

Murder She Wrote: Death and Drama in Nesting Woodpeckers

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The Problem

- Woodpeckers serve as primary cavity excavators in fire-dominated forests.
- Secondary cavity users (SCU's) rely heavily on cavities excavated by woodpeckers.
- Woodpecker species are declining, and some are now locally threatened. Management needs answers.
- How is woodpecker reproductive success impacted by the behavior of woodpeckers, SCU's, and predators?

Methods

- Total of 64 nests (34 from 2015, 30 from 2016) from two study areas in the Okanogan-Wenatchee forest in the Eastern Washington Cascades (Fig. 1).
- Monitored nest with Panasonic camcorders (model HC-V160) mounted 15-60 m from the nest (Fig. 2). Each nest was recorded for two, 24-hour periods a week. 15,000 total hours of footage (5,000 from 2015 and 10,000 from 2016).
- Scored two-hour-long videos of nests for presence and behavior of woodpecker parents, SCU's, and predators.

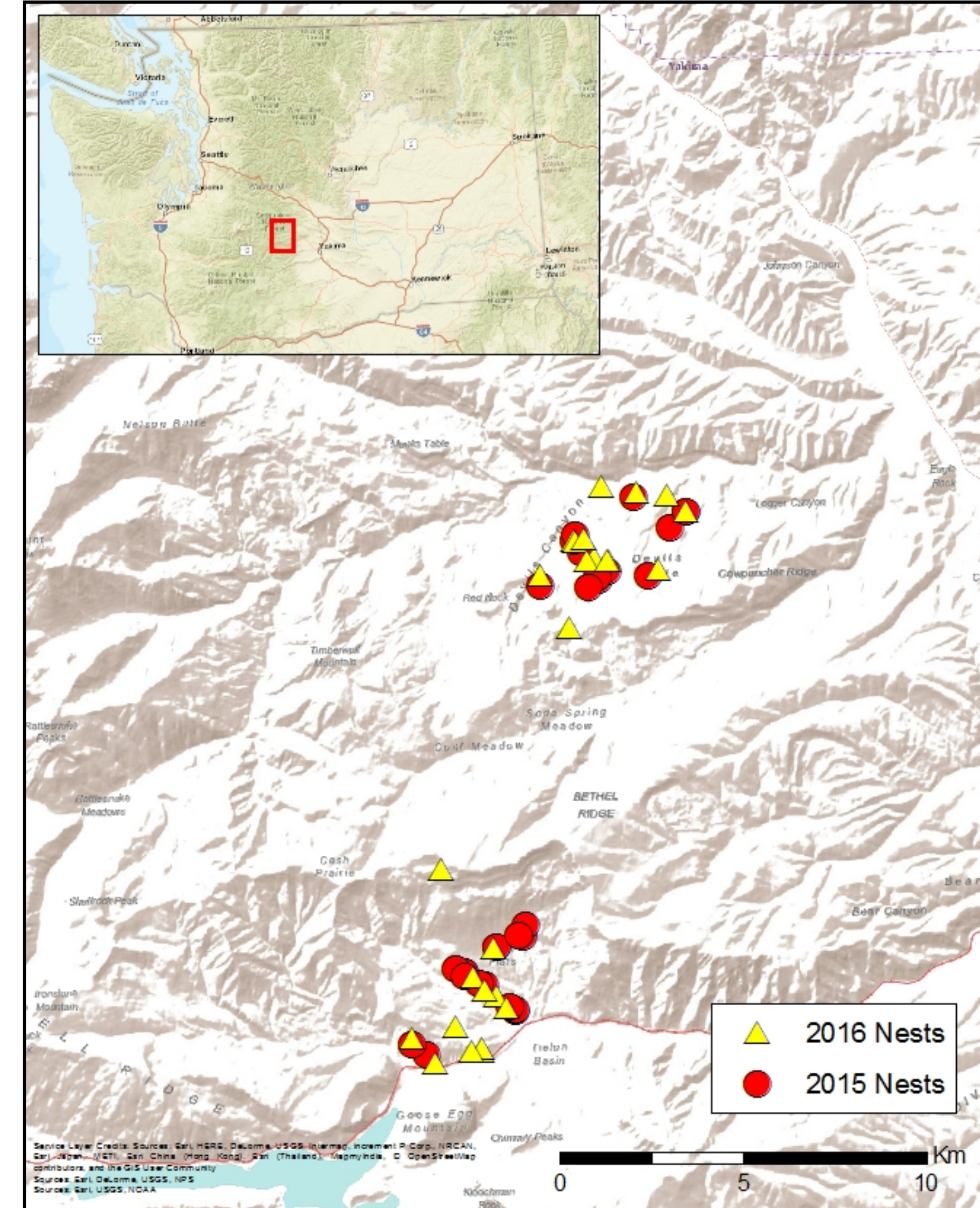


Figure 1: Location of filmed woodpecker nests.



Figure 2: Camera setup mounted away from the nest.



Figure 3: Still-shot of video footage from the Soup WHWO nest on 7/2/16. Here, the parent defends the nest off from a Stellar's Jay.



Figure 4: An American Kestrel taking a White-headed Woodpecker nestling from the same nest the Stellar's Jay visited.

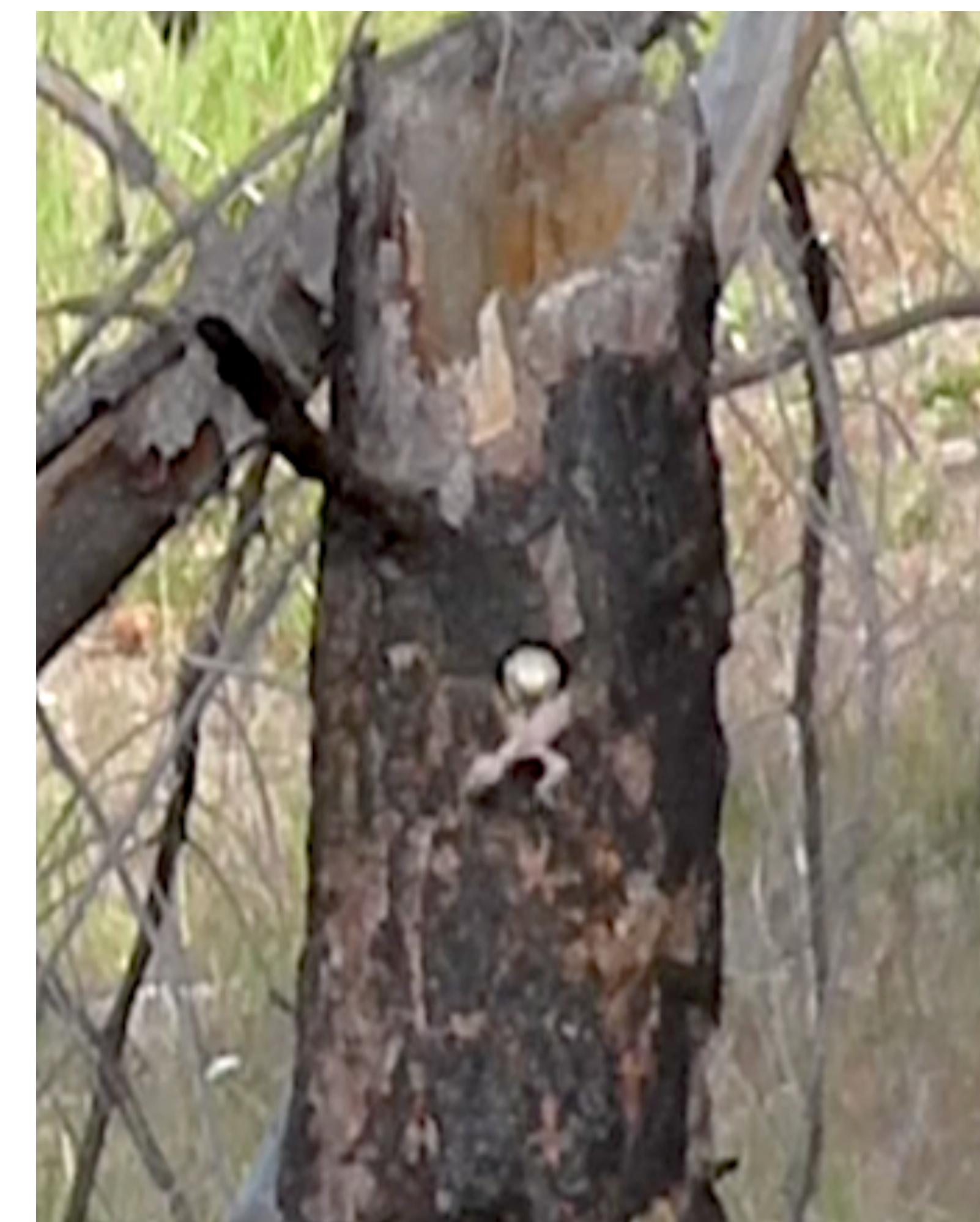


Figure 5: A parent White-headed Woodpecker removing a dead chick from the nest. Several nests had dead chicks with no obvious signs of predation.



Figure 6: Another American Kestrel at a different White-headed Woodpecker nest. This visit occurred on July 5th, around the same time the other kestrel took a nestling from the other nest.

Results

- Have watched footage from 40 nests (20 from 2015, 40 from 2016), approximately 500 hours (160 from 2015, 340 from 2016).
- 26 nests fledged (6 from 2015, 20 from 2016). 15 nests failed (5 from 2015, 10 from 2016). Cause of failure known for 4 nests (2 from each year). Avian threats, such as Stellar's Jays and American Kestrels, have been seen at several nests (Fig. 3, 4, 6).
- One pair of Black-backed Woodpeckers was shot. Many pairs of White-headed Woodpeckers had trouble raising chicks (Fig. 5).

Conclusions

- Avian threats appear to be some of the more common predatory threats nests face.
- Woodpeckers that nest later in the season may be subject to more visitations by predators and greater chance of predation.
- An unusually cool summer may have significantly reduced clutch size and successful raising of White-headed Woodpecker chicks.