The Ghost of the Forest

Great Gray Owl Study Update

Fall 2013
Craighead Beringia South is a not-for-profit organization founded in 1997 by Derek Craighead to provide unbiased scientific data on wildlife and ecosystems. The mission of Craighead Beringia South is to promote a balanced approach to conservation, management, and education programs by pursuing long-term, innovative wildlife investigations. One of the most active independent scientific organizations in the West, Craighead Beringia South has been gathering data on keystone species, such as the Great Gray Owl, to increase our knowledge of the natural world. Our organization is independently funded by private foundations and individuals, which allows for unbiased project selection, data collection and analysis.

**The Crew**

**Derek Craighead**  
President

**Bryan Bedrosian**  
Avian Program Director

**Katherine Gura**  
Wildlife Biologist

**Beth Mendelson**  
Wildlife Biologist

**CRAIGHEAD BERINGIA SOUTH BIOLOGISTS AND VOLUNTEERS**

**Ross Crandall**  
**Walter Scherer**  
**Megan Whiteside**

**Samantha Dwinell**  
**Anya Tyson**  
**Rebecca Gerber**  
**Marilyn Cuthill**

**COLLABORATORS**

**Wyoming Game and Fish Department**  
**Bridger-Teton National Forest**  
**Grand Teton National Park**
**Study Species**

Great Gray Owls (*Strix nebulosa*) are one of the most elusive and secretive raptors in North America, making them very difficult to study. Much of the basic ecology of this species remains unknown. Jackson Hole is near the southern-most extent of the Great Gray's range and is home to one of the only historic studies on this species in the US, offering an ideal opportunity to investigate any changes in the status of this state-sensitive species. In 2013, we began a multi-year investigation of the ecology of Great Gray Owls focusing on the following objectives:

- Document nesting density
- Determine productivity estimates
- Investigate seasonal movements
- Model habitat use and needs
- Understand prey selection

**Spring Surveys**

One of the most effective ways to locate nesting owls is to play calls and listen for responses from territorial adults at night (left). We surveyed the study area (above; call locations shown in green) from March through April.
Callback & Nest Surveys

834 calling locations were visited across 180 sq. miles of potential nesting habitat.

**Total Owl Detections**
- 66 Great Gray Owls
- 93 Great Horned Owls
- 74 Boreal Owls
- 70 Northern Saw-whet Owls
- 9 Long-eared Owls
- 6 Northern Pygmy Owls
- 2 Barred Owls

**What effort did it take?**
- 11 Surveyors
- 72 Survey Nights (8pm-3am)
- Skiing & Snowshoeing up to 10 miles/night

**Great Gray Owl Nesting**
- 10 Total Occupied Territories Located
- 5 Confirmed Nest Sites Found
- 3 Successful, 2 Failed

With help from the Community Foundation of Jackson Hole, fledgling call surveys were completed for the entire study area, revealing one additional successful nest and four additional occupied territories.
Tracking

Transmitters
Typically, we track raptors with solar-powered GPS satellite transmitters. Solar cells do not work on Great Grays due to their nocturnal nature and the copious amount of feathers that cover the solar panels. We developed a miniature GPS logger and have deployed units on several owls we are tracking (below). Each transmitter also has a VHF transmitter that we can follow with hand-held receivers (left). Other owls received micro-VHF transmitters affixed to their tails (center left).

Tracked Birds
During the spring/summer of 2013, we placed tracking devices on seven Great Gray Owls to document their home range sizes, habitat needs, and seasonal movements. Currently, we are tracking:

- 2 sub-adult males
- 3 adult females
- 2 adult males
**Nesting Platforms**

A key characteristic of owls is that they do not build their own nests, instead relying on other raptor and raven nests, broken snags, and mistletoe (right) for nest sites. With support from 1% for the Tetons, we will begin installing nesting platforms across the study area. This will help us assess which habitats are preferred for nesting and if nest sites are limiting the population.

**Small Mammal Census**

Great Grays rely almost exclusively on pocket gophers and voles for their food. This fall, we began a mark-recapture study of small mammals in the owl territories. Continuing this aspect of the project will be vital for understanding long-term trends of Great Gray Owl populations and forest health.

**Long-Term Data Collection**

Data from this year will be the start of what we hope will become a long-term dataset. We hope to continue this project for the next 5-10 years. With long-lived species, such datasets are critical to proper understanding of community dynamics and the needs of the species.
We Need Your Help

Please report your owl sightings!!!

While we are focusing on Great Grays, all owl sightings are important data and can be used to help owl conservation in the valley.

Email or call us to report any owl sightings.

bryan@beringiasouth.org 307.690.2450

Project Supporters

The Community Foundation of Jackson Hole, 1% for the Tetons, a Wyoming State Wildlife Grant, Four Seasons Resort, Eco-Tour Adventures, and Individuals

We thank all landowners who have graciously granted us land access

Please remember us during Old Bill’s and at tax time

Thank you!