

1999 Progress Report for Northwest Ecological Research Institute
Common Nighthawk Project - Year 2

NERI # 99-06

Coordinator: Catherine J. Flick

White Salmon, WA 98672

Probing Questions:

- Do common nighthawk parents share duties in incubating eggs and brooding nestlings?
- Do young nighthawks continue to roost at the nest site after fledgling age (≥ 18 days)?
- Note other anecdotal information that emerges in observing nighthawk behavior.

Project Sites are all on the Mt. Adams Ranger District, Gifford Pinchot Nat'l Forest. The two sites, Planting Creek and Wind River Nursery, are 3/4 air miles apart and separated by Trout Creek. Willard is 20 miles east.

- Planting Creek Tree Orchard, Trout Creek sub-basin, Wind River watershed (2 nests found in a 30-acre area)
- Willard, Lava Creek sub-basin, Little White Salmon watershed, La Roux Timber Sale, Unit 11 Fireline: (1 nest site in 1998, none located in 1999)
- Wind River Nursery Field, Trout Creek sub-basin, Wind River watershed (1 nest found in a 25-acre area)

Partners:

- US Forest Service Forestry Technician, Jo Clark, who prunes genetic trees at the tree orchard and invariably flushes nighthawks during her regularly scheduled work each year (June 28 & 29, 1999).
- NERI Associate, Jeffrey Kee, who participated in a one-day field trip to the Planting Creek Tree Orchard (July 10, 1999).
- Spouse, Stewart J. Fletcher, who participated in a one-day field outing to the Wind River nursery field (July 17, 1999).
- US Forest Service Forestry Technician, Ed Bridgeman, who completes 5-year stocking surveys for tree saplings in clearcut harvest units. Ed supplied me with new nighthawk sightings when he flushed them during the summer months.

Survey Procedures:

- Nests were initially located by flushing adults. We systematically walked through orchard tree rows and the nursery field following compass bearings. Pruned branches were used to assist in surveying area on both sides of surveyor. The orchard was surveyed in two days and the nursery field was surveyed in one day.
- Nest sites were recorded as the reference points from which all subsequent sightings were measured at the nursery field. At the orchard, all trees are marked on an x,y coordinate system, and these were used to reference sightings.

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- Follow-up visits were completed every 3-5 days starting one week after the banding date (7-17-99) to determine if nestlings were roosting near nest sites. The sites were visited during different clock times. Follow-ups were completed until nestlings were no longer located. Three additional visits were completed following the last nighthawk flushing at the nursery and two additional visits were completed at the orchard to insure the birds were no longer present.
- Fecal coils are unique and easy to identify as belonging to a common nighthawk. These were used to pin-point roosting locations after flushing individuals. A fecal coil is approximately 3-6 mm in diameter, a snail-like coil as viewed from the underside, and the upperside is topped with a white wash which gives it the appearance of a miniature white-frosted cupcake. The coil contains the shiny exoskeleton fragments of insects. It is black in color when fresh and turns a dull gray when older. The white wash is bright white when fresh and yellows with age.

Results in 1999:

- The parent portion of this project was not completed this year.
- Three nests were located with 2 nighthawk chicks each on July 10 and 17, 1999. Chicks at 2 nests in Planting Creek Tree Orchard were 1 and 2 days old on 7-10-99. Chicks at the Wind River Nursery Field were estimated to be 6 and 7 days old when found on 7-17-99. All days are post-hatching.
- All chicks were banded between ages 6-9 days old.
- The 2 nests in Planting Creek were approximately 91.4 m (300 ft) apart this year compared to 182.9 m (600 ft) in 1998. 1999 nest sites were in different locations of the orchard from the 1998 nests. Nests may be placed in different locations year-to-year. This will be evaluated over time by mapping yearly nest sites.
- Timing of egg laying, hatching, and dispersing may vary year-to-year. Young nighthawks hatched in 1999 between July 8-11, 1999. In 1998, young hatched synchronously at 3 nest sites (Planting Creek and Willard) between July 23-26. The question arises as to whether weather plays a role here, and more specifically, precipitation. In both 1998 and 1999, common nighthawks arrived during their pre-destined time from late May to early June. June 1999 was the coldest on record for many years, and precipitation was much lower than 1998. June 1998 was an extremely wet month.
- Young fledged nighthawks roosted in the vicinity of their nest sites for 33-34 days at the Planting Creek Orchard and ages 35-36 days old at Wind River Nursery or until mid-August. For comparison, 1998 fledglings remained at their natal roosts until the end of August (Planting Creek) and into first few days of September (Willard); however, they also hatched two weeks later than the 1999 young.
- Fledgling roost sites were always within 18.3 m (60 ft) of the nest site at the nursery field and within 38.1 m (125 ft) at the orchard nest sites, but mostly closer. Typically, fledglings roosted either side-by-side or within 1.5 m (5 ft) of each other when flushed, but occasions were noted when they roosted separately up to 9.1 m (30 ft) apart.

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- Adults were flushed with young up to day 27 post-hatch \pm 3 days. The Willard site in 1998 had an adult brooding or roosting with 2 young until day 25.
- Vegetative cover at the Wind River Nursery roosting sites included predominately bracken fern up to 0.4 m in height, and ground cover was either matted fern from last year's crop or bare clayey soil. At the Planting Creek Tree Orchard, all roost sites were within 2.9 m (9.5 ft) to Douglas-fir trees planted and grafted in orderly rows. Vegetative cover at the orchard roosts was predominately bracken fern. Ground cover consisted of needle casts or bare clayey soil.

Behaviors:

- Adults used a broken wing display when I flushed them directly off the chicks. They would hop and flutter a distance away from the chicks. If I continued to pursue the adult, it would continue to fly for short spurts and drop to the ground, but no longer use the broken wing display. These two behaviors may help distinguish whether a nestling is present nearby or if the bird is simply roosting by itself. Further observations will be recorded.
- Young nighthawks obviously have shorter wingspans in flight and duller gray plumage than adults.

Outlook for 2000 Project:

- Figure out a method of marking plumage to differentiate adult males from females and a nest-site identifier for the nestlings which is visible when the birds are flushed. This will reduce harrassment caused by netting or noosing methods.
- Figure out the best time and method to capture adults. Suspect it is late in the egg phase.
- Set up a blind to observe nest behaviors over a period of time.