2001 Progress Report
Northwest Ecological Research Institute
Common Nighthawk Project

#02-08

Project Leader: Catherine J. Flick

Objectives:

- Distribute an educational brochure for landowners on common nighthawk breeding ecology.
- Do diving males reduce the search area required to find nests?
- Investigate if both common nighthawk parents share in brooding eggs and young.
- With the aid of radio transmitters, determine if young nighthawks continue to roost at their nest site after fledging age.
- Develop and test a survey protocol to census common nighthawks.
- Note other anecdotal information that emerges while observing nighthawk behavior.

Project Sites and Survey Summary:

- Nests for three common nighthawks were located in the Wind River Watershed, Lower Trout Creek Sub-watershed, approximately 14 1/2 km northwest of Carson, Washington. Three nests, one at Planting Creek Genetic Tree Orchard and two within the Wind River Nursery, were monitored from June through August 2001 with varying degrees of success.
- Dive points by courting males narrowed down the location at three out of four nighthawk nests. A fourth nest in a Longview Fibre tree plantation was unsuccessfully located.
- The Planting nest site was within several centimeters of its 2000 location while the Canopy Crane nest was within several meters.
- Two adult females were banded with the aid of a mist net when nestlings were four and five days old. The third female lost her first clutch between days one and two post hatch (several hatched egg fragments were relocated). This same female nested a second time approximately 150 meters west of first the clutch and lost a second set of chicks at age four and five days (only adult body feathers were found by the nest site).
- Four nighthawk nestlings at two different nests were banded at age 15 and 16 days. Radio-transmitters were placed on two nestlings from two separate nest sites, one successfully fledged while the other was killed by a predator.
- Nighthawk roost sites were located using a combination of radio-telemetry triangulation's, fecal coils, and close-focusing binoculars. A visual check was completed every three to four days to confirm accuracy of the telemetry signals and triangulation readings.
- Surveys for nighthawks were completed using *Inventory Methods for Nighthawks and Poorwills, Version 2.0, March 1998* developed by D.J. Bender and Mark Brigham. Surveys were conducted along two Breeding Bird Survey (BBS) routes, using one observer per 10 stations from 9:00 p.m. to 10:15 p.m. or five observers total for 50 BBS stations. These results were compared to the daytime (4:45 a.m. to 9:45 a.m.) detections of nighthawks along the same BBS routes.
- Two presentations and one field trip reached 85 persons: one to the Washington Ornithological Society in The Dalles, OR, one sponsored by the Columbia Gorge Audubon Society in White Salmon, WA, and one fieldtrip sponsored by Tahoma Audubon Society. Brochures were distributed to Conservation District offices in White Salmon, The Dalles, Goldendale, Stevenson, and Hood River. Brochure requests were mailed to eight individuals in CA, OR, WA, and Canada.

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Volunteers and Partners:

- NERI: Char Corkran and Teresa DeLorenzo provided editorial assistance on a nighthawk brochure.
- Stewart Fletcher assisted in locating nest sites by triangulating dive points by male nighthawks, mist netting adult females, and conducting BBS surveys for nighthawks.
- Columbia Gorge Audubon Society: members conducted BBS surveys for nighthawks.
- WDF&W: David Anderson, Wildlife Biologist, lent a radio receiver for three months.
- Longview Fibre: Chris Lipton, Forester and Jim MacCracken, Wildlife Biologist, granted access to a Longview Fibre tree plantation rich in nighthawks, lent an aerial photograph, and coordinated communication between myself and a landowner with property access inside the plantation.
- Forest Service: Gail Bouchard, Timber Stand Improvement Technician, gave permission to access the nursery beds and a genetic tree orchard. Ed Bridgeman and Jennifer DeShong, Forestry Technicians, informed contractors, conducting stocking level surveys in 15-20 year old conifer plantations, to record sightings of nighthawk nests.

Results:

- Egg hatches occurred on July 2& 3 (Canopy Crane), July 6&7 (Yew nursery), and July 9&10 (Planting Creek). An adult female nested a second time in the Yew nursery 7 to 10 days after the first two chicks were lost. The second clutch of eggs was laid on July 15&16 and hatched on August 1&2.
- One fledgling with a radio antenna at the Canopy Crane site remained at its egg site (within 0 to 27 meters) until day 40 post-hatch at which time it moved 244 meters from its egg-site roost to another forested edge across the nursery bed. At day 42, this nestling moved to the Longview Fibber plantation 3 km away where a larger congregation of nighthawks occurred. August 14, 2001 was the last time its signal was heard. At day 43, the large concentration of Longview Fibber nighthawks was gone.
- Two adult females on nests were banded and will be relocated in subsequent years.
- A variety of behavioral interactions occur between nighthawks including a repertoire of vocalizations, chases, silent versus loud dives, and stiff wing beats with an associated clapping sound.
- Females were brooding young at all nest sites relocated with adults present. However, one evening, an adult male was heard and seen flying into the Canopy Crane nest site to the nestlings (possibly to feed them).
- A transmitter from a dead nestling was retrieved from a subterranean den under a Douglas-fir tree within the Planting Creek Tree Orchard. Predator identification is unconfirmed; however, it is suspected to be a weasel. This documents information on predators.
- At the Planting Creek Tree Orchard, a cannon was installed by the Forest Service to discourage bears from girdling trees. The cannon sounded every 20 seconds from 5:30 p.m. until 11:00 p.m. This sound was extremely disturbing and irritating while working at the site. The blasts were also heard from the nursery beds 2.4 km away. Impacts of the blasts to the nesting nighthawk are unknown.
- Once trauma is sustained within a family unit, as occurred at Planting Creek (e.g. one nestling dies), subsequent roost sites become less predictable to locate around the egg-site.
- Detections of nighthawk using two different BBS routes determined that 16 of 50 stations had nighthawk responses by night and none by day along the Mt. Adams East BBS route while 2 of 50 stations had detections by night and none by day along the Snowden BBS route.
- A spotted sandpiper nest with four eggs was located adjacent to the nursery beds and immediately adjacent to an area used for storing road fill material. Road fill was placed in several piles, which created moguls for off-road vehicle (ORV) use. The nest successfully hatched and fledged (7-6-01); however, not without some disturbance from ORV traffic.

Catherine J. Flick 2/21/02