

## Our Precious Grasslands



When I first walked in the grasslands of the Okanagan, I thought, “I’ve just walked into a Georgia O’Keefe painting”. The muted colours of the soil, rock and sage brush reminded me of the desert scenes in O’Keefe’s art. I was taught to pick a sprig of sagebrush and take in its wonderful aroma. I learned the name of some of the beautiful grassland birds – Western Meadowlarks, Mountain Bluebirds and Northern Harriers. I discovered the delicate Mariposa Lily. And like others, I now look forward to the masses of Balsamroot in the spring. Alas, many natural ecosystems and their related wildlife are endangered with the demise of the grasslands.

Burrowing Owls no longer live here, badger sightings are a rare occurrence and much of the original bunch grass have been overtaken with Knapweed and other invasive species. According to George Scotter, a respected scientist, conservationist and grasslands expert, grasslands are, “the most over exploited bit of land on our planet”. In Canada, only 1/20<sup>th</sup> of 1% of tall grassland remains, only 20% of short grassland remains and virtually all of the fescue grassland has been grazed or ploughed. All this has happened over the last 100 years. We should not take our remaining grasslands for granted! <sup>1</sup>

Because the grasslands of Black Mountain have been grazed by cattle for years, the environment has been drastically altered. Given time, that is 25 to 40 years or beyond, the natural grasslands can recover on their own when disturbances cease. The silty soil, south facing slopes and dry climate are ideal for bunch grasses to grow. Water does not seep deeply into this type of soil preventing trees from growing but allowing grasses with shallower and dense fibrous roots to survive. Mosses, lichen and algae grow between bunchgrasses stabilizing the soil, holding water and preventing weeds from creeping in. Cattle tramp on the soil and break up these low ground covers allowing in invasive weeds and making it difficult for the bunch grasses to survive. <sup>2</sup>



Grasslands provide homes for many animals such as the Pocket Gopher, voles and mice. They tunnel in the soil and are kept in check by predators such as snakes, raptors and badgers. The Northern Harrier which can still be seen flying low over the Black Mountain grasslands builds its nests, not like other hawks in trees, but on the ground hidden by grasses. The Burrowing Owl, now almost extinct in the Okanagan and the endangered badger rely on the grasslands for digging their nests underground.

Grasslands are rich ecosystems. We can do much to both protect and understand their complexity. Hiking on trails to minimize damage, observing animals and plant life to better understand the health of the grasslands and supporting scientific research designed to help restore damaged areas are three ways we can make a difference.

Knapweed is a case in point. It is an invasive species which releases a chemical into the soil making it impossible for other plants to grow in the vicinity. One scientific study suggests introducing a fly which eats knapweed seeds; another suggests introducing a beetle which while in its pupae stage is known to eat knapweeds' taproot. These promising experiments might bring new hope for grassland restoration.<sup>2</sup> Scientific research, protection of grasslands

from cattle and motorized vehicles and education are all necessary components to making sure our precious grasslands survive and flourish.

Citations:

<sup>1</sup> “The Apple Valley Review”, Vol. 3, Issue 4, December 14, 1992. “Our Disappearing Grasslands”.

<sup>2</sup> *British Columbia: A Natural History*; Richard Cannings and Sydney Cannings. Greystone Books, Douglas & McIntyre, Vancouver/Toronto, 1996. Pgs. 225 – 250.

## Guest Speaker at our 2017 AGM



Kyle Hawes was the guest speaker at the annual general meeting in March. Working as a natural resource biologist with Ecoscapes Environmental Consultants, he helps restore grasslands and wetlands.

He described wetlands as land saturated long enough to promote aquatic life, which in turn provides life to the surrounding ecosystems. Not only are wetlands home to Spadefoot Toads, Tiger Salamanders and Painted Turtles, but the insects associated with ponds provide food for bats, flycatchers and other birds.

Kyle stated that wetlands are now being recognised for their worth by providing flood controls and erosion prevention. In fact, a government report has put a figure of \$22,000./hectare/year on the economic value of wetland areas. 74% of wetlands in Kelowna

have been modified, and 24% of the natural wetlands are at risk due to drainage and changes in the PH level of the water caused by agricultural activity.

Development pressures too cause much damage by fragmenting wetland areas where wildlife cannot travel safely from one pocket of land to another. For example the Spadefoot Toad needs to travel from the ponds to neighbouring grassland areas where there are holes made by small rodents in which the toads can safely hide during the hot season. Larger animals, have an even greater need for large wildlife areas so they can move safely from lower level grasslands to the higher level forests and beyond. Fragmentation of land leads to more wildlife deaths.

Cattle can damage the wetlands by leaving deep foot prints in the wet soil which are a hazard for small toads and turtles. They can fall into the holes and not be able to scramble out, and so they die. Also, cattle carry seeds of invasive species, spreading these over large areas of the grasslands. Before any restoration can be done, the cattle need to be removed completely from the land. Fortunately, much fencing has already been put in place by the regional district parks and more is to be installed this year.

Another component to restoration would be to eliminate invasive species and allow natural grasses and flowers to re-establish themselves. Black Mountain has all manner of invasive plant species such as: Canada Thistle, Hound's Tongue, Diffuse Knapweed, Sulphur Cinquefoil and Dalmatian Toadflax. Kyle suggested that through a combination of pulling plants, mowing plants and introducing different types of weevils to eat the plants, the invasive species can be significantly reduced. This is a long term commitment and will take some hard work and determination by many volunteers.

It is encouraging to know that interventions can work and the precious habitat of Black Mountain, both the wetlands and grasslands can be restored. Hopefully, through education and commitment, this park can be a shining example of what the natural environment once was.

