



Tag-Team Takeover: Usurpation of Woodpecker Nests by Western Bluebirds

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The Problem

- Black-backed (*Picoides arcticus*) and Hairy (*Leuconotopicus villosus*) Woodpeckers serve as primary cavity excavators in fire-dominated forests.
- Black-backed Woodpeckers are listed as endangered in several states.
- Western Bluebirds (*Sialia mexicana*) are secondary cavity nesters known to usurp active nests of other species.

Methods

- Watched two-hour videos of nests during the 2015 breeding season.
- Scored presence at the nest for woodpeckers and Western Bluebirds
- Reviewed videos with woodpecker-bluebird interactions and scored specific interactions.

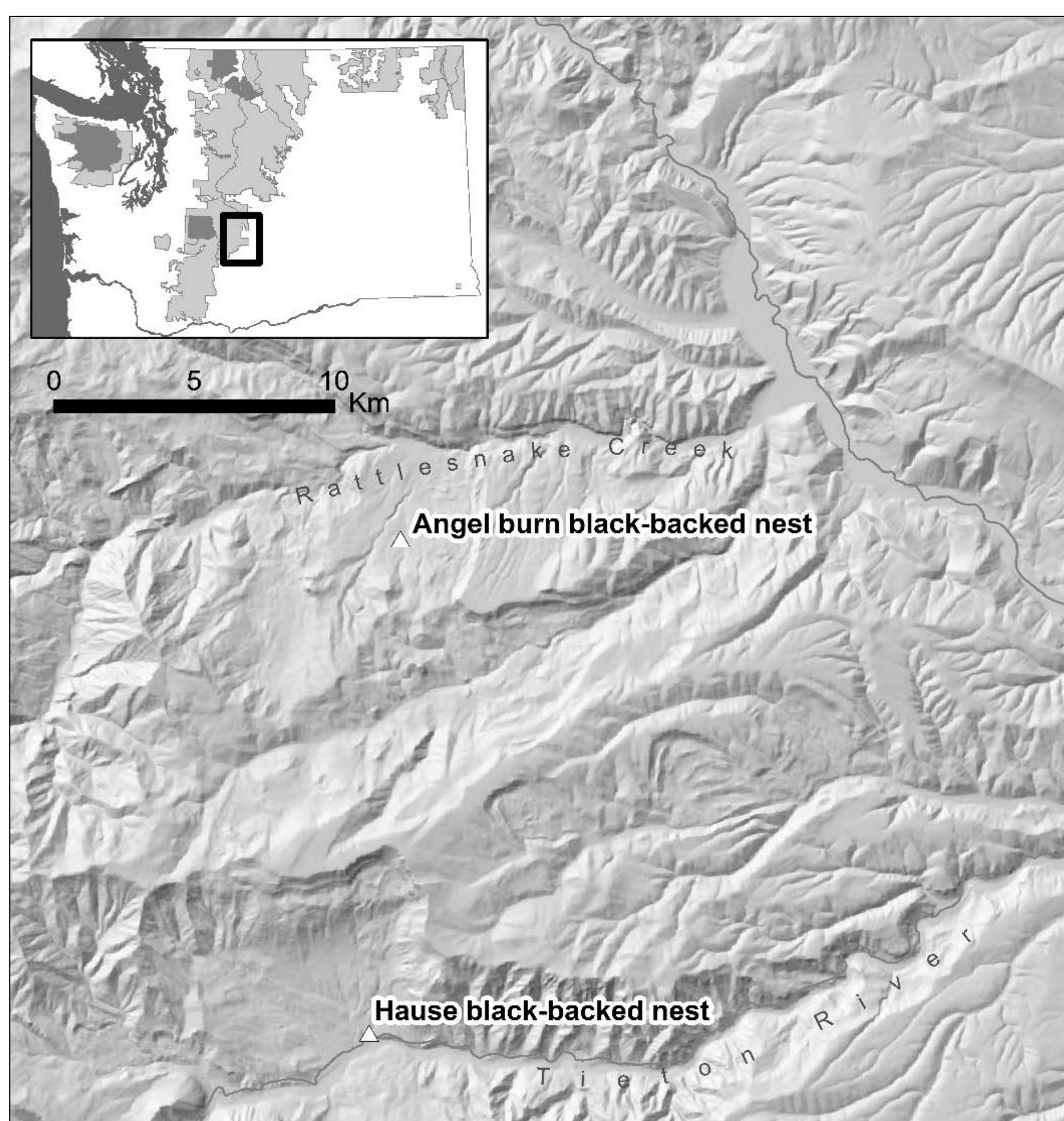
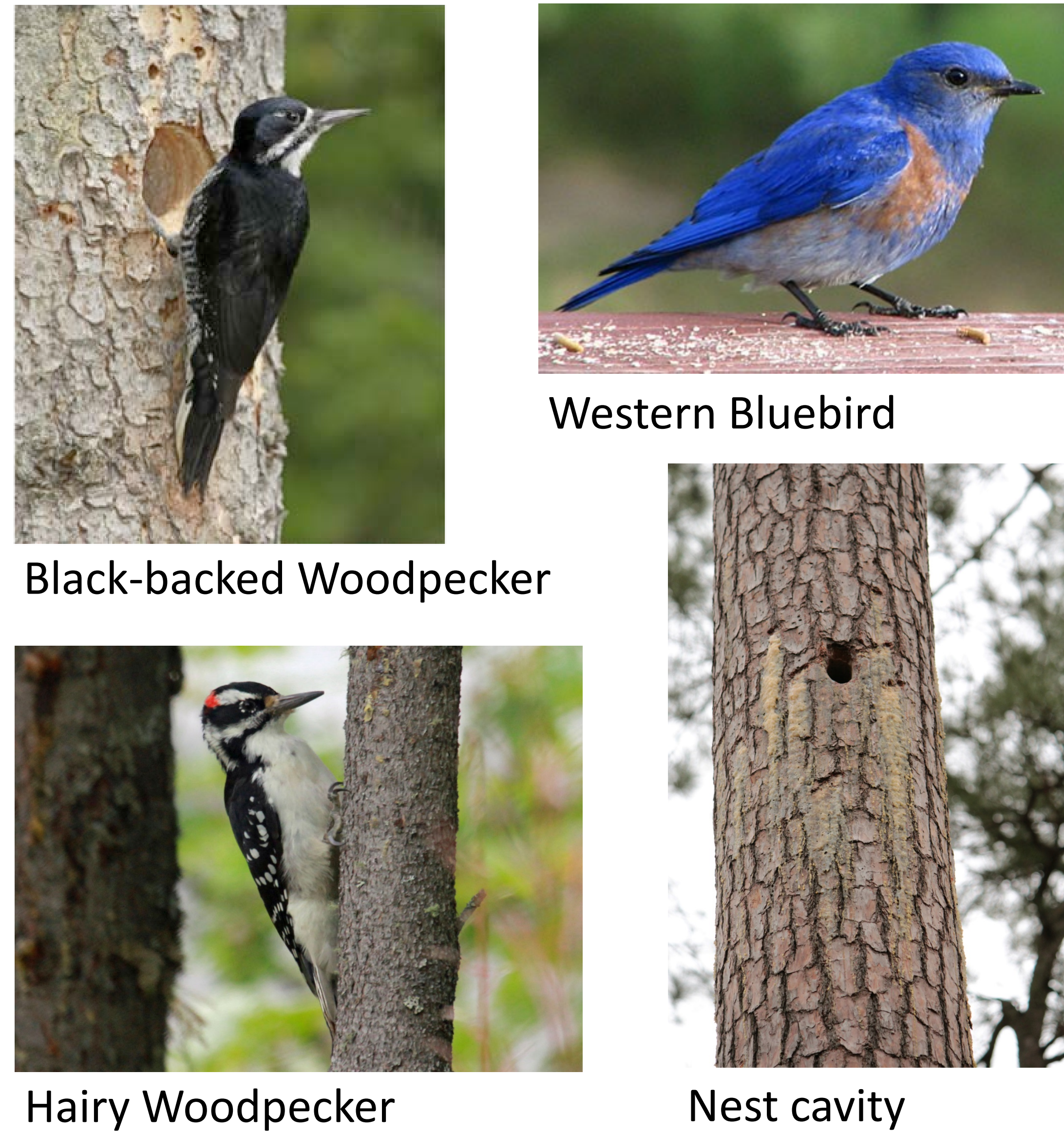


Figure 1: Nest location of the two nests usurped by Western Bluebirds in the Eastern Cascades of Washington.

Results

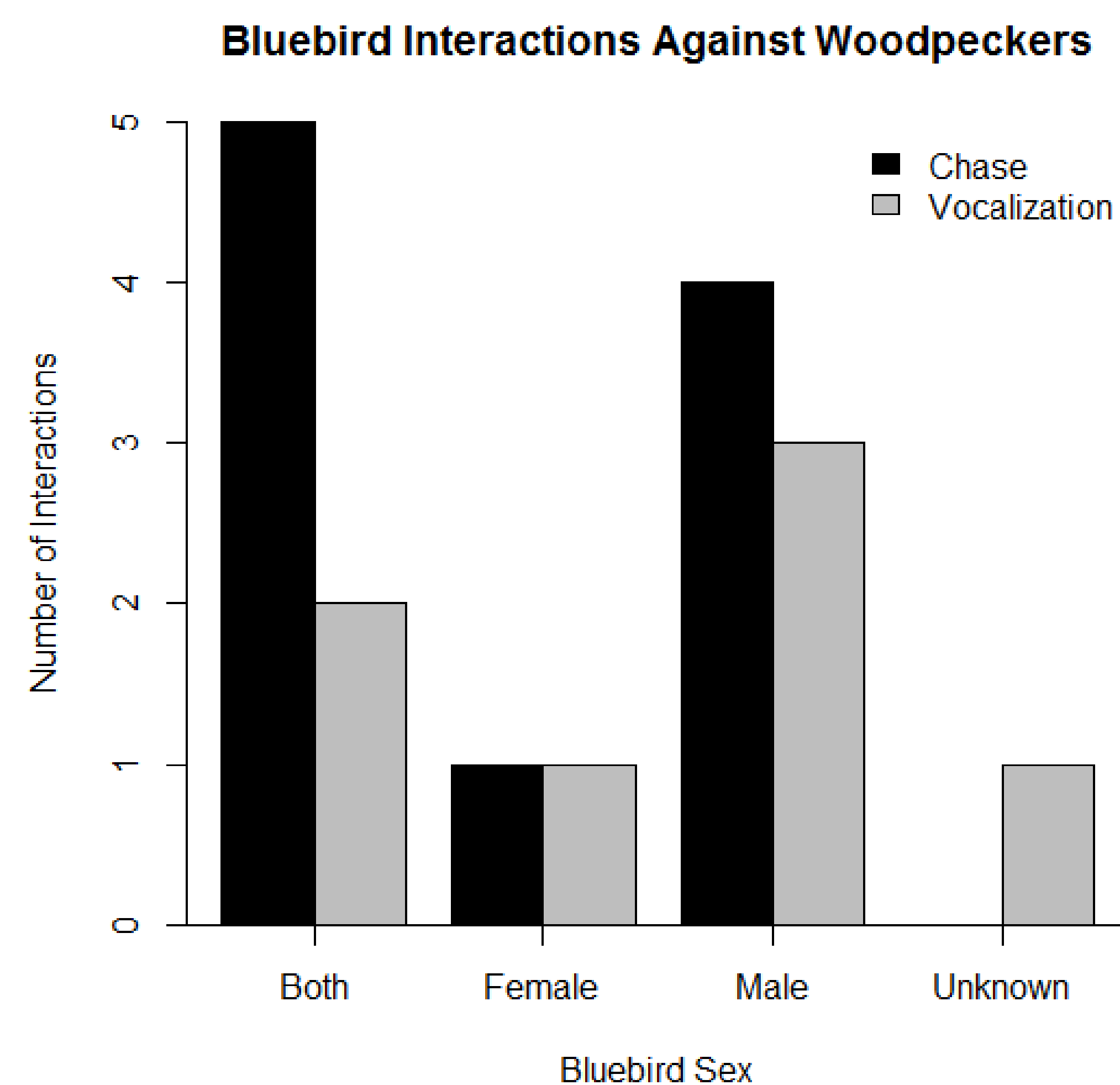


Figure 2: Data combined from both nests. Only includes interactions against woodpecker species.

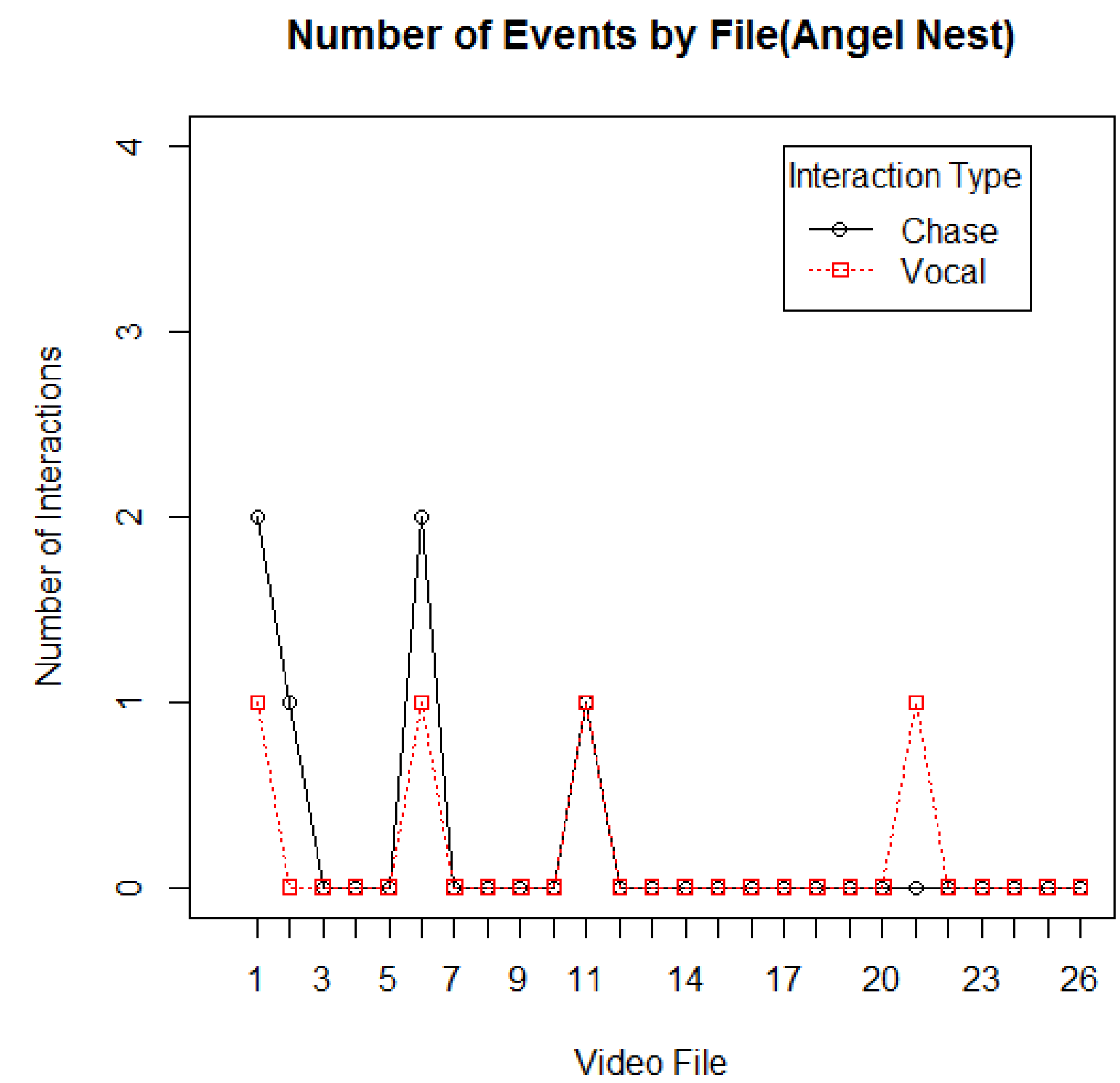


Figure 3: Sequence of interactions between Western Bluebirds and Black-backed Woodpeckers at the Angel Burn Nest. Each video file is approximately two hours long and in sequential, although not continuous, order.

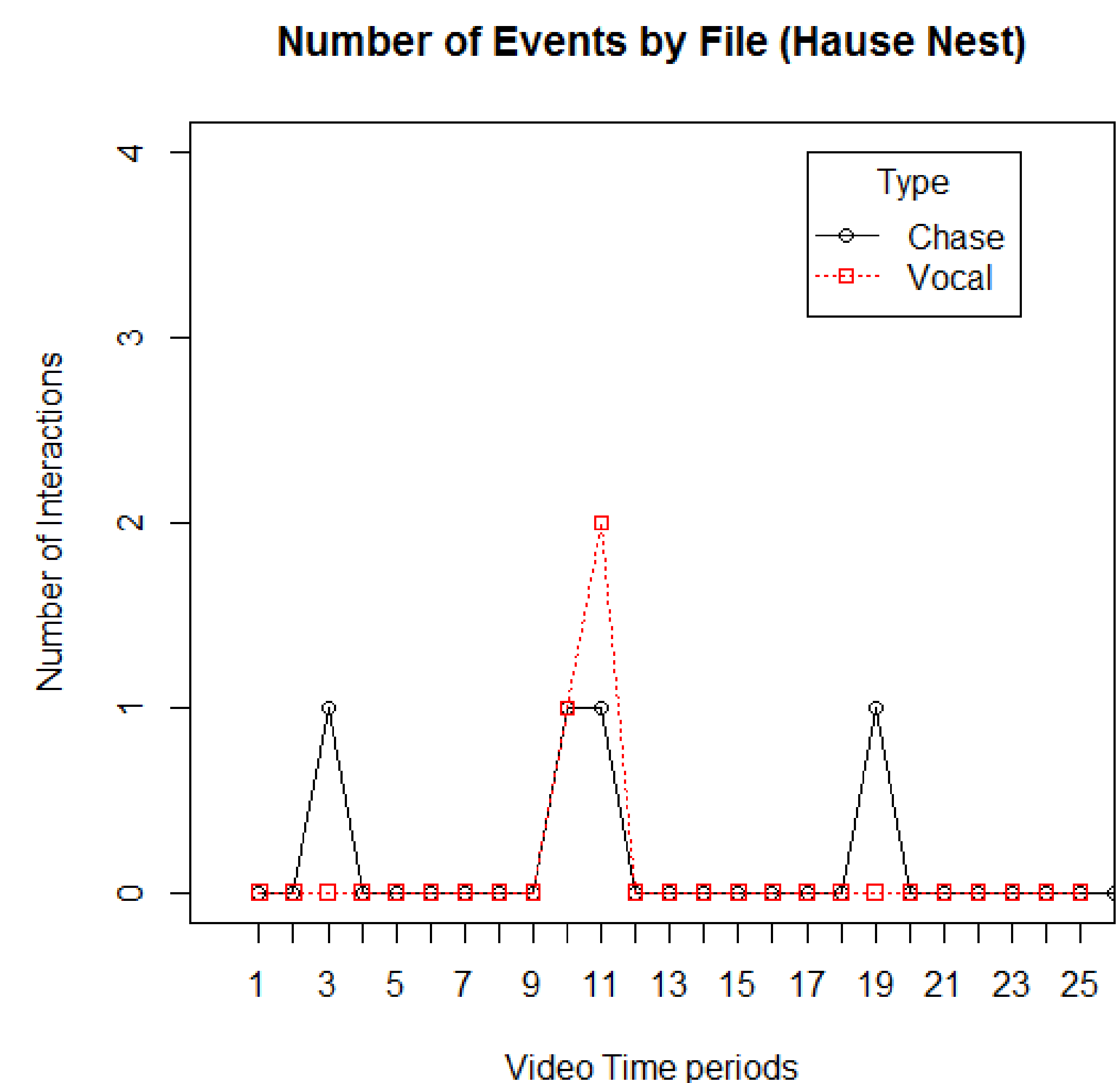


Figure 4: Sequence of interactions between Western Bluebirds and Hairy Woodpeckers at the Hause Creek Nest. Each video file is approximately two hours long and in sequential, although not continuous, order.

Conclusion

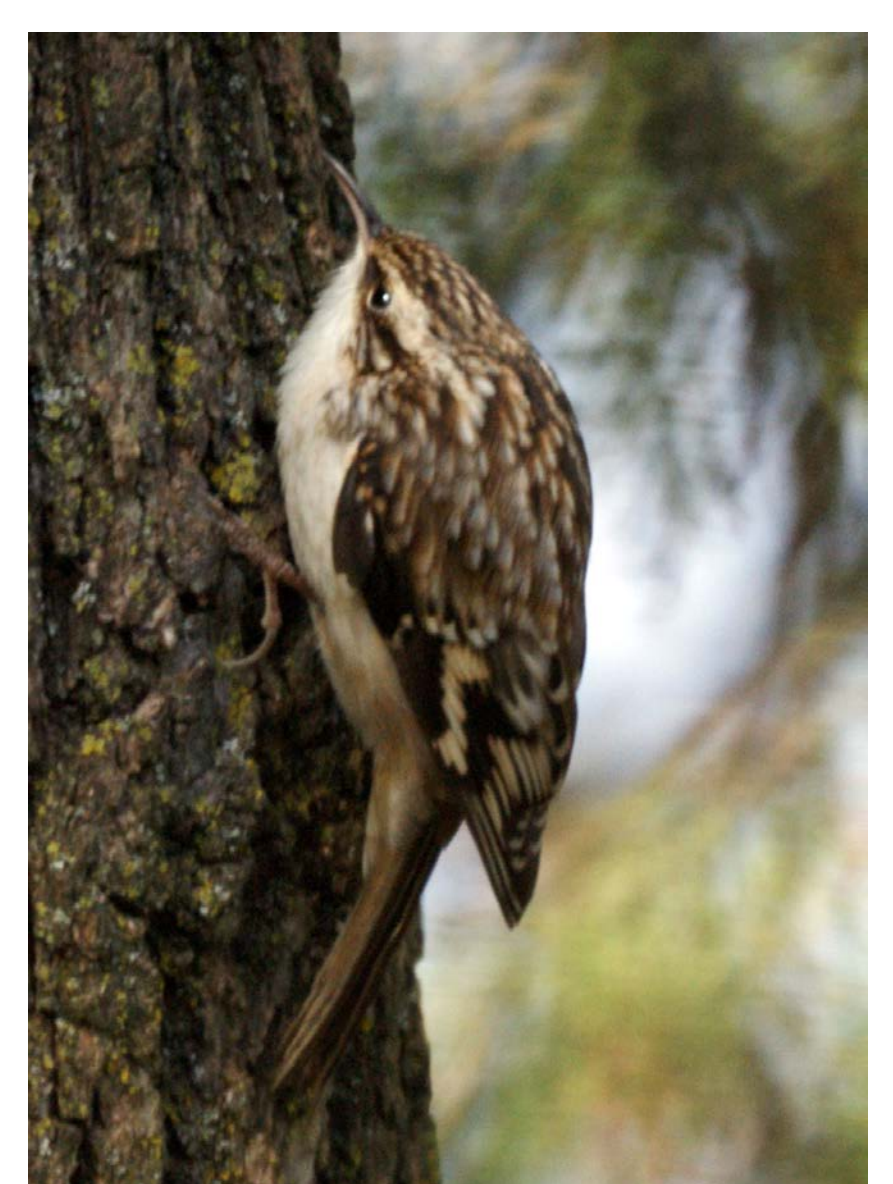
- These bluebird nest attacks were different from typical bird nest defense in that both sexes of the Western Bluebird attacked woodpeckers.
- The initial usurpation took a total of about 4-6 hours. Woodpeckers would attempt to come back about 24 hours later, but ultimately only the bluebirds remained. Takeovers did not take long.
- Of the 5 Black-Backed Woodpecker nests and 7 Hairy Woodpecker nests watched (12 total), 4 nests were unsuccessful, 2 due to bluebird usurpation. This presents a significant problem for woodpecker conservation if 50% of nest failure is because of bluebird usurpation.

Potential Solution

- Place bluebird nesting boxes near active woodpecker nests in order to alleviate the problem of nest usurpation.
- This may encourage bluebirds to defend the territory from other bluebirds or other potential second cavity nesters.



Bluebird nest box



Brown Creeper