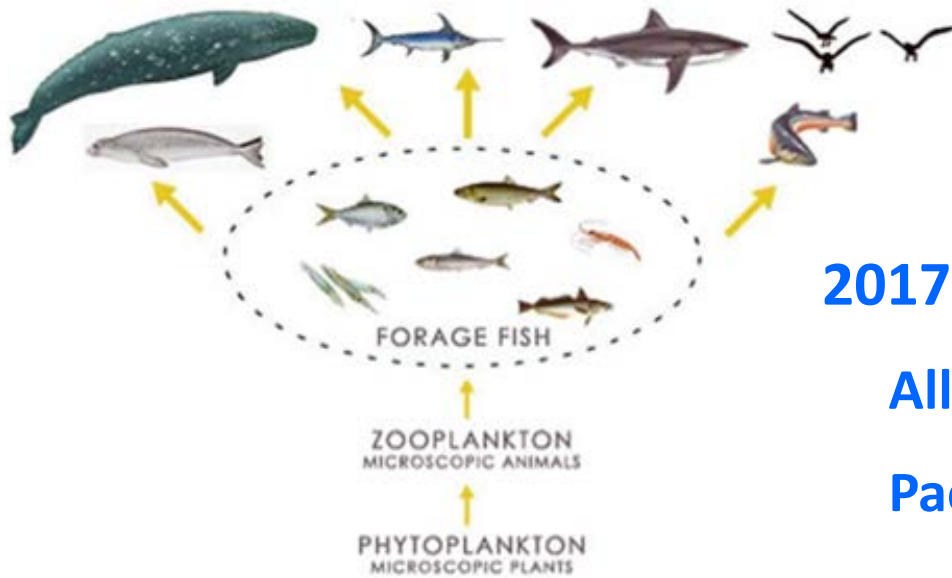
No tagged birds nested, apparently due to poor ocean conditions

Some individuals moved >350 miles from tagging locations

Significant implications for at-sea population monitoring



# Warm water conditions during May and June coincided with reduction in forage fish



**2017 NOAA ocean surveys:**

**All-time record low salmon catch**

**Pacific herring, smelt at low levels**

**Pacific herring**

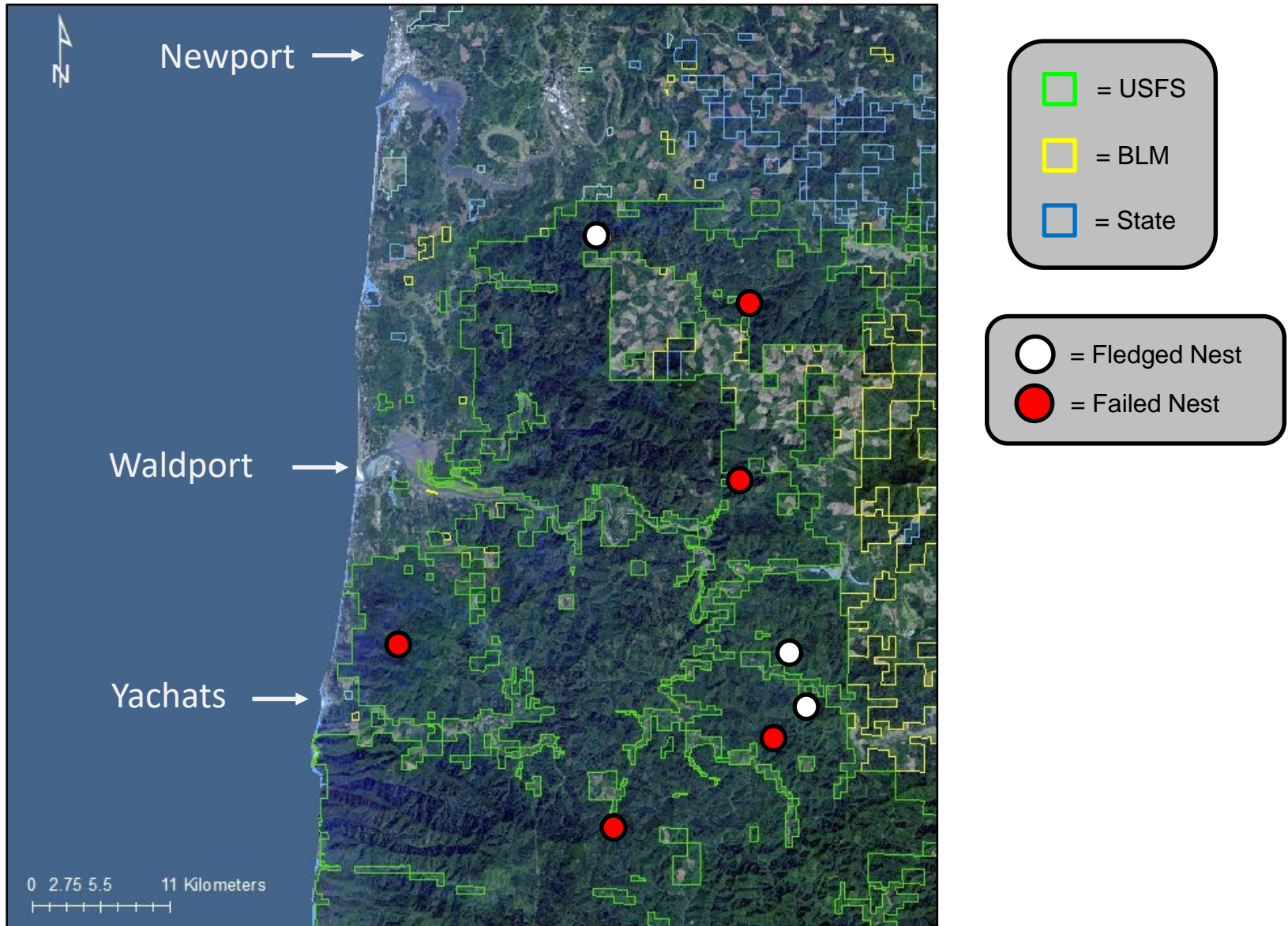


**Surf smelt**



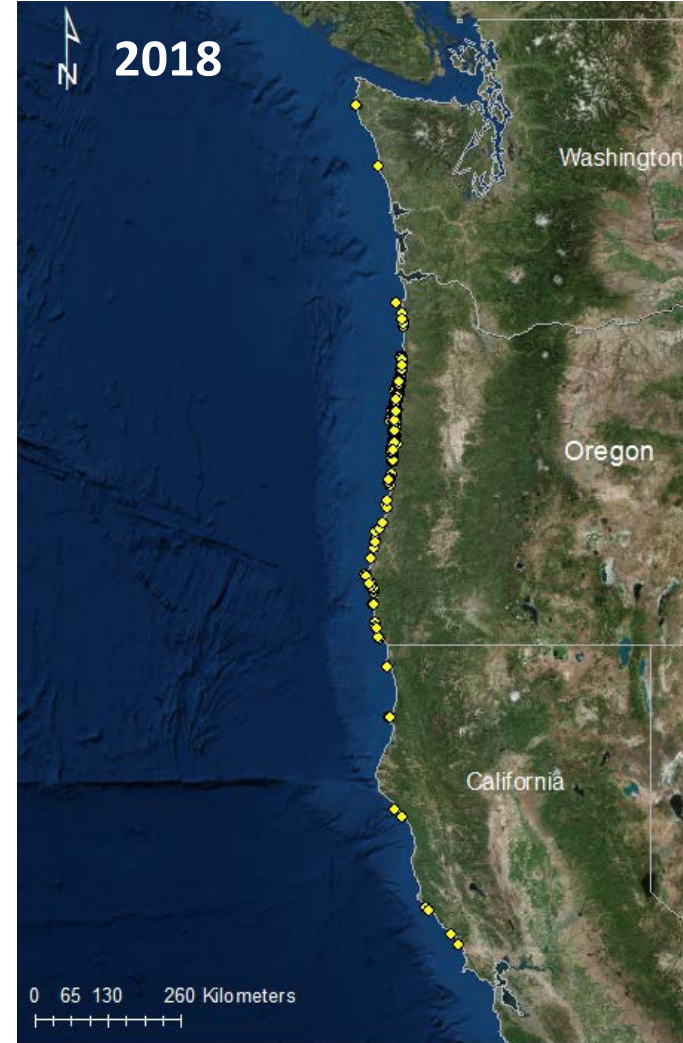
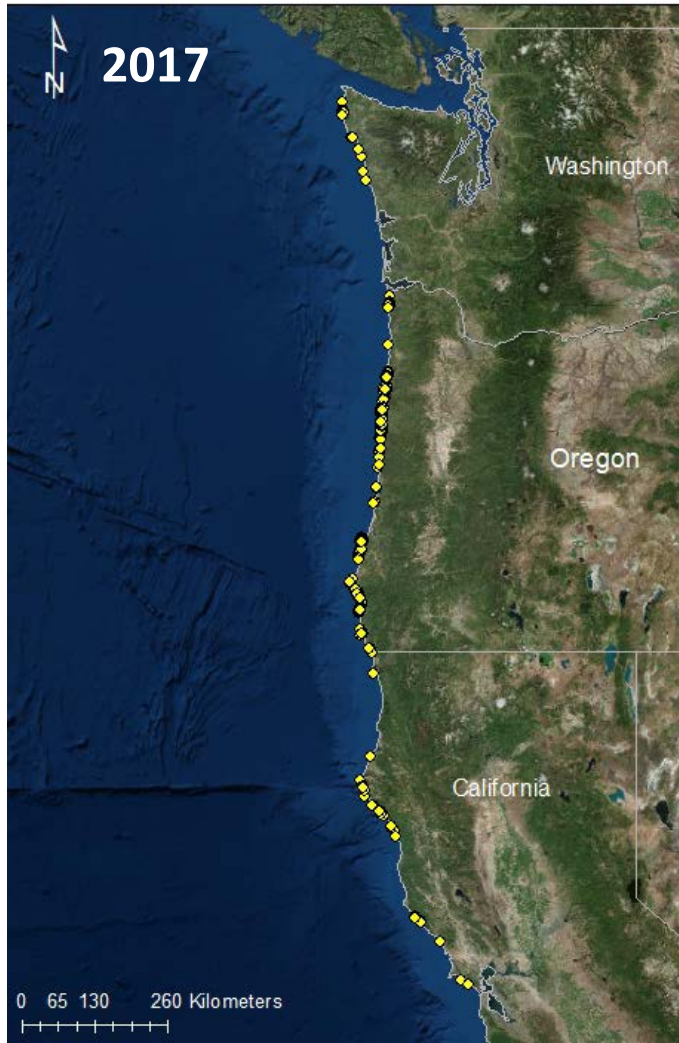


# 8 active nests located in 2018, an increase of 28%



# Radio-tagged murrelets made long-distance movements in both years

● = 1 bird-day location





















# Egg incubation behavior

# Parental exchange during egg incubation



# Brooding of recently hatched chick

# Food provisioning behavior to chick



# Unexpected nest visitor

# Take-home points from the OR Marbled Murrelet Project

**↑ in number of active nests in Oregon by 28% during 2018**

**New information is emerging on:**

**Diversity of tree species used for nesting, types of nest predators**

**Importance of ocean conditions for nesting and inland movements**

**Within-season movement between survey areas**





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# OREGON MARBLED MURRELET PROJECT

[www.oregonmurrelet.org](http://www.oregonmurrelet.org)

*Science to inform conservation and  
management of Oregon's coastal forests*