College of New Caledonia
CNC
Research Forest

Monitoring of Wildlife Activity among Constructed Coarse Woody Debris Corridors

Project Summary and Preliminary Findings

INTRODUCTION: The enhancement of habitats disturbed by forest harvesting is of increasing importance as the ratio of managed, young forest to mature, natural forest continues to increase. Since 2017, the College of New Caledonia's Research Forest has constructed coarse woody debris (CWD) wildlife corridors within cutblocks, connecting stands of mature forests across harvested areas. Originally designed to facilitate the movement of marten and other small mesocarnivores, wildlife corridors are compiled of large CWD pieces spanning a distance no greater than 200m. In 2018, additional small, single piles approximately 5-10m wide and 2-3m tall were constructed to enhance habitat near cutblock edges. All piles were constructed with entrance/exit logs placed at varying angles to facilitate access during winter months.

OBJECTIVES: This study is intended to assess the effect and value (in terms of notable wildlife uptake and use) of implementing coarse woody debris piling treatments located near forest edge or connecting forest edges.

METHODS: Upon consultation with Dexter Hodder (John Prince Research Forest), remote cameras were installed to capture wildlife activity on CWD structures, and in both the adjacent reserve and cutblock habitat in an effort to determine wildlife diversity at study locations. Seven sites were monitored in 2018, monitoring activity in 5 Research Forest Units. Altering the sampling design to include an additional camera monitoring activity in cutblock habitat 100m+ from a forested edge, 5 sites were monitored in 2019, with continued monitoring of 4 of the previous, 2018 sites.

RESULTS: The findings obtained from both the 2018 and 2018 monitoring season are as follows:

- Notable diversity of wildlife attracted to the immediate area of the CWD treatments.
- Species including (but not limited to) black bear, grizzly bear, wolf, coyote, red fox, marten, porcupine and lynx were recorded throughout the 2018/2019 monitoring seasons. Bird species (sp.) including Steller's jay, black-backed woodpecker, varied thrush, ruby-crowned kinglet and Townsend's warbler were also noted.
- In 2018, 35 wildlife sp. were captured on camera, including 22 bird sp. and 8 predator sp. In 2019, 15 sp. including 7 bird sp. and 4 predator sp. were recorded. Highest sp. diversity was noted in forest reserves, with 23 sp. recorded in 2018 (16 bird sp., 4 predator sp.) and 8 sp. recorded in 2019 (1 bird sp., 3 predator sp.)
- In 2018, the highest number of sp. diversity (birds, mammals) was found in D-3 (11 sp. recorded) at both the reserve and corridor/pile. High sp. diversity was also noted in B-1 (2018), with 9 sp. found in both the reserve and corridor/pile. In 2019, 4 sp. were recorded in the reserve in D-3. 3 sp. were detected on the cutblock camera, 2 sp. at the corridor/pile and 1 sp. at the 100m+. In B-1, 4 sp. were detected at the corridor/pile, 2 sp. were recorded at both the reserve and cutblock site and 3 sp. were detected at the cutblock 100m+ site.
- An increase in wildlife was noted among the reserve in G-8 (2019), in which 3 sp. were detected (2018, 2 sp. recorded). Significant use of the wildlife corridor among marten was noted at this site

From left to right: Observed in the 2018 monitoring season: Red fox with prey in B-1, Bull moose in B-1, Porcupine in G-10, Grey wolf in E-7 and Black bear with cub in D-3