

IMPACTS OF MANAGEMENT ON FOREST BIODIVERSITY

A McIntire-Stennis supported project



Oregon State University

PROJECT

Marbled murrelets can serve as an important indicator species for both healthy forests and healthy marine environments, as this small seabird gets its food sources from marine waters but commutes many miles inland to late-successional and old-growth forests to breed.

Murrelets are found along the coasts from Alaska to Central California. Their population has declined significantly from historic levels and they are now listed as a “threatened” species under the federal Endangered Species Act in California, Oregon and Washington. The reasons for their decline are due largely to the loss of older forests needed for breeding, and much remains unknown about this bird and the factors that influence populations. This knowledge gap has made it difficult to develop best practices for protecting murrelet nesting habitat, particularly around how different management activities will affect the marbled murrelet and its habitat within working forest landscapes.

The knowledge gap has been further challenged by the cryptic breeding behavior of the murrelet, which is difficult for researchers to track and observe.

Oregon State University Assistant Professor Jim Rivers is leading a research project to build knowledge about marbled murrelets, so conservationists and forest managers can better understand the factors that limit reproduction in coastal forests. This research will provide more certainty about how murrelet breeding ecology is influenced by factors such as ocean warming and timber harvest practices within actively managed forest landscapes. This information could help forest managers implement measures to conserve murrelet populations, while also practicing active forest management that allows for timber production.

The team of researchers has been conducting field investigations to collect data and observations about the murrelets’ breeding behavior, habitat and nesting needs, and the greatest threats to their reproductive success.

COLLABORATION

Oregon State University is partnering with many other groups on this project, including the USDA Forest Service, the Bureau of Land Management, the Oregon Department of Forestry, The National Council for Air and Stream Improvement, the forest industry, and the environmental community.



Photo: Brett Lovelace/OSU

IMPACT

This research will provide foundational knowledge about the marbled murrelet population and its habitat needs in its listed range. In turn, this will help inform forest management and conservation decisions to better protect this threatened species – while also allowing for timber harvests and other forest management activities in Oregon. This research will also offer insights into how to enhance ecosystem health across landscapes, including forest and marine biodiversity.

About McIntire-Stennis

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.

