6. A Nest of a Lewis's Woodpecker

1) Definition

A nest of a Lewis's Woodpecker (*Melanerpes lewis*) means the nest and its supporting structure that either (1) is currently occupied by a Lewis's Woodpecker to hold its eggs or offspring, or (2) is habitually occupied and still capable of holding eggs or offspring of a Lewis's Woodpecker. Figure 21 shows typical ponderosa pine nest trees.

Figure 21. Lewis's Woodpecker nest trees. (Photos: John Cooper)

2) Species Description

The Lewis's Woodpecker is a medium-sized woodpecker. Adults are mostly greenish-black on the head and back with a red face patch, pinkish belly, and gray collar and breast (Figure 22). Both male and female are similar in appearance; juveniles resemble adults but are duller in colour.

In British Columbia, Lewis's Woodpeckers breed locally at lower elevations throughout the southern Interior, from Williams Lake in the north, east to Invermere, west to Lillooet and Lytton, and south to the United States border. Before the 1960s, Lewis's Woodpeckers bred on southern Vancouver Island and the lower Fraser River valley; this Georgia Depression population has since been extirpated. Across their range in British Columbia, Lewis's Woodpecker populations are in decline.

Clearing of mature ponderosa pine forests, urbanization, and agricultural development of lower valley slopes are the primary threats for Lewis's Woodpecker. In addition, wildfire suppression has led to the development of dense forest stands and an associated reduction of fire-maintained, open-canopy ecosystems; livestock grazing in valley-bottom habitats has reduced deciduous shrub cover. Both of these conditions represent poor habitat characteristics for Lewis's Woodpecker. Another threat is the expansion in range of invasive species, such as European Starling, which compete with Lewis's Woodpeckers for nest cavities.

Lewis's Woodpecker is a *Species at Risk* under the *Forest and Range Practices Act* and is Blue-listed in British Columbia. It is designated as *Threatened* by COSEWIC.

Figure 22. Lewis's Woodpecker at nest cavity. (Photo: Jared Hobbs)

3) What to Look For

Lewis's Woodpeckers typically nest in open, mature ponderosa pine forests; riparian black cottonwood stands; recent burns; agricultural areas; open grasslands with sporadic mature trees; and urban environments. Breeding habitat is characterized by an open canopy (i.e., < 25% crown closure), the availability of a suitable dead or dying tree (> 30 cm dbh) for a nesting site, and understorey vegetation that provides an abundant supply of insects. Where closed-canopy riparian stands are frequented, trees at the edge of the stand are usually used for nesting.

Unusual among woodpeckers, Lewis's Woodpeckers "flycatch" for insects by perching on open branches, and then flying out and catching winged insects in mid-air. As a result, large perch trees and snags are an important habitat element for this species.

Lewis's Woodpeckers tend to form long-term pair bonds and typically return to the same nesting sites annually. They tend to breed as solitary pairs but may nest in loose colonies. Table 24 summarizes what to look for when identifying a Lewis's Woodpecker nest. Table 25 provides information to consider when conducting primary forest or range activities adjacent to a nest.

Table 24. Lewis's Woodpecker nest description: what to look for.

Lewis's Woodpecker Nest Description

• Nest trees are found in low-elevation, open-growing ponderosa pine and (or) Douglas-fir forests; grasslands with scattered, large decayed trees; and treed riparian habitat adjacent to open forests and grasslands.
• Nest cavities are found in:
  o living and dead deciduous and coniferous trees;
  o ponderosa pine, black cottonwood, and Douglas-fir; and
  o snags with heart rot decay (often tree decay classes 6–8) as this bird is a weak excavator.
• Nests occur in natural or excavated tree cavities.
• Cavity entrance diameter can range from 5 to 7.5 cm.
• Lewis's Woodpecker can excavate its own cavity but will also reuse old Northern Flicker or Hairy Woodpecker nest holes.
• Nests can occur from 3.5 to 9.0 m above the ground.

Table 25. Information to consider when conducting primary forest and range activities near Lewis's Woodpecker nests.

Information to Consider

• If you are unsure whether a Lewis's Woodpecker is using a tree for nesting, consult a qualified professional biologist to identify the species (see also Table 24).
• Establish a windfirm, forested retention area centred around the nest tree. If this is not practical, maintain forest connectivity (where possible) between the retention patch and adjacent forested habitat. Ensure this corridor is as wide as possible to minimize edge effects (e.g., predation, windthrow risk, etc.), and to provide additional security cover, perching, and hunting opportunities.
• Retain large-diameter, decayed ponderosa pine and black cottonwood, which are especially important for this species (see Table 24); a single nest tree may be reused over many years.
• Maintain some vegetation (where available) around the nest for additional security cover, and perching and roosting sites, if the nest tree is a single tree within an existing opening (i.e., meadow, clearing, or cutblock). This vegetation may include:
  o advance regeneration,
  o shrubs,
  o deciduous trees,
  o and non-merchantable trees (e.g., standing dead trees or trees with existing cavities and [or] evidence of internal decay).
• Avoid constructing roads, trails, or other structures within the retention patch.
• Protect nesting and foraging habitat when burning grasslands for forest ingrowth or encroachment purposes.
• Place livestock attractants to keep livestock away from nest and foraging habitat.
• Dead or decayed trees are often targeted by firewood cutters. Place a "Wildlife Tree Sign" on nest trees to educate the public and others about their high ecological value.
• Use fungal inoculation techniques to create wildlife trees and suitable nesting substrate for Lewis's Woodpecker (see Section 5).
• ***Note:*** Because of potential worker safety concerns, dead and defective trees that are considered for retention must either be located within a suitable-sized retention patch or have a danger tree assessment conducted by a certified wildlife/danger tree assessor. Consult the Wildlife Tree Committee of British Columbia website for information and links relevant to dangerous tree assessment (see Section 5).

4) Regional Information – Kootenay Boundary

In this section, we provide specific timing windows and guidance on disturbance buffers for the Kootenay Boundary Region. This information may vary from provincial guidance and may not be applicable outside of the Kootenay Boundary Region because of regional specificity.

Lewis's Woodpecker is a migratory species. It arrives in British Columbia in May and departs in October. This species typically nests at elevations of 250–1200 m, with higher-elevation nests associated with burned sites (Table 26). Lewis's Woodpecker is known to rapidly colonize new burn sites within suitable biogeoclimatic zones. Within the Kootenay Boundary Region, Lewis's Woodpeckers nest in the Boundary (Figure 23), Pend D'Oreille (Figure 24), and East Kootenay (Figure 25) areas. Lewis's Woodpeckers are sensitive to disturbance. Table 27 provides suggested minimum buffer sizes. Additional protection or alternative measures may be needed, depending on the nature of the disturbance, existing landscape and cover, or other factors.

Lewis's Woodpeckers are most sensitive during the breeding season, which includes territory establishment and courtship stages. Each breeding season stage requires protection because this disturbance-sensitive bird could abandon a site at any time during the entire breeding period. Please note that the following dates offer a general guide of when you might expect to see breeding season activities in the Kootenay Boundary Region; actual breeding season length will depend on the year and area.

- Courtship and nest initiation: May 1–May 31
- Eggs present: June 1–June 30
- Young present: July 1–August 31

This creates a potential ***sensitive period of May 1–August 31***, which encompasses courtship (month before nesting), nesting, and fledging.[1] Based on observations of nest stage, the length of this sensitive period can be refined. The period of ***least risk is September 1–April 30***.[2]

Table 26. Habitat and biogeoclimatic associations of Lewis's Woodpecker in the Kootenay Boundary Region.[3,4]

Habitat	Biogeoclimatic Zone[5]	Biogeoclimatic Subzone/Variant
Interior Cedar–Hemlock	ICH	dw, dm, dw1, dw2, mk1, mk5, mw2, mw3, mw4, mw5, xw, wk1
Interior Douglas-fir	IDF	dk1, dk2, dk3, dk4, dk5, dm, dm1, dm2, dw, mw1, mw2, un, xh1a, xh2a, xm, xw, xw2, xh4, xk
Ponderosa Pine	PP	dh1, dh2, xh1, xh2
Montane Spruce	MS	un, dk1

[1] Adapted from the BC Species and Ecosystems Explorer – Species Summary.
[2] Recovery Strategy for the Lewis's Woodpecker (2017).
[3] Identified Wildlife Management Strategy – Species Accounts and Measures (2004).
[4] M. Machmer, Registered Professional Biologist, Pandion Ecological Research Ltd., pers. comm. (2018).
[5] A Field Guide for Site Identification and Interpretation for the Nelson Forest Region (1992).

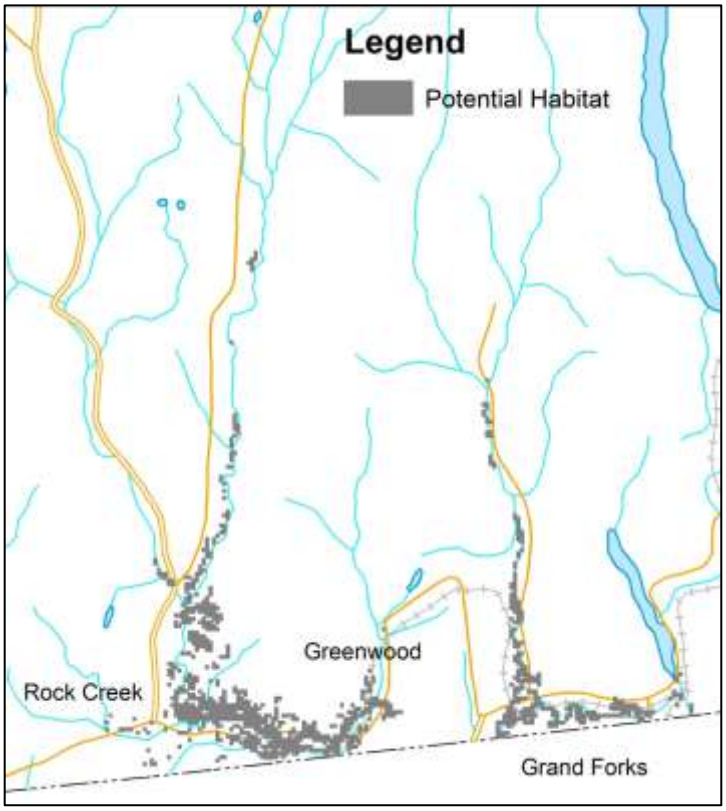

Figure 23. Distribution of Lewis's Woodpecker in the Boundary area based on habitat suitability mapping.

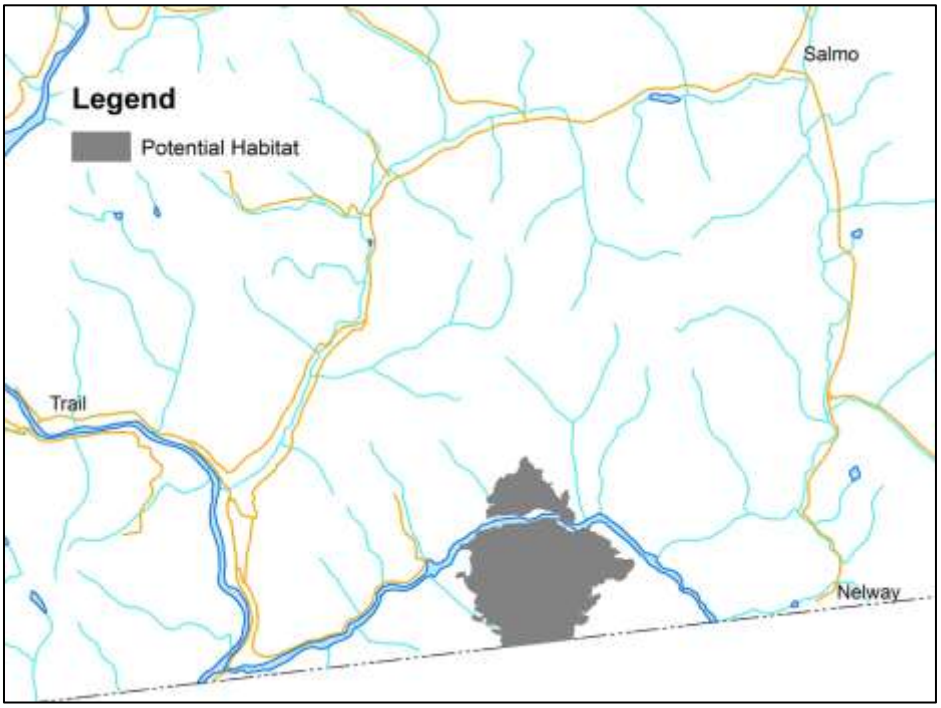

Figure 24. Distribution of Lewis's Woodpecker in the Pend D'Oreille area based on habitat suitability mapping.

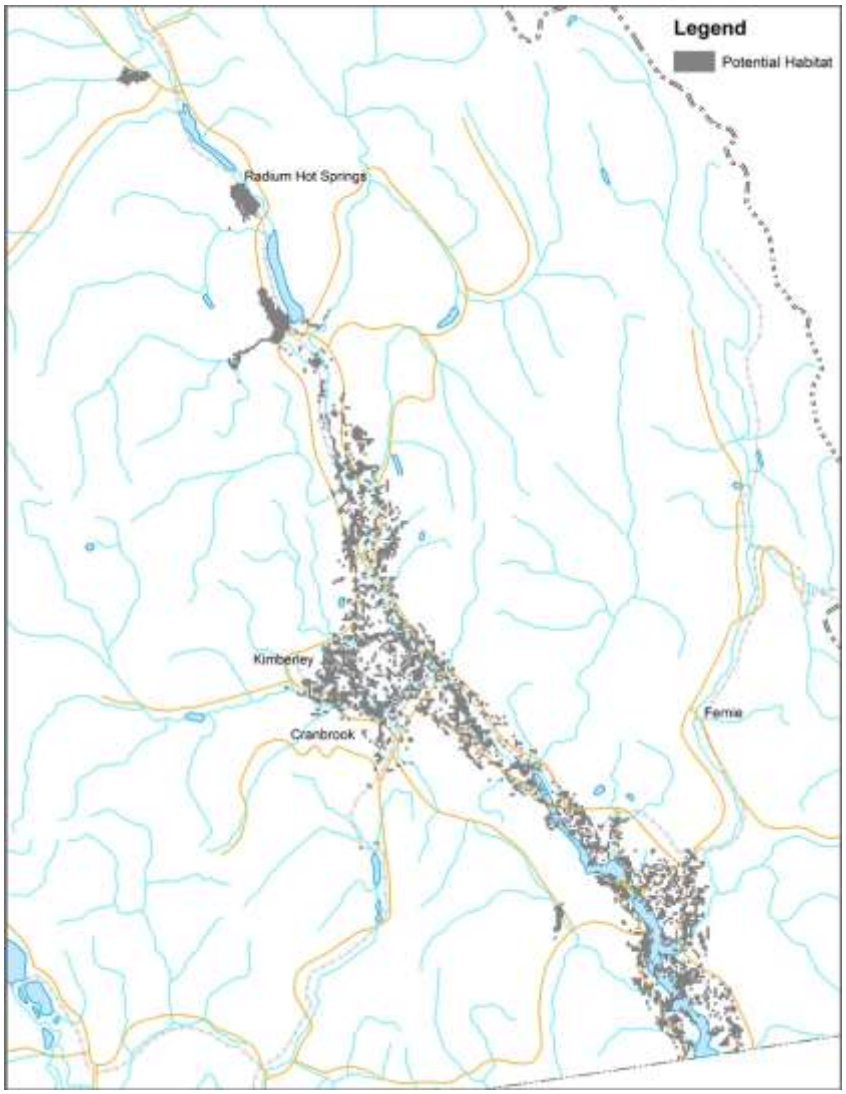

Figure 25. Distribution of Lewis's Woodpecker in the East Kootenay area based on habitat suitability mapping.

Table 27. Guidance on disturbance buffers for a Lewis's Woodpecker nest. [6]

A Nest of a Lewis's Woodpecker – Guidance on Buffers

• Avoid high-disturbance forestry activities with potential for prolonged disturbance (i.e., more than a few hours) within 100 m of a confirmed or probable nest from May 1–August 31.
• Within 400 m of a flagged known/potential nest tree:
  o prioritize removal of smaller (< 20 cm dbh) trees and non-preferred species (i.e., not ponderosa pine or black cottonwood) when removal of mature trees is necessary; and
  o use mechanical removal, rather than herbicides, and prioritize non-fruit-bearing species for removal, when understorey vegetation brushing/clearing is necessary.

[6] Management Plan for the Lewis's Woodpecker (Melanerpes lewis) in Canada (2014).

5) Additional Information

A Field Guide for Site Identification and Interpretation for the Nelson Forest Region, Land Management Handbook No. 20:
https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh20.htm

Atlas of the Breeding Birds of British Columbia – Lewis's Woodpecker Species Account:
http://www.birdatlas.bc.ca/accounts/speciesaccount.jsp?sp=LEWO&lang=en

BC Species and Ecosystems Explorer – Species Summary for Lewis's Woodpecker:
http://a100.gov.bc.ca/pub/eswp/speciesSummary.do?id=20006

Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia:
https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resource-standards-and-guidance/best-management-practices/develop-with-care

Identified Wildlife Management Strategy – Lewis's Woodpecker Species Account:
http://www.env.gov.bc.ca/wld/frpa/iwms/documents/Birds/b_lewisswoodpecker.pdf

Lewis's Woodpecker COSEWIC Status Report:
http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_Lewis%27s%20Woodpecker_0810_e.pdf

Management Plan for the Lewis's Woodpecker (*Melanerpes lewis*) in Canada:
https://www.registrelep-sararegistry.gc.ca/virtual_sara/files/plans/mp_lewis%27s_woodpecker_e_final.pdf

Recovery Strategy for the Lewis's Woodpecker (*Melanerpes lewis*) in Canada:
http://www.registrelep-sararegistry.gc.ca/virtual_sara/files/plans/rs%5Flewiss%5Fwoodpecker%5Fe%5Ffinal%2Epdf

Results of Fungal Inoculation Treatments as a Habitat Enhancement Tool in the East Kootenay Region of British Columbia: 2007–2014:
https://www.for.gov.bc.ca/hfd/pubs/docs/en/EN112.pdf

Wildlife Tree Committee of British Columbia website:
https://www2.gov.bc.ca/gov/content?id=D81A1EAB5A7F45688B4CBC746DB9DD05