

The River Current

Winter 2019

Sheep Eat Their Way Along Swale



Our Mission: Promoting watershed sustainability through awareness, linkages and stewardship.

Shepherd Sue Michalsky and her assistant Meghan Johnston spend 15 hours a day grazing a flock of 300 sheep at the Northeast Swale conservation area in Saskatoon.

It's been six weeks of work for a flock of 300 sheep that are munching their way through the shrubs and non-native grasses that have overtaken natural species in the Northeast Swale conservation area of Saskatoon. The ruminants are part of an effort to enhance the native prairie of this nature preserve and improve the nesting habitat of grassland birds such as Sprague's pipit and chestnut-collared longspur.

"Grassland birds have declined by 70 percent since the 1970s," said Renny Grilz, Resource Management Officer for the Meewasin Valley Authority, which is managing the site on behalf of the city. "What's happening is as this shrub habitat increases, you're losing your grasslands and you're getting less grass cover, which is not providing suitable habitat for the birds."

Under the three-year Habitat Stewardship Program, Meewasin is using various methods to enhance bird habitat and biodiversity on all its sites. Efforts include invasive species control, targeted conservation grazing and prescribed burning. Sue Michalsky, of Eastend, Sk. and her flock of hair sheep were contracted over the past six weeks to graze 30 acres of swale within the city of Saskatoon. "I'm a rancher but they call me the shepherd here," said Michalsky, as she and her

sheepdogs, Jake and Oz, kept an eye on things from outside the electric net fencing that surrounds the flock. "The shrubs are probably the biggest focus of the sheep grazing project. From conservation or an agricultural perspective, that's something that you want to get under control. Even if this were ranch land, the grazing opportunities are being severely limited by the shrub invasion," she said.

Each day at about 7 a.m., Michalsky, Jake and Oz, along with assistant Meghan Johnston move the sheep from their night pen to a grazing paddock. When she's not driving to get supplements for the sheep, Michalsky said she spends a lot of time talking with various groups that visit, such as elementary and high school classes, university students and even a busload of retirees.



The six-week contract was completed September 15 and the sheep did their jobs. Thousands of boulders and large patches of bare ground are now visible, free of the buck brush (western snowberry and wolf willow) that smothered the ground. Hawks can be seen circling overhead, able to hunt for ground squirrels again. "We're noticing a decrease in shrub cover and seeing some of these grassland birds utilizing the site and moving back in," said Grilz.

The Northeast Swale is officially termed a post-glacier channel scar of the South Saskatchewan River created by glaciers in the river valley 10,000 years ago. After glaciers receded, one of the largest pieces of unbroken prairie, riparian, forest and wetland in the Saskatoon region was created. The swale runs from the river within the city limits for 26 kilometres northeast of Saskatoon before re-entering the South Saskatchewan River north of the Clarksboro Ferry crossing between Warman and Aberdeen.

Sheep continued...

The city purchased 740 acres of land more than a decade ago, which the previous owner had grazed as part of a cattle ranch. An absence of ruminants since then allowed shrubs to invade and overtake natural grasses. Grilz said Meewasin hopes to do more sheep grazing next year and has plans to build permanent fencing to include cattle. However, as the landscape is slowly stewarded back to its more natural state, another form of invasion is happening from two-legged species who are steadily encroaching and surrounding it. Within sight of the grazing sheep are row upon row of newly built residences. The sounds of electric tools can be heard as another subdivision sprouts up beside the swale.

It's a concern for Grilz and Michalsky. "There's some pressure to develop some portions of the swale," said Grilz. "Some portions will remain as sort of a protected conservation area, but there's some pressure to make it more of a passive recreational area as well so people can go in and hike. One of the objectives we're trying to do is we're trying to manage that site as a natural area as a native grassland, but also allow people on the site.

"It's a real juggling act of trying to balance wildlife, human use and then also trying to manage that native prairie. We're trying to balance all three."

By William DeKay

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Biobed For Herbicide Rinsate Project

This summer a biobed for herbicide rinsate was built for urban use by Meewasin's resource management and horticultural staff. Funding for the project was received by the South Saskatchewan River Watershed Stewards (SSRWSI) from the City of Saskatoon Environmental Grant. It was decided to construct the Biobed at the Meewasin field compound and horticultural greenhouse behind Patterson Gardens near the University of Saskatchewan. Herbicide and herbicide rinsate can contaminate soil, wetlands, holding ponds, waterways or wells which can pose a danger to citizens, livestock and nature. Biobeds speed up the herbicide natural breakdown processes by creating ideal habitat for microbes which breakdown herbicides to the point where they pose no further threat to the environment (Ag Canada and Agri-Food Canada 2015). The biobed constructed consists of two fertilizer totes, with the tops cut off. The first tote was then filled with a mixture of topsoil, compost/compost and straw. There is also a small storage tank to hold the rinsate which will then be slowly released into the biomix from a perforated hose.

There are taps at the bottom of the totes to allow for removal of liquids should the system become saturated. The second tote will be filled with the biomix next spring. Liquid from the first tote will then be circulated through the second tote and mixed for even greater absorption of pesticides. Plants are growing on the first mixture and next year native grasses and shrubs will be planted by Meewasin. These plants will help with moisture control in the biobed. Meewasin staff built the biobed and will continue to maintain and manage the system.

Plans for a biobed are available from Agriculture and Agri-Food Canada. There are a variety of ways to build a biobed depending on funds available and if the use is agricultural or urban. There is also a biobed available commercially.

A "Show and Tell" was held on September 18th to explain the why and how of the biobed to interested parties. There were 23 people present from the University of Saskatchewan, City of Saskatoon, Agri-culture and Agri-Food Canada, RM Corman Park, Partners FOR Saskatchewan River Basin and Meewasin. The site is ideally situated for more demonstration days in the coming years for youth and the public.



Meewasin uses an integrated approach to invasive species management including targeted conservation grazing, prescribed burning, mechanical and hand control, biocontrol agents, and in some cases the use of selective herbicides. The use of a biobed for the herbicide rinsate from small-scale spraying equipment will help Meewasin reduce further impact to the environment.

Article Courtesy Kerry Lowndes, South Saskatchewan River Watershed Stewards

Photo courtesy Meewasin Valley Authority

Beavers along the Trails

People walking along the Meewasin Trail have been noticing that the number of fallen trees bearing the marks of beaver teeth has been increasing. The number of beavers along the South Saskatchewan River has been greater in the past several years, especially near Beaver Creek Conservation Area.

Kenton Lysak, a senior interpreter with the Meewasin Valley Authority explains that this year is not any different than other years in regards to beaver activity in the Meewasin River Valley. Beavers, like many other wildlife species, have a cyclical trend in populations where populations fluctuate depending on a variety of environmental factors, such as how available food is that year and what the annual weather conditions are. These factors determine the amount of reproductive activity and success of local populations within in river valley.

Beavers are not an invasive species, but are rather native to Saskatchewan with the earliest fossil records in North America dating back 7 million years. By diverting river systems and changing locations of small streams, beavers had a role in creating Saskatchewan into what it looks like today. Beavers are rodents and because they are rodents they need to gnaw. Their front incisors continue to grow throughout their lives and gnawing on trees helps to keep their teeth the proper length. If they do not gnaw, their teeth can continue to grow, causing serious physical problems and even death.

Beavers take an important role in creating ecosystems, such as wetlands, thus providing more readily available habitat for thousands of native plant and animal species that depend on these habitat types, such as endangered northern leopard frogs and tiger salamanders. Although beavers can potentially be viewed as an unwanted species for some humans, these animals provide important functions to their habitats and are directly connected to the species that coexist alongside them. For an example, take the favorite food of beavers, which is the trembling aspen. Beavers tend to gravitate to areas where these trees grow.

Trembling aspen is a native tree that reproduces by sending up suckers, creating trembling aspen bluffs. When beavers remove trees from the bluffs, the tree numbers usually rebound within a decade. There is an evolutionary connection between beavers and the native trees they have existed alongside for thousands of years and while the beavers will prefer native trees, they will go after other trees if hungry. Learning to coexist with this species is a fundamental step in not only conserving beavers, but also all the other species that depend on beavers for their survival.

There are some ways that homeowners can help protect their trees. Meewasin Valley Authority has experimented with a variety of ways to try to protect some of the trees at Beaver Creek Conservation Area. Chicken wire is not effective as beavers can chew right through the wire. Wrapping the tree trunks in chain-link fencing can deter the beavers, unless they are very hungry. In that case, beavers can chew through that too. The most effective way to reduce damage is to use a combination of coated chain-link fencing and ensuring the availability of species such as the aspens for the beavers to eat.

Beavers are truly fascinating creatures once you learn about their behaviours and the role they take within ecosystems.

Kenton Lysak, Senior Interpreter, Meewasin Valley Authority
Photo courtesy Steve



Churchill, Manitoba, on the shore of Hudson Bay, is the best place in the world to see the Aurora Borealis or northern lights. The type of molecules the solar wind particles collide with as they enter the earth's atmosphere is what determines the colours of these bright dancing lights. When oxygen molecules collide with solar wind particles, the result is green and yellow lights, nitrogen molecules produce red, violet and blue light. The best time to see the aurora is January through March.

*Moopher's
Amazing
Facts*

Nutrien Inc. understands that taking care of the world requires more than simply talking about it. It calls for stewardship and a lighter footprint.

Caring for our Watersheds is an international program, with branches in Alberta, Manitoba, Ontario and Saskatchewan, as well as the United States, and Argentina. It is dedicated to encouraging students to care about the health of their local watershed and brainstorm ideas on what they can do to ensure that health. Open to all grade 7 to 12 students who live in areas where Nutrien has operations, individuals or groups of up to 4 students are asked to research their local watershed, identify an environmental issue, and offer a realistic solution to the question of, "What can we do to improve our watershed?"

Contest deadlines are listed below:

Central Alberta: Contest entry deadline is April 10, 2019; Final competition is May 11, 2019
Southern Alberta: Contest entry deadline is March 15, 2019; Final competition is April 27, 2019
Manitoba: Contest entry deadline is March 8, 2019; Final competition is April 13, 2019
Saskatchewan: Contest entry deadline is March 15, 2019; Final competition is May 4, 2019

For more information please go to the website: www.caringforourwatersheds.com.

Event Listings

CWRA Saskatchewan Branch
Drainage and Drought Workshop
February 1, 2019
www.cwra.org

Regina, SK

Action on Climate Change Through Education
EECOM 2019 Conference
May 10 - 12, 2019
www.eecom.org/eecom-2019

Saskatoon, SK

ICEWW 2019
21st International Conference on Environment, Water and Wetlands
May 23 - 24, 2019
<https://waset.org/conference/2019/05/montreal/ICEWW>

Montreal, Quebec

CWRA 2019 Water Week at Blue
Shared Water, Competing Ethics: Collaboration in Water Management
May 26 - 31, 2019
www.watersummit.ca

Collingwood, ON

IWA Young Water Professionals Conference
International Water Association
June 24, 2019
<http://iwa-youngwaterprofessionals.org>

Toronto, Ont

If you have an event you would like to include under our listings, please email us at partners@saskriverbasin.ca.

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