AMERICAN BIRD CONSERVANCY

Marbled Murrelet Habitat Assessment: Coleman Creek Property

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Background:

American Bird Conservancy (ABC) is working to conserve Marbled Murrelets in Oregon and across the Pacific Northwest. As part of this effort, ABC is supportive of property acquisitions that will provide this species with the late successional and old-growth forests it requires for nesting. In February of 2023, a board member of the Cape Meares Community Association (CMCA) contacted Lindsay Adrean, ABC's Northwest Program Officer, with a request for more information on the Marbled Murrelet and guidance on whether this species could benefit from the Coleman Creek property acquisition the CMCA was considering. After reviewing the project maps and Rapid Habitat Assessment, Lindsay toured the property on May 12, 2023, traversing a two-mile loop. The adjacent property already under ownership of the CMCA, the Cape Meares Community Forest, was then toured by Lindsay on July 5, 2023.

Site Report:

As reported in the Rapid Habitat Assessment, the Coleman Creek property consists of young forested stands with a mix of Sitka spruce, western hemlock, and red alder, consistent with the native tree community commonly found in this region of the Oregon Coast. The Community Forest also supports these tree species. Although the current forest on both properties does not provide the structure needed by Marbled Murrelets, Sitka spruce and western hemlock are commonly used for nesting by the Marbled Murrelet. Murrelet occupancy has been recorded at the Cape Meares National Wildlife Refuge, bordering the Community Forest, and large stumps of hemlock and spruce on these properties indicate that past conditions likely supported Marbled Murrelet nesting as well.

The Coleman Creek property has a history of timber harvest and replanting, but does not appear to have had any ongoing management since the last planting. This is reflected in the existence of old logging roads and areas of forest where the trees are very dense and there is little undergrowth (see Figure 1).

This appears to be the case for the Community Forest as well. In addition to openings created by old logging roads, there is also a history of landslides in the area which have created openings in the forest canopy. Although continuous forest patches are often considered to be the gold standard for wildlife habitat, recent research suggests that canopy openings allowing additional sunlight exposure can be beneficial in creating the large lateral branches needed by Marbled Murrelets for nesting. Habitat restoration techniques may be needed to improve the ability of the densest stands to mature into more beneficial habitat. Development of a restoration plan for these properties should include consultation with regulatory agencies and integrate recommendations from the document "Terrestrial Habitat Management Recommendations for Marbled Murrelets" produced by the Pacific Seabird Group.

It is also worth noting that dwarf mistletoe infestations exist on at least one western hemlock within the Coleman Creek property, several hemlocks on the Community Forest property, and on numerous hemlocks in the adjacent residential area of the village of Cape Meares (see Figures 2 and 3). Marbled Murrelets have been known to use the deformities caused by dwarf mistletoe infestations as nesting platforms; this is another indication that these properties hold potential for future murrelet nesting.

Two Marbled Murrelet nest predators were detected during the Coleman Creek property tour, the Steller's Jay and American Crow. It is likely that the Common Raven is present as well. Bald Eagles and Peregrine Falcons, which can prey on adult murrelets, are known to nest in the vicinity of the wildlife refuge. All of these species are natural nest predators that are expected to overlap with murrelet breeding areas, but their presence will need to be taken into consideration as murrelet restoration decisions are made for this site.

Regional Context:

Murrelet habitat along the northern Oregon coast has been greatly fragmented and at-sea densities of these birds are lower overall than along the central and southern coasts. Because the bulk of the state breeding population is now concentrated on only a few land ownerships to the south, maintenance and restoration of habitat along the north coast is critical to increasing the resiliency of the species. One stochastic event such as a large wildfire could reduce existing tracts of habitat and further impede

recovery of this species in Oregon. The Tillamook area has maintained comparatively low but relatively stable at-sea numbers of murrelets since the early 2000s, indicating that murrelets are successful in the breeding habitat that exists. These birds would provide a source population as new local habitat is created. To the north, numbers of at-sea murrelets are even lower, further underscoring the importance of the Tillamook area, including Cape Meares, in sustaining and rebuilding the population along the north coast.

Marbled Murrelet occupancy was recorded at the Cape Meares National Wildlife Refuge in the late 1990s. Surveys have not been conducted here in the last two decades, although nesting habitat persists. Annexation of the Coleman Creek property and adjacent Cape Meares Community Forest property to the wildlife refuge has been proposed. This would increase the amount of murrelet nesting habitat in the refuge over time and benefit murrelets in the near term by preventing creation of new edge habitat that would result from timber harvest. While the refuge currently provides nesting habitat, this is a relatively small parcel at 150 acres. The Marbled Murrelet typically nests solitarily, not in dense colonies like other relatives in the auk family. Because of this, larger habitat patches are needed to support additional breeding pairs. Larger patch sizes also decrease the amount of habitat subject to edge effects that can negatively affect murrelet nest success, such as microclimate changes and vulnerability to predation.

Recent research has shown that Marbled Murrelet vacancy rates are lowest at forest sites with closer proximity to the ocean and higher proportions of mature forest. The same study also found that vacancy rates increase in years of warmer, less productive ocean conditions. The Coleman Creek property is a coastal site and the proposed expansion of the refuge has the potential to more than double the amount of coastal nesting habitat here. Cape Meares may provide foraging opportunities even in poor ocean years due to the proximity of Three Arch Rocks, estuary plumes from Nehalem, Tillamook, and Netarts Bays, and upwelling on the south side of Cape Lookout.

Summary:

The Coleman Creek and Cape Meares Community Forest properties do not currently contain suitable Marbled Murrelet nesting habitat, but the history of the sites and the current species composition

indicate that future conditions would be likely to support murrelet nesting. The proximity of these sites to the Cape Meares National Wildlife Refuge, where suitable murrelet habitat does currently exist, further increases the current and future value of these sites to the species. Large patches of contiguous forest can buffer some of the edge effects experienced by smaller patches, even at varying ages. If the Coleman Creek property is acquired, consultation with a professional forester as well as the Pacific Seabird Group Marbled Murrelet Technical Committee should inform the design of a habitat management plan that would foster future late successional and old-growth conditions. This site contains many of the ingredients needed for a high probability of use by Marbled Murrelets as the forest matures into appropriate habitat. American Bird Conservancy strongly supports this acquisition.

Figure 1. A young stand of dense trees on the Coleman Creek property.

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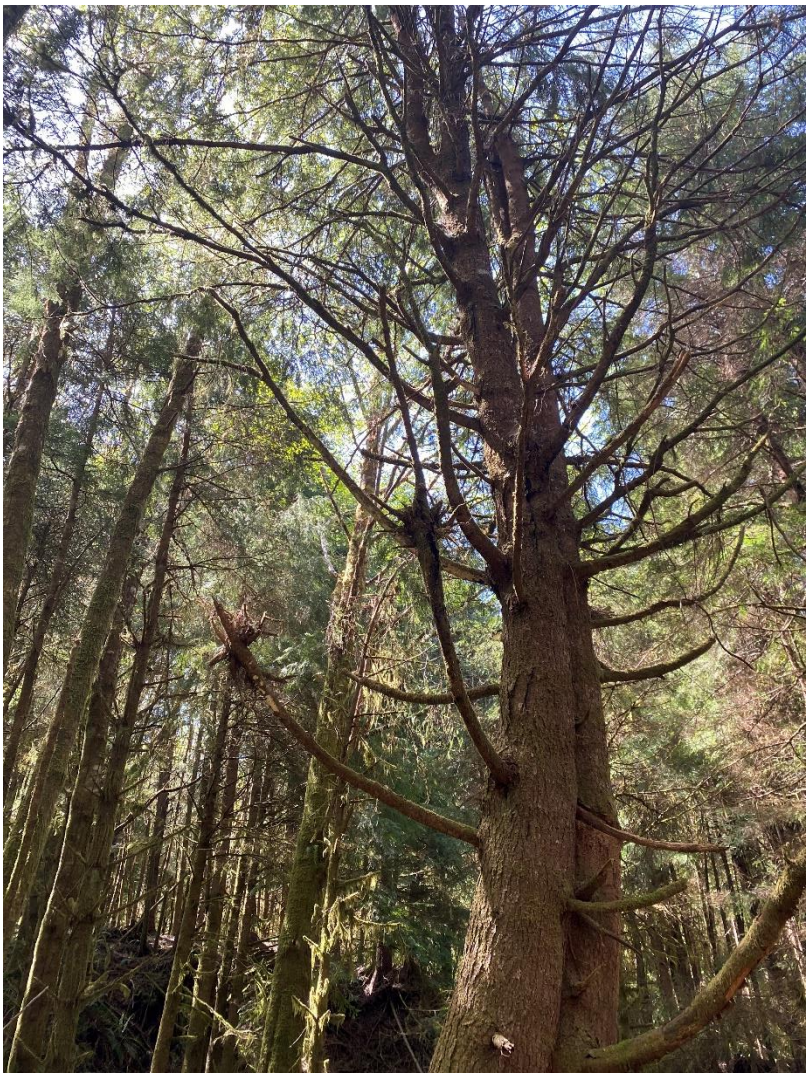

Figure 2. Dwarf mistletoe infestations on a western hemlock on the Coleman Creek property.

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Figure 3. Dwarf mistletoe infestations on western hemlocks within the residential area of Cape Meares.

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