



The Pileated Post

Quarterly Newsletter Friends of the Little Pend Oreille NWR

Summer 2019

[http:// www.refugefriends.com](http://www.refugefriends.com)

Number 69

From the President

Visit Refuges while traveling

There are many great refuges, close to home, that you might consider visiting on your travels this summer. I will give you a quick guide to refuges to the east and south that are all within a day or two drive and along routes to Glacier and Yellowstone National Parks. The great things about these refuges is that they are all unique, beautiful and get less visitation than their nearby National Parks. If you want peace and quiet visit a refuge.

If you are heading to either the Glacier NP or Yellowstone NP areas, there are some great refuges to visit along the way. Heading to Glacier? Kootenai NWR is a great stop for a picnic lunch and some birding along with a short walk to Myrtle Falls. Next stop, Lost Trail. Lost Trail NWR is located about 25 miles west of Kalispell (on hwy 2) and a few miles north of Little Bitterroot Lake. This is a new enough refuge (est. 1999) that it is not on many maps. With restored wetlands and a large lake this is a beautiful refuge that gets little visitation.

After your stay in the Glacier NP area head south of Flathead lake to visit Ninebark, Pablo, and Bison National Wildlife Refuges. Ninebark and Pablo are both mainly lakes and wetlands and are great for birding. Both are located along highway 93. Also along 93 is Bison Range NWR. A great place to see this iconic species along with some great views of the Mission Mountains.

Heading to the Yellowstone area? Consider visiting these refuges: Lee Metcalf, Red Rock Lakes and Camas.

The Lee Metcalf NWR is located 25 miles south of Missoula along highway 93. Part of the refuge is floodplain and there are also wet meadows, wetlands and grassland. An excellent refuge for wildlife observation and birding.

Red Rock Lakes is a bit more difficult to get to than most refuges. Coming from the east (near West Yellowstone) or the west (Interstate 15) it is around 25 – 30 miles of gravel road to reach the refuge and refuge HQ. High clearance vehicle with good tires are strongly recommended. It is a high elevation refuge ranging from around 7000 ft. to over 9000 ft. in the Centennial Mountains. Often called one of the most beautiful refuges in the country, it is also home to the only native population of Artic Grayling in the lower 48. At one time Red Rock Lakes had the only population of Trumpeter swans in the world, which lead to the establishment of the refuge in 1935. Trumpeters were down to 70 individuals, but have now made a good recovery and you can even see them nesting at Turnbull NWR south of Cheney WA.

Our last refuge to visit is Camas NWR in Idaho along Interstate 15, 35 miles north of Idaho Falls. Primary established for nesting waterfowl and as a rest-over location for migrating birds it is known as an excellent refuge for birding and wildlife observation.

This is a very limited sample of refuges in our area. To find out more about National Wildlife Refuges and what they offer, visit the Refuge System Home page: <https://www.fws.gov/refuges/?ref=topbar>

Get out and enjoy your National Wildlife Refuges!

Dan Price, President

Refuge Manager's Meandering

The appearance of early spring wildflowers like yellow balsam root and woodland star announces a new season, even if I can still see snow on Kalispell Peak. While late winter seemed unnecessarily snowy, spring run-off was

almost a non-event this year. There was enough snow-melt to fill Potter's Pond, but not enough left over to make much of a difference in Bayley Lake. The Little Pend Oreille River and other streams came up a bit in April and early May, but the water level never reached the top of the banks and high flow was over quickly. Water levels in the lakes and streams now resemble mid-summer, not late spring.

The usual cast of spring characters arrived on cue. A yellow warbler has again declared the alders along spring creek adjacent to refuge headquarters as his kingdom, declaring his sovereignty for all to hear. His warbling song is one of our most reliable signs of spring at headquarters. But a few new actors stepped on stage. This spring a house wren is using the radio antenna mast, furnace chimney and kiosk roof for as singing posts. I've never had a wren welcome me to work every morning before! Columbia ground squirrels emerged a few weeks ago and have raised havoc with our meager attempts to maintain a lawn around headquarters. I suppose I should be angry about the lack of lawn and abundance of bare ground outside my office window. But then I remind myself this is a wildlife refuge; how many other people are as privileged to witness their antics as I am? Soon the young squirrels will emerge from the burrows and the real games will begin! Another new treat this spring are a pair of kestrels perching in the cottonwood snag down by the river. Hopefully they nested in one of the cavities in that cottonwood or some other nearby tree. It's exhilarating watching those little falcons rocketing around.

Bald eagles are nesting on both McDowell Lake and Bayley Lake. One afternoon in early April I saw nine immature bald eagles and a pair of adults roosting and soaring around Bayley Lake. The immature eagles have left, but the adults are rearing two eaglets on a menu of fish and ducks. The McDowell Lake pair are also on the nest, but no young have popped their heads up yet. You can see into the Bayley Lake nest from the Cliff Ridge overlook, and observe the McDowell Lake nest by looking directly across the water from the McDowell Lake overlook along the auto tour.

The arrival of hummingbirds is always cause for much rejoicing. The first hummer this spring was a male calliope that hovered outside my office window one afternoon, giving me the stink eye because I hadn't deployed the hummingbird feeder yet. I was quick to take the hint, immediately dropped all my important government business, and cooked up some fresh hummer brew, stat! Since then all the feeding ports on the feeder are occupied, with black-chinned, calliope and rufous humming-

birds stacked up in the airspace around the feeder impatiently waiting their turn to refuel.

Last week we were able to pull off a 135 acre prescribed fire on Starvation Flat near headquarters adjacent to Mill Butte Trail. We burn ponderosa pine stands because they are naturally adapted to a short fire return cycle; this is the third time we've burned that area over the last 20 years. Fire reduces the pine needle litter, removes lodge pole pine seedlings, and rejuvenates the grasses, forbs and shrubs under the canopy thus both reducing risk of wildlife fire and improving habitat. While we often burn these stands in the fall, the spring burn also helps reduce the consumption of large woody debris that is important to maintaining small mammals, insects, fungi and soil moisture. The burn window in spring is smaller since factors including wind direction, fuel moisture and green-up change rapidly. This project worked because we were ready when good weather conditions coincided with availability of firefighters from the Forest Service to augment our fire folks. If you walk the Mill Butte Trail you'll see this spring's burn, and just north of it last fall's prescribed fire project for a side-by-side comparison. But the best comparison is to visit the burn periodically over the summer and watch how it turns from black to green!

Thanks to the Friends for helping with the spring EARTH DAY! trash pickup, and the annual McDowell Marsh trail spruce up. The annual butterfly count will be on Saturday, June 29. And our 6th annual Blue Goose Chase Family Fun Bike Ride happens on Saturday, July 20. Both events will be posted on the Refuge website, as well as the Friends website and Facebook page.

Jerry Cline, Manager, LPO

Biologist's Report

Summer is nearly here. It seems like just yesterday I was writing my piece for the winter newsletter. It is going to be a very busy summer. I have three seasonal staff coming soon. That is most I have had since 2016. One of my interns should be here before this is printed. We will be doing a lot of the usual projects like bird and bat surveys. For the first time in at least three years we have multiple bald eagle nests with young in them. Both the Bayley and McDowell nests have chicks this year. Osprey are using the Minnie Flats nest as well. This is the first time all three nests were active at the same time.

A couple of big projects will be going on this summer. We are working on a project to install Beaver Dam Analogues (BDA) or artificial beaver dams. These will be

built in the stream that feeds Deer Lake in our Kaniksu unit. These should help slow down the water and collect silt to replace the material lost to erosion in the past. As the channel fills in we anticipate the creek will overflow its banks in spring. This reconnecting of the stream and the historic floodplain should start the process of restoring floodplain wetland. This should benefit waterfowl and other birds. This work should take place in late summer.

The other big project I am working on also involves water. If you have been out to the refuge in the last year Eurasian water milfoil has pretty much overrun McDowell Lake. Some time in June a contractor should be treating the milfoil. Milfoil grows in dense mats covering the bottom of the lake and reaching to just below the surface. This causes a myriad of problems for us. It crowds out native vegetation. The milfoil can become so dense that fish are unable to move about and forage in overrun areas. High density of the plants can deplete oxygen in the lake causing fish to suffocate. In addition to the fish, eagles, ospreys and otters are unable to maneuver and catch the fish that are there. Beaver will abandon ponds that have been overtaken. Milfoil spread by the tiniest of fragments being carried to another body of water. If you fish McDowell Lake please make sure you remove all vegetation from your equipment.

Unfortunately, milfoil is only one of dozens of foreign species that have invaded the refuge. Many of these have major impact on our ecosystem. Western white pine was the dominant trees species in much of North Idaho and Northeast Washington a hundred years ago. More than 95 percent have been killed by an invasive fungus from Asia and to extensive logging of this favored tree. Bullfrogs have invaded several refuge ponds on the Cusick and Kaniksu units. They are such efficient predators that ponds where they occur are devoid of native frogs like the spotted or Pacific tree-frogs. At one point invasive fish like tench, perch, and pumpkinseed sunfish had all but wiped out trout in McDowell Lake. Most of our invasive species are weeds that are altering our habitats for native species. These include such species as Canada thistle, several species of knapweed, several species of hawkweed, common tansy, and hounds tongue just to name a few. One of the worst of these is reed canary grass, which has overrun wetlands.

It's not just the refuge, invasive species cost the US more than 120 billion dollars each in year in agriculture and environmental damage. That does not include what homeowners spend on weed control around homes and businesses. For information on the costs see the fact sheet from the Fish and Wildlife Service at

<https://www.fws.gov/verobeach/pythonpdf/costofinvasivesfactsheet.pdf> .

However, in spite of what I written so far all is not lost. We have made great strides here at Little Pend Oreille. The removal of tench and perch from McDowell Lake has allowed trout to return. Chester Field, Starvation Field, Christian Fields were all rehabbed with native plant species. While each of these requires continued vigilance to keep weeds out they are now dominated by native grasses and wildflowers. The open area behind headquarters and along the river view trail was just a few years ago dominated by knapweed and hound's tongue with a touch of Canada thistle and common tansy. It is now dominated by native grasses and home to a thriving Columbian ground squirrel colony. The squirrels in turn are hunted by red-tailed hawks and bald eagles where the once was just weeds. Space prevents me from going into the reduction of leafy spurge on the refuge, the near elimination of knapweed around the Olson Creek parking area and other weed success stories. We must remain vigilant to prevent further introduction and to reduce those that are already here. This one area where you can help us manage the refuge. If you fish refuge waters clean your gear before you leave. If you are out hiking check your pants for hound's tongue seeds before leave an area. If you see a patch of knapweed, hawkweed, or hound's tongue along the roadside don't park there and carry seeds away with your car. Most of all educate yourself on what weeds are in your area. Learning to recognize them is the first step to prevention. If you want to do more we always welcome volunteers for a weed pulling party.

Critter of the Season



As I look back through my columns I see only one time before I wrote about a butterfly. That was the Lorquin's admiral way back in fall of 2012. So I thought it was about time to do another one. The subject this time is the Western tiger swallowtail, (*Papilio rutulus*). With a wingspan up to 4 inches it is the largest butterfly we normally see on the refuge. It is black and yellow with a forked tail. It is one of 4 swallowtail species we have documented on the refuge. The adults can be seen flying most of the summer. They feed on the nectar of a variety of flowers depending on what is blooming at any given time. They are important pollinators for many types of plants.

They lay the eggs and the caterpillars eat the leaves of various deciduous trees. Look for them using cottonwoods, aspen, and willows in our area. They are frequently found drinking from puddles. They are often seen "puddling" and "mudding". Mudding is a term butterfly biologists and enthusiasts use to describe the behavior of many species that gather at muddy spots to extract moisture and minerals from mud. Females lay individual eggs on the underside of leaves and will lay up to 100 eggs. After about 4 days the eggs hatch. The caterpillars go through 5 molt cycles as they grow. Once it reaches full size, the caterpillar pupates by spinning a chrysalis around itself (that is simply a technical term for a cocoon). When the butterfly pupates in the summer an adult swallowtail emerges in about 15 days. When the last generation pupates in the fall the insect over winters in the chrysalis with the adult emerging in the spring. The chrysalis is green in summer but those that over winter will turn dark brown and look like a piece of wood.

Swallowtails are one of our most recognizable butterflies and can be seen throughout the refuge from mid-May through the end of summer. Look for them on your next trip to the refuge.

Mike Munts, Refuge Staff

Here is the second part of the article called "A Rotten Story" by Ken Bevis

Mushrooms are the fruiting bodies of fungi. These can provide food for a variety of forest-dwelling animals, including the northern flying squirrel, which then spreads the spores through their droppings and help the fungus move about the forest.

Some of these above-ground fruiting bodies are tasty to us homo sapiens too, including chanterelles, matsutake, and morel mushrooms. Some fungi have below-ground fruiting bodies, such as truffles, but the effect is the same. These "fruits" are often meant to be eaten by something to help spread the fungal wealth in the ecosystem.

Fungi are the "engines of decay" in the forest ecosystem, beautifully described in David George Haskell's excellent 2012 book, *The Forest Unseen*. Haskell looks closely at one square meter of a Tennessee forest over the course of a year, and shares observations of life, both large and small, that apply to forests everywhere.

Meanwhile, glamorous megafauna such as our banana slug, will eat fungal elements, including mushrooms, and can play their own role in breaking down organic material by shredding, eating, and defecating as they slide around the forest floor ([see recent article in DNR's Small Forest Landowner News](#)).

There are a lot of other animal characters acting in the forest duff as well, including mites, millipedes, centipedes, springtails, protozoans, worms, spiders, snails and gophers. The food chain down there is stunningly elaborate, with fungus (and bacteria) in foundational roles, breaking leaves and wood down initially in a myriad of ways. Then small animals such as springtails, (some smaller than the period at the end of this sentence!) feed on the fungus and the released compounds. These critters are in turn fed upon by larger creatures such as millipedes, who are in turn fed upon by larger critters, such as shrews, who could be eaten by a small owl, who could be eaten by a larger owl or coyote, etc. It is boggling when the various energy pathways are identified.

Salamanders live in the decaying duff and wood of the forest floor. These ancient life forms live slow and deliberate lives, mostly in the dark tunnels underground, making dramatic appearances on wet days in our forests. They eat small insects and worms, and are the apex of the rotting wood food pyramid.

How our forests are managed can greatly influence what happens in the soil. The soils we began managing in the late 19th and 20th centuries were the products of many thousands of years of development by way of fire, ice, geology, organisms and time. Human impacts in forestlands today are generally in the form of changing vegetative structure, removing organic material and soil compaction.

What can small woodland owners do to help promote and protect the precious habitats and soil ecosystem below our feet? A few suggestions:

1. Retain organic material across the land, especially decaying logs
2. Keep portions of the land shaded to lessen soil drying
3. Minimize compaction from machinery
4. Scatter large organic pieces after harvest
5. Retain patches of natural forest at regular intervals on managed landscapes to enable soil flora and fauna to persist and return to managed areas
6. Get down on your hands and knees with a hand lens and marvel at the life in a patch of duff, rotting wood, and forest soil

This is only the proverbial tip of the soil ecosystem. I hope you got down low on the forest floor, looking under some duff with dirty hands after reading this article. Send me your photos, ideas and experiences!

Ken Bevis, *Wildlife Biologist, Washington State Department of Natural Resources*, ken.bevis@dnr.wa.gov

References

Campbell, S.; Addell, K.W.; Gray, A.; (2010). Washington's forest resources, 2002-2006: Forest inventory and analysis report. Gen. Tech. Rep. PNW-GTR-800. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

Molina, Randy & Amaranthus, Michael. (1990). Rhizosphere biology: ecological linkages between soil processes, plant growth, and community dynamics.

2019 Friends of the Little Pend Oreille National Wildlife Refuge Amateur Photo Contest

You are invited to participate in the Friends of the Little Pend Oreille National Wildlife Refuge Amateur Photo Contest. The sole purpose of the contest is to encourage you to visit and enjoy the Refuge this year. Up to five entries (total) per person may be submitted in any of the following categories:

1. Animal Life – the animal is the main subject
2. Plant Life - the plant is the main subject

3. Scenics/Landscapes
4. Public Use/Recreation

The winning photos will be printed in the Statesman-Examiner, will be on display in the Colville Chamber of Commerce Office, will be featured on the *Friends' Web Page*, and in the North Columbia Monthly. Past winners are displayed in the Refuge office.

Official contest rules are as follows:

1. Photographers must be non-professional; this is an amateur contest for people who have not sold any photos. All entries must be photographs taken at Little Pend Oreille National Wildlife Refuge between August 16, 2018 and August 15, 2019
2. **Digital images:** All entries must be digitized. Submit on a CD-ROM. Multiple files must be specifically identified on the entry form. Acceptable file formats are jpg or jpeg.
3. Mail or deliver all entries to Friends of the Little Pend Oreille National Wildlife Refuge Photo Contest, c/o Joel Anderson, 2342 Bodie Mtn. Rd, Colville, WA, 99114, or drop off at the Colville Chamber of Commerce Office in Colville. On the back of the DVD please include your name, address, phone number, category entered, the name of the photo, and the date. Emailed entries will not be accepted.
4. All entries must be received by August 29, 2018.
5. Entries must be accompanied by the entry form (only one per contestant). Entrant's signature constitutes a release to the *Friends Association* for the right to use, reproduce, publish and display the photographs without further compensation. Entries will not be returned.
6. While extreme care will be taken in handling all entries, the Refuge cannot be responsible for any damage to photographs.
7. Winners will be notified by September 19, 2018.

Joel Anderson

Newsletter Necessities

Number 69 - Jim Groth - Editor

To send comments, write articles for the newsletter, or to contribute items of interest, please contact:

Editor, *The Pileated Post*
P.O. Box 215, Colville, WA 99114
Email: larchsavage@yahoo.com

The Pileated Post is published quarterly and is sent to all Friends of the Little Pend Oreille National Wildlife Refuge.

Calendar

June

12th-- Board Meeting--6:00 p.m.
29th--Butterfly Count--8:00 a.m.

July

10th-- Board Meeting --6:00 p.m.
20nd-- Family Bike Ride--8:30 a.m.

August

14th -- Board Meeting -- 6:00 p.m.

Our Mission: The Friends of the Little Pend Oreille National Wildlife Refuge is an independent, nonprofit organization dedicated to promoting the conservation of native fish, wildlife, plants and their habitats on the Refuge, providing educational opportunities, and fostering understanding and appreciation of the Refuge.



Box 215
Colville, WA 99114

Friends of the LPO

Membership Application

Name _____

Address _____

City _____ State _____

Zip _____

Telephone _____

Email _____

Date _____

Annual Membership

___ I would like my newsletter emailed to me

___ Basic Member \$10 ___ New

___ Contributing Member \$25 ___ Renew

___ Supporting Member \$50

___ Sustaining Member \$75

___ Other \$ _____

Please mail, along with a check to:

Friends of the LPONWR
Box 215
Colville, WA 99114