

MAKING TRACKS

NEWSLETTER OF THE FRIENDS OF THE TUALATIN RIVER NWR

JOYFULLY CONNECTING OUR COMMUNITY WITH THE WONDER OF THE REFUGE



PRESIDENT'S PERCH

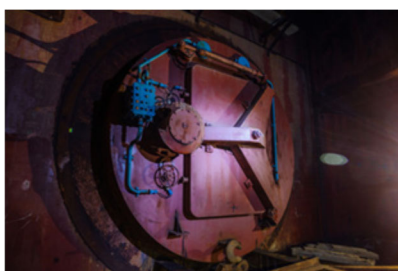
By Mark Newell, President of the Board



Hoodoo and her person Mark

The question of how long we would survive in an airlock probably hasn't entered our minds lately, but should it?

There are two major problems with being in an airlock. The first, running out of oxygen, turns out is relatively minor. In a ten by ten-foot room, you should be fine for three days



breathing normally. All bets are off if you choose to run in place. The major problem is breathing out carbon dioxide, which at concentrations of about two percent will kill you. Running in place is doubly bad for you in a closed, airtight room. In a ten by ten-foot room you would be dead halfway through that first day just breathing normally from elevated CO₂. The easiest way to keep yourself alive in an airlock would be to stock it with plants. How many? This is a harder problem to solve, because there are lots of variables. One of those, is the fact that plants produce less oxygen as carbon dioxide levels increase. They produce different amounts of oxygen at different phases of their growing cycle. They take in different amounts of carbon dioxide at different temperatures, with different light sources. And finally, some plants only "breathe," at night in order to save water, you get the picture, lots of variables.

Scientists estimate a safe oxygen consumption of 50 liters per hour (13.21 gallons/hour) for a human. Meanwhile, a leaf gives off about five milliliters of oxygen per hour (.00132gallons/hour). A person would need to be in a room with about ten thousand leaves. About 300 to 500 plants would produce the right amount of oxygen, but it's much harder to estimate the amount of carbon dioxide the plants absorb, especially if every time a person breathes out, they inhibit oxygen production. To be safe, don't get into an airlock without bringing about seven hundred potted plants with you. And remain still, do not run in place, no matter how strong the desire. Try to ignore that treadmill calling your name. Moral of the story: plan ahead if you are going to be getting into an airlock, you'll need time to get all those plants in there.

JOIN

DONATE

RENEW

UPCOMING EVENTS

[Drop In Exploration Day: Wilderness Survival Skills](#)

August 04, 2019 12:00 PM

[Drop In Exploration Day: Bald Eagles](#)

August 11, 2019 12:00 PM

[Puddle Stompers- Dragonflies](#)

August 14, 2019 1:00 PM

[Wildlife Walk](#)

August 17, 2019 8:30 AM

[Trailhead Nature Table \(session 6 of 10\)](#)

August 17, 2019 12:00 PM

[Drop In Exploration Day: Worm Composting](#)

August 18, 2019 12:00 PM

[Puddle Stompers- Dragonflies](#)

August 20, 2019 10:00 AM

[Wildlife Walk](#)

August 24, 2019 8:30 AM

Friends Board Meeting

August 27, 2019 6:30 PM

There is always a catch and here it is, we are living on one big planet that is an airlock. Once we ruin the atmosphere enough, we won't be running in place, or to do an errand, or because we're late for work, because we'll be gone. Let's do something about that. At the end of September, we need you to help us plant thousands of plants while we restore the Tualatin River National Wildlife Refuge's back yard. Come join us on September 28th for a massive restoration effort and planting party after our Annual Meeting. Let's improve our chances in this giant airlock called Earth by planning ahead.

Save the Date for the 2019 Friends of the Refuge Annual Meeting.

September 28, 2018

Invitations will be emailed out the last week of August and will include details about the meeting and the planting party.

FYI: Here's the cost of memberships if you want to support the Refuge.

Student: \$15.00/Individual: \$25.00/Family: \$45.00/

To join go to: <https://fotr.wildapricot.org/Join/>

WEAR IN THE WORLD



Board Members Tom Hartz and Willem Stoeller enjoy an outing at Steigerwald Lake NWR in Washougal, Washington.

Board Member Michelle Scholz organized the Friends and the Refuge to participate in Sherwood's 2019 Robin Hood Festival Parade.



Going anywhere fun this summer? - take your Friends Logo Wear along and snap a Photo.
Send photos to Info@Friendsotualatinrefuge.org
Be sure to include the location

SOCIAL MEDIA

HELP THE FRIENDS WHILE YOU SHOP

community rewards
Where shopping & giving unite

HABITAT IMPROVEMENT AT TUALATIN RIVER NWR

Chicken Creek Restoration

The Friends have secured over \$500,000 in grant funding to support the Chicken Creek Restoration project. Please visit:

<https://www.refuge2020.info/chicken-creek-restoration>

Beginning July 2019, a small tributary stream to the Tualatin River, known as Chicken Creek, will be restored to its natural, curving flow at Tualatin River National Wildlife Refuge's Atfalat'i Unit. The project aims to restore natural stream and wetland floodplain functions, where the realigned Creek will feed a portion of the Atfalat'i Units once heavily managed wetland impoundments. Anticipated beaver activity in the restored Creek channel will cause water to pond, and in concert with the native vegetation planted by the Refuge, will result in 280 acres of wetlands and 2 miles of stream habitat supporting a healthy, diverse array of plants, fish and wildlife.



KEY DATES

Mid-July, 2019 through September 2019: The project will begin with a delivery of large woody debris that will be used for habitat improvement in the Creek channel and its associated floodplain. This will require the Refuge to close a portion of the Wetlands Seasonal Trail (pictured below). That section of the trail will eventually be removed to connect the new 280-acre wetland site. A new section of trail will open in mid-July, providing access to a previously closed area of the Refuge while overall adding 1/2 mile of trail. This will be a permanent change to the Refuge trail system. Additional activities will include excavating the new creek alignment, filling ditches and the placement of the woody debris.

Fall 2019 through Winter 2020: Large scale plantings are slated to occur. Stay tuned for likely volunteer opportunities during this time.

May 2020 through September 2020: Beginning in spring 2020, work will start with the removal of water control structures and the installation of two new bridge crossings near the wayside and photo blind. Finally, late in the summer, flow from the current Chicken Creek ditch will be diverted into the new excavated Creek channel that was created during phase 1 and the ditch filled in.

LATEST UPDATE

["Setting the Stage for Creek Restoration"](#) July 23, 2019
[Download the project fact sheet \(PDF\)](#)

PRESIDENT'S VOLUNTEER SERVICE AWARD

The Friends of the Refuge are a certified organization to verify and deliver this national award to our members on an annual base. These awards are normally presented during the February Board meeting, but the pins have been out of stock until now (Gold Pins are still on back order). The President's Volunteer Service Award for 2018 volunteer hours will be presented at the Refuge Volunteer Dinner on August 28, 2019.

Wondering about this award? Here are a few details about the program. It is important to make sure that all of your volunteer hours are captured by USFWS.



Bronze Level

Kids: 50 to 74 hours
Young Adults: 100 to 174 hours
Adults: 100 to 249 hours

Family & Groups: 200 to 499 hours



Silver Level

Kids: 75 to 99 hours
Young Adults: 175 to 249 hours
Adults: 250 to 499 hours

Family & Groups: 500 to 999 hours



Gold Level

Kids: 100 hours or more
Young Adults: 250 hours or more
Adults: 500 hours or more
Family & Groups: 1000 hours or more

- The PRESIDENT'S VOLUNTEER SERVICE AWARD is a prestigious national honor offered in recognition of sustained volunteer service.
- America has a long proud history of volunteer service, and volunteers work to unite our Nation. Whether mentoring a child, spending time with an elderly neighbor or cleaning up after a natural disaster, millions of Americans commit their time, energy and talent to meet urgent and everyday needs in our community.
- Established in 2003, the PRESIDENT'S VOLUNTEER SERVICE AWARD gives Presidential recognition to individuals, families and groups who have demonstrated a sustained commitment to volunteer service each year. The AWARD shares this achievement as a way to inspire others to contribute to their communities through volunteer service and to make volunteer service a central part of their lives.
- The AWARD is available on an annual basis and is an honor that every American – from all ages and all walks of life – can aspire to achieve. Even if people have never volunteered before, the PRESIDENT'S VOLUNTEER SERVICE AWARD is within their reach.
- To be eligible to receive the AWARD, individuals, families and groups submit a record of their annual volunteer service hours to participating Certifying Organizations that will verify the service and deliver the AWARD.
- Children of ages up to 14 are eligible to receive the PRESIDENT'S VOLUNTEER SERVICE AWARD after completing at least 50 hours of community service in a single year. Ages 15 to adults are eligible after 100 hours of annual volunteer work, and families and groups of two or more people are eligible after 200 hours of service.

2018 Friends of Tualatin River National Wildlife Refuge President's Volunteer Service Award recipients are;

Bronze Pin (100-249 hours)

Sara Abel, James Alexander, Barbara Allen, Barbara Birney, Mike Burnett, Wendy Cattanach, Alan Christensen, Marty Clancy, Christine Crocker, Darlene Dumke, David Dunn, Pam Farris, Larry Harrington, Carly Hishmann, Don Holland, Linda Kilgore, Ginny Maffitt, Paula McCall, Sharon Miller, Scott Owen, Ruthann Panck, Rodney Robertson, Michelle Scholz, John Schweitzer, Judy Silverforb, Ed Squiers, and Mary Taylor

Silver Pin (250-499 hours)

Alan Fitzpatrick, Bob Fuquay, Frank Nusser, Mike Skinner and Willem Stoeller

Gold Pin (500+ hours)

George Burnett, Dawn Carovano, Cheryl Hart and Tom Hartz

Thank you to all of our volunteers. Your ongoing support of the Friends and the Refuge is a huge part of what makes Tualatin River National Wildlife Refuge so special.

SUMMER PROGRAMS ON THE REFUGE

Summer is in full swing with programs on the refuge! Here is a glimpse at what is going on this summer. All program information is on the Friends website at friendsoftualatinrefuge.org.

Drop In Exploration Days

Join us from 12:00-2:00 for free activities and crafts in our environmental education classroom. All ages welcome, hosted indoors in our Visitor Center. No registration required for this drop in program, stay as long or short as you like within the two-hour period. The program will happen throughout the summer on every Sunday starting on June 16th.

Puddle Stompers

Our preschool environmental education program invites children and their families to spend the morning learning about the natural wonders of the Refuge. The Puddle Stompers program is offered the second Wednesday and following Tuesday every month, and each month has a new theme. This event is free & open to the public, but registration is required on the Friends website at friendsoftualatinrefuge.org.

Wed, August 14th: Dragonflies (1:00-2:30)

Tues, August 20th: Dragonflies (10:00-11:30)

Trailhead Tables

Drop in at our trailhead table to see what you can discover on the refuge during your hike. Each trailhead table talk has a different theme, so stop by and see what you can explore! All programs will be held Saturday from 12:00-2:00 PM at the trailhead to the year-round trail.

Sat, August 17th: Salmon of the Tualatin Basin

Sat, August 24th: Backyard Birds

Sat, August 31st: Frogs, Snakes, Salamanders, OH MY!

Sat, September 7th: Wild Waterfowl

Sat, September 14th: Creatures of the Dark

Wildlife Walks

Join a naturalist from 8:30-10:00AM on a morning walk and discover the wildlife on the refuge. Bring a pair of binoculars, bird book, or field guide on this family-friendly experience, and explore the habitats of the Refuge. Registration is required for this free event. Register at friendsoftualatinrefuge.org.

Saturdays, August 17th, August 24th, August 31st

Bats of the Night

Join a bat biologist and learn about these nocturnal flying mammals. The program starts indoors, and then moves outside at dusk to look for these amazing creatures. Please register for this free event at friendsoftualatinrefuge.org.

Thursday, August 29th 7:00-8:30

Thursday, September 12th 6:30-8:00

Thursday, September 26th 6:00-7:30

We are looking for people who are interested in writing for the Friends Newsletter; have a desire to right about something you are interested in, a creative writing itch, or skills as an editor? Contact Bonnie at: Info@FriendsoftualatinRefuge.org

NATURE'S OVERLOOK STORE



Duck Stamps Are Here!

The 2019-2020 Federal Migratory Bird Hunting and Conservation Stamp, otherwise known as the Duck Stamp is now for sale! While the Duck Stamp serves as a license for waterfowl hunting, its greater purpose is to generate revenue for conservation. Anyone can (and should!) purchase these conservation revenue stamps; 98 percent of the purchase price goes directly to help acquire and protect wetland habitat and purchase conservation easements for the National Wildlife Refuge System.

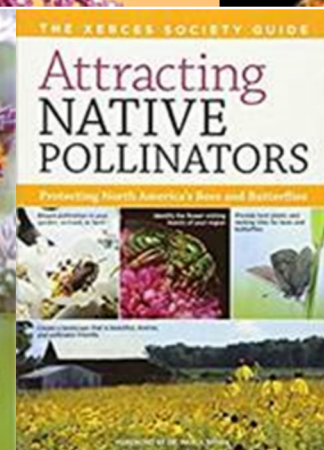
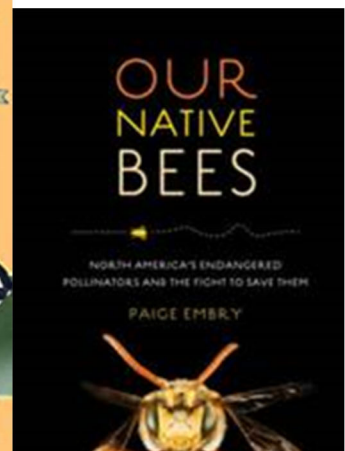
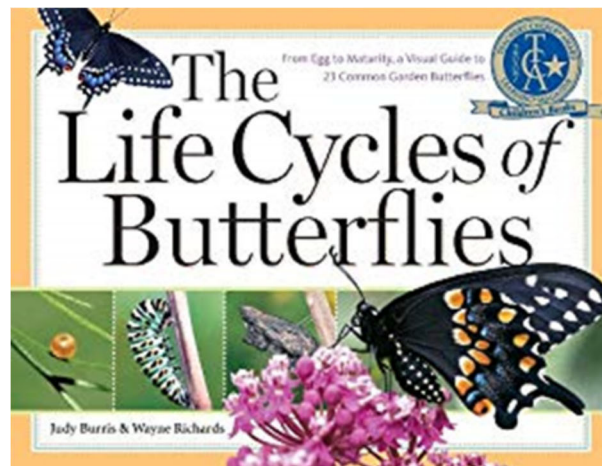
Duck Stamps have always been an integral tool for our Refuge System. For every dollar spent on Duck Stamps, ninety-eight cents goes directly to purchase of critical habitat or the acquisition of conservation easements for protection in the NWRS. More than 6 million acres at over 300 wildlife refuges were created or have been expanded using Duck Stamp dollars.

At least one refuge in nearly every state has benefited from Duck Stamp dollars.

Dear readers – there has been much more in the news recently about saving the bees, native pollinators, organic gardening, etc., so I am hopeful that a shift in public sentiment is happening. More and more people are starting to care about bees and other invertebrates and making the connection between the small beings of the world and how our lives are entwined. I know I am preaching to the choir. Here are some great books we have in the shop regarding insects, **including several really good field guides** (please browse through those – likely one format will appeal to you more than the others)...

And, thanks for shopping at Nature's Overlook – as you know, your purchases directly support the Friends of the Refuge, which supports the Refuge... there we go again with that "chain of life" concept!

Happy summer reading!



TUALATIN RIVER PHOTO SOCIETY

Photo Society Meeting
September 5th, 7 PM at the Visitor Center

Do you enjoy taking nature photos?

Would you like to improve your photographic skills?

Come to our September 5th gathering when guest speaker Adam Bacher, a Portland-based professional photographer, will present his **Conspiracy of Ravens** project. (Intriguing title isn't it?)

Come see glimpses into the lives of Ravens as you've not seen before...

"Commercial photographer by day, artist by night, I've been a professional photographer for 25 years. My latest project took flight three winters ago when I came across a conspiracy of ravens after a day of cross country skiing in February, 2014."

- Adam Bacher



Who we are: The Friends Photo Society organizes monthly meetings focused on nature photography in the North West. These meetings typically consist of a presentation by a professional photographer, followed by a sharing of nature photos made by the attendees. In addition to guest speakers, we are planning to organize photo walks on the Tualatin River National Wildlife Refuge led by experienced photographers. The Friends Photo Society is a great opportunity to improve your photography skills, to network with other photographers and meet like-minded folks!

All Photo Society meetings are free and open to both members of the Friends and non-members. Monthly meetings are held at the Visitor Center at the Tualatin River National Wildlife Refuge on the first Thursday of every month at 7 PM September through June.

The Friends Photo Society also offers some wonderful volunteering opportunities with the Refuge. Examples of volunteer opportunities include, leading of photo walks at the Refuge, creating photo journals of major restoration projects at the Refuge, and others.

TRPS meets the first Thursday of each month from September through June. Meetings begin at 7:00 p.m. in the Riparian Room at the Tualatin River National Wildlife Refuge, 19255 SW Pacific Hwy, Sherwood, OR 97140.



CONTACT US

Friends of the Tualatin River National Wildlife Refuge
19255 SW Pacific Highway
Sherwood, OR 97140
503-625-5944 x227

info@friendsoftualatinrefuge.org