

June 2020

WILD KIDS

SEASONAL NATURE EDUCATION FOR KIDS & THEIR GROWN UPS



**How to Tell the
Temperature with
Cricket Chirps**

**The Eyeshine
Colors of Night
Animals**

**What to
Plant for the
Hummingbirds**

**Foraging
Self Heal and
Shepherd's
Purse**

**Seasonal poems,
activities, nature
journal pages
& more**

From the editor

BY ALICIA BAYER

Welcome June!

I hope this issue finds you and your family safe and healthy. Hopefully you are finding ways to enjoy nature even if you have been at home lots more than usual.

I am still getting over being sick myself but I am almost completely recovered, which makes me very grateful. Our son Jack also got a little sicker than the rest of our family and he is still a little weak and sore, too. We always thought he and I were two of the healthiest ones in the family, so this has been a good reminder that everyone has to take especially good care of their health right now. As always, nature has been a big part in taking care of ourselves. I saw our doctor recently for blood work and she said to keep doing exactly what we're doing (she was especially impressed with my iron levels from all that nettle tea my hubby foraged to take care of us!), so it seems to be working.

Once again, I tried to gather ideas for this month's magazine that you can do even if you're at home. I apologize but I ended up using last June's poems for this month's issue since time was short. Ah well! I'm guessing you'll forgive me!

You are all in my thoughts and I'm sending lots of well wishes!

Alicia



Why is Wild Kids free?

Kids (and their grown ups) need nature, and nature needs us! Our family believes in the importance of sharing & helping each other, and of passing on skills to help our world and each other. As long as we are able, we plan to produce Wild Kids to help do this for families who find it useful.

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Find lots more links, information and fun to accompany this month's themes at www.magicalchildhood.com/wildkids.

Go Wild in June

10 WAYS TO PLAY & LEARN WITH NATURE THIS MONTH

Go find a bug and just watch it work. See what you can learn about it and see the world through its eyes.

Figure out the temperature by counting cricket chirps (we tell you how in this issue)

Make sun tea (fill a gallon jar with fresh water and some tea bags, let it steep all afternoon in the sun, sweeten to taste)

Use a free plant ID app like Plant Snap to ID a weed near you & research what it's good for

Learn to find 3 constellations in the night sky, then make up one of your own

Take a picture of the sky every day and make a collage of the photos

Put a white flower in a vase of water with food coloring added and see if anything happens over the next few days.

Make a green smoothie with wild greens from your yard or local park. Lambsquarters are particularly tasty and grow as weeds in many yards & gardens.

Make a bucket list of ten wild places you want to explore

Dig up a weed from outside & see if you can grow it as a houseplant on a sunny windowsill

Use Cricket Chirps to Tell the Temperature!

Who needs a thermometer if there's a cricket in your yard? Here's how to tell the temperature by counting cricket chirps.

We've been using this trick to tell the temperature for years in our family. It sounds silly, but it actually works. Scientists have been using the formula since the late 1800's.

How does it work?

Crickets, like all insects, are cold-blooded, which means they take on the temperature of their surroundings. There is a special equation called the Arrhenius equation that cold-blooded animals follow that determines things like the speed at which ants walk and the rate that crickets chirp.

All living things have many chemical reactions that go on inside their bodies. The Arrhenius equation describes the activation energy (or threshold energy) required to make a chemical reaction occur inside the organism. As the temperature rises, it becomes easier for chemical reactions in cold blooded animals to happen, so they happen more rapidly. Chemical reactions are needed to contract the muscles crickets use to chirp. As the temperature rises, the rates of the chemical reactions inside the crickets' bodies speed up, causing characteristics such as the chirping to also speed up.

The formulas differ slightly, depending on whom you ask.

The first cricket temperature formula was created by A. E. Dolbear in 1898. He studied various species of crickets to determine their chirp rate and then created Dolbear's Law: $T = 50 + [(N - 40) / 4]$ (with T representing temperature Fahrenheit and N representing number of chirps in 1 minute). NOAA uses the simple formula of counting the chirps in 15 seconds and adding 40.

The Old Farmers' Almanac recommends another simple formula: To get a rough estimate of the temperature in degrees Fahrenheit, count the number of chirps in 15 seconds and then add 37.

To get the temperature in degrees Celsius, count the number of chirps in 25 seconds, divide by 3, then add 4.

Want to get even more precise?

Dolbear and some other scientists determined that different species of crickets and katydids chirped at slightly different rates. They devised different formulas for each of these species:

Field Cricket $T = 50 + [(N - 40) / 4]$
Snowy Tree Cricket $T = 50 + [(N - 92) / 4.7]$
Common True Katydid $T = 60 + [(N - 19) / 3]$

(T=Temperature, N=Number of chirps per minute)

See if you can determine which variety of cricket is common in your back yard and see if the formula gets a more accurate temperature.

Note that (usually) only male crickets chirp, and usually only at night.

There are actually several reasons why crickets chirp. Scientists think that these reasons can be:

- Calling to attract a female with a a loud and monotonous sound
- Courting a nearby female with a quick, softer chirp
- Behaving aggressively during the encounter of two males
- Sounding a danger alert when sensing trouble

How do crickets chirp?

Crickets make sounds by using a process called stridulation, where special body parts are rubbed together to make a noise. Crickets have a special structure on the top of their wings called a scraper. They raise their wings to a 45-degree angle (similar to the way we raise the lid on a piano to increase its volume) and draw the scraper of one wing across a series of wrinkles on the underside of the other wing, which is called a file. The process is somewhat like running your fingernail across the teeth of a comb, and it results in the characteristic chirping sound.



This activity is featured in my nature studies book, *A Magical Homeschool: Nature Studies: 52 Wonderful Ways to Use Nature Studies in Every Season to Teach Science, Math, Art and More*

Night Animals & Eyeshine Colors

Did you know that different animals have different colors of eyes that reflect light back to you at night?

In his wonderful nature activity book *Talking to Fireflies, Shrinking the Moon*, Edward Duensing says:

Eyeshine is an eerie phenomenon caused by a membrane of reflective cells that lie behind the retinas of many nocturnal animals. This membrane, called the tapetum, reflects incoming light back onto the retina and then straight out of the eye in the same direction from which it came. This returning light creates the glowing eyes you see when the beam from your light catches one of these animal's eyes.

Duensing lists these colors of eyeshine for some common nocturnal animals:

- | | |
|--------------------|------------------|
| • raccoon | bright yellow |
| • opossum | dull orange |
| • skunk | amber |
| • porcupine | deep red |
| • fox | bright white |
| • whitetailed deer | greenish-white |
| • woodcock | glowing red dots |
| • flying squirrel | reddish-orange |

He also says that you can find the tiny white diamond-like dots of a wolf spider's eyes in your own back yard at night. Wolf spiders hunt at night and their eyes are so bright that you can see the tiny reflections from 10 feet away!

How many other animals and colors of eyeshine can you find and identify?



Food for thought... What colors of eyeshine do you think humans and pets like dogs and cats have? Do you think it would make a difference if they have different colors of irises (the colored part of eyes) like blue, brown or green? How could you find out? What color is your eyeshine?

What to Plant for Hummingbirds

Lots of people put out hummingbird feeders filled with sugar water to feed hummingbirds in the summer time, but it's actually much better for them if you plant flowers to provide them with real, nourishing nectar full of nutrients. After all, how long would you stay healthy if all you ate was sugar water?

There are lots of flowers, vines and shrubs that will lure hummingbirds into your yard and give them healthy nectar to nourish them.

Try to plant some plants that span multiple times so they have lots of plants to visit for a long season. Here are some that HGTV recommends.



Spring and early summer:

- Bleeding heart
- Columbine
- Coral bells
- Fuchsia
- Lupine
- Petunias
- Phlox
- Sweet William

Summer:

- Lantana
- Penstemon (especially red varieties)
- Fuchsia
- Salvia
- Scarlet petunia
- Hollyhock
- Blazing star
- Bee balm
- Gladiolas
- Daylily
- Nasturtium
- Zinnia

Late summer to fall:

- Bee balm
- Butterfly bush
- Cardinal flower
- Dahlia
- Hollyhock
- Four-o'clock
- Zinnia
- Penstemon
- Salvia

Shrubs and trees:

- Azalea
- Coralberry
- Butterfly-bush
- Wild Indian plum
- Red elderberry
- Red flowering current
- Weigela
- Honeysuckle
- Beauty bush
- Flowering quince
- Hawthorne
- Horse chestnut
- Rose-of-Sharon
- Currant
- Gooseberry
- Flowering crabapple
- Tuliptree
- Black locust

Vines:

- Cypress vine
- Scarlet morning glory
- Trumpet honeysuckle
- Trumpet creeper
- Clematis
- Scarlet runner bean

Poems for June

"I wonder what it would be like to live in a world where it was always June."

- L. M. Montgomery

Mine is the Month of Roses; yes, and mine
The Month of Marriages! All pleasant sights
And scents, the fragrance of the blossoming vine,
The foliage of the valleys and the heights.
Mine are the longest days, the loveliest nights;
The mower's scythe makes music to my ear;
I am the mother of all dear delights;
I am the fairest daughter of the year.

- Henry Wadsworth Longfellow

June

Now summer is in flower and nature's hum
Is never silent round her sultry bloom
Insects as small as dust are never done
Wi' glittering dance and reeling in the sun
And green wood fly and blossom haunting bee
Are never weary of their melody
Round field hedge now flowers in full glory twine
Large bindweed bells wild hop and streakd woodbine
That lift athirst their slender throated flowers
Agape for dew falls and for honey showers
These round each bush in sweet disorder run
And spread their wild hues to the sultry sun.

- John Clare

Dusk In June

Evening, and all the birds
In a chorus of shimmering sound
Are easing their hearts of joy
For miles around.

The air is blue and sweet,
The few first stars are white,--
Oh let me like the birds
Sing before night.

Sara Teasdale



All In June

A week ago I had a fire
To warm my feet, my hands and face;
Cold winds, that never make a friend,
Crept in and out of every place.

Today the fields are rich in grass,
And buttercups in thousands grow;
I'll show the world where I have been--
With gold-dust seen on either shoe.

Till to my garden back I come,
Where bumble-bees for hours and hours
Sit on their soft, fat, velvet bums,
To wriggle out of hollow flowers.

- William Henry Davies

The Swing

How do you like to go up in a swing,
Up in the air so blue?
Oh, I do think it the pleasantest thing
Ever a child can do!
Up in the air and over the wall,
Till I can see so wide,
River and trees and cattle and all
Over the countryside.
Till I look down on the garden green,
Down on the roof so brown--
Up in the air I go flying again,
Up in the air and down!

- Robert Louis Stevenson

Foraging shepherd's purse and self heal

Both of these helpful weeds are likely to grow in your lawn or nearby park.



Shepherd's purse is a common plant in the mustard family that grows around the world. It has traditionally been used medicinally (topically and internally) and eaten as a young green. All parts of shepherd's purse are edible, though it has a strong flavor (especially as it gets bigger) like all plants in the mustard family.

There is some evidence that shepherd's purse is toxic to mosquitoes, so some people scatter it in ponds to control the mosquito population!

We have links to learn more about shepherd's purse on the Wild Kids website.



Self heal is another common plant that grows around the world. It was once one of the most widely used medicinal plants to help heal tissue both internally and externally, and for its powerful immune boosting benefits.

Herbalist Susun Weed says that self heal contains more of the antioxidant rosmarinic acid (which helps prevent heart disease and cancer) than any other plant tested. People use self heal topically as a poultice and in teas and tinctures to support the immune system and fight colds, flus and viruses.

We have links to learn more about self heal on the Wild Kids website.

Remember -- Never eat a plant you're not 100% positive of, and never use a wild plant medicinally without the advice of a properly trained herbalist. These are great plants to safely learn about, but always follow foraging rules for safety and courtesy. Also remember to always try just a little of any new plant the first time in case you have an allergy.

"SHEPHERD'S PURSE"

(*Capsella bursa-pastoris*)

Plate 5.



From: *A Curious Herbal: Containing Five Hundred Cuts Of The Most Useful Plants Which Are Now Used In The Practice Of Physick,*
Written, illustrated and engraved by Elizabeth Blackwell, 1737

"SELF HEAL"

(*Prunella vulgaris*)

Plate 24



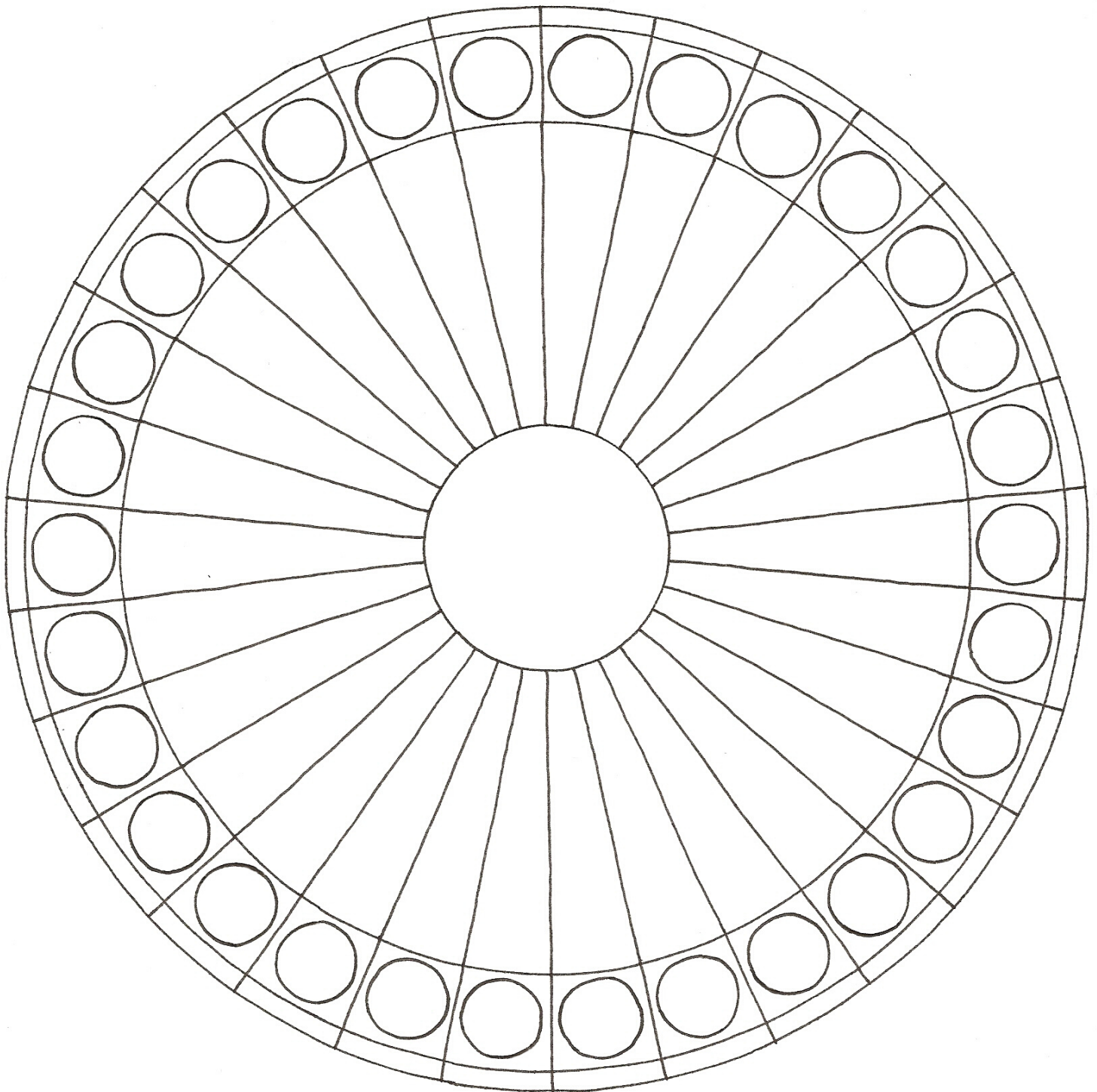
Self Heal. } 1 Flower { *Prunella*
 } 2 Cup { *Brunella*
 } 3 Seed {

Eliz. Blackwell delin. sculp. et Pinx.

From: *A Curious Herbal: Containing Five Hundred Cuts Of The Most Useful Plants Which Are Now Used In The Practice Of Physick,*
 Written, illustrated and engraved by Elizabeth Blackwell, 1737

June Phenology Wheel

Here's a 30-day phenology wheel to use this month. Track the moon, record firsts in your yard and garden, or use it however you like to track nature observations.



My Nature Journal

June



JUNE WEATHER TREE



June Bird List

Birds spotted this month

June Animal List

Mammals, reptiles & other wildlife spotted this month

JUNE NATURE NOTES

Record any interesting discoveries here -- plants you identify, foods you forage, outdoor activities, cool nature projects, nature books read, or just notes about what it's like outside this week!

Week 1 Observations

Week 2 Observations

Week 3 Observations

Week 4 Observations

MY FORAGING GUIDE FOR:

GENERAL SKETCH OF THE PLANT

CLOSE-UP SKETCHES OF PLANT PARTS

LATIN NAME _____

WHERE FOUND _____

PARTS USED _____

LOOKALIKES & HOW TO POSITIVELY ID:

WARNINGS: _____

FORAGING RECORD (DATES, WHERE FOUND, HOW IT WAS USED)

MY RATING FOR THIS PLANT





Want to see your stuff in Wild Kids?

We welcome articles, photos, artwork and other submissions from kids and their grown ups.

Visit magicalchildhood.com/wildkids to learn more

or email photographs, artwork, letters or other submissions to alicia.bayer@gmail.com