

THE GLOVER'S LEDGER

A Monthly Newsletter

welcome! // Kolipaid!

Pitta tkigen kwajemiwi // it's very cold outside! The winter winds are here. It's an especially beautiful time for a stroll (and an equally good time to follow that stroll with a warm beverage!) Enjoy the heaps of snow on the way!! All the best from our neck of the woods, to yours.

Take care // wlinanawalmezi

Glover's Ledge was established on N'dakinna, the unceded homelands of the Western Abenaki peoples. We acknowledge and honor with gratitude the land (ki), the water (nebi) and the alnôbak (people) who have stewarded N'dakinna through generations and continue to do so today.

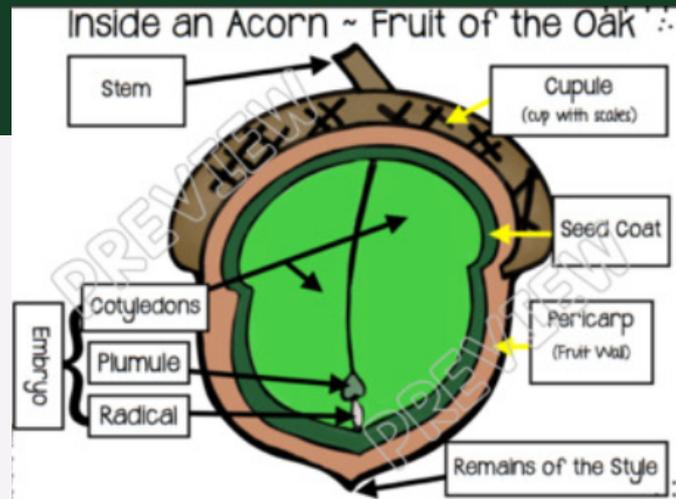
Pitta: PEE-ta
tkigen: T-kee-gen
kwajemiwi: KWA-jem-iwi

My thanks and gratitude to Jesse Bruchac for his teaching Alnôbaôdwa - the Abenaki language. For more, visit westernabenaki.com

ACORN FLOUR

Article & photos by: Will Poirier

Through my work as a permaculturist and naturalist, I have learned a tremendous amount about the interaction between animals and nature. I first learned about acorn flour a few years ago while I was teaching at school working hand in hand with a naturalist. My first experience with this process was with our first, second, and third grade students as we all learned about the science of acorns and the process of turning an acorn from a tree into flour to eat. The process is time and resource consuming but illustrates a powerful point about food and where it comes from.



Acorn Cross Section (photo [source](#))



Leaching the acorn flour.

The process begins with the seed itself, the acorn. When looking at an acorn, it is well protected by a hard exterior shell, followed by two separate insulation layers before the actual nut 'meat' can actually be reached.

Phase 1 process details collecting and processing non-edible material.

1. Locate suitable Oak Tree, collect acorns in 1 gal bucket
2. Dry acorns (dehydrator, direct sunlight) until shell naturally splits.
3. Remove hard outer shell, as well as the fuzzy first inner shell, both can be removed easily after drying process
4. Hand rub acorns to remove final paper-thin layer around the acorn flesh.





Now you should have mostly processed acorn flesh or nut 'meat' as it is sometimes referred to.

Phase 2 is fine processing and leaching.

5. In a food processor or blender of choice, finely grind up the acorn flesh, creating a light brown flour-ish substance.

6. Place contents into a large bucket for leaching.

Leaching: the process of using water to draw out unwanted or toxic chemicals

7. Can use cold or hot water. Hot water is faster to process but the flour loses nutrient value. Cold water is slower but does not remove the nutrients. Place mostly processed flour in large buckets and fill so ration is 50/50 flour to water. The water will begin clear, and in just a few hours or days begin to change color. When the water is amber colored, use a strainer, drain the amber water out, keep flour in, replace with fresh water. Rinse and repeat until water does not change to dark amber color. After a few weeks, after straining, taste test if the flour does not taste bitter then you are done.

8. Last step is drying the flour (dehydrator) and additional processing depending on how fine you like your flour, and now you are ready to cook.

Acorn flour can be used as a substitute in any baking that uses flour. Acorn flour is a complex carbohydrate, contains protein, fiber, fat, and potassium as well as essential vitamins and minerals. This was my first year attempting this myself and it was a lot of hard work, especially cracking the acorns, but very rewarding and powerful. This process has made me more aware of our reliance on the industrial food system, and showed me that there are alternatives right outside your door.

Acorn flour after leaching and dehydrating.



UPCOMING EVENTS

@ Glover's Ledge and nearby

FEB 21 @ 2PM: ANIMAL TRACKING *ANTIOCHERS ONLY*

JOIN CONBIO EXPERTS ANDREA GROSSMAN AND RYAN EAGLESON TO LEARN HOW TO IDENTIFY ANIMAL TRACKS AND TRACES AT GLOVER'S LEDGE. **RSVP REQUIRED** - EMAIL SLOBDELL@ANTIOCH.EDU TO ATTEND

FEB 24 @ 4PM: DECOLONIZING SCIENCE

HOSTED BY UNH, AN EXPERT PANEL WILL SHOWCASE EFFORTS WITHIN THE REGION TO BRING INDIGENOUS KNOWLEDGE AND DECOLONIAL APPROACHES TO THE COLLECTION, STEWARDSHIP, AND ANALYSIS OF DATA FROM NATIVE LANDS. REGISTER [HERE](#).

MARCH: WOMEN IN SCIENCE SPEAKER SERIES

MARCH IS WOMEN'S HISTORY MONTH! CHECK OUT THIS SERIES HIGHLIGHTING THE WORK OF WOMEN IN SCIENCE. FULL SCHEDULE [HERE](#).

MARCH 18 @ 7PM SALAMANDER BRIGADE

AS THE EARTH THAWS AND SPRING RAINS DRENCH NEW HAMPSHIRE, THOUSANDS OF AMPHIBIANS MIGRATE TO VERNAL POOLS TO BREED. MANY ARE KILLED WHEN THEIR JOURNEYS TAKE THEM ACROSS ROADS. JOIN THIS ONLINE TRAINING TO LEARN HOW TO HELP! - REGISTER [HERE](#).

MONDAYS @ 8AM STARTING MARCH 29TH: SPRING BIRD MIGRATION

JOIN ANTIOCH ALUM STEVEN LAMONDE FOR A SERIES OF BIRDING OUTINGS DURING THE SPRING MIGRATION. NO BIRDING EXPERIENCE REQUIRED! REGISTER [HERE](#).





- BIRD OF THE MONTH -

COMMON REDPOLL

by Ally Gelinias, photo Eric Gofreed (eBird)

Common Redpolls (*Acanthis flammea*) are small songbirds comparable in size to the American Goldfinch. They have small heads and small, pointed, seed eating bills and a short tail with a small notch at the tip.

Redpolls travel in flocks of up to several hundred individuals. They move frenetically, foraging on seeds in weedy fields or small trees one minute and swirling away in a mass of chattering birds the next. During the winter, you can find tunnels more than a foot long and 4 inches under the snow where Redpolls stay warm during the night! >[Sounds](#)



CLIMATE CHANGE CHANGES BIRDS

Have you noticed more Carolina Wrens recently than ever before? Robins and Bluebirds staying the winter, when they didn't used to? Do you remember a time when there were no Cardinals to be found in NH? See how climate change has affected the bird population of NH, especially NH's winter residents, [here](#).

FUN FOR ALL SEASONS

Eager to get outside, but not sure what to do? Check out [these activities](#) from The Harris Center - fun for all seasons that kiddos, adults, and educators will enjoy!

ADAPTATION MAGIC by: Sara Lobdell

What if, instead of layering up to avoid the winter chill, we froze solid? Sound crazy? Well, if you're a wood frog, freezing for the winter is your yearly tradition.

Beings have all sorts of strategies to survive and thrive in the freezing winter months in this part of the world. For humans, we tend to notice a decrease in daylight hours as a sign of winter's arrival. For most other critters, however, survival strategies kick in as a response to lengthening nights.

At Glover's Ledge, as the nights grow longer, you may have noticed fewer and fewer peeps from our woodland amphibians. Many frogs of the region - wood frogs, grey tree frogs, peepers - freeze a significant portion of their body mass for the winter. A sugar-based antifreeze lies in wait in their tissues, so when the spring rains come these amphibians are able to reanimate within a few hours and hop away to their mating rituals. Snakes, another ectotherm, overwinter together in caves and crevices.

Animals that create their own body heat have various strategies for survival, often depending on size and habit. Smaller creatures - moles, voles, mice, etc - take advantage of the insulating snowpack and tunnel below to stay warm. Other smaller creatures like bats and many birds migrate to areas where food is more plentiful.

Larger critters have their own adaptation magic. Those such as bears, for example, create fat stores and fall into torpor, a period of time where metabolism is decreased and energy is conserved. Large size, generally, can also be an advantage as larger animals have a lower surface area to volume ratio and therefore lose less energy to heat production.

Finally, lighter coloration can also be an adaptive advantage for winter survival. Although it may seem that one would want to be darker in colder climates for greater potential to absorb heat from the sun, in fact, the more heat absorbed the greater the heat differential between one's body and the air. A greater difference between the air temperature and body causes critters to lose heat faster so, interestingly, being a lighter color is advantageous in colder climates!

See [here](#) for more!

Thanks for Visiting!!

WE WANT TO HEAR FROM YOU! HAVE AN IDEA FOR AN ARTICLE? WANT TO LEAD A HIKE?

CONTACT: [SARA LOBDELL \(SLOBDELL@ANTIOCH.EDU\)](mailto:SARA.LOBDELL@ANTIOCH.EDU)

GLOVER'S LEDGE ENVIRONMENTAL EDUCATION/OUTREACH COORDINATOR

FOR DIRECTIONS TO GLOVER'S LEDGE, VISIT: GLOVERSLEDGE.WEBBLY.COM/DIRECTIONS

facebook.com/gloversledge
gloversledge.weebly.com

~~Bud Bingo~~

Director of Antioch Forests Peter Palmiotto led us on a very fun tree bud identification hike the first Saturday in February - thank you Peter!! Now it's time for....drum roll....bud bingo! Can you identify these buds here, or out on a walk? Answers upside down below.

(1) Hint: Needles single along stem on pegs, stem tan brown.
Photo: Kim Snyder



(2) Hint: Leaf scar goes all the way around bud.
Photo: Kim Snyder



(3) Hint: Buds opposite and VERY red.



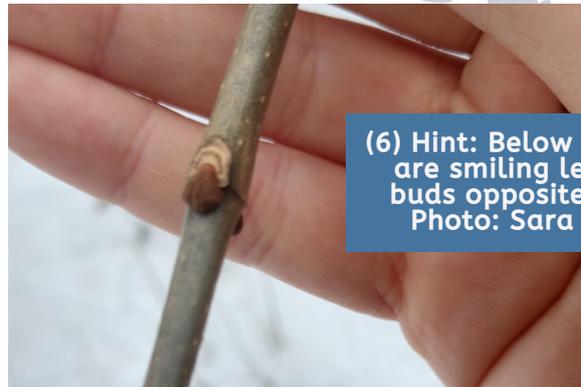
(4) Hint: Needles in bundles of 5, good for tea! Photo: Kim Snyder



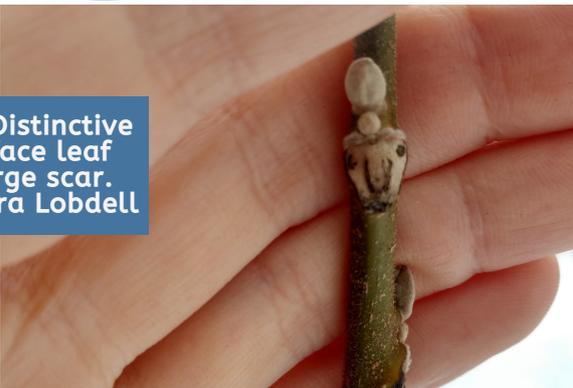
(5) Hint: "Bitter" yellow buds over large leaf scars. Photo: Mary Anne Borge ([source](#)).



(6) Hint: Below these buds are smiling leaf scars, buds opposite pattern. Photo: Sara Lobdell



(7) Hint: Distinctive smiley face leaf scar, large scar. Photo: Sara Lobdell



(8) Hint: Twigs smell of wintergreen, buds small, fuzzy twigs. Photo: Sara Lobdell



(1) Norway spruce (2) Sycamore (3) Red Maple (4) White Pine (5) Bitternut hickory (6) Ash (7) Butternut hickory (8) Yellow Birch. For more buds, check out [this Bud ID Guide](#) from Champaign County Forest Preserves.