How to

Coordinate With Forest Officials

in order to

Legally Wildharvest

* Acorn Flour & Oil * Buckeye Nut Flour *

* Sycamore Syrup * Golden Chia Seeds *

* Pine Nuts & Pollen *



Photos by Distance.

& much more!

Notice

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¹ **Distance Everheart:** http://www.wildwillpower.org/about-wild-willpower/our-civil-pac/distance-evehearts-bio

² Download GIMP graphic design editor: www.gimp.org/downloads/

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National Forests, National Parks, State Parks,



BLM Lands,
Regional Parks,
& many other places.

First,

There Are 3 Types of Permits To Know About.

How To Perform Legal Wildharvests

Permit #1: Special Use Permit

The Forest Service manages over 192 million acres of national forests & grasslands that comprise the National Forest System (NFS). The Agency's special-uses program authorizes uses on NFS land that benefit the general public and protect natural resources. Each year the Forest Service receives thousands of individual & business applications for authorization for use of NFS land for such activities as water transmission, agriculture, outfitting & guiding, recreation, telecommunication, research, photography & video productions, & granting road & utility rights-of-ways. The Forest Service carefully reviews each application to determine how the request affects the public's use of NFS land. Currently there are over 74,000 authorizations on the NFS lands for over 180 types of uses.³



From Yosemite National Park's webpage on "Parks as Classrooms': http://www.nps.gov/yose/forteachers/pacprograms.htm

^{3 &}quot;Obtaining a Special-Use Authorization with the Forest Service; *The Application Process*": http://www.fs.fed.us/specialuses/documents/broch.htm

FAQ: What Types of Things Can I Harvest?



From The Atlantic, "The Terrible Beauty of California's Powerhouse Fire": http://www.theatlantic.com/photo/2013/06/the-terrible-beauty-of-californias-powerhouse-fire/100527/

We Must Talk About Wildfire Prevention *First*.



Permit #2: Campfire Permit

Campfire permits can also be obtained from any CAL FIRE, US Forest Service, or BLM station or office. Your campfire permit is valid from the date issued until the end of the calendar year. They are required to have campfire *or* portable gas stove on public lands.

Check to ensure there aren't any local fire restrictions in the area. During periods of high fire danger, campfires may be restricted. Also, keep a shovel & bucket of water nearby at all times.

Camping Fire Safety - How to Build an Open Campfire

Select a level, open location away from heavy fuels such as logs, brush or decaying leaves & needles. Clear an area at least 10 feet in diameter (local regulations may vary). Scrape away grass, leaves or needles down to the mineral soil. Scoop a depression in the center of the cleared area in which to build the fire & put a ring of rocks around it. Cut wood in short lengths, pile within cleared area & light the fire. The fire should be built no larger than necessary. Your fire must never be left unattended & the fire must be extinguished completely before leaving.

While the Fire is Burning - Open Fire Safety

Always keep a shovel & bucket of water nearby at all times. While the fire is burning, be sure there is a responsible person in attendance of the fire at all times. Never leave children around a fire unattended.

How to Completely Extinguish an Open Campfire

Use the "drown, stir and feel" method: drown the fire with water, then stir around the fire area with your shovel to wet any remaining embers & ash. Be sure to turn wood & coals over & wet all sides. Move some dirt onto the fire site & mix thoroughly to fully smother it. And finally, feel the area with the back of your hand to ensure nothing is still smoldering.

California Campfire Regulations & Restrictions Health & Safety Codes

13007. Liability for Damage. Any person, who personally or allows another person to willfully, negligently or in violation of law, set fire to, allows fire to be set to, or allows a fire kindled or attended by him or her to escape to the property of another, whether privately or publicly owned, is liable to the property's owner for any damages caused by the fire.

13008. Due Diligence Required. Any person who allows a fire burning upon his or her property to escape to the property of another, whether privately or publicly owed, without exercising due diligence to control such fire, is liable to the owner of such property for the damages to the property caused by the fire.

13009. Expense of fighting fires, liability for. Any person who negligently, or in violation of the law, sets a fire, allows a fire to be set, allows a fire kindled or attended by him or her to escape onto any public or private property will be financially responsible for the firefighting costs.

Public Resources Code

4103.5 Campfire Defined - "Campfire" means a fire which is used for cooking, personal warmth, lighting, ceremonial or aesthetic purposes. This includes fires contained within outdoor fireplaces and enclosed stoves with flues or chimneys, stoves using jellied, liquid, solid, or gaseous fuels, portable barbecue pits and braziers, or space heating devices which are used outside any structure, mobile home, or living accommodation mounted on a motor vehicle. "Campfire" does not include portable lanterns designed to emit light resulting from a combustion process.

4432. Neglecting Campfire - A person shall not leave a campfire, kindled or attended by him or her, burning or unextinguished unless one of the following requirements are satisfied: He or she leaves some person in attendance. The fire is enclosed within a stove, oven, drum, or other nonflammable container, in such manner that the fire cannot escape from the container. No person shall allow a campfire, kindled or attended by him or her to spread after it is built. 4433. Permits Required - A person shall not light, maintain, or use a campfire upon any brush-covered land, grass-covered land, or forest-covered land which is the property of another person unless he or she first obtains a written permit from the owner, lessee, or agent of the owner or lessee of the property. If, however, campsites and special areas have been established by the property owner and posted as areas for camping, a permit is not necessary. A written campfire permit duly issued by or under the authority of the United States Forest Service is necessary for use on land under the jurisdiction and control of the United States Forest Service. 4434. Campfire Escape - The escape of any campfire from the control of any person who is maintaining the campfire is prima facie evidence that such person was negligent in maintaining the campfire.4

⁴ Brought to you by The California Wildland Fire Prevention Group: http://www.preventwildfireca.org/Campfires/

How To Perform Legal Wildharvests

Additional Wildfire Prevention Techniques

Based on Traditional Knowledge.

Lesson #1:

"Deadwood Stacked All Throughout The Forests" is a modern phenomenon.

For at least hundreds of years many different Native American nations, tribes, & clans⁵ coordinated to manage ecosystems through pre-meditated control burns.

Such burns, however, were much more tame than today's wildfires or control burns, as clean-burning branches from trees such as Oak, Cedar, Walnut, & Juniper were first picked up by hand prior to lighting such fires for use in firepits—for cooking, boiling water, firing clay pots, & daily survival needs in general.

Wood that does <u>not</u> burn clean— such as Pine, Buckeye, Ceanothus (Wild Lilac), or Cottonwood— was <u>also</u> gathered & used, but generally for use in shelter building (& other uses) instead.

Sights such as this <u>deadwood fire hazard</u> were <u>not</u> a common sight throughout the wilderness in <u>those</u> times:



Clean-burning woods were gathered for small fires. Other woods were often used for building shelters.

⁵ List of Native American Tribes, *U.S. Department of the Interior*: http://www.wildlivingskills.org/directory-of-resources/native-american-resources/

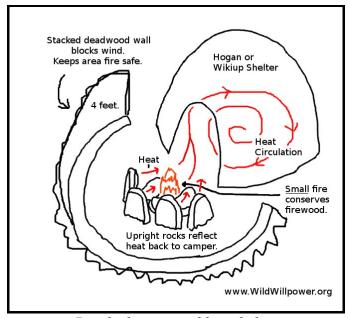
Rule #1.

Small, Intelligently-Designed Fires Only

Less Fuel; More Heat:



<u>Instead</u> of a :circle of rocks:, the rocks are placed to direct the heat where desired.



Poorly drawn; vital knowledge.

The 3-Rock Technique:



The very small fire makes the rocks <u>hot</u>, & the pot is set atop. Greatly conserves firewood! The rocks help heat the pot, & the upright rocks surrounding it (see diagram) also help heat the pot.

Every Major Civilization *Ever Began* Alongside A River



From Museum of the Cherokee in South Carolina: http://cherokee.wildsouth.org/visit-cherokee/museum-of-the-cherokee-in-south-carolina/

Encampment Preparation

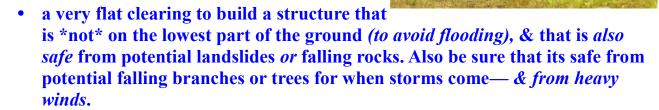
The first thing to do *before beginning* to build a shelter is to scout the most ideal location among whichever ecosystem you're among; this is *very important* in survival. No matter *which type* of shelter you're looking to build, here are *some* things to look for, *ideally*:

 more than one ecosystem merging together (i.e. desert and forest, forest and prairie, etc.)

Flowing water (gnats & mosquitoes are attracted to standing water) preferably a stream to a river, & one that is deep enough it won't dry up in summer. Seek a healthy & diverse riparian zone.

Caution: Contact the local water district (or question officials) to find out what kind of contaminants may be found in the water so you will know which types of water purification are sufficient. For instance, a carbon-block filter can be made with crushed Oak charcoal & sand, but more complex techniques are required for removal of mercury.⁶

• a diversity of plants, trees, & deadwood plenty of Oaks— also open space to walk without trampling flora & fauna.



• several rocks of different sizes that are small enough to lift & bigger than pebbles—pancake-shaped rocks are quite useful as well—for use in building a fire pit, reflector fire, etc.

http://people.uwec.edu/piercech/hg/mercury_water/removalmercury.htm

⁶ Removal of Mercury in the Environment:

Recommendation:

Wikiup ("wick-ee-up") Shelters for Wildfire Prevention and Common Benefit

Many types of deadwood produce toxic chemicals when burned, & when left untended among the wilderness (see page 12) produce the perfect conditions for dangerous & massive wildfires. These woods (Conifers, Buckeyes, Lilacs, & many other non-Oak woods) can be gathered, & are ideal for crafting Wikiup shelters.

A partially-built Wikiup:



Photo of an all-weather Wikiup shelter in-the-making.

Wikiups Improve the Camping Experience

Wikiups help campers who are scared of wild animals to feel safe & secure. They're also sturdy & waterproof, & allow people to feel at home. Their aesthetic beauty invokes appreciation & respect for their natural design.

Wikiups for Ecological Benefit

Building Wikiups helps *greatly* to prevent out-of-control wildfires by clearing deadwood (also gathering Oak for firewood). It also helps open up space for plantlife to grow, allows wildlife to walk unencumbered, & is constructed without contaminating ecosystems with foreign objects.

Some Additional Eco-Wise Shelter Types:

Southern Caddo Grass House:

Great Plains Tipi:



Wichita grass house. Photograph by Dee Ann Story, The Virtual Museum of Texas Cultural History:

http://www.texasbeyondhistory.net/tejas/fundamen tals/images/ic-house2.html



From "Structures of the Plains Indians":
http://people.ucls.uchicago.edu/~snekros/20078%20webquests/Structures
%2089/structures89.html

Northeast Wigwam:

Photo source: http://www.gettyimages.com/detail/photo/barkwigwam-with-cornstalks-high-res-stockphotography/162279927

Southwest Hogan:



Photo source: http://kids.britannica.com/comptons/art-136493/A-Navajo-weaves-a-traditional-rug-outside-herhogan

Note: Wild Willpower PAC would like to broadcast "how to construct traditional Native American shetlers" on www.WildLivingSkills.org. Please contact

Distance@WildWillpower.org to get involved.

Before Harvesting:

Permit #3: Special Forest Product Permit

There are four general categories for collecting Special Forest Products on National Forest lands.

- 1. No Permit Required: Personal use within the Forest boundaries.
- 2. Free Use: Small quantities for personal use.
- 3. Charge Use: Quantities that exceed Free Use Limits or that are not offered under the Free Use Program, *prices vary*.
- 4. Commercial Contract: Exclusive harvest right on a contract basis.⁷

The term "nontimber forest products" is widely used internationally & within the United States to describe a multitude of forest products that are administratively distinguished from timber & wood fiber resources. Nontimber forest products have a variety of uses, including food, medicine, fuel, decorative uses, & ceremonial & spiritual uses. Types of products include fruiting bodies (e.g., mushrooms and berries); roots, leaves, cones, bark, & needles; woody parts of plants, such as boughs & logs; & resins & oils.

Of the five major federal land management agencies, the USDA Forest Service has played the most prominent role in encouraging harvesting of nontimber forest products.⁸

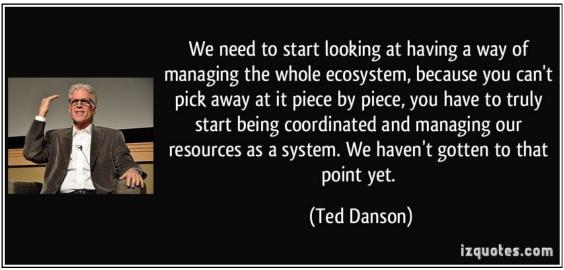
For Wildharvesting Cooperatives: Wild Willpower recommends indicating on your permit that your team will always use Positive-Impact Harvesting Techniques as described on www.WildLivingSkills.org. Once USDA certified, these techniques will make "coordinating with forest officials" a simple & streamlined process.

⁷ **Giffor Pinchot National Forest** *website*: http://www.fs.usda.gov/detail/giffordpinchot/passes-permits/forestproducts/?cid=stelprdb5137136

⁸ Nontimber Forest Products Management on National Forests in the United States Rebecca J. McLain and Eric T. Jones: http://www.fs.fed.us/pnw/pubs/pnw gtr655.pdf

"Positive-Impact Harvesting Techniques"

To ensure the health of native ecosystems see <u>benefit</u> rather than <u>detriment</u> as the result of wildharvesting.



Thank you IzQuotes.com for this great commemorative graphic! Great quote, Ted Danson! ("Sam" from "Cheers"). Graphic source: http://izquotes.com/quote/46830

Notice!

Never harvest anything unless you have identified it to-the-species, & never harvest anything for commercial purposes without first filing a Special Forest Product Permit with the forest service & then having it approved. Wild Willpower recommends forming a "Wildharvesting Cooperative" as an alternative to supporting sole prioprietorships in this matter in order to prevent exploitation of natural resources and of workers. See www.KernRiverCoop.com for details.

"Positive-Impact Harvesting Techniques" are currently being determined & broadcast for each species on www.WildLivingSkills.org, however a general rule fo law is described throughout the following pages.

There are

5 Rarity Classifications For Native Species

Native species can be classified as:

- extinct
- endangered
- uncommon
- common
- underharvested (growing rampantly <u>like</u> invasive species due to no longer being annually harvested).

Rare Plant information Resources, U.S. Forest Service:

http://www.fs.fed.us/wildflowers/Rare Plants/resources.shtml

List of Endangered Plant Species in California:

http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEPlants.pdf

Inventory of Rare, Threatened, & Endangered Plants of California, California Native Plant Society:

http://www.rareplants.cnps.org/glossary.html

List of Species in North America Extinct Since 1960:

https://www.currentresults.com/Endangered-Animals/North-America/recently-extinct-animals.php

California Native Plant Society, Find Your Local Chapter:

http://www.cnps.org/cnps/grownative/lists.php

California Laws Protecting Endangerd Species:

https://www.wildlife.ca.gov/Conservation/Plants/Laws

To Mitigate, Or To Propagate?

When harvesting from a species that is *native* to an ecosystem, it is important to harvest in a way which causes *benefit to the health of the individual being* that is being harvested from, *but <u>also</u> to consider the greater ecology* & then to harvest accordingly. If a species is growing in such abundance that *nothing else has room to grow*, then harvesting should be done in that section of the ecosystem in a way which mitigates the population (<u>and supplies you with your needs</u>), whereas if the species is growing in scarcity in that section of the wilderness, it should be *left untouched*, <u>carefully</u> propagated (*or mildly pruned*), &/or mildly weeded around.

A species population can be:

1.) Mitigated via harvesting the:

- roots
- flowering bodies
- nuts, seeds, or pollen (etc.)
- entire organism

2.) Propagated via:

- Prune the Branches or Leaves: Leaves which aren't receiving any sunlight (usually at the base of the plant, tree, or shrub) can be harvested in order to help prune it. This allows nutrients & minerals to be used for other parts of the plant rather than "wasting" them on leaves which are not performing photosynthesis.
- Spread the Seeds: If the nuts or seeds (etc.) are being harvested, then some may be spread into spots that they could potentially grow in order to ensure their continuation. Native organisms tend to "take" without needing to be planted & tended to.
- Plant the Cuttings: Most plants, trees, & shrubs can have pieces of their branches cut off, slightly dried, then planted in order to grow new roots & become a new plant. See Wild Willpower's "Homesteading Starter Kits" guide to learn "how to transplant a cutting".
- Stimulate Growth by Trimming: Often, harvesting the tips & unhealthy branches of the plant, tree, or shrub will help *stimulate the growth* of that being. When there is not an overpopulation, harvesting a few leaves here & there can help them to thrive.

A New *Type* of *Rarity Classification:* "Underharvested Species"

Oaks⁹, California Buckeyes¹⁰, Sycamores, & Pine trees, as well as Soaproot, Nettles, Horsetail plants, & many other species of plants & trees (shrubs, etc.) have been harvested & consumed by Native Americans and people throughout the world for thousands of years, yet today the abundant supply of renewable resources which can be accessed from these species lay almost completely untouched—they're often being removed only to be replaced by more resource-intense extractions. Many of these species who produce these now untapped resources had their roots, seeds, &/or flowering bodies harvested regularly.

Today—in many ecosystems—these species now spread like invasive species except within their own native ecosystems—growing far too rampantly for more rare species to be able to keep up! These are classified as "underharvested species", & the general rule for harvesting is to "resume traditional wildharvesting methods using the same techniques which were used before"; it is important to replicate what was going on as close as possible in order to help restore ecosystems and to provide for humanity's basic resource needs.

An underharvested species is a species that is:

- 1.) native to an ecosystem & has been harvested <u>OR</u> harvested <u>from</u> by indigenous people for thousands of years.
- 2.) is no longer having its population either mitigated <u>OR</u> propagated as was done via annual traditional wildharvests.
- 3.) is spreading like an invasive species within its own ecosystem (often, but not always).

The general rule for harvesting underharvested species is to resume/emulate traditional harvests, monitor the needs of the surrounding ecosystem, & harvest accordingly & continue to monitor.

- 9 Oak Tree on The Wild Living Skills Database & Smartphone App: http://www.wildlivingskills.org/identify-a-species/tree/hardwood-broad-leafed-tree-non-conifer/deciduous-leaves-fall-off-in-winter/simple-leaves-one-single-leaf-attaches-to-the-petiole-the-non-woody-leafs-stem-that-attaches-to-the-woody-branch/oak-quercus/
- 10 California Buckeye Tree on The Wild Living Skills Database & Smartphone App:
 http://www.wildlivingskills.org/identify-a-species/tree/hardwood-broad-leafed-tree-non-conifer/deciduous-leaves-fall-off-in-winter/which-best-describes-the-compound-leaf-divided-into-leaflets-that-share-a-common-stem/palmately-compound-leaves-hand-shaped-collection-of-leaflets-radiating-from-a-central-point/california-buckeye-aescules-californica/

The following pages contains <u>some</u> Underharvested Species

Wise, Drought Tolerant Solutions To Vastly Increase Healthy Production

Industrially-Viable Wild Foods



Thank you One-Ring.co.uk AND the team who made Lord of The Rings such a wonderful, inspiring production!

Notice!

Wild Willpower will begin broadcasting how to harvest the following industrially-viable Forest Products using Positive Impact Harvesting Techniques, & then "how to process them with the help of deshellers, oil presses, grain mills, & highly-efficient traditional Native American processing techniques" in order to model what "a renewable, production-based resource management system which simultaneously prevents wildfires" looks like. Once we have product on hand, we'll seek to arrange studies to ascertain USDA & FDA approval of forest products, & to broadcast in a way which promotes stewardship, but denounces exploitation. Wild Willpower promotes noncommercial harvesting or harvesting by using Positive-Impact Harvesting Techniques, & also harvesting by wildharvesting cooperatives but not sole proprietorships to prevent predatory tycooning.

We'll primarily be broadcasting via www.WildWillpower.org &

The Wild Living Skills Database & Smartphone App on www.WildLivingSkills.org.

Please Note: WildWillpower.org will begin broadcasting how to process these Forest Products following the acquisition of Our List of Needed Resources. 11 Please contact Distance@WildWillpower.org to donate &/or sponsor the cause, to write an article, interview, outreach, etc. There's a link to our Crowdrise.com fundraiser which can be found on www.WildWillpower.org.

¹¹ Wild Willpower PAC's "List of Needed Resources": http://www.wildwillpower.org/contact-us/our-list-of-needed-resources

Buckeye Nut flour

- Caution! Buckeye nuts are poisonous when eaten raw due to the chemical aesculin present throughout the tree!¹²
- Buckeye nut flour has been a mainstay food for people around the world for hundreds of years, & can be processed into a highlynutritious, starchy flour sim liar to potato flour.
- Buckeye trees produce 4.4 tons of nuts per acre!¹³
- Buckeye nuts are much larger than most nuts currently sold on the market. *An abundant local drought-tolarant food source!*



California Buckeye {Aescules californica} Nut:

Sycamore Syrup

Just like Maple Trees, Sycamores produce a sweet sap that can be made into syrup-except that it tastes more like butterscotch & honey. Its "the west coast syrup"!! Very common trees!



Palmate ("open-hand"-shaped) Sycamore Leaves & Globose (globe-shaped) Seed Pods.

¹² Fuller and McClintock 1986:178

^{13 &}quot;CALIFORNIA INDIANS, The Ohlone Peoples: *Botanical, Animal and Mineral Resources*" by Susan Labiste: http://www.primitiveways.com/Ohlone Peoples2.html

Highly-Nutritious Acorn Flour & Oil

- Oak trees {Quercus sp.} produce 4.5 tons of nuts per acre!¹⁴
- There are several ways to process them into nutritious flour; the raw nuts can be processed into flour within 20 minutes!
- Industrial de-shellers, grain mills, & oil presses expedite the once-tedious process of producing acorn flour.
- Acorns are a complete protein by themselves, containing all 9 essential amino acids! <u>High in calcium & potassium</u>.¹⁵
- Acorns produce a rich, buttery oil similar to olive oil— with nutritional value similar to coconut oil.
- Acorns not only fed Native Americans¹⁶ more than any other food prior to colonization, but also European tribal people *prior* to the expanse of The Holy Roman Empire!¹⁷
- A drought-tolerant food source!
- Oaks grow all throughout the Northern and Southern Hemispheres, & thus are a "feed the world" food source!

^{14 &}quot;CALIFORNIA INDIANS The Ohlone Peoples: *Botanical, Animal and Mineral Resources*" by Susan Labiste: http://www.primitiveways.com/Ohlone Peoples2.html

^{15 &}quot;Nutritional Value of Acorn Flour, *full fat:* http://nutritiondata.self.com/facts/nut-and-seed-products/3084/2

^{16 &}quot;List of native American Tribal Nations" on *United States Department of the Interior website*: https://www.youtube.com/watch?v=l3-la0C19Z4

¹⁷ Old European Culture, "Acorns & Archaeology" by "Serbian Irish": http://oldeuropeanculture.blogspot.com/2014/11/acorns-in-archaeology.html

California, <u>Here's</u> Your Drought-Tolerant Food Source:

Wildfire Prevention and Increased Production through

Traditional Native American Oak Tree & Acorn Crop Management Techniques



Join the "Wildharvesting Cooperatives Across America!" Campaign!

The Properly Managed Oak Crop

Every year— around August (usually)— Oaks are known to drop their <u>first</u> batch of acorns. This <u>first</u> batch <u>always</u> has holes in them because the moths & weevils infested them! After this "first drop" is when the dried leaves & "bad acorns" were raked into piles & then control burned. This process was very safe, as deadwood had already been cleared from the forest floor for use as firewood, and shelter building material.

Now, a month later when the Oak trees drop their *second batch* of good acorns, you will not have to sift through dried leaves and "bad and good acorns mixed together" in order to harvest your crop. And remember— Oak trees {Quercus sp.} produce 4.5 tons of nuts per acre!¹⁸



Fire hazards such as this were inexistent in the time when Native Americans managed California ecosystems. Traditional techniques led to greater forest diversity, healthier soil, & in a way which fed people & prevented wildfires. Today we spend money fighting wildfires instead of earning money by producing acorns which would save money by preventing wildfires.

^{18 &}quot;CALIFORNIA INDIANS The Ohlone Peoples: *Botanical, Animal and Mineral Resources*" by Susan Labiste: http://www.primitiveways.com/Ohlone Peoples2.html

Prevent wildfires <u>AND</u> produce a healthy, drought-resilient food supply?!?!?

Or as we like to call it:



Special thanks to MediaWebApps.com for the above photo (the saying it a Wild Willpower original):

http://www.mediawebapps.com/picturelike.php?id=1147

Important!

Wild Willpower recommends leaving at least 1/3 of the acorns beneath each tree for wildlife to eat. (Positive-Impact Harvesting Technique for acorns!)

The previous page's assessement was based upon the following excerpt from the book "Tending the Wild; Native American Knowledge and the Management of California's Natural Resources" by M. Kat Anderson:

"The Ecological Rationale for Using Fire as a Management Tool"

"Fire was the primary land management tool of California Indians because it had many significant ecological effects.

1. Decreasing Detritus & Recycling Nutrients

Many wild plant populations accumulate aging parts (dead branches & shoots, leaves, cones, & seed pods) that may reduce plant vigor & productivity over time. Fires set by California Indians consumed this biomass & released some of the plant nutrients it contained.

Scientific studies have recently shown that nutrient movement can take a long time, relative to human life spans. The turnover rates of many nutrients are slow. In some ecosystems the nutrient storage compartment (e.g., the litter on the forest floor) can become a vault, locked against internal cycling. Various ecosystems will not remain productive over time if dead material accumulates much faster than it decomposes. Like soil. arthropods, bacteria, & fungi, fire is a mineralizing agent in forests & other vegetation types, but it works much faster than decaying organisms & thus speeds up nutrient recycling & the return of sites to high productivity. Although fire can accelerate nitrification & thus loss of nutrients, research is demonstrating that the leguminous, nitrogen-fixing forbs (such as lupines & clovers) often promoted by fire can rapidly provide nutrient replacement.



By mattmangum - Slash and Burn, CC BY 2.0, https://commons.wikimedia.org/w/index.php?curid=33978429

In many parts of the world, "slash & burn" agriculture is utilized to replenish soils, however it is one of the primary causes of deforestation in tropics due to its use for creating permanent agricultural projects which replace native ecosystems. Native American traditional Oak tree understory burns provide nutrient benefit to the soil—without the ecological decimation.

¹⁹ Impact of Slash-And-Burn Agriculture on Forest Ecosystem in Garo Hills Landscape of Meghalaya, North-East India" b Pramod Yadav: http://ggsipu.academia.edu/PramodYadav

"Tending the Wild, continued:

2. Controlling Insects & Pathogens

Fire helped to control the pathogens & insects that would otherwise compete for the same resources used by native people.

Many Indian tribes in California burned in Oak (Quercus spp.) woodlands & Tan Oak (Lithocarpus densiflorus) stands to reduce insect pests that inhabit acorns & over winter the Oak leaf duff. According to Kathy Heffner (Wilaki, pers. comm. 1992), all of the tribes she interviewed in Northern California (Hupa, Hailaki, Tolowa, Yurok, & Karuk) burned under the California Black Oaks & other oak species to destroy insect pests: "They needed to eliminate that duff that was underneath the Oak trees because the oaks will drop their leaves & create a big pile of duff. As long as all that duff stayed there, when the acorns dropped, the acorns could only be on the ground just a little while because that duff was home to a lot of bugs. The minute they hit the ground, those bugs were into those acorns. So if they burned it, that eliminated the duff & the insects that would get into the acorns."

In a 1916 letter to the California Fish & Game Commission, Klamath River jack from Del Norte County makes the link between eliminating wormy acorns & setting fires: "Fire burn up old acorn that fall on ground. old acorn on ground have lots worm; no burn old acorn, no burn old bark, old leaves, bugs & worms come more every year... Indian burn every year just same, so keep all ground clean, no bark, no dead leaf, no old wood on ground, no old wood on brush, so no bug can stay to eat leaf & no worm can stay to eat berry & acorn. Not much on ground to make hot fire so never hurt big trees, where fire burn."

Arthropods in two major genera feed on acorns during their larval stage, causing severe damage or destruction. These are the filbert worm (Cydia latiferreana) & the filbert weevils (Curculio occidentalis, C. pardus, & C. aurvestis). Studies of California Oak species have shown that individual trees can exhibit up to 80% acorn damage by the filbert worm & 20 percent to 75% destruction by filbert weevils. Individual trees can exhibit up to 95% acorn damage from a combination of these pests. The larvae tunnel throughout the inside of the acorn, leaving frass, destroying the embryo, & rendering the acorn inedible.

Ted Swiecki, a plant pathologist who has studied California oak pests & diseases, on the habits, feeding, & life cycles of the filbert worm & filbert weevil:

'These insects invade acorns while on the tree, & the insects continue to develop as the acorns fall. In fact, insect-infested & diseased acorns tend to drop earlier than sound acorns. Eventually, the larvae exit the acorn & over winter as pupae in the duff beneath oak trees. If you were to burn off the duff & old acorns in the fall, you would destroy most if not all of the infested acorns as well as pupae that are in the duff. This would greatly reduce the number of filbert worm & filbert weevil adults that emerge in the following year, which would reduce the level of infestation in the acorn crop. If you were to do this every year, or even every couple of years, I would think that you would end up with a pretty clean crop of acorns, with relatively low losses due to insects.

Also, burning of plant debris beneath the trees would make harvesting easier whether you are knocking acorns out of the tree or simply waiting for them to fall. It makes the acorns easier to find & pick up & eliminates an old acorns (with holes in them) that would need to be sorted out."²⁰





Note: The <u>real</u> reason California has been having so many wildfires <u>besides</u> the drought is <u>not</u> climate change, but rather <u>ecological mismanagement</u>.

Prescription: Resume traditional wildharvests.

^{20 &}quot;Tending the Wild; Native American Knowledge and the Management of California's Natural Resources", by M. Kat Anderson ISBN 9780520280434

Positive-Impact Harvesting Techniques continued:

There are 2 Types of Non-Native Species

Species that were introduced from another ecosystem are classified as either "invasive" <u>OR</u> "naturalized". An invasive species is one that has been reproducing so fast ("growing so rampantly") that the species is threatening the populations of native species by not leaving room for them to grow. A <u>naturalized species</u> is one that is <u>not showing invasive behavior</u>; it is not native, however it is not growing so rampantly as to be upsetting the ecological balance.

Naturalized Species, What to Do:

Naturalized species should *also* be considered industrially viable, *although only when they are found growing in "abundance" rather than "isolation"*. There are 2 "rules" for harvesting naturalized species:

#1: If the species is growing rampantly, harvest at will, but not to population scarcity.

#2: If the species is not growing in isolation, harvest it as you would native species.

Invasive Species: What to Do

Because invasive species do not leave room for native species to grow, it is then best to harvest the entire organism <u>OR</u> harvest plenty of its nuts/seeds/flowers/roots in order to help <u>mitigate</u> its population. The good news is that many invasive species were first introduced because *historically* they are known for having valuable human uses (this is not always the case); such uses <u>are</u> being mapped throughout WildLivingSkills.org to help encourage people to harvest them for either commercial or non-commercial purposes.

Invasive species as well as algal dead zones should be considered for their viability as a source for biofuels <u>instead of</u> growing biofuels <u>and</u> their practical uses. <u>Traditional Uses</u> are being mapped throughout www.WildLivingSkills.org.

Invasive Species List and Scorecards for California:

http://ice.ucdavis.edu/invasives/home/species

INVASIVE SPECIES COUNCIL OF CALIFORNIA:

http://www.iscc.ca.gov/

Fertilizer Runoff Overwhelms Streams and Rivers--Creating Vast "Dead Zones", Scientific American:

The nation's waterways are brimming with excess nitrogen from fertilizerand plans to boost biofuel production threaten to aggravate an already serious situation:

http://www.scientificamerican.com/article/fertilizer-runoffoverwhelms-streams/

Mushrooms & Lichens

When harvesting *mushrooms*, there are a couple ways to cause *benefit* by helping the species to propagate while simultaneously harvesting what you need. When we see *mushrooms* sticking up out of the ground (out of wood, soil, dung, etc.), what we are seeing is the fruiting body of a much larger fungal network. Whether the mushroom has a stipe ("stem") or no stipe will determine the harvesting technique which should be used. Never harvest anything which has not been effectively identified to the species.

Mature Mushrooms with Stipes

Simply cut the mushroom about an inch above where the mushroom meets the substrate (ground, bark, etc.), & then shake the mushroom in a circular area directly above where it has been harvested from in order to disseminate as many spores as possible. This will help ensure that the patch continues year after year, & never harvest all of the mushrooms for an area-only take less than half from any given patch, & never harvest from a patch which looks like it has already been harvested from in the same year.

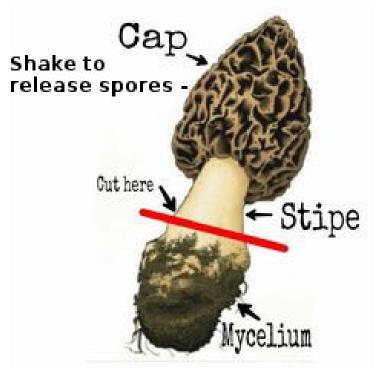


Photo uploaded onto Pinterest: https://www.pinterest.com/primrulle/morel-mushrooms/

Lichens:

Lichens are generally *very* sensitive to air pollution; they are also used as surprisingly precise air quality monitors! Because of this, they often grow sparsely in urban areas. *As per harvesting*:

After consulting lichen experts in Canada, U.S.A., U.K., & Australia, Karen Diadick Casselman in her book Lichen Dyes, The New Source Book developed a code of ethics for collecting lichens with the intended use of dying fiber.

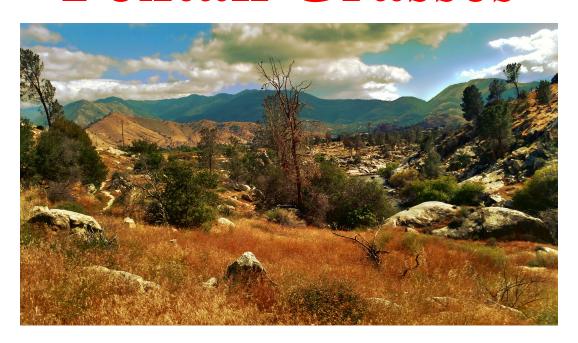
- Learn about lichens in your region— reproduction/dispersal, ecology, habitat issues, conservation issues
- Learn to identify lichens before collecting
- Collect primarily salvage material— lichens that have blown out of trees or other situations where the lichens would otherwise be destroyed (i.e. on firewood, lichensgrowing on roofs or structures that will be cleaned)
- Use only those lichens that are conspicuously abundant
- Collect no more than 10% of the material from the area you are collecting in
- Do not buy or sell lichens
- Do not collect in parks, historic sites, or protected areas
- Do not use lichen dyes for large textile projects that require more than 6-7 lbs of yarn
- Do not use lichen for dyes that result in colors that are easily obtained naturally or from other dye sources (e.g. beige)
- Avoid group collecting and set a good example by your own collecting methods

These guidelines have also been recommended by The California Lichen Society, who has a section on using lichens for dyes HERE.

When used properly, Positive-Impact Harvesting Techniques help:

- open up room for wildlife to walk & new plantlife to grow.
- prevent "invasive species" AND "underharvested species" from taking over ecosystems.
- ensure a healthy diversity of native biological organisms.
- ensure that the health & needs of each species is considered, accounted for, & met.

What are we going to do about Foxtail Grasses





The Old Fashioned Way Is Still The Best Tear It Up In Spring & Plant A Garden



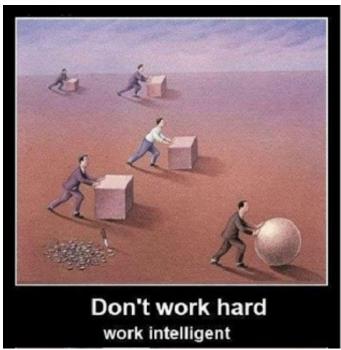


Today, There's Only One Thing To Do:

We need to begin *properly managing resources*, but how do we get *today's youth* in learning skills we barely know how to do ourselves?

We Need To Model A Movement:

Today— these techniques are no less vital than they have been for the past 10,000 years, & frankly— as a species- we NEED to begin implementing them throughout wildlands for the health of ecosystems, the protection of our homes, the production of our everyday resources, and to simply survive.



Thank you LiveSmartnotHard.com for this great graphic to help prove a point: http://www.livesmartnothard.com/2014/03/10/work-smart-not-hard/

We are currently seeking land along the Pacific Crest Trail in order to model the "movement" Wild Willpower is working to build & make accessible to others.

Introducing Wild Willpower's

Heirloom & Native Seed Homesteading Starter Kits



Many "early American" homesteading techniques have been devastating to native ecosystems— cattle ranching, hog confinements, large-scale monocropping, & so on. "Homesteading Starter Kits" are built for today's movement with today's knowledge. Campaign Contributions to Wild Willpower enable our "peaceable assembly of civilians" to compile these kits & get them out to "as many people as possible".

See www.WildWillpower.org for details.

Alexandra Wilson & Kevin Byrd

Founders of Wild Willpower



Wild Willpower PAC (www.WildWillpower.org) is currently fundraising to move our organization forward & begin assembling Homesteading Starter Kits & fundraising through selling our recommended outdoor gear. We seek to sponsor native teachers & documentation crews around the world to build The Wild Living Skills Database & Smartphone App to help humanity & future generations with this gift.

Please contact Distance@WildWillpower.org to offer a contribution & help us *move forth the movement*. There's also a "campaign fundraiser" link that can be found on www.WildWillpower.org.

In 2 or 3 *organized* planting seasons, humanity could end ecological scarcity on this planet for <u>all</u> people, & provide 'rent-free housing & a place to grow as a human right"

Thank you for reading!



Thank you www.InspirationBoost.com for sharing this exceptional commemorative quote by Nelson Mandela.

We're seeking to raise \$40,000 to purchase a RAV4 *Electric Hybrid* from Toyota of Marin (\$30,000), printing supplies, & overhead to assemble Starter Kits.

We are also currently seeking *land* in order to *model the movement* being broadcast on www.WildWillpower.org.

One goal of ours includes opening up a "vast wild living space & permaculture paradise" as a community space which combines, permaculture & ethnobotany among a native animal sanctuary (elk, pronghorn, porcupine, etc.), & to set precedent to enable others seeking to foster similar projects to follow suit.

We are creating a fund specifically to secure land for this purpose <u>and</u> to continue broadcasting important sills throughout WildLivingSkills.org.

All research & concepts throughout this pamphlet brought to you by www.WildWillpower.org.

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You may find the following *related* publications on our website:

- Wild Willpower's Housing Solutions national Plan & Petition
- Petitioning & Civil Rights Legal Self-Help Guide
- New Technology- The Wild Living Skills Database & Smartphone App
- Introducing... (heirloom & Native Seed) Homesteading Starter Kits!
- Our line of Highly-Efficient Outdoor Gear
- Wild Willpower's Original Publications
- Who Is Wild Willpower, & How To Help

Please contact Distance@WildWillpower.org if you have any questions, ideas, to collaborate, or to offer a campaign contribution &/or become a monthly sponsor. We can only make this happen with your help.