



Photo: Merlin Tuttle



# A Novel Approach to Roost Mitigation in the Columbia Basin

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WILDLIFE CONSERVATION SOCIETY CANADA WESTERN BAT PROGRAM

*We respectfully acknowledge that this project takes place on the traditional, ancestral, and unceded territories of the Ktunaxa, Secwépemc, Sinixt and Syilx Okanagan peoples, whose values and cultures continue to inspire and guide stewardship of this region.*

# Background: Bats in the Columbia Basin

13 species of bats:

- Hoary Bat
- Eastern Red Bat
- Silver-haired Bat
- Big Brown Bat
- California Myotis
- Long-legged Myotis
- Long-eared Myotis
- Northern Myotis
- Yuma Myotis
- Little Brown Myotis
- Fringed Myotis
- Western Small-footed myotis
- Townsend's Big-eared Bat



Photo: Stephen Brandebura

# Tree Roosting Bats



Most species rely on trees for roosting

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Ideal roost trees have features associated with old-growth

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Multiple roost trees required

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Roost trees are in decline...

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... and bat boxes are not appropriate

2023 Bat Box BMP for Canada and US

# A Novel Approach



# BrandenBark™

- Flexible, artificial “bark” product
- Large size (1.0 m across top, 1.1 m across bottom, 1.3 m tall)
- Mimics microclimate and visual cues of natural bark roosts
- Immediate roosting habitat
- Long lasting (>30 years)

<https://copperheadconsulting.com>



Photo: Lorna Visser

# BrandenBark™ Trees



Photos: Jeremy McDowell

# BrandenBark™ Poles



# Chainsaw Modified Wildlife Trees



Photo: Jeremy McDowell

# Canadian BatBark and MiniBark

## Local Innovation



### Canadian BatBark

- Large sheets, similar in size and installation to BrandenBark™

### MiniBark

- Smaller, self-contained units
- Support small bat species and those that prefer to roost in small numbers/individually
- Can be installed on live trees



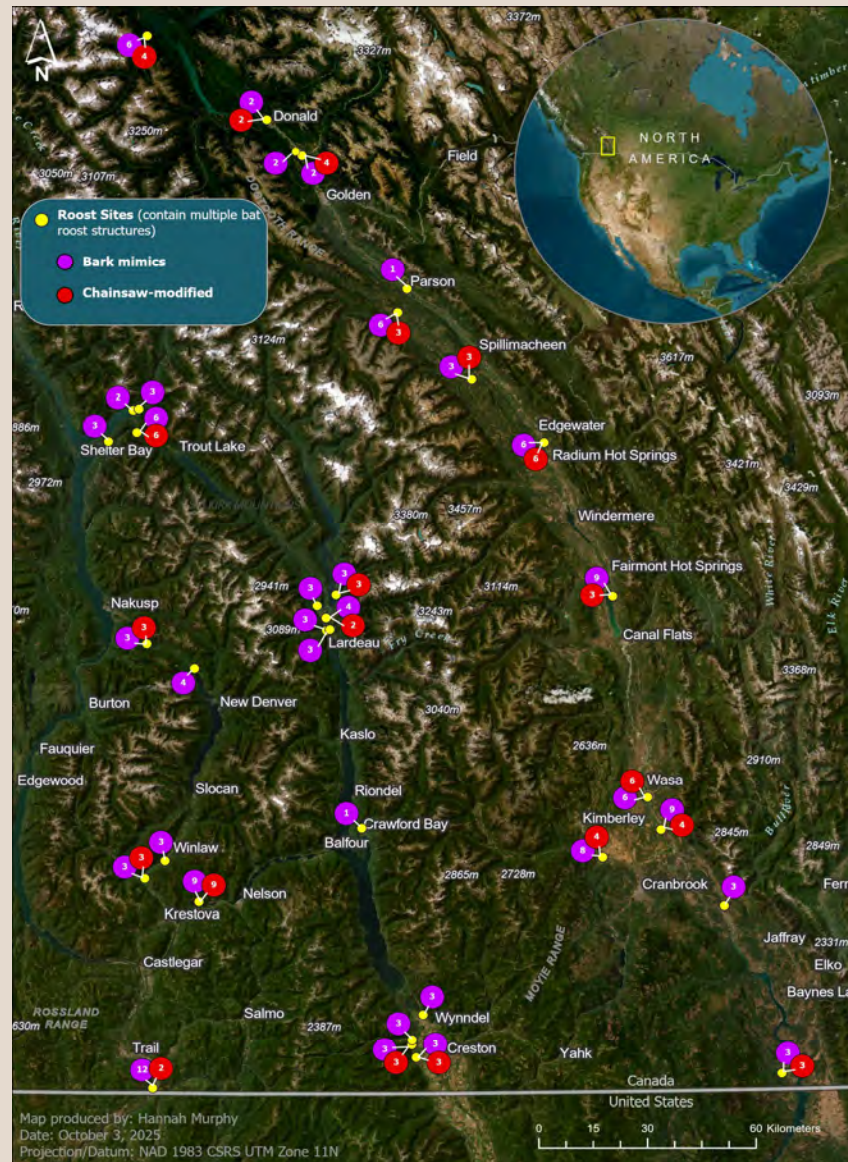
# Install Considerations

- Siting
  - Baseline acoustic data (NABat and/or Migration)
  - Capture data
  - Connectivity considerations
  - Absence of natural roost trees
  - “Goldilocks approach”
- Timing
  - Appropriate season(s)



# Roost Locations

- 97 BrandenBark™ trees
- 41 BrandenBark™ poles
- 72 Wildlife trees
- 2 BatBark trees
- 2 MiniBark trees (4 MiniBark/tree)
- 1 Natural bark (Douglas fir) pole



# Roost Monitoring and Evaluation

- Guano sampling
- Acoustic monitoring (Titley Roostloggers)
- Temperature and humidity monitoring (HOBO loggers)
- Emergence counts
- Capture

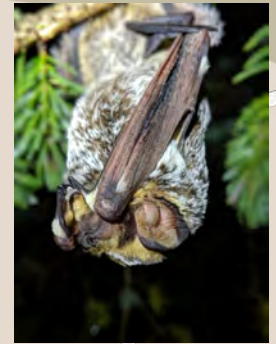


Photo: Cori Lausen

# Guano Sampling

Genetic Species ID From Guano:

9-10 species Basin-wide



Photos: Cory Olson, Jared Hobbs, Jason Headley, Heather Gates

# Use Over Time

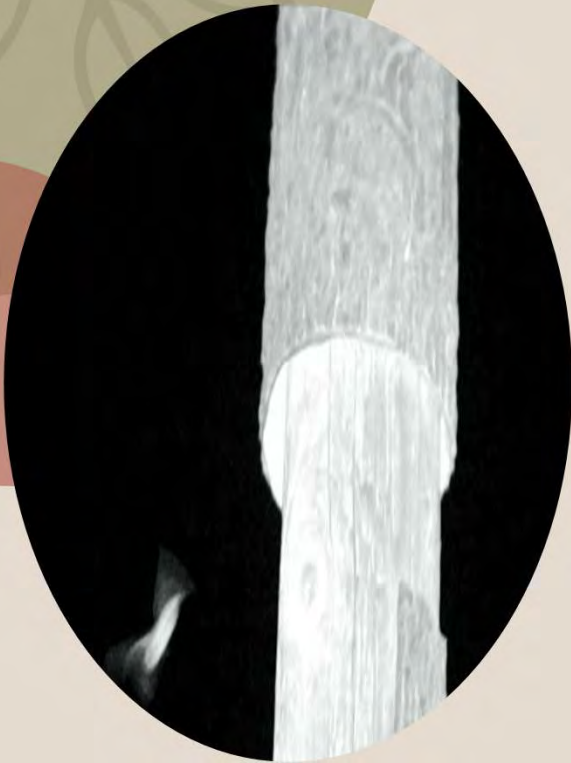
BrandenBark™ roosts - nearly 100% within two years

Wildlife trees - ~67% within two years



Photo: Erin Low

# Additional Roost Evaluation



# Capture



# Next Steps

- Continued monitoring of existing roosts
- Installation of BatBark and MiniBark at key locations
- Data analysis
- Write up methods and findings



# Conclusion



This project clearly demonstrates that it's possible to create successful roosting habitat, however, long-term bat conservation will require protecting and recruiting natural roost trees at a landscape scale.

# Thank You!

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