Number 16 **March 2024**

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Upcoming Events

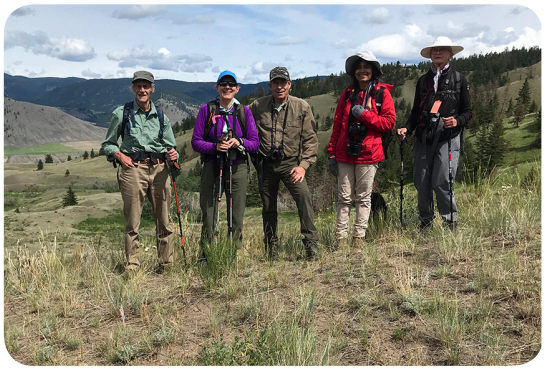
2004 AGM on April 11

The AGM will begin at 5:00 pm on Thursday, April 11 at the Scout Island Nature Centre in Williams Lake. Join us for pizza (provided) followed at 6:00 p.m. by brief reports from the executive and the election of directors and officers. If you are unable to join us in person, please let us know (contact Peter at peter&skye@telus.net) and we will provide a Zoom link. Contact Peter if you need any further information or would like to become a director.

Activities Update

Hikes and Field Tours in 2023

The Friends of Churn Creek (FCCPAS) hosted a hike as part of the Grassland Conservation Council of BC's AGM on June 10 to view how grassland ecosystems were responding to the wildfire that swept through the Protected Area in 2021. On June 18, several members hiked through the grasslands below the calving barn to view birds in the aspen groves. On September 10, members enjoyed an easy hike to Koster Lake and viewed many birds in the area around the lake and the old range cabin. On October 3, FCCPAS hosted a tour for the Cariboo-Chilcotin Ecosystem Restoration Committee, with grasslands stops including our restoration projects in the Dry Farm pasture. We were pleased to receive positive feedback on our efforts to restore grassland by removing tree encroachment.



Planned Hikes for 2024

We are currently planning two one-day hikes in Churn Creek Protected Area. The first will be an easy walk in the Dry Farm pasture of the Protected Area to explore and discuss grassland and open forest restoration projects, both past and planned. We will look at a site where many trees, including a very dense understory of small stems, were removed in 2005 to create an open-grown forest resembling those that occurred here prior to 100 years ago. Friends of Churn Creek is monitoring vegetation and tree regeneration on this site and we will discuss whether objectives of the project are being met. We will also look at other nearby sites where similar treatments are being planned. The second planned hike is in the Hairy Fish to Grasshopper lakes area, walking past BC Lake.
When dates for these hikes have been confirmed, information will be provided to all members by e-mail and on our website and Facebook page. In the meantime, if you have any suggestions please contact us.

Membership and Donations

To keep our organization thriving, we need to build our membership. Please ask a friend to join our society. Membership forms are available on our website at www.friendsofchurn.ca.

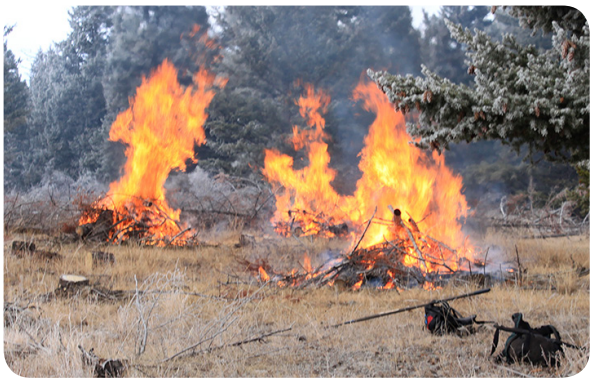
Membership renewals are due again by the end of March and before the AGM. Both individual ($20.00) and family ($30.00) membership fees remain unchanged. We are a registered charitable organization and tax receipts will be provided for any donation, other than membership fees, of $20 or more.

Project Updates

Grassland Restoration Efforts Continue in Churn Creek Protected Area

Cut, bucked and piled slash to restore grassland

In 2023, the Friends of Churn Creek again received funding from the Priority Places initiative and the Cariboo Chilcotin Ecosystem Restoration Committee for grassland restoration in the Protected Area. As a result, volunteers were able to oversee the cutting of Douglas-fir encroachment and ingrowth in the Alkali Flats area, south of Grinder Creek, and the bucking and piling of thick slash in the Alkali, Dry Farm, and Lease pasture areas. Stswecem'c Xgat'tem Development Ltd Partnership^(SXDLP) crews limbed, bucked, and piled slash into several hundred piles. Over the past late fall and winter, Friends of Churn Creek volunteers have spent several days burning many of the slash piles.



Slash piles being burned by Friends of Churn Creek volunteers

Churn Creek Wetlands in a Changing Climate

BCIT graduate student documenting wetland vegetation and water depths

Friends of Churn Creek volunteers are continung to study wetlands within the Protected Area. Twelve wetlands, which occur from low to high elevations in the grasslands, are being monitored for hydrology and vegetation changes. Our principal goal is to assess the effects of a changing climate on wetland hydrology and vegetation. This is a joint project with BC Ministry of Forests Research staff. In addition, in 2023, two graduate students from BCIT conducted MSc research on Churn Creek wetlands, guided by faculty advisors, supported by BC Parks Living Lab funding, and with technical support from Friends of Churn Creek volunteers. Their studies will benefit our understanding of wetlands in the Protected Area. During 2023, we installed automatic water level monitoring equipment in additional wetlands, manually monitored water levels, measured wetland basin topography, established a second weather station, monitored vegetation plots, collected soils for analyses, collected time lapse photography of snow cover, and monitored snow water equivalents during winter months. We expect that the 2023-2024 winter, with its very low snow pack, will provided important insights into the role of relatively dry, warm winters on wetland presence and characteristics.

Friends of Churn Creek Website

We encourage everyone to check our updated website (www.friendsofchurn.ca) with its new design, information, and ease of use.

Feature Article

California Bighorn Sheep Recovery

Wild sheep populations are limited by factors such as habitat availability, predation, disturbance, and disease. Recent advances in laboratory testing suggest that the 1990's population declines of California Bighorn Sheep herds along the Fraser River was due primarily to *Mycoplasma ovipneumoniae* ("M. ovi" for short) infection. This is a bacterium which causes lung pneumonia and often death, especially in lambs. Because there is currently no vaccine to treat M. ovi infections within wild sheep populations, research has shown that the only practical solution to address the disease is to test animals for the presence of M. ovi bacteria and then remove infected ewes from the population. Testing

Feature Article (cont)

involves capturing all ewes in a selected area, collecting nasal swabs and blood samples and then fitting all animals with radio collars and releasing them back into the wild. Once test results are known, biologists return and remove infected ewes from the population. Once treated, herds typically show dramatically increased lamb survival.

Test-and-remove operations along the Fraser River started in 2020 and are expected to continue until all herds have been assessed, likely by 2028. The two non-migratory herds on the west side of the Fraser River with ranges overlapping Churn Creek Protected Area, were treated in 2022. Recent surveys suggest that after treatment and some natural mortality, there may be as few as three adult females remaining in the non-migratory herd residing near the mouth of Churn Creek. Further south, the non-migratory herd on the grasslands between Grinder Creek and French Bar Creek includes at least 19 ewes. Although the sheep in both these herds show improved lamb recruitment rates, the small number of ewes residing near the mouth of Churn Creek may no longer be viable and efforts to supplement sheep numbers there are being considered by wildlife officials.

In the two migratory herds, it is believed that M. ovi has circulated in the populations in the past, and in contrast to the non-migratory herds, no infected sheep were thankfully detected within either herd. These migratory herds summer in the mountains southwest of Churn Creek P.A. and usually winter on the grassland benches along Churn Creek. In 2021, a total of 55 sheep were counted on these winter range benches. Lower than desirable lamb recruitment rates within these two migratory herds, however, suggests that other factors may be limiting recruitment.

In support of habitat improvements for wild sheep in Churn Creek Protected Area, BC Parks has conducted several prescribed burns to reduce Big Sagebrush cover and improve winter forage for sheep in the Lower and Middle Grasslands. To complement these efforts, the Friends of Churn Creek P.A. Society conducted a project to remove grassland encroachment and prune lower branches from larger trees on Sheep Flats, an important habitat for migratory sheep. The objectives of this project included improved forage for sheep on open grassland and an increased ability of sheep to detect stalking predators where trees were left. This project was funded primarily by the Habitat Conservation Trust Fund and treated 47 ha of Douglas-fir encroached grassland in 2019 and 2020. Treatments reduced tree densities from greater than 1500 stems/ha to less than 100 stems/ha. In treated areas where encroachment included large trees, cover for predators was further reduced by removal of lower branches from these trees.

Felled tree encroachment on Sheep Flats prior to slash removal by broadcast burning.

Friends of Churn Creek volunteers continue to work with BC Parks and local wildlife biologists to identify opportunities to restore wild sheep numbers within Churn Creek Protected Area. We are hopeful that sheep numbers will increase in the near future.