

SUMMER

VOLUME 2

YOOPER TROOPERS

U.P. Conservation for Kids!



UPPER PENINSULA
LAND CONSERVANCY

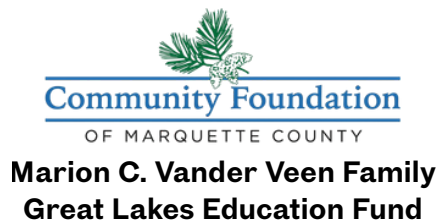
Yooper Troopers is a youth conservation magazine designed by **Upper Peninsula Land Conservancy (UPLC)** for 3rd-5th graders. It centers youth voices, Upper Peninsula conservation topics, outdoor education, and UPLC's three pillars of connection:

***Connecting contiguous land,
Connecting people with one another, and
Connecting people with the land.***



For more information and PDF copies of issues, visit our website at ***www.uplandconservancy.org/youth-magazine***

Art and content for *Yooper Troopers* was created by Jenny Kalejs, a **2026 Michigan Healthy Climate Fellow**.



Calling all Yooper Troopers!

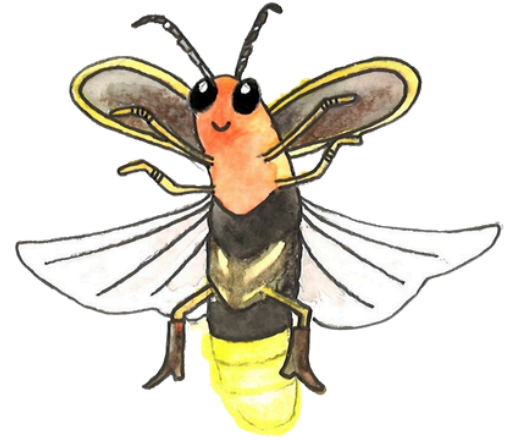
(Yes, that's you!)

Are you a 3rd-5th grader interested in submitting a question, observation, drawing, or idea for a future issue of *Yooper Troopers*?

With your guardian's permission, email your work to **uplc@uplandconservancy.org** or call us at 906-225-8067 to set up a time to drop by our office!

**Upper Peninsula Land Conservancy
1907 Presque Isle Ave
Marquette, MI 49855**

CONTENTS



Fritz
the firefly

4 Connecting PEOPLE with the LAND
What's in a name?
Insect expertise courtesy of Carmen Greenwood

6 Connecting LAND
Illuminating firefly facts

7 Connecting PEOPLE with the LAND
Take a hike! Leaf ID
Featuring Em Staat, UPLC Stewardship Coordinator

9 Connecting PEOPLE with EACH OTHER
Poetry Corner: "Summer's Here"
Ondine Clark-Bonk, age 12

10 Connecting PEOPLE with the LAND
Meet the summer Yooper Troopers!

12 Connecting PEOPLE with EACH OTHER
Word Search + Drawing Challenge

13 Connecting PEOPLE with the LAND
RECIPE: Thimbleberry Jam

14 Connecting LAND
Sounds of a summer night

WHAT'S IN A NAME?



This is a **juvenile firefly** - a ferocious hunter of worms and slugs!

ROLL CALL!

Turns out, fireflies (also known as lightning bugs) are neither flies nor bugs! So what are they?

First of all, they are **insects**. "Insect" is the larger category that includes bugs and flies (and bees, wasps, butterflies, moths, and beetles!).

Insects are the only **invertebrates** (creatures with no backbone) that have wings - so the type of wings they have is very important in how scientists decide what to call them.

"**Ptera**" means "wing". You can see the letters **p-t-e-r-a** in all of the insect names on the next page.



Adult fireflies lay **eggs** in the summer. They hatch within 3 to 4 weeks.



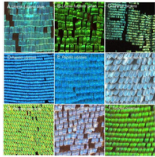
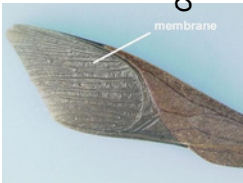
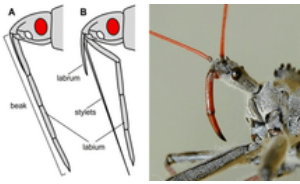
This is an **adult firefly** in flight!

Insect expertise provided by **Carmen Greenwood**, entomologist (bug expert!) and UPLC board member.

These are the five biggest groups of insects.
Any guesses as to which group fire "flies"
actually belong?*

HINT:



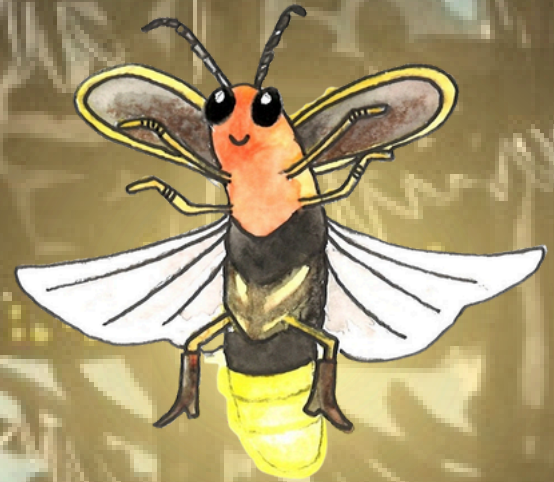
INSECT GROUP	SCIENTIFIC NAME AND WHAT IT MEANS	EXAMPLES OF CORRECT COMMON NAMES	FUN FACTS
Bees, wasps, and ants 	Hymenoptera = "clear, membranous wings"	Bumble bee, spider wasp, carpenter ant	Most of this group is made of tiny wasps that kill insect pests!
Flies 	Diptera = "two wings"	House fly, Horse fly	Mosquitoes are flies.
Butterflies and moths 	Lepidoptera = "scaly wings" 	Monarch butterfly, Tiger moth	The scales on their wings come off like powder if you touch them. 
Beetles 	Coleoptera = "sheath wings"	Ground beetle, Bark beetle Beetles are the most diverse group of animals on the planet, with almost half a million species!	Front wings are a protective covering called "elytra". Rear wings are for flight, folded and tucked under the front wings.
True bugs 	Hemiptera = "half wings" 	Ambush bug, Squash bug Bugs have a front wing that is half clear and half hard, and a big triangle on their back.	Bugs have a mouthpart like a straw for sucking liquid food! 

*Fireflies are beetles!

ILLUMINATING FIREFLY FACTS

- Fireflies are important **bioindicators** of environmental health! A bioindicator is a living thing that gives scientists clues about how healthy an environment is. Because fireflies have a complex life cycle, they are very sensitive to changes in their surroundings. That means the places where you see lots of fireflies usually have clean water, moist soil, dark skies, and low pollution.
- **As larvae, fireflies hunt for slugs and earthworms, and as adults, they feed on pollen and nectar and act as beneficial pollinators.**
- In Michigan we have about 30 different kinds of fireflies.
- **Fireflies glow and have different flashes as a way of finding others of their own species.**
- Too many artificial lights at night can confuse fireflies and make it hard for them to find each other.
- **The “glow” that you see in fireflies is a very unique light produced by a chemical called luciferin, and it does not make heat.**
- Fireflies have been declining all over the world and need our protection. Can you think of things you can do to help fireflies survive and find each other? _____

Finally, my moment in the spotlight!



TAKE A HIKE!

Recently, UPLC Stewardship Coordinator **Em Staat** led an educational hike at Chocolay Bayou Nature Preserve with kids from Keweenaw Bay Indian Community Promise Neighborhoods. With Em's guidance - and the handy leaf chart on the next page - young naturalists learned how to identify different leaf shapes, arrangements, and notable native plants!

We asked Em about some of their favorite plants to see at Chocolay Bayou (or most places around the U.P.!) in the summertime. **Have you seen these in the wild?:**



That's Em in the middle!



Dwarf raspberry

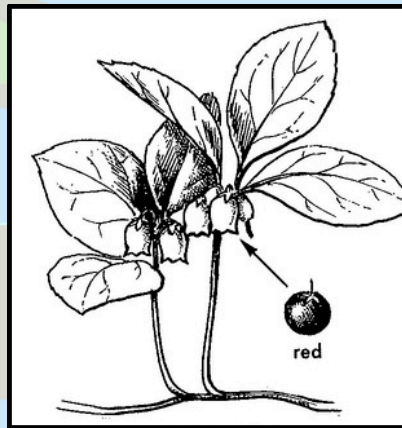
Rubus pubescens

Compound leaves are in a **palmate** arrangement of 3 leaves. The center leaf is **rhombic** and other leaves are **oval** to **ovate** and sometimes lobed. Margins are **serrated**.

There are tiny hairs on the underside of leaves. The fruit is edible but much smaller than a typical raspberry.

Why Em likes it:

"It looks like poison ivy but it won't hurt you! It makes for a cute little ground cover."



Wintergreen

Gaultheria procumbens

Simple leaves are **oval** to **elliptical** with **entire** or small **serrated** margins. Leaves branch from a single stalk and smell minty when crushed. Plants form in colonies and have connecting stems underground. White, bell-shaped flowers bloom under the leaves.

Why Em likes it:

"The flowers look like little bells hiding under the leaves!"



Lowbush Blueberry

Vaccinium angustifolium

Simple leaves are **alternately** arranged, **elliptical** or **lance-like**, and have **entire** margins. Young leaves are yellow-green and turn deeper green as they get older. Flowers are white-pink and bell shaped. The iconic blue fruit is edible and sweet.

Why Em likes it:

"Blueberries are delicious, duh!"

LEAVES

TRY IT! Use this handy guide to identify the characteristics of leaves.

SHAPES:



DIVISIONS:



COMPOUND DIVISIONS:



ARRANGEMENTS:



MARGINS:



EXTRAS:





POETRY CORNER

Summer's Here

By Ondine Clark-Bonk, age 12

Green on blue on pink on red

Don't hibernate, play instead

Layers of colors, textures intertwined

Wiggly, squiggly, wavy lined

We stretch our legs, greet the sun

Summer's here, have some fun!



Chocolay Bayou Nature Preserve

Meet the summer **YOOPER TROOPERS!**

During the summer months, BB the black bear got into the habit of taking an evening stroll at Chocolay Bayou Nature Preserve. He often ended up at his favorite bench overlooking the water, where he would sit and think.

On one particular evening, the temperature was just right and the sunset was especially beautiful. BB felt completely content. Gazing at the beauty of the water, he let his thoughts drift to his favorite blueberry patch, making thimbleberry jam, mmm...

With a start, BB realized how dark it had gotten. In his contentment, he had stayed out much later than he usually did.

"Oh, dear," thought BB. "I hope I can find my way back to the trailhead in the dark."

Gathering his courage, he put one paw in front of the other, squinting to make out the trail. It was going pretty well until he came to a fork in the road.

"Left or right?" He whispered. "Both trails look the same in the dark!"

Just as BB was beginning to worry, he noticed a faint light blinking up ahead. It looked like it was floating toward him! As the light got closer, it got brighter and brighter.



Suddenly, a small voice came from the direction of the glow.

“Are you lost?”

The light was so comforting, BB forgot to be afraid. “I think I am! I’m looking for the trailhead. Who’s there?”

“Fritz the firefly, at your service!” came the cheerful reply. “A chemical compound called **luciferin** makes me glow. I normally use my blinking light to communicate with other fireflies, but if you follow me, I’ll lead you back to the trailhead!”

BB thanked Fritz and eagerly did as he said. In respect for the peaceful night, the two proceeded in companionable silence, enjoying the music of the crickets and treefrogs.

Before they knew it, the darkness of the forest gave way to an open canopy. BB traded the blinking of Fritz’s tail for the twinkling stars overhead. He knew the way back to his den from here!

“I can’t thank you enough, Fritz. It was so kind of you to use your special talent to help me in my time of need.”

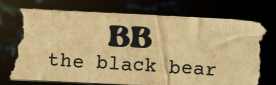
In response, Fritz produced two quick blinks, followed by a long third.

“That means ‘*you’re welcome*’ in firefly. Good night! I’ll see you around the Bayou?”

“GRRROWL,” bellowed BB, mischevious grin on his face. “That’s ‘*yes you will!*’ in black bear.”

--

**MEET MORE YOOPER TROOPER FRIENDS
IN THE NEXT ISSUE!**



WORD SEARCH

P	S	A	L	K	T	S	T	A	D	W	B
J	Z	W	Z	R	C	C	R	Q	A	N	A
M	G	L	K	B	O	S	O	L	C	X	Y
B	W	M	M	Q	L	S	O	U	Y	Y	O
R	L	Z	Y	E	E	U	P	C	M	O	U
D	K	U	R	M	O	M	E	I	N	O	F
I	Z	K	E	R	P	M	R	F	C	P	I
N	F	R	H	B	T	E	W	E	I	E	R
S	P	D	V	U	E	R	P	R	H	R	E
E	K	B	E	A	R	R	Y	I	E	G	F
C	A	V	W	P	A	X	R	N	H	J	L
T	Q	Q	V	H	X	L	V	Y	A	S	Y

Find these words:

- LUCIFERIN
- FIREFLY
- BLUEBERRY
- INSECT
- COLEOPTERA
- SUMMER
- BAYOU
- BEAR
- YOOPER
- TROOPER

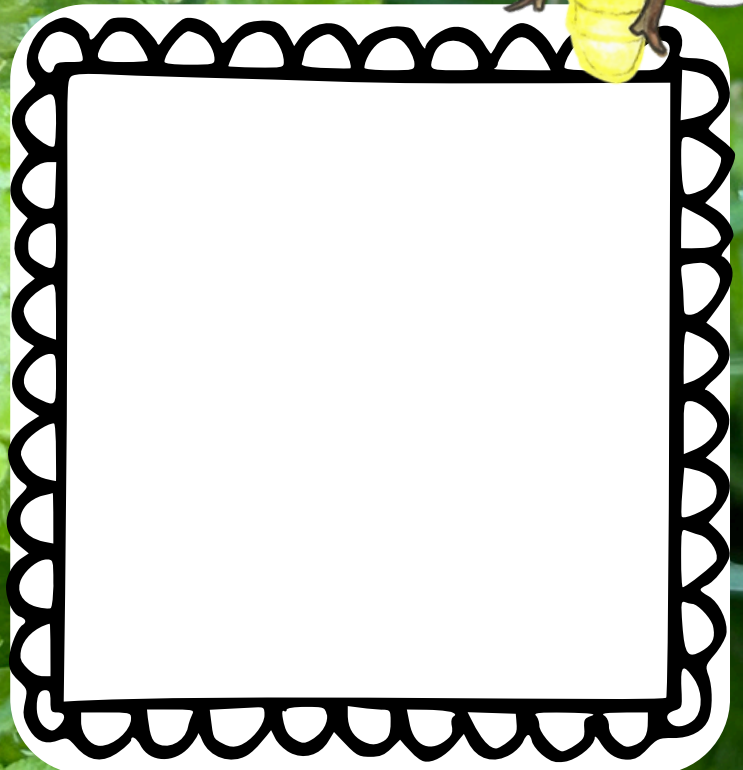


DRAWING CHALLENGE:

If you could design an insect, what would it look like? Draw it! →

Would it belong to the group Hymenoptera? Diptera? Lepidoptera? Coleoptera? Hemiptera?

(Go back to the insect chart on page five to remember what these big words mean!)



THIMBLEBERRY JAM RECIPE!

Try one of BB the black bear's favorite summer treats!

INGREDIENTS:

Yields approximately two 8-ounce jars.

- 3 cups Thimbleberries, about 1.5 cups mashed, or 3/4 pound fruit
- 1 cup sugar (or to taste)
- 1 Tbsp lemon juice

INSTRUCTIONS:

1. With an adult's help, cook the thimbleberries in a pot on medium heat. Stir continuously so they don't burn. The berries will break down and release their juices.
2. Once the berries look mashed up and heated through, turn the burner down to low.
3. Add lemon juice and up to one cup of sugar, to taste.
4. Stir the sugar until it's well blended. Turn the burner back up to medium and stir constantly for 5-10 minutes.
5. After 5-10 minutes, turn off burner, remove pot, and let stand until cool.
6. Once the jam is cool, add it to mason jars. ENJOY! Jam will keep in the refrigerator for a few weeks.



In the U.P., thimbleberry season lasts from mid-July through late August.

WHERE CAN I FIND THIMBLEBERRIES?

Thimbleberry plants have BIG leaves that love the sun. They like to grow in open spots along forested trails or two tracks.



BB's tip: Try thimbleberry jam on ice cream!



SOUNDS OF A SUMMER NIGHT



Barred Owl
(*Strix varia*)

The call of the
Barred Owl kind of
sounds like:

"Who cooks for you?
Who cooks for you
all?"

Coyotes make a wide
variety of
vocalizations,
including yips,
barks, howls, whines,
yelps, and even
laughter-like sounds.



Coyote
(*Canis latrans*)

SOUNDS of a SUMMER NIGHT



Snowy tree cricket
(*Oecanthus fultoni*)

Snowy tree crickets "sing" by rubbing their wings together.

COOL THING: Their songs can help you estimate the temperature (in degrees Fahrenheit) outside! Listen for the number of chirps you hear in 13 seconds, then add 40. Try it!



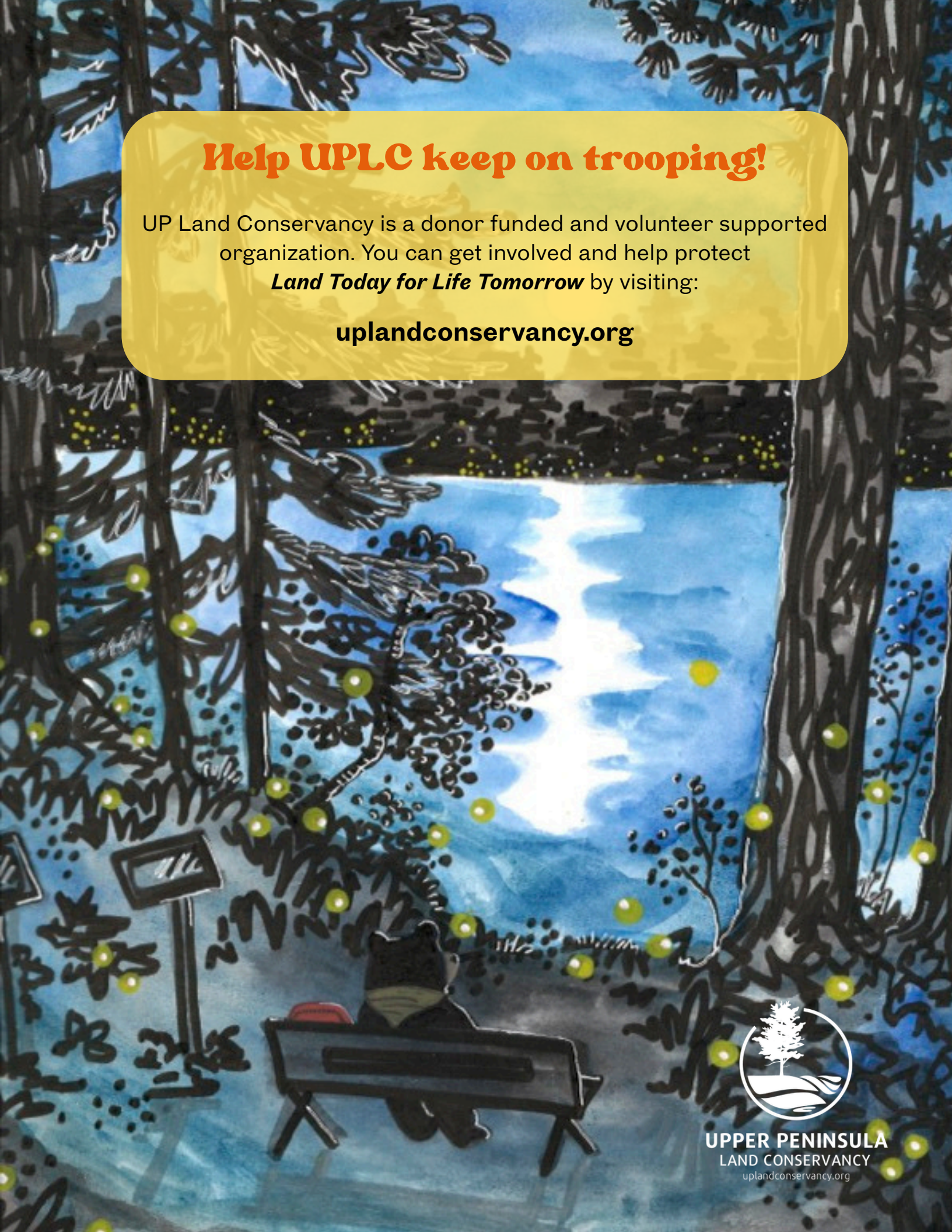
The call of a green frog kind of sounds like someone plucking loose banjo strings.

"THWUNK!"



Green frog
(*Lithobates clamitans*)





Help UPLC keep on trooping!

UP Land Conservancy is a donor funded and volunteer supported organization. You can get involved and help protect *Land Today for Life Tomorrow* by visiting:

uplandconservancy.org



**UPPER PENINSULA
LAND CONSERVANCY**
uplandconservancy.org