

tree tips

Natural Resources Education News


Trees For Tomorrow[®]
Environmental Education Center

Winter 2022

...sustaining the world we live in through the science of nature



winter wonder

TFT4ALL Learn about how we're ensuring all students have access to learning about the natural world on [page 2](#).

NORTHBOUND Some animals make significant changes when the weather gets colder - find out more starting on [page 6](#).



from the desk of
Cheryl Todea, Executive Director

As I complete my first 9 months as Trees For Tomorrow's Executive Director and started thinking about my goals for 2022, it was actually quite easy to identify my top three priorities.

- #1 – **Provide a safe learning environment** for students, visitors, and employees.
- #2 – **Ensure all programs connect to our mission** of promoting sustainable management of natural resources.
- #3 – **Ensure our programs are accessible to all** students, all ages, all families, all communities and all economic backgrounds regardless of ability to pay full tuition fees.

Many of you have already helped me to meet priority #3 by supporting our TFT4All Annual Giving Campaign through an end of the year donation. Our goal was to raise \$20,000 by December 31, 2021 to ensure we can offer a Trees For Tomorrow experience in 2022 to all students, all schools, and all families regardless of age, race, or financial background. With your help, we surpassed our goal and as of the printing of this newsletter, the campaign has reached more than \$138,000. What an impact!

Why did we call this campaign TFT4All? When I asked our staff what TFT4All means to them, we heard things like:

- "...providing all with opportunities to learn about natural resources"*
- "...timeless and ageless and for everyone"*
- "...programs for people of all interests and all skill levels"*
- "...meals for all dietary needs and restrictions"*
- "...one common, fun, safe, learning space for our guests"*
- "...for all demographics, for all races, for all people regardless of income"*

TFT4All may mean something slightly different for everyone. However, this campaign is about more than just raising money. By supporting our Annual Giving Campaign, becoming a member, sponsoring an event or program, or by giving of your time, you are making the world a better place — one student at time — no matter where that student is from.

I promise you, your support makes a difference. It's not too late to make a difference to one more student, one more school, or one more family. Contact me today to share how you want to make a difference to the students of Trees For Tomorrow, both today and tomorrow.

Program ideas? Fundraising suggestions? A story to share? Please contact Cheryl Todea, Trees For Tomorrow's Executive Director at ctodea@treesfortomorrow.com or 715-479-6456 x222.



Trees For Tomorrow, Inc. is a private 501(c)3 nonprofit organization. Contributions are tax-deductible as permitted by law. Equal opportunity employer.

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Our Mission

Trees For Tomorrow promotes sustainable management of our natural resources through transformative educational experiences.



Trees For Tomorrow's campus includes National Forest Property under permit from the USDA Forest Service.

Please send editorial comments & suggestions to:
TreeTips@TreesForTomorrow.com
 (715) 479-6456

“Diversity” means more than just acknowledging and/or tolerating difference. Diversity is a set of conscious practices

TFT4ALL: ENCOURAGING DIVERSITY IN OUR CLASSROOMS

Outdoor Classroom

Diversity among our program participants is something we always strive for at TFT, yet achieving a truly diverse audience remains a challenge for both TFT and the environmental education community at large. One issue is that diversity can mean so many things to different people- are we talking about diversity in gender? Age? Ability? Race? Something else? We found this out as a staff when discussing our “TFT4ALL” giving campaign- the idea of “TFT4all” meant something completely different to each of our staff! Here at TFT, we are making the effort of increasing diversity among our program participants.

We strive to offer a variety of programs that fit ages ranging from 3 years all the way up to adults. We also work tirelessly to secure funding to provide scholarships to those in difficult economic situations.

TFT educators have adapted classroom materials to fit students of different learning abilities as well. In general, we try very hard to remove as many barriers to inclusion as we can!

In the environmental education field, it is widely recognized that all of us need to improve our diversity, equity, and inclusion in terms of race and ethnicity. We here at Trees are trying to take little strides in removing barriers in this area of diversity as well. This last year a focused effort was made to increase minority presence in our Natural Resources Careers Week (NRCEW) program of both participants and professionals. This small measure ensured that more students were able to see professionals that looked just like them in job fields that might have seemed out of reach previously in a predominately white field. We are eager to continue this

in future years of NRCEW. We also recognized that there were changes we could make to our internship program to make it more accessible for all people and we are hoping that our 2022 makes even more students feel empowered to apply.

Even though these accomplishments are things we are proud of, we know that there is still a tremendous amount of work for us, and everyone in the environmental education field to do to help promote diversity and make our programs more accessible to audiences of all demographics. For now though, no matter who you are, what your background is, what your age, ability, race, ethnicity, religion, gender identity, or sexual orientation, we want you to know that TFT is for YOU, and we are committed to providing you with a safe, fun, and welcoming environment at any of our programs!



Article by
Kim Feller, Education Manager



from the desk of
Mandy Gingerich, Operations Manager

On Campus

How lucky am I to call home to somewhere that I can experience the beautiful change in seasons (sometimes all in the same day)? Fall 2021 was one of the best I have experienced yet — the crisp fall air, the leaves crunching under my feet. Best of all, in September we started welcoming overnight school groups back to campus! As a staff, I don't think we realized how much we missed it, until they arrived. It felt like we had a purpose again. Despite feeling the continued effects of the pandemic and our attendance still being down, we had a successful fall/early winter 2021 hosting many programs and students!

School Programs

- 1 elementary school
- 4 middle schools
- 4 high school groups
- Several day groups

Community Programs

- Fall session of KinderWild (9 weeks)
- 3 Nature Adventures
- 2 Sustainable Living Institute courses
- 2 Wreath-making sessions
- New Year's Eve Candlelight Snowshoe/Hike
- 3 facility rentals



In September we also rounded out our amazing management team by hiring our new Hospitality Manager, Patricia Omarro-Gould. Patricia brings a refreshing outlook on hospitality with her many years of experience. She is exactly who Trees For Tomorrow needed to continue to provide healthy and delicious meals to our guests and provide direction to make sure our guests also have a safe and clean environment to stay in.

We will bring in the New Year with much hope and optimism as our calendar for 2022 is filling up! If you are interested in bringing your group to campus, contact me today mandy@treesfortomorrow.com or ext. 228.

We continue to welcome groups to campus throughout the pandemic. Following the guidance of the CDC and our local Health Department, we provide a safe and clean environment to all our guests by social distancing, rigorous deep cleaning of all buildings, and face coverings worn by staff while guests are on campus.



Foraging:
Guest Speaker
Ann Small



Telemetry & Wildlife Tracking:
New equipment courtesy of WPS Grant



Wreath-Making:
Adult & Family
Sessions



Facility Rental



Fridays
for preschoolers





Why Trees For Tomorrow?

According to Board Member Peter Denney, Procter & Gamble in Green Bay has been supporting high school students from Green Bay area in attending natural resource workshops at Trees For Tomorrow annually since 1949. As TFT was founded by local paper and pulp industry executives with the goal of maintaining wood supply for local paper mills, there is a natural connection between TFT and P&G. P&G has a shared interest in supporting the TFT

mission of “sustainable management of our natural” resources to both enrich our local community and reinforce our role as an environmentally conscious local manufacturer. TFTs use of “transformative educational experiences” to engage local students in natural resource management, meaningful experiences in nature, and careers in natural resources serves as a catalyst to “Prepare today’s youth to be tomorrow’s stewards of the natural world.”

Procter & Gamble

Photos: Students from Green Bay School District at Trees For Tomorrow for the annual P&G Sponsored Natural Resource Workshop.



NEVER
Underestimate the
DIFFERENCE
You Made and the
Lives You Touched.
Thank you.

Thanks to our 100+ donors who supported our TFT4All Annual Giving Campaign in 2021!

MORE THAN 5,000 STUDENTS WILL BENEFIT FROM REDUCED FEES IN 2022 BECAUSE OUR DONORS COLLECTIVELY GAVE MORE THAN \$138,000!!

No gift is too small as donations came in all sizes from \$10 to \$50,000!

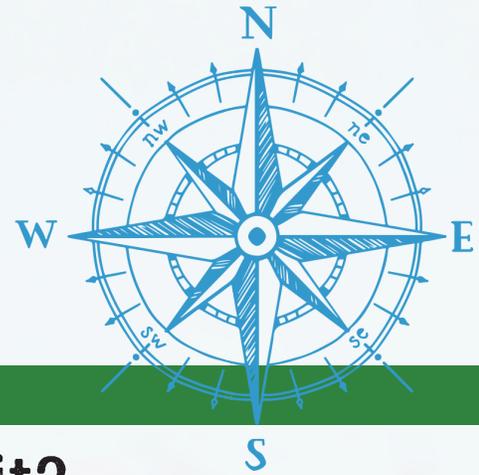
It's not too late to show your support by becoming a member, donor or volunteer; joining us for a program; or by becoming a Trees For Tomorrow ambassador and spreading the word about our mission and program opportunities.

Thank you



northbound

A Forum for Natural Resource Issues & Education



A Tree Tips supplement since 1984

Change Is Good – Isn't it?

From a human perspective, change can often be difficult. The top ten list of life stressors includes death of a loved one, dismissal from a job, marriage, relationship breakup, buying/selling a house, debt, jail time, legal troubles, and retirement. Some of these things are within our control while others are not. Change can also be beneficial when it's for our personal good like leaving a low paying job for a better one or getting out of a bad relationship.

Let's look beyond the human side to changes that happen all around us that many people are unaware of. In the animal and plant kingdoms these transformations are generally seasonal. For many animals, change happens twice a year as the temperatures and the amount of daylight (photoperiod) increases or decreases.

Let's explore several examples of changes in nature as we explain their significances such as animal hair color and thickness, heart rate, and hibernation as well as dormancy in trees.

Hair Color & Thickness

What do you do when the outside temperatures get colder? You add more layers of clothing, right? When the temperatures rise, you remove layers as needed to stay cool. Humans can control the number of layers needed to regulate their body temperature; animals are not so fortunate.

Have you noticed your pet's fur changing as fall begins? If they spend long periods of time outdoors, our pets will often nat-

urally increase the thickness of their fur. This thicker fur allows them to stay warmer in colder temperatures. It's like putting on another layer of clothing.

Most animal fur is comprised of three layers (pets and wild animals).

1. The layer closest to the body, the **Down hair**, is short and curly. It creates a dry layer to help keep moisture away from the animal's skin.
2. The **Awn hair** is the middle layer. Slightly longer and stiffer, this type of hair helps form the barrier to the skin.
3. Finally, the **Guard hair** is the top layer. These hairs are longer than awn hairs and contains the pigments for the animal's color and appearance.



Some animal hair, such as the white-tailed deer, (*Odocoileus virginianus*) change from a normal hair to a hollow hair when they get their winter coat. If you observe a cross section of such a hair under a microscope, it will resemble a straw. These hollow hairs trap air from the body to keep the animal warm. The phenomenon of trapped air is much like the applied window film or multi panes of a window that trap air and regulate heat loss. These hollow hairs insulate so well that sometimes snow can build up on the deer's back.

Fur Color

Are you the type of person that adapts the color of your clothing to match the seasons? If this is the case, then you are not much different than some mammals that live in the Northwoods. But unlike humans that are able to choose to wear lighter colors in warmer temperatures, some mammals will become lighter color in colder weather.

Fur color is one of the changes that happen seasonally when changes in the temperatures and light (photoperiod) triggers a transformation in the animal. Two animals come to mind when talking about seasonal color change.

The first is the snowshoe hare, (*Lepus americanus*) and the second is the short-tailed weasel, (*Mustela erminea*). In both species there is an advantage and



disadvantage to the color change. The first advantage is camouflage. These species live in a climate where part of the year the ground is covered by snow. Snow is usually white, allowing the white fur coat to blend into the surroundings. The disadvantage of this color change comes when the snow melts more quickly than the color change occurs leaving the animal in contrast to its surroundings and more easily spotted against the opposing background.

It is argued whether white hairs aid in thermoregulation of body heat. Some believe that the absence of pigments in the hair allows for those hairs to be hollower and thus hold heat from the body. It is more likely that the metabolism of each species is altered to save energy and heat.¹

Heart Rate (torpor)

An animal's heart rate, body temperature, respiration, and metabolic rate can change at different times of the year; these changes are known as torpor. An animal, such as a bird, will slow down their body functions to conserve energy and heat, like hibernation but not as extreme.

Torpor is most common in smaller bird species in areas where food supplies can be unpredictable and nighttime conditions can be extreme.

During torpor, birds are more vulnerable to predators due to slowed reflexes and reaction times. They are often misidentified as sleeping, sunning, recuperating, and even hibernating. In each of these situations the bird is able to bounce back to activity rather quickly. The common poorwill, found in the western United States, is the only known bird to truly hibernate².

Hibernation

While it may be a great feeling to lie down and take a short nap, hibernation is more intense. An animal that is preparing for hibernation will start months in advance by eating large amounts of food that will add enough fat to carry it through the winter. Bears are probably the first animal that come to mind when talking about hiber-

nation. During the stage of hyperphagia, which is stage four (4) in the annual cycle of a black bear, the bear will consume between 15,000 and 20,000 calories per day to store enough body fat to carry them through the 6 to 7 months of hibernation. In stage five (5), the fall transition, a black bear will change its metabolic processes in preparation of hibernation; resting longer per day, drinking more water, and slowing heart rates significantly.

During hibernation, a black bear will reduce oxygen consumption and use only up to 4,000 kcal per day. They will not eat, drink, urinate, or defecate³.



Tree Dormancy

Change does not only occur in animals. Many plants also change due to the length of sunlight. Most noticeable is the dropping of leaves in deciduous trees such as maple, oak, birch, etc.

All spring and summer trees have been using the sun to carry out photosynthesis and producing food and energy to have a large plumage of leaves.

In the fall and winter, trees enter a state of dormancy where they may look dead but are resting. Due to the lack of moisture and sunlight that trees need to carry out their life process, they drop their leaves and stop the flow of nutrients to the extremities.

As the temperatures, amount of light and moisture increase in the spring the trees come "alive" again.

Phenology

A dictionary definition of phenology is the study of cyclic and seasonal natural phenomena, especially in relation to climate, plant and animal life.

Animals changing fur or slowing body functions, and plants going dormant usually fall in this cyclical study realm. Triggered by the change in temperature and daylight, these changes typically take place within a few days or weeks of the previous year(s).

Calendar records of the occurrence of these phenomena over the course of many years have been documented by scientists and other interested people. By keeping track of these changes, they can study the influences of events such as climate change. How do warmer temperatures, and more or less snow affect the changes in animals on a seasonal basis?

Conclusion

Some change is good and necessary. Change in nature is beneficial to the individual species. Some may look more drastic than others, but nature has a way to preserve energy for life.

We can decide to add clothing layers, but nature is on a regular rotation. When this annual rotation happens, we gain clues to other changes that may be taking place such as changes in weather patterns and climate.

Keep observing the changes in nature!
Change is good, isn't it?

Sources:

¹Function and underlying mechanisms of seasonal colour moulting in mammals and birds: what keeps them changing in a warming world? - Zimova - 2018 - Biological Reviews - Wiley Online Library

²Torpor Definition: What Is It and How Does It Work? (thespruce.com)

³Information taken from 5 Stages of Activity and Hibernation - North American Bear Center North American Bear Center Online Library



Article by
Verne Gentele,
Environmental Educator

Join our educators learning about and exploring Northern Wisconsin's lands, waters, and wildlife.

Upcoming Community Programs



key:



Nature Adventures

Tailored to individuals and families, TFT provides a Nature Adventure on the 3rd Saturday of most months. The program focuses on connecting people to nature for a single afternoon and giving them a taste of outdoor recreation in the Northwoods.

\$15/person; equipment rental available.

- Saturday, February 19 - Snowshoeing, 1-4 PM
- Saturday, April 16 - Survival Skills/Archery, 1-4 PM
- Saturday, May 21 - Canoeing, 1-4 PM



Nature ReTREETS

Geared towards any adult who either wants to learn a new skill, or already has some experience and wants to explore the Northwoods while spending time with others who share similar interests in a small-group atmosphere. Week-long program includes programming, meals, equipment and lodging. \$795/person skiing; \$895/person birding.

- February 20-26: Cross-country Skiing/Snowshoeing
- May 1-7: Birding/Hiking



KinderWild Camp

A day camp offered for children ages 3-5. Held on Fridays in 9-week sessions. The program is focused on generating an early love and curiosity for nature by spending the majority of time outside each session. Full-day (\$40), or half-day (\$20, morning or afternoon) sessions

- Fridays, January 14-March 11
- Fridays, April 8-May 27



Sustainable Living Institute (SLI)

For those looking to lead a more sustainable life, participants of a SLI program will walk away with ready-to-use knowledge that will help them be good stewards of our natural resources while providing a healthy and simple-living environment in their homes.

- Saturday, March 26, 9 AM-12 PM: Making Maple Syrup
- Saturday, April 23, 9-11 AM, Composting



Create Your Own Adventure

If the timing or activity of the pre-scheduled programs don't work for you, TFT offers customized on- or off-campus adventures tailored to your group's goals, interest and abilities. This is the perfect solution for individuals and groups looking to step outside of the ordinary and into the outdoors to learn about and experience the natural world of the Northwoods. Participants work with TFT educators to determine what they want out of their experience, and from there create the best activities to fit exactly what they are looking for.

TFT employs professional environmental educators who are experienced in guiding and teaching groups on the trails and waterways of the Northwoods. Suggested activities for a guided nature adventure include hiking, canoeing, biking, birding, and skiing and snowshoeing, but can be anything a group is looking for, including a combination of activities or a skill-building activity like archery.

Try a customized outdoor adventure for your next family reunion or special occasion, or business retreat/conference. Whether it's an hour or a week, TFT's professional educators put their expertise to work to create a memorable experience.



Tree Seedlings

Pre-order begins February 1
Available mid-May

For over 75 years TFT has been providing a variety of quality containerized tree seedlings to landowners. The 2022 selection includes Red (Norway) Pine, White Pine, White Spruce Hybrid and Northern White Cedar. Seedlings can be shipped to MN, WI, IL, and MI for an additional cost.



High Schoolers, Naturalists and Interns!

APPLICATIONS DUE...

Deadlines are fast approaching for the following programs.

- DUE March 18

18+ Intern Application
June 6-August 12

- DUE April 8

2 3 Natural Resource Careers
1 3 Exploration Week
June 12-17

- DUE June 30

18+ Master Naturalist
July 10-15



Summer Programs

June 13 - August 1

Save the date for these beloved programs. We keep the adventure and learning going for everyone during the summer months!

- Tuesday 9 AM - Noon

2 3 Jr. S.E.E.K., ages 4-7

- Tuesday 7-8 PM

18+ Nature at Night, ages 16+

- Wednesday 10:30 AM

2 3 Family Nature, all ages

- Thursday 8:30 AM-4 PM:

2 3 S.E.E.K., ages 8-12

Community Program FAQ's

- Pre-registration and payment required for all programs at least 48 hours in advance and can be done online at TreesForTomorrow.com/visit/.
- Most programs need a minimum number of participants for it to run. When people wait until the last minute to sign up, we end up having to cancel. Don't wait to register!
- If a program is full, consider the waiting list option.
- Dates and times subject to change. Check availability of a program online or by calling 715-479-6456.
- Covid-19 safety guidelines followed (smaller group sizes, mask-wearing, social distancing, etc.)

Scan this code with your mobile device to quickly access the latest program schedule or make a donation.



Alumni Spotlight

Greg
Neuschafer



Alumni Greg Neuschafer attended Trees For Tomorrow on a scholarship in March 1967 with fellow sophomores from Weyauwega High School along with other schools in the Fox Valley area.

Greg's list of what he learned during his time at TFT is lengthy: annual life cycle of white tail deer including digestive system changes, antler cycle, winter yarding survival adaptation; hand making paper from pulp; estimating board feet and height of a tree; and river flow rate.

This was Greg's first of many natural history field trips and he credits his hands-on science experiences as the catalyst for his career as Oceanographer and US Navy Captain (retired).

Greg continued to emulate the instructors' enthusiasm and hands-on teaching techniques in his position as the Office of Naval Research Science Awards Program Judge of high school competitions at the local, regional national and international competitions for over 36 years.

Nature and natural sciences were always of great personal interest to Greg and he continued his life-long learning through all of his achievements in his career.

- Participated in a Grey Whale migration census.
- Geological consultant for interagency negotiations for California coastal oil drilling safety regulations.
- Fabricated, and field-tested ice gauges which measure superstructure icing growth rate on Navy ships working above Arctic Circle.
- Installed, the first Navy surface ship prototype Global Position System (GPS) navigation hardware.
- Co- developed a software suite used aboard Navy ships which

predict sea and swell.

- Used aircraft mounted 3 dimensional color Doppler radar to image turbulence from the inside out on hurricane strength storms.
- Acted as Oceanography Merit Badge instructor, for Assistant Secretary of the Navy education outreach program at the Boy Scouts of America National Jamboree

Trees For Tomorrow loves to hear and share alumni stories about how their personal experiences at TFT changed their behavior and the course of their lives. What an impact one student can make!



“Trees for Tommorrow was a solid rock in the foundation of my educational experience.”

Recipe: Vegan Brownies

Ingredients

- 2 cups unbleached all-purpose flour
- 2 cups white sugar
- ¾ cup unsweetened cocoa powder
- 1 tsp. baking powder
- 1 tsp. salt
- 1 cup water
- 1 cup vegetable oil
- 1 tsp. vanilla extract

Preheat oven to 350 °F (175 °C)

In a large bowl, stir together the flour, sugar, cocoa powder, baking powder and salt. Pour in water, vegetable oil and vanilla; mix until well blended. Spread evenly in a 9x13 inch baking pan.

Bake for 25 to 30 mins in the preheated oven, until the top is no longer shiny. Cook longer for a firmer brownie. Let cool at least 10 minutes before cutting into squares. Top with a dusting of powdered/confectioners sugar.

Perfect recipe for those with egg or dairy allergies as it contains neither.

Recipe from
Patricia Omarro-Gould, Hospitality Mgr.

We're Social!

Follow, like and share us on your favorite social media sites



Donor Communication Survey



Please complete the survey below and email it back to ctodea@TreesForTomorrow.com or mail it to Trees For Tomorrow, PO Box 609, Eagle River, WI 54521. Or scan the QR code on the left to take the survey online.



1. What is your age group?

- 18-25 26-40 41-55 56-75 76+

2. What method of communication do you rely on primarily to get general information?

- Social media
 Internet browser
 Newspaper
 Other: _____

3. What search words do you use when searching for general activities, programs, or events in your community or while traveling?

4. What do you primarily use to get updates about Trees For Tomorrow?

- Social media (Facebook, Twitter, Instagram)
 TFT website TreesForTomorrow.com
 Internet browser such as Google
 Tree Tips newsletter
 Local newspaper
 Word of mouth
 Other: _____

5. What is the most relevant information about Trees For Tomorrow to you and/or your family?

- Schedule of upcoming programs or events
 Impacts of donations
 General updates on Trees For Tomorrow
 Upcoming sponsorship and donation needs
 Updates from the Executive Director
 Photos/videos of students at Trees For Tomorrow
 Other: _____

6. What can we do to get you more involved or engaged in Trees For Tomorrow?

7. To help us plan for 2022 and beyond, would you be willing to spend 15 minutes on the phone or in person with Trees For Tomorrow's Executive Director? If so, please share your name and contact information below.

Name: _____

Phone: _____ Email: _____

8. Other comments or feedback related to how we communicate with you?

Thank you so much for taking the time to complete this survey - we value your input!

Nonprofit Org.
PRSRT STD
Permit No. 26
Eagle River, WI 54521

ELECTRONIC SERVICE REQUESTED



YES! I Want to Support Trees For Tomorrow

As a private, nonprofit natural resources specialty school, we rely on donations from people like you to support our educational efforts. Please consider making a financial contribution.

- YES! I want to have an important impact on Trees For Tomorrow's legacy of preparing today's youth to be tomorrow's stewards of our natural world!**

- \$50
 \$100
 \$250
 \$500
 \$1,000
 Other \$ _____

Every \$1 donated is 15 more minutes
a student explores the science of
nature at Trees For Tomorrow!



Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Email _____

Payment Method: Check Visa MasterCard Discover

Credit Card # _____ Expiration date: ___/___ CSC#: _____

Please complete this form and return it with your donation to:

Trees For Tomorrow, P.O. Box 609, Eagle River, WI 54521