

Status Update on the College of Forestry Dean's Research Initiative: The Oregon Marbled Murrelet Project

Jim Rivers, College of Forestry, OSU

Matt Betts, College of Forestry, OSU

Kim Nelson, Dept. Fisheries and Wildlife, OSU

Dan Roby, USGS-Oregon Cooperative Fish and Wildlife Research Unit



Kim Nelson



Science Team for the Oregon Marbled Murrelet Project



Dr. Jim Rivers

Professor
CoF, OSU

*Bird demography and
forest management*



Dr. Matt Betts

Professor
CoF, OSU

*Landscape ecology
and forest
management*



Kim Nelson

Senior FRA
FW, OSU

*Marbled Murrelet
ecology and conservation*



Dr. Dan Roby

Unit Leader and Professor
USGS and FW, OSU

*Seabird ecology and
conservation*



The OMMP Science Advisory Committee was convened to ensure scientific credibility



Dr. Marty Raphael

**Emeritus Scientist
US Forest Service**

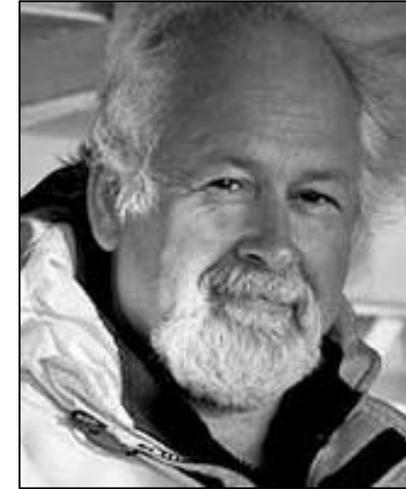
*>25 years of murrelet
population ecology research*



Dr. Alan Burger

**Adjunct Professor
Univ. Victoria, B.C.**

*>25 years of murrelet and
seabird ecology research*



Dr. John Piatt

**Research Wildlife Biologist
USGS, AK Science Center**

*>35 years of murrelet and
seabird population research*



The OMMP Project Advisory Committee was convened to ensure stakeholder relevance



Jake Verschuyf

**Director of Forestry
Research**

***National Council for
Air and Stream
Improvement***



Esther Lev

Executive Director

***The Wetlands
Conservancy***



Seth Barnes

Director of Forest Policy

***Oregon Forest &
Industries Council***



Nick Palazzotto

Wildlife Biologist

***Oregon Department
of Forestry***

The Institute for Working Forest Landscapes

Timely, Relevant, and Credible Science



Murrelets are unique among North American seabirds



- Eat forage fish and invertebrates**
- Long-lived and lays only 1 egg/nest**
- Can move >40 miles inland to nest**



Brian Taggart/OSU

Nesting data are limited, yet critical for recovering Oregon murrelets

Potential nesting habitat in Oregon: >6.5M acres

Only 29 active nests located prior to 2017

Nesting platform
(Tillamook, OR)



OREGON MARBLED
MURRELET PROJECT



Component #1. Landscape-level modeling of murrelets and their key nest predators



**Dr. Joe
Northrup**

**Dr. Sophie
Garcia-Heras**

**Available data from OR, WA, and CA:
occupancy: >85,000 MAMU surveys
at-sea surveys: 2001-present
nest predators: 1984-2012**

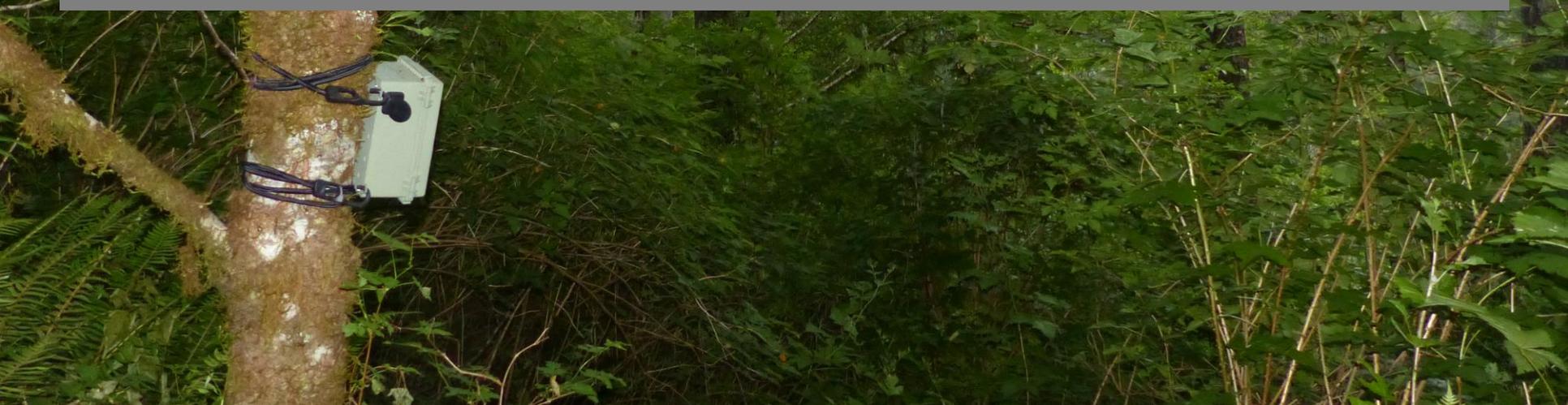
Papers in progress:

- 1. Habitat, climate, and corvids on murrelet abundance and distribution**
- 2. Assessing habitat loss and fragmentation on murrelets**

Component #2. Testing the role of social attraction in murrelet habitat selection

Paper in progress:

1. Post-breeding season social cues induce settlement by Marbled Murrelets



Component #3. Intensive demographic monitoring to quantify reproductive success

Nest success and
population
recruitment

Interactions
between marine
and terrestrial
environments

Terrestrial
habitat use and
nest-site
selection

Individual health
parameters and
population
genetic structure







Matt Betts

AGENDA ITEM A
Attachment 4
Page 13 of 25



Oregon State University
College of Forestry



Jaymi Heimbuch



Coastal telemetry stations

Pacific City → Florence (~75 miles)





Chelsea Hutton/OSU



Tagged birds provided unprecedented conservation-relevant insights in 2017

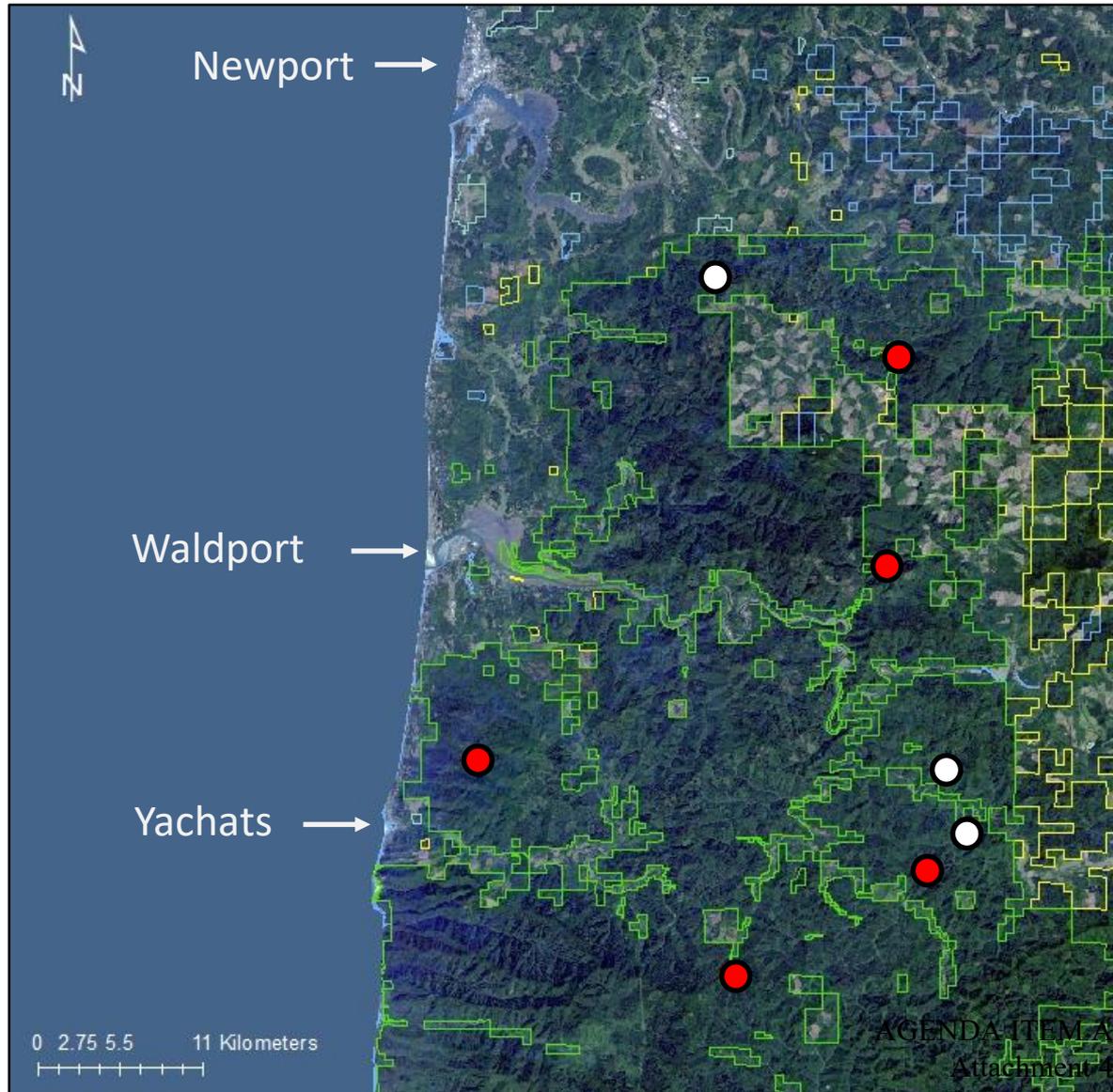
No tagged birds nested, apparently due to poor ocean conditions

Some individuals moved >350 miles from tagging locations

Significant implications for at-sea population monitoring



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



-  = USFS
-  = BLM
-  = State

-  = Fledged Nest
-  = Failed Nest



First record of a Red-tailed Hawk causing nest failure



First record of a nest in a big-leaf maple within the U.S.

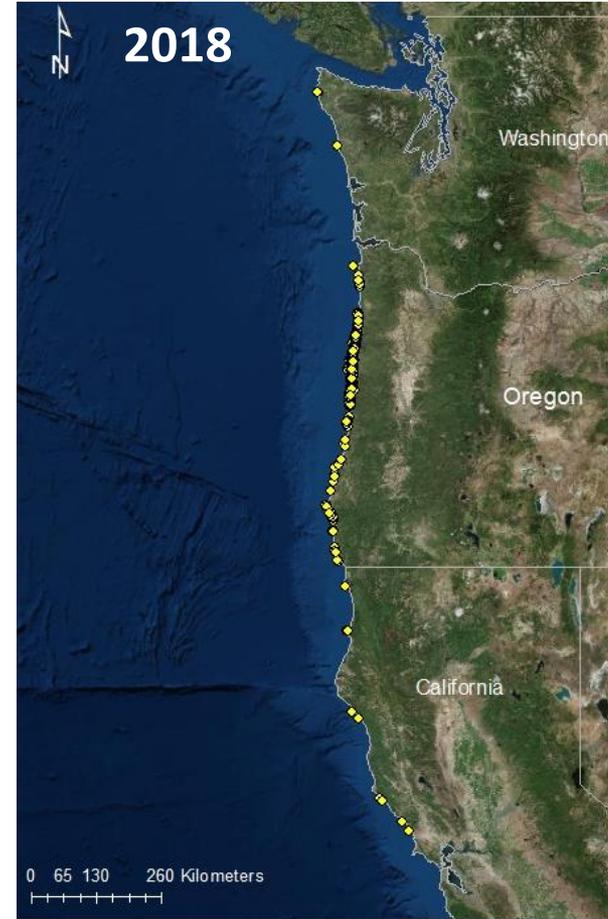
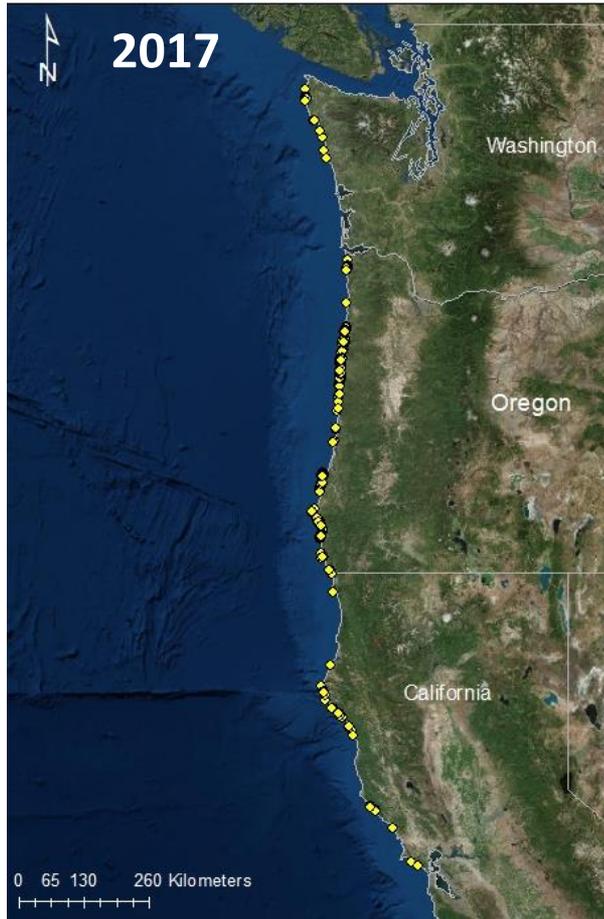


Brett Lovelace/OSU



Tagged murrelets made long-distance movements in both years

● = 1 bird-day location



Key findings to date regarding Oregon murrelets

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

New information is emerging on:

Diversity of nest predators, tree species used for nesting

Importance of ocean conditions for nesting activity

Within-season movement between survey areas



Brett Lovelace/OSU



Timeline of the Oregon Marbled Murrelet Project

Short-term goals

Conclude spatial modeling and social attraction studies

Mid-term goals

Continue data collection on space use and reproduction

Assess role of ocean conditions on occupancy and nesting

Long-term goals

Evaluate forest management effects on nesting activities





OREGON MARBLED MURRELET PROJECT

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

