



# the WILLET

Beaverhill Bird Observatory

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## ANNUAL GENERAL MEETING

March 2<sup>nd</sup>, 2011 at the University of Alberta  
Room 812, General Services Building

**Directions:** General Services Building is directly north of the Stadium Car Park. Access to Stadium Car Park east of 89 Avenue off of 115 Street.

**Time:** 7 p.m. (to be followed by a regular board meeting); snacks, pop and juice provided.

**Contact:** To nominate someone for the board or for more information to join the board phone Chuck Priestley at (780) 984-6957 or e-mail [chuck@STRIXecological.ca](mailto:chuck@STRIXecological.ca).

## BEAVERHILL BIRD OBSERVATORY CASINO 2010

The Beaverhill Bird Observatory would like to thank ALL the volunteers who helped with this year's casino. As one of our major fund raising initiatives, it is important to have volunteers for the event. We sincerely thank them for their time.



Barb Beck  
Jim Beck  
Kim Blomme  
Meaghan Bouchard  
Christine Boulton  
Katie Calon  
Shaun Cariou  
Ray Cromie  
Shirley Cromie  
Al DeGroot

Jason Duxbury  
Jim Faragini  
Warren Fleming  
Matt Hanneman  
Alan Hingston  
Geoff Holroyd  
Doug Hube  
Janos Kovacs  
Jim Lange  
Maureen Mulherron

Michael Otto  
Philip Penner  
Trevia Piekema  
Chuck Priestley  
Lisa Priestley  
Margaret Shane  
Juanita Spence  
Josef Takats  
Margaret Takats  
Helen Trefry



**Funding** from Alberta Conservation Association, Alberta Sport Recreation Parks and Wildlife Foundation, Mountain Equipment Co-op, Shell Environmental Fund, TD Friends of the Environment, and the Charles Labatiuk Endowment Fund (Nature Canada) is appreciated.

# GREAT THINGS COME IN SMALL PACKAGES – TRACKING BURROWING OWLS FROM THEIR NORTHERN BREEDING RANGE

by Geoff Holroyd and Helen Trefry, Environment Canada, Edmonton, Alberta

Satellite telemetry provides a window into tracking the movements of birds and other species that was impossible when GH started his career. Bird banding as a teenager seemed like a dream; imagine someone might find the bird with the band and tell me where it went. Fast forward 50 years and we get hourly locations with GPS accuracy from satellite transmitters on peregrine falcons that travel from Canada to South America.

Since the late 1980's we have researched the movements of Burrowing Owls. Through the 1990's this species declined in Canada at the rate of -20% per year, by 2000 the population was only 5% of its numbers a decade earlier and was listed as Endangered. How can a species decline so quickly, what was causing such a rapid decline? We were lacking key information such as where do burrowing owls from the northern edge of their range in prairie Canada go for the winter?



Weighing only 150 gm, tracking Burrowing Owls has been difficult. We have used aluminum and colour leg bands, stable isotopes, geolocators, and VHF radio telemetry from small fixed wing aircraft to try to find their winter destinations, with funding assistance from Beaverhill Bird Observatory (BBO). All these techniques have severe limitations and strong biases. Now, Microwave Telemetry Inc. has provided a better alternative due to the development of the new 5 gm PTTs. We purchased 5 transmitters with funds from BBO, Environment Canada, and Alberta Sustainable Resource Department (Fish and Wildlife Division). Here is the story of one of the transmitters.



We trapped a female Burrowing Owl at her nest with young on 24 June, 2010 and attached a 5 gm solar PTT using a Teflon harness. She stayed in the vicinity of her nest in south-eastern Alberta until early July, when she began to make forays further from her nest site. On July 15, she began flying 5 km south, across the U.S. border in northern Montana but still returned to her nest. On August 3 she stayed at the Montana site for two months in a vast area of cultivated fields adjacent to native prairie. One major advantage of these micro-PTTs is that we

get locations in real time so we were able to visit her new roosting and foraging site while she was still there. We found she was roosting in a fallow field with numerous scattered badger holes and feeding on thousands of grasshoppers within sight of the US Homeland Security Border Patrol.

With shortening days and the sun dropping lower in the horizon, the PTT's solar panel struggled to get enough power to send signals to the NOAA-ARGOS satellite. On October 10 she was still in Montana. By October 21 she was in north-eastern New Mexico, 1400 km from her Montana roost. Six days later she was 470 km south in the south-east corner of New Mexico just 17 km south of Carlsbad Caverns awaiting a favorable wind into Mexico. Her rate of travel was at least 110 km per night assuming she left Montana on October 10. She was following a new migration route previously not described. All the band recoveries from prairie Canada have followed the Great Plains. This owl had followed the foothills of the Rockies. She then did a dramatic thing. Most migrating birds travel in a consistent direction turning when they encounter a water body or mountain chain that blocks their travel. Our female owl turned right near the US-Mexico border and flew west to Baja California, Mexico. We can speculate that she was avoiding the Rockies and turned west to fly up the Rio Grande valley that provides a gap in the mountains.



On November 12 she was on the Pacific coast near the border between Baja California Sur and Norte. She has remained there since. Because the transmitter sends signals every 2.5 days we were able to visit the site while she was still there - see next article for details of what we found.

## HABITAT OF A 'CANADIAN' BURROWING OWL WINTERING IN BAJA

by Geoff Holroyd & Helen Trefry, Environment Canada, Edm., AB

From 10-17 January we traveled to Baja to study her winter habitat. The female Burrowing Owl is spending the winter in view of the congregation of gray whales on the west coast of Baja California Sur in Mexico near the Pacific Ocean. Her winter home is very remote, located in the vast El Vizcaíno Biosphere Reserve and about ~20 km south of the closest habitation in the town of Guerrero Negro. Her roost is on a rise of land looking west. From this vantage point with good eyesight she can watch the spouts of the gray whale females with their new born calves and the broiling waters of the mating adults in the shallows of Laguna Ojo del Liebre (see additional article). The plateau where she roosts is desert with ~75 % bare soil at this time of the year. The vegetation consists of scattered lomboy and Palo Adan (a type of ocotillo) shrubs 1.5 m high; the remainder were low Salicornia, saltbush and sparse forbs. Below on the flats the larger shrubs disappear and only the low shrubs grow. The Vizcaíno Desert receives less than 5 cm rain /year so all plants are dry and brittle waiting for spring rains to green and bloom. However, the cool California current creates morning moisture which allows ball moss and large lichens to congregate in the shrubs and on the sandy soil.

Some of the owl's roost burrows are the result of road construction. The over burden of fine silts, were deposited in rows and piles when the white caliche rock was extracted for road building for the local salt evaporation factory. Mammals, possibly wild dogs, foxes or coyotes, have tunneled into the rows of soil. Her burrows faces east and are 7 cm high and 20 cm wide. We could identify the two she was using by the presence of white-wash and pellets; each burrow had only two pellets suggesting there were other roosts. The four pellets were comprised of insect parts.

The surrounding desert contains unlimited options for other roosts and the tracks of nocturnal animals were common place and hinted at the abundant life not visible during the day. Larger burrows, 7-10 cm in diameter, likely built by desert cottontail, are common and big enough for a burrowing owl to find cover for the day. Kangaroo rat burrows are smaller in diameter but very common under shrubs where soil has blown and mounded up. Areas of dense concentrations of even smaller holes are likely home to the variety of small mammals that exist here. Small 5 cm lizards darted into burrows ahead of us. Larger holes of coyote and/or foxes and wild dogs are interspersed. In fact the soil was so undermined with burrows that in places the soil would collapse as we walked. A Burrowing Owl would have no problem enlarging burrows if necessary as the soil is fine and loose. But our owl appeared to have a solitary winter. We found no other owls in the immediate area nor sign such as whitewash, pellets or moulted feathers. The burrows were present and delectable crickets called but no owls took advantage of this secure site.



The night telemetry locations of the owl and the direction we saw it fly indicate it typically foraged north of its roost sites on the desert flats about 20 m lower in elevation than the roost ridge and only 2 or so meters above sea level. This area included two dirt trails which she might use for hunting as they do in summer in Canada. Or she could be using the desert flats with lots of bare ground for easy access to prey. Crickets were calling in the evening. On the night of 12 January while we were in Guerrero Negro, the owl fed south of its usually roost sites, so the next day we hiked out to visit this foraging habitat. The desert was similar to the foraging area to the north. What was unusual was a complex of 8 burrows, at least three used actively by kit foxes likely. This fox den looked like the dens of swift fox that we have studied in Alberta with larger holes and lots of tracks but no prey remains, very clean sites. Two of the burrows on the east side were not used by the foxes, but had many burrowing owl pellets. In the soil were many small mammal bones. The bones, pellets and burrow diameter are typical of nesting burrowing owls. We suspect that owls nested here in the summer of 2010. Now with foxes in residence the owls have left.



Foxes are not the only potential predators in this area. We saw many canid paths with fresh tracks each day. We could not tell if the tracks were feral dogs or coyotes which also occur in the area. Peregrine Falcons were common and likely a bigger threat to the owls. We saw 6 peregrine falcons in one evening drive along the access road but they were concentrated many kilometers from the owl on the power poles closer to the shallow lagoon waters which are home to thousands of shorebirds, and we saw no raptors in her roosting and foraging area. Merlins and kestrels are common wintering raptors and are less threatening to the owls, but not to be taken lightly. Unlike the lagoon, the desert area supported few other birds. We saw 3 Loggerhead Shrikes, birds we associate with burrowing owls in parts of the Canadian prairie. Like the BUOW they may be wintering or breeding individuals. The Le Conte's Thrasher is a rare bird that was utilizing the same shrubs as the shrikes and it confirmed its territory with exuberant singing all day long, a 'lifer' for both of us.



The area around Guerrero Negro has historic and recent records of breeding burrowing owls. Our hosts, Rebeca Kobelkowsy Sosa and Edgardo Maya Martinez took us to Mario's Restaurant where Edgar's father, Mario, has documented several burrowing owl nests within 100 m of his buildings and a male and female were still in the area. One nest was unusual in that it was at the base of an old well about 2 m deep.

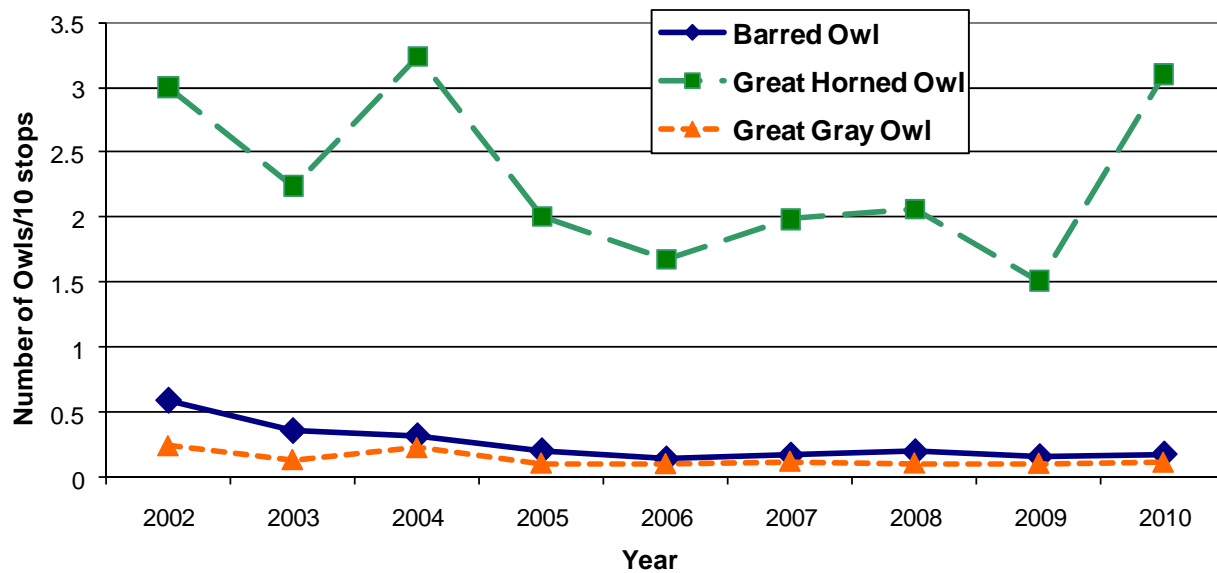
#### **Acknowledgements**

Our thanks to BBO, Alberta Sustainable Resource Department, and Environment Canada for funding to conduct this research.

## **THE OWL FILES**

The Alberta Nocturnal Owl Survey had 182 volunteers conduct owl surveys on 98 routes in 2010! Surveyors recorded high numbers of owls, and owl abundance was close to the numbers found in 2004. After the poor owling season in 2009, it was encouraging to hear so many owls calling this spring. Nine species of owls were heard or observed this year: Barred Owl, Boreal Owl, Great Gray Owl, Great Horned Owl, Long-eared Owl, Northern Pygmy Owl, Northern Saw-whet Owl, Short-eared Owl, and Snowy Owl. Northern Hawk Owl and Burrowing Owl were not detected.

Some of the new owl survey routes in northern Alberta were very productive, with high numbers of owls detected. One route in particular had 10 individual owls of three species.



**Number of Barred, Great Horned and Great Gray Owls detected on surveys between 2002 and 2010.**

Our Diurnal Owl Survey continues to gain momentum; we had 16 routes surveyed by 34 volunteers. Four Northern Hawk Owls and three Northern Pygmy Owls were detected this year. There were 33 other species of birds and mammals detected during diurnal surveys.

## RECOVERY OF A NORTHERN HAWK OWL

*by Lisa Priestley, Mike Blom, and Brent Terry*

On October 31, 2009 Mike Blom, Brent Terry and Ken McDaid were searching for owls near Leoville, Saskatchewan. They found a Northern Hawk Owl perched up high, perhaps searching for food. When they captured it they found it was already banded. When the banding office was contacted they said it was originally banded in 2006 in Alberta. Mike Blom contacted Lisa Priestley to try and find out more information about the capture. It turns out that Lisa and Chuck Priestley had banded it near Chisholm, Alberta on December 23, 2006, a straight line distance of 465 km!! This Hawk Owl was banded as a second year bird (meaning it had hatched in spring 2005), therefore the owl was 5 years old. The sex of the owl was unknown at the time of banding, but it was one of pair of owls that were found in the recent burn near Chisholm.



Northern Hawk Owls banded near Chisholm, Alberta. The owl on the left was recaptured in Saskatchewan 3 years later.



Northern Hawk Owl  
5 years old  
(photo: Mike Blom)

The Hawk Owl appeared have sustained an eye injury since the first time it was captured. Mike wonders if maybe they might injure themselves while plunging for mice and voles into stubble left over in fields. We have observed a number of eye injuries in Hawk Owls over the years, whereas we've banded more than 1600 Northern Saw-whet Owls and have observed only one with a damaged eye. A Long-eared Owl study of eye injuries documented 38 over a 22 year period, a very low incidence rate (Holt and Layne 2008). Long-eared Owls with abnormalities were captured years later suggesting they can survive with the injury.



The Northern Hawk Owl (*Surnia ulula*) is a medium-sized owl found throughout Alberta except for alpine and grassland regions. This owl hunts more like hawk, catching food on the fly and is one of the most diurnal owls in Alberta. The Hawk Owl is listed as a Sensitive species in Alberta. Hawk Owls are an irruptive species, they congregate into an area that has a lot of food (mostly mice and voles). Raptor banders are always on the lookout for winter irruptions of hawk owls or Great Gray Owls throughout the prairie provinces. If you know of a concentration of Hawk Owls during the winter we welcome the information.

Holt and Layne. 2008. Eye injuries in Long-eared Owls (*Asio otus*) prevalence and survival. Journal of Raptor Research 42:243-247.

## BACKYARD VISITOR – WHAT IS IT?

This bird has been spending the winter in Tofield. It is visiting feeders throughout the town, capturing birds, plucking and eating them. In this photo he feeds on a House Sparrow just captured from a feeder in late December. Can you tell what species it is?



## PUBLICATIONS OF INTEREST

Priestley, D.L., C. Priestley, D. Collister, D. Zazelenchuk, and M. Hanneman. 2010. Encounters of Northern Saw-whet Owl from banding stations in Alberta and Saskatchewan, Canada. Journal of Raptor Research 44(4): 300-310.

Holroyd, G.L., H.E. Trefry, and J.M. Duxbury. 2010. Winter destinations and habitats of Canadian Burrowing Owls. Journal of Raptor Research 44(4): 294-299.

## MEMBERSHIP INFORMATION

\$10/yr for an individual, \$20/yr for a family, \$25/yr Supporting, \$25/yr Corporate, \$100/yr Sustaining, \$500 (one time) Life Membership

Cheques can be made to the Beaverhill Bird Observatory and sent to: Box 1418, Edmonton, Alberta, T5J 2N5

Material for the next newsletter can be sent to:

Lisa Priestley, Editor, Box 1418, Edmonton, AB T5J 2N5.

Email: [lisa@beaverhillbirds.com](mailto:lisa@beaverhillbirds.com). Articles and photos can be on bird banding, bird watching, wildlife viewing, personal nature photos, etc. **Deadline:** April 15, 2011.