

Pellet Post



Counting owls in Umatilla



More than a thousand bunkers ('igloos') dot the landscape at the Umatilla Chemical Depot. – Adrienne Clay photo

By Adrienne Clay
TRU M.Sc. Student

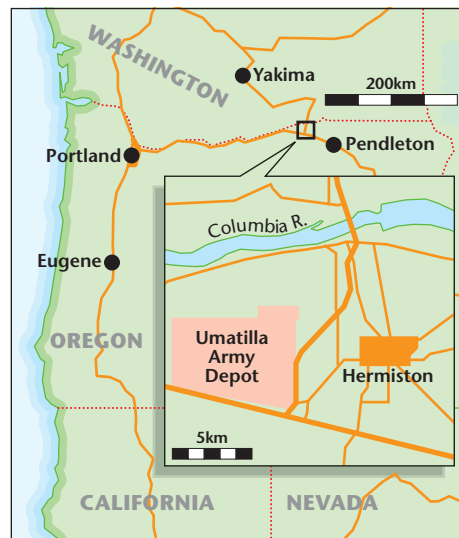
We pack up our suitcases ready for summer field work and head out on what feels like an expedition. I pick up my volunteer field assistant and we head south. Highway 97 is a beautiful drive that takes us through the rolling grasslands of the southern interior of British Columbia.

We pull up to the Canada/USA border and the border guard has a few questions for us. When he finds out that we are going to look for birds he starts questioning. What kind of birds we are looking for? Burrowing owls (*Athene cucularia*).

His partner perks up behind him and peers at us over his shoulder. Burrowing owls? "They have burrowing owls at Moses Lake! Have you seen their cameras and live feed video?" I begin to chatter about the burrowing owl recovery program in BC and how we are accomplishing the work of renewing the population. Every time I visit the border, I have the opportunity to engage the border agents in a conversation about habitat conservation and species recovery while reaffirming the stereotype of crazy birder.

On we go through the towns along US 97. The steep cliffs formed from receding waters of the "great floods" of the last ice age, rise up on each side of the Columbia River Valley. The rolling hills of the grasslands fade into the rear-view mirror and the horizon ahead flattens out.

Boulders, dropped by the glacier that



© 2019 BOCSBC

receded here over 10,000 years ago, dot the fields. Many of these rocks have been cleared to the edge of the farmers' fields creating stone piles that follow the highway and pillars that adorned each country road. Occasionally large erratics still remains in the middle of the fields.

Continuing on south, towards central Washington, we occasionally glimpse small silhouettes starting to appear on these rocks. These are the shadows of the burrowing owls that we are looking for. Washington is currently home to the northern extent of their natural range.

In Washington, their populations are declining between 5% and 8% each year. In BC, the Burrowing owl was extirpated by 1989 with none returning until the Burrowing Owl Conservation Society of

BC (BOCSBC) began its work in the early 90's.

Today we see a 5% annual return rate but overall population numbers remain low compared with the past. Some of the areas in Washington that once saw owls returning each summer are now silent.

We make our way through the Tri-Cities and across the bridge over the Columbia River into Oregon. Pulling into the Umatilla Army Depot, with its arched sign erected in the 1940's identifying the base as "Umatilla Chemical Depot", stirs a feeling of anxiety in newcomers.

Old missiles and rockets have been erected on both sides of the road and a guard steps out in front of you to ask for your identification documents. Permission to enter must be applied for weeks in advance and the guard checks our passport against their list of approved personnel.

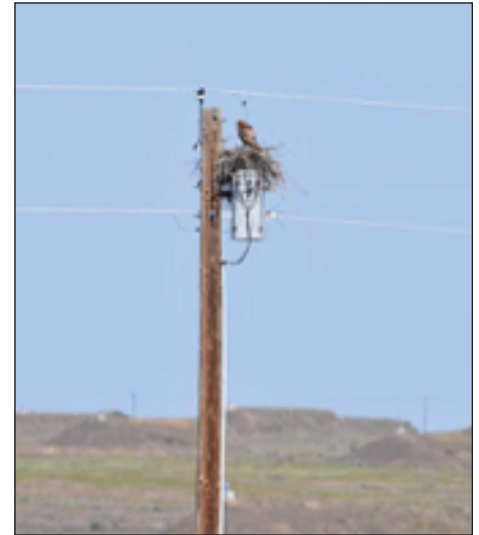
The Umatilla Burrowing owl research area is the meeting place of minds. This is where enthusiasts and researchers from across North America and the world come to volunteer their time with the Global Owl Project.

Wildlife biologists from a nearby National Guard base, international scientists and researchers, students and professionals all come here to learn how to observe, record and handle owls. Each one leaves Umatilla with a new respect for these tiny creatures and a fresh and positive outlook on the recovery of endangered species.

David H. Johnson (DJ) is an owl scientist and an eternal optimist who has the ability to pull everyone into his bubble



The Umatilla Depot originally had 80 kilometres of interior rail lines. The abandoned train platforms provide homes to ravens, pigeons and occasional song birds. – Adrienne Clay photo



A red-tailed hawk watches for its next meal perched high on its nest. – Adrienne Clay photo

of enthusiasm. He has to be the best person to lead this decade-long project.

DJ has been contracted by US Fish and Wildlife under the auspices of the Department of Defense to set up a conservation area in one corner of this sprawling base. This region is a part of the grasslands of the western interior of North America extending north all the way to BC's interior.

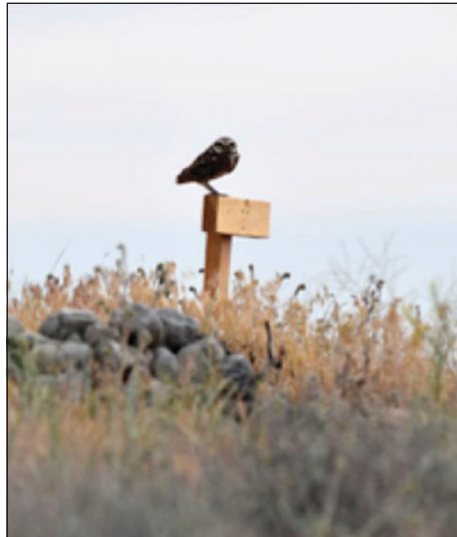
Over 200 artificial burrows have been installed throughout this military base. The owls share this landscape with soldiers in training and over 1,000 earth-covered bunkers (locally known as 'ig-loos') which once held chemical weapons stored during the Cold War.

Burrowing owls in this part of Oregon perch on dead sagebrush nearby their artificial burrows, between the buildings that are relics of the past. Throughout the 80 square kilometers of the base, Barn owls build nests atop old conveyor belts in warehouses which would have seen bombs assembled, while ravens live in the rafters of old train platforms where faded signs are still legible detailing explosive limits and staff restrictions.

While these ghostly remains tell of an ominous past, this base is the safest place for an owl, protected from the general public by armed guards and multi-layers of perimeter barbed wire fencing. But even here they are still in peril. These owls like those in BC spend their days dodging aerial predators. Harrier hawks, red-tailed hawks and goshawks share this protected landscape.

These owls may not be social, or nest in dense populations, but they still rely on their communal population to help warn each other about these potential threats. Aerial threats are the most common, but the terrestrial predators can be no less dangerous.

Last year we watched an owl defend his burrow and his mate from a coyote



Burrowing owl guards his burrow, aided by the armoured entrance installed by the Global Owl Project. – Adrienne Clay photo

using distraction. While the coyote had its nose at the burrow entrance the male owl stood its ground on a nearby low perch, giving its alarm chatters. The thin and scruffy coyote turned its attention from the burrow to the perched owl and walked over, coming nose-to-claw with the owl. The owl took flight and hovered over the coyote. This time the coyote was unsuccessful in penetrating the armoured artificial burrow and, realizing defeat, it left.

Over previous years, teams of volunteers have hauled buckets of large rocks to each artificial burrow and piled grapefruit- to melon-sized rocks in an archway over the entrance of the burrows.

This is done to prevent curious noses and paws from digging up the PVC pipe of the artificial burrow which leads to freshly hatched chicks. After several years, DJ has successfully completed the armouring of all the Umatilla artificial

burrows. It has proven effective.

Last year, our Burrowing owl gravel-hauling team from BC included Lauren Meads, Lia McKinnon, a senior lecturer from Thompson Rivers University, Dr. Nancy Flood and myself. We helped to haul pails of gravel out to cover the aprons which are the patio at the burrow entrances with the goal of reducing weeds and time spent on future maintenance.

Owls in the grasslands are easy to spot because they have a distinctive shape and predictable behaviour patterns. Often, we find the male owls standing guard outside of their burrows on a high point observing the landscape. This landscape has changed drastically over the last hundred years with the spread of what might have been known as introduced forage crops or tame pasture but are now considered invasive grasses and weeds.

Cheatgrass, (or speargrass) is ankle-high and abundant in Oregon, extending across the horizon. It covers everything that is not currently cultivated. In BC the crested wheatgrass, timothy and cordgrass grow thick and high around the artificial burrows. Cheatgrass although invasive, is short and soft, allowing the birds to see as far as the topography will allow.

Early mornings in April are dark and crisp. We pull our toques over ears and bundle up with warm jackets as we head out for the first survey of the season. We drive out on familiar roads that were built in the 1940s. Cracks in the pavement are the only scars showing where small grasses have popped up to take advantage of the limited precipitation that they might absorb. We scan the horizon looking for a small shadow that might resemble a snowman on a stick (See photo "Burrowing owl on sagebrush" on page 3). We might see an owl on the horizon before we start any audio playbacks. We then turn the recording on and play



Survey crew looks for owls and records observations. Some of the 'igloo' bunkers can be seen in the background. – Adrienne Clay photo

mating cuckoos over the speaker that sits in a custom made roof-top box on the car. In early April we might hear a response from a male interjecting his own cuckoo between the moments of silence in the playback. Owls don't like to compete for air time so they will offset their song by 1 second so you can hear their voice when the competitor takes a breath between beats. If we did not already see the owl, our eyes instantly dart over to where we sense the call is coming from. The owls are only territorial during the April and May surveys and this wonderful experience of it responding to our playback will be short-lived this season.

By our June survey the Burrowing owls have little interest in territorial intruders because they are focused on feeding and raising their chicks (locally referred to as the 'kids'). By the end of this survey we are looking forward to the last survey on the July long weekend (See photo "Survey crew" above) when the days are long and the temperatures perfect. At this time the owls are plentiful as the 'kids' often join the parents outside of the burrow.

After three hours of early morning surveying we head back to our accommodation in the barracks at the fire-hall and begin to input our data. We often spend the afternoon helping with various activities of the Global Owl Project and getting ready for another round of surveys which begin in the early evening. As the sun sets we end our survey at last light. Burrowing owls are common in this area because of the work of the Global Owl Project and the avian biodiversity is awe inspiring. As the last rays of light hit the road the nighthawks come out to start their aerial acrobatics. The evening chorus of songbirds comes to an end and the curlews, ravens, pigeons, and meadowlarks all call it a day to get some rest.



Burrowing owl on sagebrush near burrow entrance. An artificial 'T' perch is provided at most burrow sites. – Adrienne Clay photo

Knowing that artificial burrows can bring a large and sustainable population to an area is uplifting and provides justification for the work that is being carried out by BOCS in BC. Despite these successes artificial burrows are not the permanent solution. We need to work towards ecosystem restoration for the long term. Occasionally a BC-born owl will arrive in Umatilla providing evidence that the owls from BC are surviving elsewhere in their northern breeding grounds.

The work done to recover any species at risk across the United States and Canada relies on the strength of volunteers and the guidance of strong leaders striving for positive changes and attainable goals. Like burrowing owls, we have strength in numbers and we cannot work in isolation. Our network with other provinces and states will ultimately help BOCSBC and its mandate for Burrowing owl recovery.

A brief history of the Umatilla Weapons Depot



1940 The US Army identified twenty thousand acres eight miles west of Hermiston, as the site for a military munitions and supply depot.

1941 Construction began in January. At the peak of construction seven thousand workers in three shifts were building the depot. The depot opened on October 14, warehousing World War II-era bombs, rocket ammunition and bullets.

1942 During the war, the depot employed two thousand civilian workers; 27% were women.

1944 The only fatal accident at the depot occurred on March 21, when a bomb being loaded into an igloo exploded, killing six workers.

1962 The installation's name was changed to the Umatilla Army Depot, and it began receiving and storing chemical weapons.

1969 Last shipment of chemical weapons arrives. At its peak, 7.4 million pounds of deadly nerve and mustard agents, 11.5 percent of the U.S. chemical weapons inventory, reposed in the highly secure "K-Block" area. The substances included World War I-era mustard agents, and sarin and VX, both developed by Nazi scientists to kill on skin contact.

2004 Destruction of the chemical weapons inventory begins using high-temperature incineration.

2005 Deadline to finish incinerating all chemical weapons and begin the depot's countdown to closure under federal Base Closure and Realignment Commission, or BRAC, rules is set to September 15, 2011.



Wildfire at Eagle Bluff

Fire rages behind the BOCSSBC Oliver breeding facility — Lauren Meads photo

By Lauren Meads

As many of you heard we had a large wildfire behind our facility in Oliver. We evacuated all 28 owls and moved them temporarily to our Kamloops facility at the BC Wildlife Park.

We are so lucky to have three breeding facilities in cases of emergency. And this year we didn't have as many owls at the Wildlife Park, so the owls from Oliver fit quite nicely.

While the owls were away we were able to do some much-needed repairs at the facility and we welcomed back the owls to Oliver at the beginning of October.



Source: BC Wildfire Service © 2019 BOCSSBC



Owl evacuee at BCWP — Lauren Meads photo



Roof repairs to the Oliver facility. — Lauren Meads photo



Man working above. — Lauren Meads photo



Volunteers assemble! More than 30 people helped install burrows in the South Okanagan.



Dig those burrows!

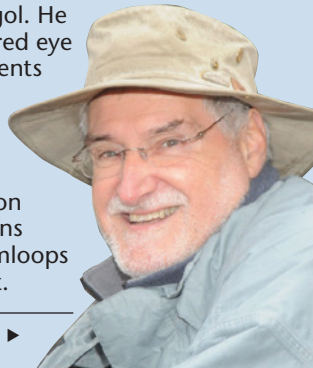
BOCSBC's annual fall field trip through the lens of Volunteer and Membership Director, Cliff Lemire

Our 2019 fall field trip took place at our newest site in the South Okanagan with the Nature Trust of BC.

On Saturday October 19th, about 30 keen volunteers helped to dig two new burrows to add to the site. In addition, landscape fabric was installed around entrances to other burrows to reduce weed growth in front of the burrows. This will help the owl see better as they exit their burrows.

Charyl Tennant was in attendance with our newest education owl, Smeagol. He has an injured eye which prevents his release. Smeagol takes Charyl on his education presentations around Kamloops and Merritt.

Cliff Lemire ▶



Charyl Tennant brought Smeagol.



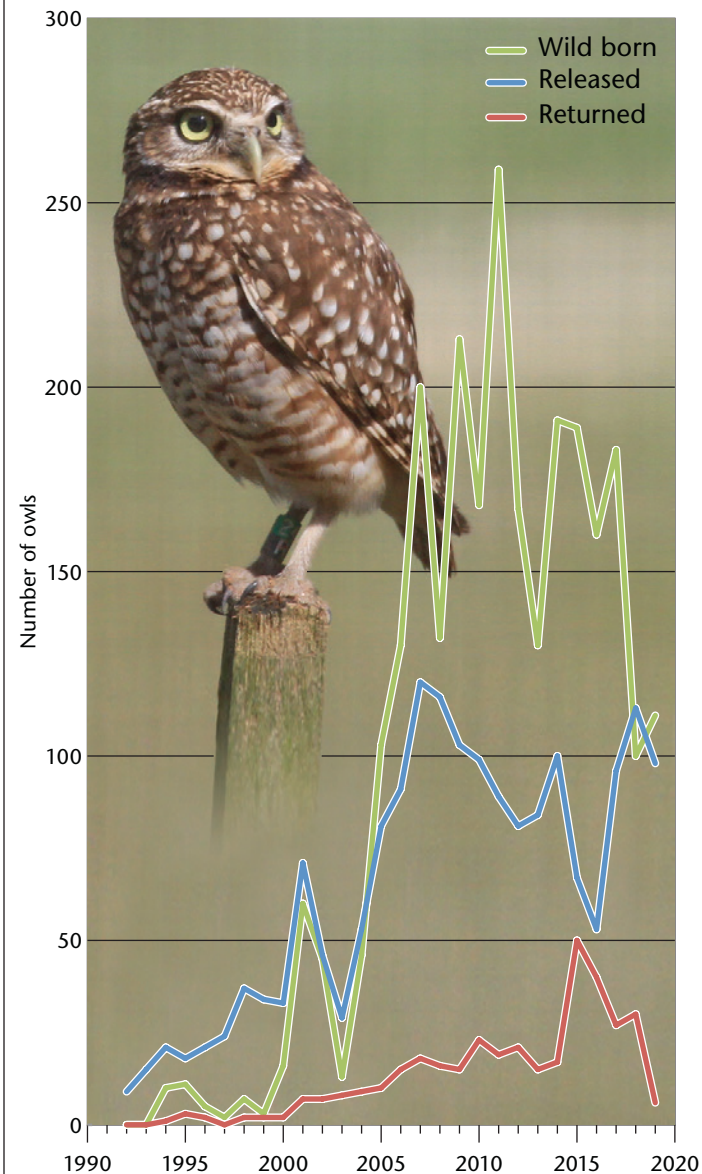
2019 The year in review

By Lauren Meads

This year we released 98 owls from our captive program along with six confirmed returning owls which produced 111 wildborn young. This year we hit a low of six returning owls to all of BC (See graph below). We believe this could be a combination of climate change not only in the breeding grounds

here in BC, but extreme weather events at their wintering grounds in Mexico and California. This is not isolated to BC alone. Reports from programs in Oregon and Alberta have seen lower than normal returns this year. The next step in the program is understanding the influence of climate change (extreme weather events) and the migration patterns of the owls.

Number of owls released, returned and wild born



Graham Dixon-MacCallum (left) and Base Commander, Lieutenant-Colonel Mike Onieu (right) release the first Burrowing owl.
- Warrant Officer Derrick Steeves photo

Soldiers join scientists in Burrowing owl recovery effort

By Jocelyn Antonovitch
CFB Suffield Public Affairs

Canadian Forces Base Suffield joined forces with the Calgary Zoo, and Environment and Climate Change Canada (ECCC) in a project to improve the Burrowing owl survival rate.

Owlets are raised at the zoo's offsite Devonian Wildlife Conservation Centre, which allows them to grow large enough to be released as breeding adults.

Scientists theorize that increasing the owls' first-year survival may in turn reduce the rate of population decline in Canada. Four pairs of owls were returned to the CFB Suffield National Wildlife Area this spring, where they had been captured as owlets the previous year.

Established in 2003, the 458-square-kilometre wildlife area is the only protected area managed by the Department of National Defence. It preserves prairie habitat and more than 1,100 species, about 20 of which are species at risk.

Since it is closed to the public and one of the largest areas of undisturbed prairie in Canada, it is ideal for this project. It also houses a small but healthy number of wild nesting pairs each year.

Support from the base extended beyond clearing nest sites of hazards before the spring release. Soldiers also gave hands-on assistance digging and placing artificial burrows.

"The National Wildlife



Area on CFB Suffield just presents an excellent opportunity. We have trapped owls in the National Wildlife Area in previous years, so now we can release some back there," said Graham Dixon-MacCallum, Calgary Zoo Conservation Research Associate.

For Dixon-MacCallum, an important facet of this project was the opportunity to work closely with military personnel.

"Soldiers are a very organized group of people. All in all, just great people to work with. They are really kind, genuine and happy to be working on this project. It was a real pleasure," he said about the experience.

For more information, pictures and video visit the link below.

ml-fd.caf-fac.ca/en/2018/06/14733

Upper Nicola Reintroduction Program

Fourth year in review



Loretta and Craig on repair and maintenance.



Sean McKay "... liked being able to help".

Stories and photos by

Dawn Brodie, UNB BUOW Consultant, dawnbrodie@telus.net and **Loretta Holmes**, Upper Nicola Senior Cultural Heritage Resource Technician, tootkin@hotmail.com

This spring eight owls (four males, four females) were released at the Upper Nicola Band (UNB) site, April 16. The owls were selected using DNA testing for genetic diversity. The year-old owls were from three captive breeding facilities in Kamloops, Oliver and Port Kells. Each owl gets two permanent leg bands, health check and paired with an unrelated mate.

Field monitoring

Monitoring of the owls begins in March and continues until November.

Two burrows were damaged by horses and repaired prior to the release. The UNB Burrowing Owl sign was also repaired (horses used it as a rubbing post) and once again stands at the site entrance.

Release day

Release Day, April 16, Dawn and Loretta presented the release owls to N'kwala School where the students welcomed the owls with the Okanagan

Song. The students learned that male and female owls line their underground nest with manure and hunt for mice and grasshoppers. Jayden Swaquam and Sean McKay were chosen to be ambassadors to help with the owl release.

Sean McKay said, "I liked being able to help with what is happening with the low numbers of these owls and my favourite part was holding an owl and seeing where they live."

Rate of return

Owl return rate was extremely low this year throughout BC. Only six owls returned to BC, with no return owls sighted at the UNB site. While the cause is currently unknown it is thought to be weather-related events on their wintering grounds and migration pathway. Let's hope this is not an alarming trend to Burrowing Owl populations in Canada and the US.

Owl productivity

Success was the highest since 2016 with 20 juveniles produced from 3 nests. (avg. 6.7 per nest)

Supplement feeding

Supplement feeding during brood rearing has proven to increase juvenile

survival. Why supplement feed?
 1. Starvation is common during the first four weeks post hatching. Inclement weather of 2-3 days can prevent the adults from hunting for their large family of 6-10 young.
 2. Post fledging, the juveniles are most vulnerable and inexperienced in predator avoidance (mainly from hawks and larger owls) and foraging for food.

CONTINUED ON NEXT PAGE

Congratulations Loretta!

Upper Nicola Senior Cultural Heritage Resource Technician

“I was thrilled with the success and evolution during this fourth year; the community has such an increased interest of stewardship not only for the BUOW but for the grassland habitat and partner species.”

Acknowledgements

Upper Nicola Band Chief Harvey McLeod, Council, Administration and Community support and value the cooperation and partnerships that have contributed to the success of the UNB BUOW Program. Thank you to Councillor Brian Holmes and Cultural Heritage Resource Manager Lynne Jorgensen for their support and

advice. Thank you to my colleague, Loretta Holmes for her outstanding commitment and friendship. Chris Gill, RPBio contributes knowledge and organizational skills. Thank you to the Burrowing Owl Conservation Society and volunteers for their contributions. The Interdepartmental Recovery Fund and the Canadian Wildlife Service provided valuable financial support.

Upper Nicola Reintroduction Program

Wild-born juveniles celebrated



Banding Ceremony attendees, July 4 in Merritt.

A Banding Ceremony to celebrate the 20 wild-born juveniles was held on-site on July 4. Councillor Brian Holmes gave opening remarks followed by drumming by former Chief Daniel (N'kwala) Manuel. An update of the program from 2016 to present was given by Chris Gill, Loretta Holmes and Dawn Brodie. The thirty-five attendees included UNB Band Administration, Community members, Ministry FLNROD, industry representatives and neighbours.

Spotting scopes were set up for visitors to view the owls. The juvenile owls were each given identification bands and a health check before going back to their natal burrow. The UNB hosted an Indian Taco lunch to all participants at Old Mom's restaurant. A great finale to the day.



Daniel (N'kwala) Manuel.

Burrowing owls go to N'kwala School



The students did an awesome job dissecting owl pellets.

N'kwala Students dissect owl pellets at a Burrowing Owl presentation by Dawn and Loretta on June 4.

Looking at Burrowing owl artifacts and pellets, the students soon discovered what the owls had eaten.

They found mouse ribs, skull, ver-



tebrae, tibias, femurs, upper and lower mandibles, many teeth and a tail, plus several species of beetles and grasshoppers. A photo album of the Burrowing Owl program was given to the school "Burrowing Owls Go To N'kwala School".

Shared thoughts from UNB Burrowing Owl supporters



Brian Holmes —
UNB Councillor

“The BUOW program is a great initiative for the community and ecosystem. The effort by the team that manages

and cares for the owls is an essential part of the success for the owls.”

Sierra — BNRSc student, TRU

“I enjoyed my participation in the owllet banding ceremony immensely. I was able to learn more about the program and meet many of the people who have dedicated their lives to protecting burrowing owls here in BC.”

Cathy — AHT,RVT

“I had the pleasure of being a participant/helper at the Burrowing Owl banding ceremony held in July 2019. The site was filled with adults and children who were there to observe, to learn, to connect with nature and to celebrate and welcome the new offspring. It was an amazing experience! This work that Dawn, Loretta and the Upper Nicola Band are doing to reintroduce the Burrowing Owls back into the grasslands is so important. Without this dedication and commitment, another species would be lost to us making our world an infinitely smaller place.”

Marnie and Derm — volunteers

“It was an honour to see young burrowing owls weighed, banded and then put into their underground nests. The small gathering of people who witnessed this poignant event were in awe. The wise words from a Band Council member, to the beautiful song created and sung by an Elder made the owl release very memorable. Loretta and Dawn spoke of their love for this project. The owls have a beautiful peaceful place to grow and thrive. The celebration lunch at Mom's with Indian tacos was so good! An awesome day.”

Margaret — volunteer

“Dawn and Loretta's enthusiasm and passion for the burrowing owls is infectious! I have learned so much while walking with Dawn and Loretta from burrow to burrow at the Upper Nicola Band site. A brief glimpse of newly born baby owls makes all the hard work of digging and cleaning burrows, clipping grass or moving rocks melt into the background! Thanks for the Invitation to help, it is a highlight of my year!”



**Upper Nicola is a proud
Syilx community working together
to promote Suxw̓tx̓t̓m, teach our
Captikw̓l and committed to building
foundations through E'nowkin'wixw̓.**

BurrowBriefs



© 2019 BOCsBC

Burrowing owls create pockets of rich plant life in a desert landscape

Science News

In the rain-starved deserts of coastal Peru, tiny patches, surprisingly rich in plant life, dot the landscape. Burrowing birds may be responsible, scientists say.

Mounds of sand shoveled out by nest-digging Burrowing owls and miner birds harbor more seedlings and exclusive plant varieties compared with surrounding undisturbed soils, researchers from the National University of San Marcos in Lima, Peru report in the October *Journal of Arid Environments*.

Although the mounds hold fewer seeds, the structures may provide a sheltered and moist germination environment at the start of the growing season — unlike adjacent crusty soils carpeted with cyanobacteria, lichen, moss and algae.

That crust inhibits seed growth in two ways. Seeds stranded on top are exposed to the harsh environment, and may not be able to sprout at all. And the crust itself can act as a barrier for water to reach buried seeds, and for seedlings to emerge.

When burrowing birds break the crust and dig up sand, seeds can mix into the sand, and water may pool between the tossed sand and crust, the researchers say. That allows seeds to become buried and accumulate moisture needed to germinate.

► www.sciencenews.org/article/burrowing-birds-owls-plant-life-desert-landscape

California Burrowing owl receives 3-D printed leg

KPIX5 CBC San Francisco
Walnut Creek, California

The Lindsay Wildlife Experience rehabilitation hospital in Walnut Creek, California is using cutting-edge technology to help a badly injured owl to live a more normal life.

At nine years old, Pueo is considered a senior citizen among Burrowing owls. She came to Lindsay Wildlife in February after her leg was broken. The limb eventually withered and fell off.

“For an animal out in the wild, that’s a death sentence injury,” said Lindsay Wildlife Curator of Animal Encounters Emma Molinare. “For an animal that’s in a zoological facility, you know, it’s a challenge.”

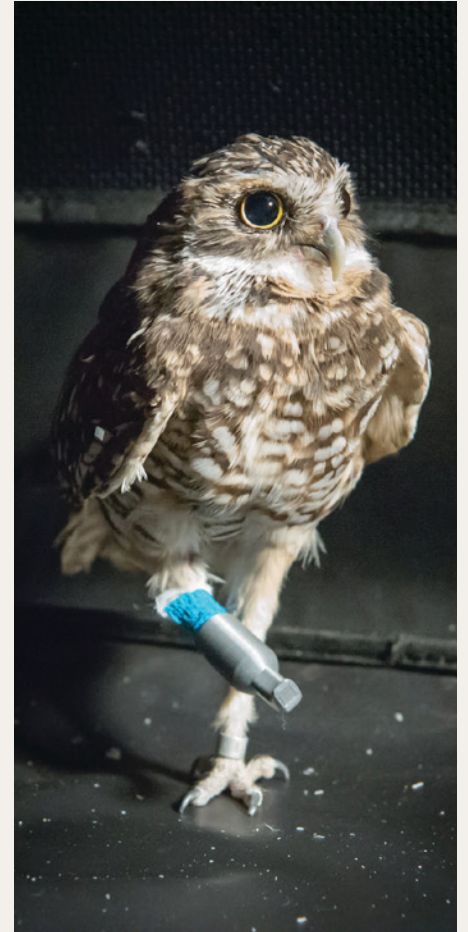
Pueo had come to the right place, because Molinare and the Lindsay Wildlife veterinary staff love a challenge almost as much as they do animals.

They recruited a team of tech designers to create a 3-D printed prosthetic leg to give Pueo the ability to stand while using her good leg to eat and clean herself.

The first prototype looked more like a bird foot, but it kept getting snagged. So the designers switched to a concept similar to the “blades” worn by Olympic para-athletes.

“And for our last prosthetic try-on, Pueo actually stood on this prosthetic for the first time,” said Molinare. “Not for very long, but she was able to stand and move on it briefly, which was very, very exciting.”

Molinare said — to her knowledge, this the first time a raptor has been fitted with an artificial limb. But she says the fighting spirit of her little feathered friend left the staff with no choice but



to try.

► sanfrancisco.cbslocal.com/2019/10/22/3-d-printed-leg-designed-injured-owl-walnut-creek-animal-hospital

Follow the progress of Pueo on the facility’s Facebook page.

► www.facebook.com/pg/LindsayWildlifeExperience/posts/

Hats off to the landowners

The society’s re-introduction program would not be possible if not for the participation of the landowners in the Nicola Valley and South Okanagan who generously allow the Burrowing owls to be released on their property.

Hats off to the kind folks at Deleeuw Ranch, Haughton Ranch, Guichon

Ranch, Chutter Ranch, Frolek Cattle Co., Elkink Ranch and

Douglas Lake Cattle Company, Nature Conservancy of Canada, Nature Trust of BC, The Province of BC, Pentiction Indian Band and Upper Nicola Band.



BurrowBriefs

Mice and owls and petrels, oh my!



Ashy Storm-petrel — Photo by Jeff Poklen, Flickr.com

Science Daily, October 10, 2019 Point Blue Conservation Science

New research from Point Blue Conservation Science shows the significant negative impact that invasive, non-native house mice on the Farallon Islands are having to the threatened Ashy storm-petrel.

Experts estimate that there are only about 5,000-10,000 breeding Ashy storm-petrels, with nearly half of the world's population breeding on the South Farallon Islands.

Modeling published in the journal *Ecosphere* shows the potential impacts to the petrel's population if mice are allowed to remain. Burrowing owls regularly stop at the islands to rest during their fall migration and find a plentiful food source when invasive mice are at their seasonal population peak.

Instead of continuing on their migration, owls remain on the islands to feed on the mice, staying long past the natural time for them to move on to their wintering grounds. But the mouse population crashes each winter which forces the owls prey on the rare storm-petrels, which are just returning to begin their breeding cycle.

Even a small number of owls can kill a large number of Storm petrels if the owls overwinter on the island. Because the owls prey on breeding ashly storm-petrels, they also eliminate all current and future offspring of every bird they kill. The result is increasing mortality of the seabird, reducing the ability of the population to grow.

Scientists estimate that over 40% of current annual mortality of the Faral-



© 2019 BOCsBC

lon storm petrel is due to predation by owls.

Removing house mice from the South Farallon Islands would break this chain of events. With no mice to feed on, migrating owls would find the islands inhospitable and most would continue on their southward migration instead of feeding on rare Farallon birds.

- ▶ www.sciencedaily.com/releases/2019/10/191010085747.htm
- ▶ www.audubon.org/news/mouse

Meet the BOCsBC board of directors

Here is the list of Directors and their roles. If you want to volunteer please contact the society at bocsbc@gmail.com.

- **Mike Mackintosh**, Vancouver, BC: Chair of the Board and Public Relations and Media Director
- **Lauren Meads**, Kaleden, BC: Executive Director
- **Jim Wyse**, Oliver, BC: Finance and Fundraising Director
- **Adrienne Clay**, Kamloops, BC: Director at Large in Kamloops
- **Aimee Mitchell**, Vancouver, BC: Science Director
- **Tracy Reynolds**, Kamloops, BC: Captive Director
- **Elaine Humphrey**, Victoria, BC: Education Director
- **Cliff Lemire**, Vancouver, BC: Volunteer and Membership Director
- **Dave Low**, Kamloops, BC: Director of Lac Du Bois
- **Jack Madryga**, Merritt, BC: Director at Large
- **John Gray**, Vancouver, BC: Director at Large
- **Steve Church**, Burnaby, BC: Director at Large

Thanks to our sponsors...

- The BC Community Gaming Grant program
- The Burrowing Owl Winery
- Canadian Wildlife Service of Alberta
- Special acknowledgment to Toni Hess, for her continued commitment and support of the program for over 8 years
- Mike and Maureen Lipkewich
- Toyota Penticton
- Private donations

... and our partners

- Monika and Frank Tolksdorf
- BC Wildlife Park
- SORCO: Raptor Rehab Centre
- Okanagan Similkameen Stewardship Society



Pellet Post

The newsletter of the Burrowing Owl Conservation Society of BC
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Lauren Meads: Executive Editor
Rosemarie Tirshman: Editor
Nick Murphy: Design and layout