The incidental capture of bats in Douglas-fir beetle funnel traps

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Project Goals

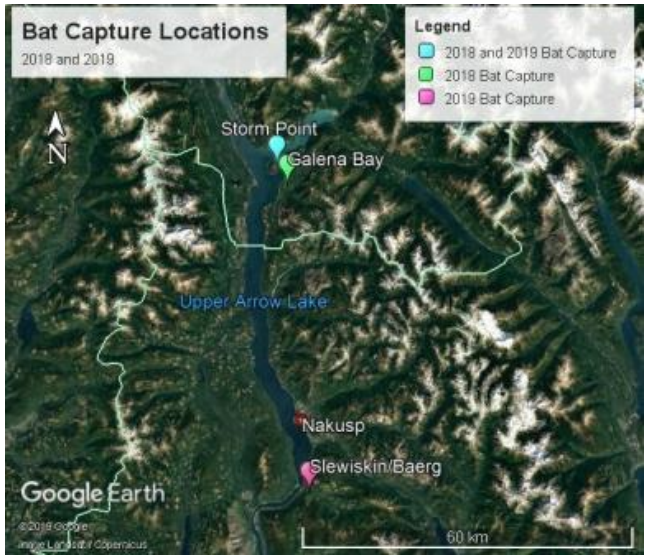
- Encourage stewardship and education on the ecological services of bats provided to the forest industry
- Collect data on incidental bat captures, providing information on bats and their prey
- Provide solutions to prevent incidental bat captures

Douglas-fir Beetle Funnel Traps

- Monitor and control Douglas-fir beetle (*Dendroctonus pseudotsugae*) populations in the Selkirk Resource District
- Combined effort between forest licensees and provincial government
- Pheromone-baited funnel traps collect beetles during beetle flight period (early May to late August)
- Beetles are collected in the trap, killed by insecticide, and retrieved weekly for analysis
- Traps are removed at the end of the beetle flight

Bats Attracted to Beetle Traps

- Long-eared bats (*Myotis evotis*) were found dead and alive
- In 2018, 4 bats were trapped in 15 weeks
- In 2019, 3 bats were trapped in 13 weeks
- Most bats were found from mid-July to mid-August
- Bats were found in traps in recent cutblocks, 50-100 m from the timber edge
- Bats are unable to get out of the trap because of the smooth surfaces and straight sides of the collection cups



Proposed Efforts to Prevent Trapping Bats

- Wire mesh placed over the bottom funnel of the trap to prevent bats from entering the collection cup
- Poles wrapped in wire mesh to act as ladders so bats can climb out of collection cups
- Enclose the whole funnel trap in wire mesh so bats can't enter the trap system but beetles will not be impeded

Data Collection and Reporting

- Multiple bat captures within a trapping grid collected over time can be uploaded to the B.C. Conservation Data Centre.
- Additional project fields within the Wildlife Incidental Observation Form should include if possible:
  - Number of pheromone traps
  - Pheromone lures used
  - Time period monitored
  - Insect trapping data
  - Location of traps with non-captures
- This would allow quantification of capture effort (% capture) and inspection of the timing of bat trapping and insect peaks

An Excel template can be obtained from SPI_Mail@gov.bc.ca

https://a100.gov.bc.ca/pub/wiof/locationForm.do

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