

SPRING  
2017

*Journal of*  
**MEDICINAL PLANT  
CONSERVATION**

*A United Plant Savers Publication*

*Saving a Sacred Fertility Herb...  
False Unicorn Root*

*How We Protect Trillium*

*The Yerba Mansa Project*

*Community Herb Clinics*

*Distinguishing Black Cohosh  
from Look-alikes*

*Race, Rights and Research  
in Caribbean Ethnobotany*

*IUCN Meeting*

*Ethnobotany in Laos,  
the Roots of Culture*



*Chamaelirium luteum*

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## SPRING 2017

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# WE HAVE LOTS OF WORK TO DO!

By Susan Leopold

This year's Journal cover featuring false unicorn (*Chamaelirium luteum*) comes with a very important message. **The herbal industry can reformulate, but plants cannot.**

Currently false unicorn root is selling for \$277.83 a pound on Bulk Apothecary, and it even graces the shelves of Walmart. This spring advertised paid prices to diggers are around \$30 green/wet and \$90 for dried false unicorn root. This is a plant that we do not know how to cultivate to meet commercial demand at this time. The seeds can be germinated, and plants can be purchased from reputable native plant nurseries, but attempts to grow false unicorn root on a commercial scale have failed thus far. This is a very slow growing plant, and there is still much to learn

about the plant's current populations in the wild and its reproductive biology. The alarming concern is that diggers are being paid \$5 per pound for green goldenseal root and \$26 for dried root (advertised on Facebook). I share this as a means to compare the current value of another wild harvested root known to have declining populations. The only other plant being paid more to diggers is Virginia snakeroot (*Aristolochia serpentaria*) at \$100 per pound dried weight. Compare this to trillium (*Trillium* spp.), which diggers sell to dealers for around \$3.50 per pound for dried root/bulbs and black cohosh (*Actaea racemosa*) root at the same price. My point is that false unicorn is sold for such a high price because it is not easy to find, and it is not abundant when you do find it. I can only wonder if this red flag is our last warning sign that our most sacred fertility herb is disappearing from our forests. We hope that by sharing our concern we can bring awareness to how we can use the "At-Risk" Tool, as well as the network of United Plant Savers to curb the demand and bring awareness to natural product companies that they can reformulate, but once false unicorn is gone, that is it!

We are working towards refining our "At-Risk" Assessment Tool to bring more clarity to the consumer and the herbal industry. We plan to include a "No Pick/No Use" third category, hoping to send a clear message to the herbal industry to lay off these plants unless they are cultivated. We have also identified those plants on the "At-Risk" and "To-Watch" List that are now tagged to be reviewed and rescored. These plants have further been rated by highest priority, top priority, and mid priority and are now listed in our Journal next to our "At-Risk" and "To-Watch" plants on page 9.

These plants have been tagged for review because we are concerned about their increased use in the herbal trade and/OR decline due to disease. We are looking to inform the scoring of the plants by gathering the most current data on wild populations and tonnage in trade. We are also intending to score a list of plants that have come to our attention. We are also setting a clear



Steven Foster, Susan Leopold, and Tom Newmark in Missouri

protocol for an annual review process and a way to be more timely and effective when reviewing plants. We encourage our membership to share concerns with us, and if you are interested in helping us conduct research or review plants, reach out to us.

The herbal industry is growing at a rate much faster than the slow growing forest botanicals. And only a handful of companies are conscientious about the conservation of wild plants. In each state where the Department of Natural Heritage monitors for rare plants and reports to Nature Serve and where plants are ranked at a state and global level, in most cases they are a decade behind in reporting. A ranking of a medicinal plant that is in high demand such as false unicorn based on data that is over a decade out of date can be extremely misleading to the realistic stability of its future in the wild.

Two international plants featured in this Journal, *hombre grande* (*Quassia amara*) and bitter kola (*Garcinia kola*) also represent forest botanicals that are in high demand both as folk medicine and in the international market place. *Garcinia kola* of the Guttiferae family was listed as vulnerable under the IUCN redlist in 1998 and evaluated again in 2004. Found in the rainforests of West Africa and used extensively in folk medicine, as well as to inhibit the growth of Ebola, bitter kola is an immune booster and antiviral. Maurice Iwu of the Bioresources Development and Conservation Program in Nigeria, who has won awards for his research on bitter kola states, "When the healer does not know what is wrong, the drug of choice is an extract of *Garcinia kola*". One can imagine the increase in its popularity among the general population in Africa. How do we keep up with conservation work in regards to important medicinal plants in times of crisis as Nigeria and many African nations are in the midst of conflict, famine, and massive migration of refugees? Harvesting the fruit of bitter kola is very sustainable—its limitation is that it is very tricky to germinate, which is the focus of the article in the Journal. *Quassia amara*, also known

as strong man, can be very sustainably managed, as you can coppice the understory shrub. This is an amazing plant to grow in a permaculture setting and an extremely relevant medicinal that is for the most part harvested from wild populations. Spreading the word on how to encourage the forest farming of this critical forest medicinal demonstrates not only economic opportunity but also forest conservation.



Susan Leopold speaking at the Free Herbalism Project.

The two most significant studies to emerge this year that I want to share with our membership are the **State of the World's Plants**, produced by Kew Botanical Gardens and **The Great American Stand: US Forests and the Climate Emergency**, produced this year by the Dogwood Alliance. These two studies combined provide the most updated perspective on what is happening both on a global and local scale in regards to plant biodiversity. The big message is that we need to take action in how we manage our botanical resources, not just to curb the rapid rate of biodiversity extinction, but also to see the forest as our best solution to carbon storage, essentially the solution to the climate crisis that we are facing.

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False Unicorn Root  
cover art courtesy of  
Tessa Scheele

The Kew's State of the World's Plants released in 2016 is now going to be annually reported and in collaboration with a global network of researchers to continue to track and provide up-to-date botanical data. This is a huge and vital undertaking. The report cites 391,000 vascular plant species known to science, and reports on the 2,034 new plant species that were discovered in 2015. **The red flag in the study is that 21% of global plant species are threatened with extinction at this time according to the IUCN red list criteria, in large part due to loss of habitat.**

We can look outside of our own geopolitical borders and feel helpless about the rapid conversion of wild lands in the tropics especially, but the Dogwood Alliance's study on American forests points out a very real global double standard.

*"When farmers burn forests for palm plantations in Indonesia, it is deforestation—but when landowners clear-cut forests in the U.S. for pine plantations, it is sustainable? Somehow, crossing country lines changes the meaning of landscape-wide degradation."*

(Moomaw and Smith, 2017)

The study is extremely important because it points out the dramatic conversion of biodiversity-rich forest ecosystems that were once large carbon sinks and providing important ecosystem services due to our outdated forestry practices and management protocol of our most treasured and important resource. The study further points out that "Protecting mature, high-biomass forests and remaining old forests, allowing young forests to mature, and halting the conversion of natural forests to plantations may solve many of our current forest carbon problems" (Moomaw and Smith, 2017).

**What is most important to understand from the study is that not only are the old-growth and mature forests the keepers of the highest densities of carbon, they are also where our most "At-Risk" forest dwelling medicinal plants call home.** Essentially saving "At-Risk" medicinal plants by protecting their habitat is also the most critical solution to our climate crisis; sadly it is the old growth and more mature forests that are most vulnerable to logging.

We can shift this paradigm and change the way we perceive and manage our forests. Richard Evans Shultes' monumental book, *The Healing Forest* has taken on a new meaning for me. As we face our most serious global crisis, not only are the forests our solution, but also the source of our medicine. We have work to do!

United Plant Savers is now an official voting member of the IUCN, which has been the international voice for

conservation and manages the RED LIST. We attended, presented, and participated in the Conservation Congress that happens every five years.

This year I spoke at the Free Herbalism Project, hosted by Mountain Rose Herbs. I spoke about the deeper message that medicinal plants bring to us through their stories. I shared the importance of sacredness in regards to sandalwood (*Santalum album*), the ecology of osha (*Osha* spp.) and other high altitude medicine, and the teacher of bringing back balance through our most valued adaptogen, ginseng (*Ginseng* spp.). This talk is a podcast you can listen to from the Free Herbalism website. I also gave a talk at the Center for Agroforestry at the University of Missouri. Tom Newmark provided the Keynote talk, **Health Planet, Healthy Lives: Making the Case for Medicinal Plants in Agroforestry**, and I presented on **Medicinal Plant Conservation: Sanctuaries, Outreach, and Forest Farming**. You can watch both these talks featured on the center's website.

I traveled to Standing Rock, and for me it was a reminder of how sacred landscapes have guided humanity. We are living in a time when nothing is sacred anymore. It is no coincidence that the Cannonball River, home to the naturally formed spherical balls, became the location for the largest gathering of native people to happen in recent history. The land is sacred, and Standing Rock is now the birthplace of bringing the sacredness back. The herbal clinic at Standing Rock and the outpouring of the herbal community to rise into action in the midst of activism speak to the power of plants to show up and bring us all together.

This year's Journal signifies the role of medicinal plants in healing the landscape through the ever-growing network of Botanical Sanctuaries both here in the U.S. and the Sacred Seeds international network. We are observing the rapid growth in the natural products industry, but we are not witnessing a rapid growth in consciousness when it comes to conservation. We need to work together to ensure that herbalism is not just about

healing ourselves, it's also about building a community of activism and raising consciousness in these critical times. We need all hands-on deck. We have work to do! ■

Moomaw, B. and D. Smith. 2017 "The Great American Stand, US Forests and Climate Emergency, Why the United States needs an aggressive forest protection agenda focused in its own backyard. Published by the Dogwood Alliance.

Full report [www.dogwoodalliance.org/forests-climate](http://www.dogwoodalliance.org/forests-climate)

[www.stateoftheworldsplants.com](http://www.stateoftheworldsplants.com) for full Kew report and updates

[www.centerforagroforestry.org](http://www.centerforagroforestry.org)

<http://www.centerforagroforestry.org/events/symposia.php> for video of presentations

<https://info.mountainroseherbs.com/free-herbalism-project-fall-2016> for podcast link



Prince Maximilian von Wied-Neuwied (23 Sept. 1782 – 3 Feb. 1867) was a German explorer, ethnologist and naturalist, he traveled into the interior of North America during the summer of 1833. Here is an excerpt of his travels to the Cannonball River: "On the north side of the mouth, there was a steep, yellow clay wall; and on the southern, a flat, covered with poplars and willows. This river has its name from the singular regular sand-stone balls which are found in its banks, and in those of the Missouri in its vicinity. They are of various sizes, from that of a musket ball to that of a large bomb, and lie irregularly on the bank, or in the strata, from which they often project to half their thickness when the river has washed away the earth; they fall down, and are found in great numbers on the bank. Many of them are rather elliptical, others are more flattened, and others flat on one side, and rather convex on the other. Of the perfectly spherical balls, I observed some two feet in diameter."

# DISTINGUISHING BLACK COHOSH FROM LOOK-ALIKES

by Karen Johnson Heeter<sup>1</sup>, Laura Price<sup>2</sup>, and Sunshine Brosi, PhD<sup>3</sup>,  
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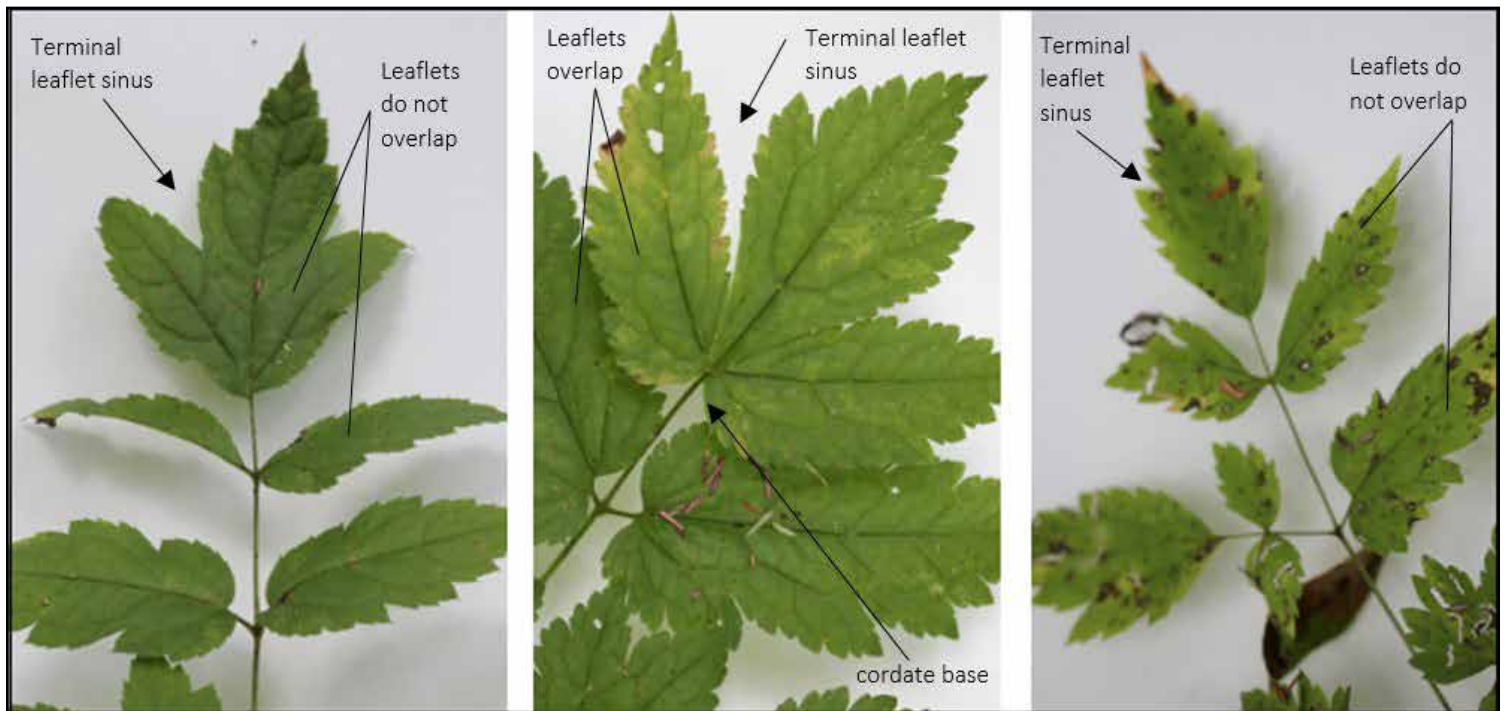


Figure 1. Leaves of black cohosh (*Actaea racemosa*) on the left and two look-alike species, mountain bugbane (*Actaea podocarpa*) (middle) and doll's eye (*Actaea pachypoda*) (right) for comparison. *A. racemosa*: Leaflets do not overlap each other and terminal leaf sinus is approximately  $\frac{1}{2}$  the length of the entire terminal leaflet. *A. podocarpa*: Leaflets, with cordate bases, overlap one another and terminal leaf sinus is greater than  $\frac{1}{2}$  the length of the entire terminal leaflet. *A. pachypoda*: Leaflets do not overlap one another and terminal leaf sinus lacking or is less than  $\frac{1}{2}$  the length of the entire terminal leaflet.

Black cohosh (*Actaea racemosa* L., Ranunculaceae), is an herbaceous, medicinal plant found within the understory of rich, moist woods throughout North America (Foster, 1999; Strausbaugh et al. 1978). Its native range runs from Maine to Florida to as far west as Iowa. As an endemic species, it contributes to the richly diverse ethnobotanical history of Appalachia, being used for a broad range of ailments. The Algonquians, Cherokee, and Iroquois used the rhizome for hives, kidney troubles, backaches, constipation, colds, and rheumatism (Hamel and Chiltoskey 1975; Mooney & Olbrechts 1932; Speck 1917). Today, the rhizomes are primarily harvested for their commercial value as dietary supplements, which are typically used for menopausal complaints, such as hot flashes (Chamberlain et al., 2013; Verbitski et al., 2008; Shou et al., 2011).

Annual market values establish black cohosh as one of the top ten selling herbal supplements in the U.S. and such high demand raises concerns about the sustainability of massive-scale wild harvesting (Blumenthal et al., 2011; Qiu et al., 2014; Foster, 2013).

**Annual harvests of black cohosh can equate to as much as 500,000 pounds in dry weight per year, 97% of which is being sourced from wild habitat** (Greenfield & Davis, 2003; Davis & Persons, 2014; American Herbal Products Association, 2000, 2003).

Black cohosh is critically imperiled in Mississippi, Massachusetts, and Illinois, where it is also state listed as endangered (NatureServe, 2017; Massachusetts List of Endangered, Threatened and Special Concern Species, 2015; Checklist of Illinois Endangered and Threatened Animals and Plants, 2015).

Wild harvesting proposes a particular health threat as supplements may be cross-contaminated with other species. For instance, DNA sequencing used to analyze black cohosh supplements found that 3 out of 7 capsules tested did not contain any black cohosh DNA (Harnly et al (2015)). One supplement contained a species native to China (*Actaea brachycarpa* (P.K.Hsiao) J.Compton), while another contained only rice DNA (Harnly et al., 2015). In addition, several species of North American *Actaea* are easily mistaken for black cohosh. **These include mountain bugbane (*Actaea podocarpa* D.C.), Appalachian bugbane (*Actaea rubifolia* (Kearney) Kartesz), doll's eye (*Actaea pachypoda* Elliott), and red baneberry (*Actaea rubra* (Aiton) Willd)** (Upton, 2002).

Mountain bugbane has a native range that runs from Pennsylvania to Georgia to as far west as Illinois. It is typically found at high elevations on western slopes of the Allegheny Mountains (Strausbaugh et al. 1978). It is listed as endangered in Illinois, imperiled in Maryland, and vulnerable in Pennsylvania, West Virginia,

and Georgia (NatureServe, 2017; Checklist of Illinois Endangered and Threatened Animals and Plants, 2015). Mountain bugbane is often found under eastern hemlock (*Tsuga canadensis* L. Carrière), which is facing declines due to the hemlock woolly adelgid (*Adelges tsugae*), an invasive insect (Evans & Gregoire, 2007). This poses an additional threat of overstory habitat loss.

Appalachian bugbane is also typically confined to western slopes. Its native range runs from Illinois to Alabama to as far east as Virginia (Strausbaugh et al. 1978). This species is imperiled in Illinois, Kentucky, and Virginia and critically imperiled in Indiana (NatureServe, 2017). Appalachian bugbane is also experiencing declines throughout its ranges due to habitat fragmentation (NatureServe, 2017).

The native range of doll's eye, a look-alike that is toxic, runs from Minnesota to Florida to as far west as Nebraska. It is listed as imperiled in Louisiana and critically imperiled in Delaware, Oklahoma, Kansas, Nebraska, and Florida (NatureServe, 2017). The unintentional harvest of doll's eye is concerning because all parts of the plant are toxic when ingested and can cause vomiting, diarrhea, and seizures (Dirckx, 1991).

Red baneberry has an expansive range and is found in many of the western, lower 48-states. It is listed as vulnerable in Pennsylvania and Illinois and imperiled in Ohio and Indiana (NatureServe, 2017). Red baneberry is also toxic, especially for children, and ingestion can lead to severe gastroenteritis or death. (Droppo 1987; Johnson et al. 1995; Turner, 1997).

Floras focus on separating these species based on reproductive characteristics which may not be present on every plant or at the time of harvesting. Vegetative characteristics separating these species can be found on Figure 1 and Table 1. Black cohosh has the distinction of non-overlapping leaflets, unlike mountain bugbane. The terminal leaflet sinus of mountain bugbane is also greater than ½ the length of the terminal leaflet, unlike black cohosh or doll's eye. Black cohosh also has a smooth basal stalk, without the groove found in mountain bugbane. The ability to distinguish these species from leaf characteristics may aid in the conservation of species of concern as well as benefit public health due to reducing contamination. ■

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**Table 1. Distinguishing Characteristics of Black Cohosh and its Look-Alikes**

	<b>black cohosh</b>	<b>mountain bugbane</b>	<b>Appalachian bugbane</b>	<b>doll's eye</b>	<b>red baneberry</b>
<b>Height with racemes</b>	up to 8 ft.	up to 6.5 ft.	up to 5 ft.	up to 2.5 ft.	up to 3 ft.
<b>Basal Stalk</b>	no groove; slender; terete;	grooved; deep, broad, sometimes darkened along groove	no groove; stout at base, becomes narrower towards the summit	terete; no groove; narrow	no groove; usually branched 2-3
<b>Leaflets</b>	20 or more leaflets; cuneate, rounded, or subcordate base; 3 prominent veins arising from base; leaflets do not overlap and terminal leaf sinus is about ½ length of entire terminal leaflet	20 or more leaflets; deeply cordate base; 3 prominent veins arising from base; leaflets do overlap and terminal leaf sinus is more than ½ length of entire terminal leaflet;	3-9 leaflets; maple-like; deeply cordate base; 5-9 prominent veins arising from base; leaflets do not overlap and terminal leaf sinus is more about ½ length of entire terminal leaflet; cordate base	20 or more leaflets; cuneate, rounded, or subcordate base; ; 3 major veins arising from the base; leaflets do not overlap and terminal leaf sinus is less than ½ length of entire terminal leaflet	generally cuneate, rounded, or subcordate to cordate base; leaflets may or may not overlap; terminal leaflet sinus is less than 1/2 length of entire terminal leaflet
<b>Flowers</b>	racemes elongated; over 1/2 ft. long; 12-35 in.; stamodia present; 1-2 carpels, sessile; 1 pistil, sessile	racemes elongated, slender; over 1/2 ft. long; 8-16 in.; staminodia present 2-8 carpels, stalked; pistils 3-8 (mostly 5), stipulate	racemes elongated; 6-24 in. long staminodia lacking; 1-3 carpels, sessile; pistils 1-2, sessile	racemes compact; less than 2 in. long; staminodia present; 1 carpel, sessile; 1 pistil; sessile (distinctively exaggerated; ovate)	racemes compact; ovoid; 2-4 in. in length; staminodia present; 1 carpel
<b>Flowering Time</b>	May-Aug	July-Sept	Aug-Oct	Apr-May (Early bloom)	May-July
<b>Fruit Type</b>	Dry; ovoid, firm-walled follicles; pale green to dark brown; dehiscent; 1/4 to 1/3 in. long	Dry; flattened, papery follicles; pale green to light brown; "beaked"; 1/2 in. or longer	Dry; thin-walled, follicles; pale green; "beaked"; up to 3/4 in. long	Fleshy; globular berries; white; attached to thickened, red pedicels; 1/4 to 1/3 in. long	Fleshy; ovoid, glossy berries; attached to slender, pale green pedicels; 1/10 to 1/2 in. long
<b>Rhizomes</b>	vascular tissue in a central 3, 4, or 5 armed cross or star	lunate bundles of vascular tissue with circular arrangement	vascular tissue lacks thickly knotted structure	vascular tissue in a central 3, 4, or 5 armed cross or star	

Information from (Rhoads & Block, 2007, Strausbaugh et al., 1978, and Weakley et al., 2012



Pink Lady's Slipper  
*Cypripedium acaule*

**FEATURED ARTIST: TESSA SCHEELE**

Tessa's work focuses on the interpretation of the botanical world. As a naturalist, wildcrafter, and horticulturalist, she is inspired by both the living wild and the lovingly cultivated. Taking form as an illustration, a basket, or a landscape, plants may be both the subject and object of her work. Illustration is one medium for her to tend her native curiosity and connection. She finds that in the process of translating morphology onto paper, a particular kind of familiarity becomes available with the characters and patterns of the natural world.

Tessa has a BA in Natural History from Sterling College and is a past intern of United Plant Savers. She currently lives in central Vermont, where she works in horticulture and native plant conservation and studies at the Vermont Center for Integrative Herbalism.

Pink Lady's Slipper (*Cypripedium acaule*)  
by Tessa Scheele



# “AT-RISK” & “TO-WATCH” LIST

## STATEMENT OF PURPOSE

For the benefit of the plant communities, wild animals, harvesters, farmers, consumers, manufacturers, retailers, and practitioners, we offer this list of wild medicinal plants which we feel are currently most sensitive to the impact of human activities. Our intent is to assure the increasing

abundance of the medicinal plants which are presently in decline due to expanding popularity and shrinking habitat and range. UpS is not asking for a moratorium on the use of these herbs. Rather, we are initiating programs designed to preserve these important wild medicinal plants.

### “At-Risk”

**AMERICAN GINSENG**

*Panax quinquefolius*

**BLACK COHOSH**

*Actaea (Cimicifuga) racemosa*

**BLOODROOT**

*Sanguinaria canadensis*

**BLUE COHOSH**

*Caulophyllum thalictroides*

**ECHINACEA**

*Echinacea spp.*

**EYEBRIGHT**, *Euphrasia spp.*

**FALSE UNICORN ROOT**

*Chamaelirium luteum*

**GOLDENSEAL**

*Hydrastis canadensis*

**LADY’S SLIPPER ORCHID**

*Cypripedium spp.*

**LOMATIUM**

*Lomatium dissectum*

**OSHA**

*Ligusticum porteri*, *L. spp.*

**PEYOTE**

*Lophophora williamsii*

**SANDALWOOD**

*Santalum spp.* (Hawaii only)

**SLIPPERY ELM**

*Ulmus rubra*

**SUNDEW**, *Drosera spp.*

**TRILLIUM, BETH ROOT**

*Trillium spp.*

**TRUE UNICORN**

*Aletris farinosa*

**VENUS’ FLY TRAP**

*Dionaea muscipula*

**VIRGINIA SNAKEROOT**

*Aristolochia serpentaria*

**WILD YAM**

*Dioscorea villosa*, *D. spp.*

### “To-Watch”

**ARNICA**

*Arnica spp.*

**BUTTERFLY WEED**

*Asclepias tuberosa*

**CASCARA SAGRADA**

*Rhamnus purshiana*

**CHAPARRO**

*Castela emoryi*

**ELEPHANT TREE**

*Bursera microphylla*

**GENTIAN**, *Gentiana spp.*

**GOLDTHREAD**, *Coptis spp.*

**KAVA KAVA**

*Piper methysticum* (Hawaii only)

**LOBELIA**, *Lobelia spp.*

**MAIDENHAIR FERN**

*Adiantum pendatum*

**MAYAPPLE**

*Podophyllum peltatum*

**OREGON GRAPE**

*Mahonia spp.*

**PARTRIDGE BERRY**

*Mitchella repens*

**PINK ROOT**

*Spigelia marilandica*

**PIPSISSEWA**

*Chimaphila umbellata*

**RAMPS**, *Allium tricoccum*

**SPIKENARD**

*Aralia racemosa*, *A. californica*

**STONEROOT**

*Collinsonia canadensis*

**STREAM ORCHID**

*Epipactis gigantea*

**TURKEY CORN**

*Dicentra canadensis*

**WHITE SAGE**, *Salvia apiana*

**WILD INDIGO**, *Baptisia tinctoria*

**YERBA MANSA**,

*Anemopsis californica*

### “In-Review”

HIGHEST PRIORITY: RESCORE NOW

**SLIPPERY ELM**

*Ulmus rubra*

**GOLDENSEAL**

*Hydrastis canadensis*

**FALSE UNICORN**

*Chamaelirium luteum*

**BLACK COHOSH**

*Actaea racemosa*

TOP PRIORITY: IN THE NEXT YEAR

**SPIKENARD**

*Aralia racemosa*, *A. californica*

**CASCARA**

*Frangula purshiana*

**BLOODROOT**

*Sanguinaria canadensis*

**VIRGINIA SNAKEROOT**

*Aristolochia serpentaria*

**TRILLIUM**, *Trillium spp.*

**BLUE COHOSH**

*Caulophyllum thalictroides*

**WILD YAM**, *Dioscorea villosa*

MID PRIORITY: IN THE NEXT 2 YEARS

**LOMATIUM**

*Lomatium dissectum*

**OSHA**

*Ligusticum porteri*

**ECHINACEA**

*Echinacea spp.*

**BUTTERFLY WEED**

*Asclepias tuberosa*

**STONEROOT**

*Collinsonia canadensis*

**YERBA MANSA**

*Anemopsis californica*

**MAYAPPLE**

*Podophyllum peltatum*

**PARTRIDGE BERRY**

*Mitchella repens*

## Requested To Score

**INDIAN PIPES**

*Monotropa uniflora*

**CHAGA**

*Inonotus obliquus*

**WILD CHERRY**

*Prunus serotina*

**SOLOMON’S SEAL**

*Polygonatum biflorum*

**YAUPON**

*Ilex vomitoria*

**WILD GERANIUM**

*Geranium maculatum*

# SAVING A SACRED FERTILITY HERB... FALSE UNICORN ROOT

Dalene Barton-Schuster, CH, Doula

One of the most popular fertility herbs we are asked about is false unicorn root (*Chamaelirium luteum*). I think it is now time to highlight false unicorn root's healing powers, but shed light on why we do not promote use of this herb.

Both Native Americans and skilled midwives have used this herb for hundreds of years. It is native to North America, but grows best in eastern Canada and the United States. Because of its popularity and the human desire to profit, this herb is now threatened. In fact, wild harvesting of this herb is pushing it ever closer to the endangered list. This herb goes by many names; Helonias (more popular in Europe), blazing-star, devil's bit, and sometimes fairy wand.

Out of all of the North American territory where false unicorn root grows, the southern area from Florida to Mississippi has the greatest potential for cultivation of this herb. As this herb became marketed and sold in greater quantities, it began to rapidly decline. This plant is prized for the rhizome (root), that once harvested does not grow back. Cultivated false unicorn beds across the U.S. have shown little to no results in regrowth of the rhizome, which despite great effort is a little discouraging for potential marketing. One farm that has had some good results in cultivating this plant is Horizon Herbs in southern Oregon.

In 2001 alone, wildcrafted (harvested from the wild) false unicorn root sold for \$35-\$50 a pound, with annual sales of \$700,000. That was 13,500 pounds of the rhizome wild crafted in one year. In 2003, this herb was selling for up to \$65 a pound. As demand grows, so does the price. The continued decline of this herb drives the price up as well, making the herb more and more difficult to find. Today, most medicinal botanical companies have stopped purchasing this herb for their products.

## Actions As A Fertility Herb

False unicorn root has been touted as the perfect herb for helping to regulate menstruation, as well as prevent miscarriage; this may have been what has contributed

to its decline. This herb is mentioned regularly across many forums for women's fertility health. It is an herb frequently asked about in online communities which makes me wonder where women are even hearing about it. I am part of many forums on women's fertility and in spite of this plant's fate, I still see women not only asking about it, but recommending it, or suggesting that other women learn about it. We need to be clear up front that while this herb may have beneficial healing properties for fertility issues, it is a plant that is struggling.

For hundreds of years this herb has been used for women with recurrent miscarriages related to uterine and cervical weakness. It has also been used to heal women with uterine prolapse (where the uterus comes through the cervix into the vaginal opening). There was a case report that showed that when given a tincture of false unicorn root every hour during threatened miscarriage, bleeding and cramping were stopped, while human chorionic gonadotropin (HCG) levels rose. False unicorn may also be valuable in aiding women

with low to no cervical mucus, as well as women with amenorrhea (absent menstruation). It is very helpful when there is stagnation of the uterus or ovaries present; some signs of this can be dark, sluggish, clotty menstrual blood.

This root has been shown to work in the body by interacting with estrogen receptor sites of the hypothalamus. It is said to increase estrogen, aiding the ovaries in releasing a mature egg at ovulation. False unicorn root overall has not been studied that much. **It may seem that this herb sounds perfect for you, but in reality there are a variety of other wonderful herbs with similar actions that may be just as effective.** Tribulus (*Tribulus terrestris*), vitex or chastetree berry (*Vitex agnus-castus*) and dong quai (*Angelica sinensis*) are some examples of fertility herbs with similar actions. As for aiding in prevention of recurrent miscarriage, partridge berry (*Mitchella repens*) is a great alternative.

## Making Smart Choices When Choosing Herbs for Healing

False unicorn root should only be used under the supervision of a skilled herbalist, naturopathic physician, or midwife. It also should only be chosen when all other herbs have failed to produce desired results and has been prescribed by a qualified herbalist, ND, or midwife. If one of these practitioners suggests you use this herb or a formula containing this herb, be sure to ask them



Image courtesy of: Wikipedia user Phyzome

where this herb was sourced, meaning where did it come from? If they say it was wildcrafted, ask if there is another herb that could be used in place of this plant.

I am proud to say that Vitanica, makers of Pregnancy Prep and Fem Rebalance, which is formulated by Dr. Tori Hudson, ND, has modified those formulas that once contained false unicorn root. They now contain maca (*Lepidium* spp.)



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1:489.

Our world is always changing. Modernized societies are taught to consume all resources available, without much understanding about balance and sustainability. Because of over harvesting of false unicorn root and many other popular medicinal herbs, the threatened plant species list is growing. Before choosing any medicinal herb or herbal blend, first research each individual herb. Be sure that the plants were ethically wildcrafted or grown organically. As I said before, if an herb that you use often or are interested in is on the threatened, "At-Risk", or "To-Watch" list, ask an herbalist or ND in your area for good alternatives. ■

*Dalene Barton-Schuster is an herbalist residing in Marble, Colorado. She started her herbal medicine journey in the year 2000, under the guidance of Lynn Albers at Yarmony Mt. Herbal College. She was Senior Herbalist for The Natural Fertility Company for seven years, after which she became the creative inspiration behind her own herbal medicine practice and Earth Medicine Collective. Dalene has a deep connection to plants and their medicine.*

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We are thrilled to say that the second edition of *Growing At-Risk Medicinal Herbs* is now available at [www.strictlymedicalseeds.com](http://www.strictlymedicalseeds.com)

## Growing At-Risk Medicinal Herbs

*Cultivation, Conservation and Ecology*



by **Richo Cech**  
illustrated by **Sena Cech**

# THE YERBA MANSA PROJECT: COMMUNITY-DRIVEN NATIVE PLANT RESTORATION IN THE RIO GRANDE BOSQUE

By Dara Saville

Riparian habitats are among the most altered and endangered ecosystems (Brinson et al., 1981; Crawford et al., 1996), creating concern for native riparian plant communities. This is particularly true in the arid American West, where water is carefully allocated, rivers often run dry, and floodplain vegetation is disconnected from water sources. Additionally, flood control measures, modern development, invasive non-native plants, and climate change converge to threaten native plant populations. The Rio Grande Bosque is one such mosaic of ecosystems, home to a diverse collection of native medicinal plants, including the iconic yerba mansa (*Anemopsis californica*) and matriarchal cottonwood (*Populus tremuloides*) trees. Watson (1908 & 1912) noted that yerba mansa and cottonwoods alternated as the dominant plants, and yerba mansa created an expansive 'turf'. Currently, these plant communities are in decline as cottonwoods relent to more drought tolerant species such as salt cedar (*Tamarix* spp.) and Russian olive (*Elaeagnus angustifolia*), and yerba mansa's wetland habitats become scarce. During the last 150 years the Rio Grande Bosque has seen a 60% replacement of the entire system with agriculture and urban development, river flows decreasing to 1/6 of their historic levels, large-scale reduction in channels and wetlands, the invasion of many non-native species, increased wild-fires, and dramatic decline in the reproduction of native keystone species (USACE, 2003).

In areas where large-scale restoration work is underway, there are opportunities for native plants to rebound. Many of these projects, however, do not engage in effective replanting of native species or long-term monitoring of vegetation recovery (Follstad-Shah et al., 2007). I saw an opportunity to restore yerba mansa and other native plants in the Rio Grande Bosque where large-scale restoration work to create new wetland habitat was completed by the US Army Corps of Engineers (USACE) years earlier. Native plant diversity was, nevertheless, low in the new wetlands, and non-native plants covered significant areas of prime habitat. This is how the Yerba Mansa Project (YMP) was born. The YMP is an all-volunteer, community-driven native plant restoration and education project undertaken with the support of managing government agencies (City of Albuquerque Open Space and USACE) on public lands within the Rio Grande Valley State Park. In order to sustainably implement such a project it has been essential that we engage in efforts that identify, organize, and enact change in collaborative and replicable ways. The following methodology used by the YMP provides one example of a citizen-driven restoration project on public lands.

## 1. Evaluate habitats

Choose a place you love that is a reasonable distance from your home and visit it often. Find out what research or restoration work has already been done and consult with knowledgeable people in the area. Document observations about the plant communities and compare to historical surveys.

## 2. Outline a problem

What specifically can be done to make a difference for the native plants in the selected habitat? Will the existing conditions (e.g., amount/proximity of water) allow for viable restoration?



Bosque Restoration Field Crew members receiving training on how to remove invasive Ravenna Grass from a native Coyote Willow stand.

3. **Engage with management agencies**  
Identify and establish relationships with individuals at managing government agencies. There may be multiple agencies with which contact should be made.
4. **Collect data**  
Identify what plants could be successful additions to the existing native plant community and specific locations where they are most likely to thrive. Collect baseline data to enable periodic evaluation and long-term monitoring of your work.
5. **Form a plan and write a proposal**  
Write a plan outlining specific methodology and goals. Submit to the appropriate agencies for approval.
6. **Organize volunteers and cultivate partnerships**  
Reach out to your community through like-minded businesses, organizations, institutions, or environmental groups to recruit volunteers. Form supporting partnerships by becoming more actively engaged where you live. Make a website so people can learn about your project and progress.
7. **Enact your plan**  
Start doing what you planned to do. Plan and promote your first event.
8. **Collect more data and evaluate your work**  
Return regularly to the restoration site. Document observations, collect new data, and compare results to the baseline.
9. **Adjust your plan based upon results**  
What have you learned from your work so far? Revise your plan as needed to overcome unexpected problems or improve methodology.
10. **Repeat this process**  
Restoration of native plants is a long-term experimental process. Continue to learn, increase community outreach, and conduct careful fieldwork.

If we dream of living in a place with healthy plant communities, we can actively make that happen. Community-driven restoration projects are one way to protect and revive the native medicinal plants we love. The first two field seasons of the YMP (700 field service hours) have produced a dramatic reduction in non-native ravenna grass (*Saccharum ravennae*), recovery of native plants, reestablishment of yerba mansa through live planting, reseeding native grasses and medicinal forbs, collection of baseline GIS data, ongoing educational outreach, and the establishment of a collaborative community project. ■

*Dara Saville is the Founder of the Albuquerque Herbalism bioregional herbal studies program and the Director of the Yerba Mansa Project, an all-volunteer organization to restore native plants and provide educational outreach. She has a Bachelor's degree from New York University, a Master's degree specializing in Geography of the Southwest from the University of New Mexico, and is a graduate of Dr. Tierona Low Dog's Foundations of Herbal Medicine*



Bosque Restoration Field Crew members planting a new colony of Yerba Mansa along the Rio Grande.

*Program. Dara is also a regular columnist for Plant Healer Magazine, a board member of the Native Plant Society of NM Albuquerque Chapter, and has many years of resource management and fieldwork experience for the National Park Service. Contact/info: [dara@albuquerqueherbalism.com](mailto:dara@albuquerqueherbalism.com), [www.albuquerqueherbalism.com](http://www.albuquerqueherbalism.com).*

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# HOW WE PROTECT TRILLIUM

by Susan Leopold, PhD

The adoption of trillium (*Trillium* spp.) by Mountain Rose Herbs is wonderfully symbolic of the power of the triad found in the leaves, petals, and sepals of the wildflower loved by so many. On a personal level the trillium links the conservation passion of yet another three entities that have deeply touched my life and so many other plant lovers: Mountain Rose Herbs, United Plant Savers, and Rosemary Gladstar. Rosemary founded Mountain Rose Herbs to supply the California Herb School and is also the inspirational force behind United Plant Savers. As a guiding light of herbalism, she reminds us all to think of how we can return the favor to help the plants that endlessly help us.

## Medicinal Use

Trillium, most commonly known as bethroot, has been used historically for helping bring on contractions to aid in birth and as a uterine tonic to help stop bleeding. *Trillium erectum* is the species that is historically referred to for medicinal use. It has a dark red flower and a unique smell that attracts carrion flies as its pollinator. There is also its rich folklore as a love potion, which makes sense for the passion it elicits in plant lovers. Wake-robin and whip-poor-will flower are also wonderful common names that came about because the trillium bloom with the return of the birds and the peak time for the sound of the whip-poor-will call into the dusk. Trilliums are an essential and iconic spring ephemeral.

## Conservation Insight and Overview

When I first moved to my farm 17 years ago, I researched what endangered plants were near me since I was at the time interning at the Virginia Department of Natural Heritage. I learned that there was a documented population of *Trillium cernuum*, listed as Imperiled in the state of Virginia, and I was eager to find it and protect it. (Imperiled = At high risk of extirpation from the state due to very restricted range, very few populations, often 20 or fewer, steep declines, or other factors.)

Later I discovered that *Trillium cernuum* was the first trillium specimen sent to Europe, and in 1753 Linnaeus named the genus *Trillium* (trilix, Latin for three). Linnaeus would also name *T. erectum* and *T. sessile*. Various botanists would name the remainder of the genus, but certainly *T. catesbaei* would be attributed to my favorite plant explorer and botanical artist, Mark Catesby. We take for granted these early plant explorers that documented medicinal plant uses and natural history knowledge through their connections with native people. It is this knowledge that would inform the eclectic herbalism movement



Whip-poor-will (*Trillium cernuum*). (Photo credit Susan Leopold)

based on the rich native medicinal species found so abundantly during the 1700s and into the 1800s. The flora of the Appalachian region was noted back then and confirmed today as a biodiversity hot spot (the most diverse temperate region found on the planet) and uniquely rich in a plethora of medicinal plants. Trillium represents that diversity once you dig into how its genus is expressed in its various forms; thus you gain a deeper understanding of what trilliums can teach us about endemic populations and awareness for critical conservation.

Alan Weakly, Director of the UNC Herbarium prepared a lecture for the Mt. Cuba Symposium entitled "Ecology and Biogeography of Trillium in Eastern North America: Where are the Trillium and Why are they there?" It provides an excellent

overview and is available online.

<http://www.mtcubacenter.org/images/symposium-files/Weakley-Alan-Lecture-2.pdf>

Noted from Weakly's research is that the Eastern U.S. is the mecca in regards to Trillium diversity with endemic regional species representing relictual populations; this refers to populations that presently occur in a restricted area but whose original range was far wider during a previous period. **With that in mind there are currently 65 taxa globally recognized; 53 are in North America (42 in the east and 11 in the West), and 12 are found in Asia.** It is clearly remarkable the diversity found in the southern Appalachian region with Georgia being the most blessed state with 22 species of trillium.

As the south has an abundant diversity of these small endemic populations, the northeastern region has

fewer population but with much larger distribution, such as the *T. grandiflorum*. This species I know well because just a few miles from my farm is the G.R. Thompson Wildlife Management Area. This is the largest and densest population found in the United States. It is the premier wildflower destination for native plant enthusiasts who travel to see the spring display that has been estimated to have 18 million individual trilliums within two square miles along the famed trillium trail that is adopted by the Virginia Native Plant Society. Near to the preserve there is constant development taking place, and I have organized several plant rescues of trillium, cohosh (*Actaea* spp.), bloodroot (*Sanguinaria canadensis*), yellow lady's slipper (*Cypripedium parviflorum*), wild ginger (*Asarum canadensis*), wild yam (*Dioscorea villosa*), and other natives that I have then brought back to my farm and planted. Each time I see the orange marking tape I am deeply saddened that there is little to no process for ecological assessments when developments are considered and that the value of these sensitive disappearing native plants is often overlooked. This is compounded by the fact that states have few resources to fund botanical fieldwork to even accurately document or monitor plant species. Each state has a Department of Natural Heritage, which then collectively shares data with Nature Serve, a national database for biodiversity and endangered species. You can search the Nature Serve website by species to see its conservation status at the state and global level.



Catesby's trillium, Mark Catesby (1682-1749)

## Deep Disconnect Between the Medicinal Plant Trade and Native Plant Nursery Trade

I see a deep disconnect on so many levels when it comes to plant conservation of native medicinal plants from Appalachia, and trillium particularly. I have painstakingly dug trillium's small rhizomes/bulbs. It takes time and care as they are very small (the size often of a gumball), and that bulb could easily be older than I am at 42. **In Appalachia root buyers pay .60 cents a pound for fresh root and 4.00 dollars a pound for dry bulbs cut down the middle (noted advertised spring 2016 prices)**. Who would dig these precious bulbs for so little? It must take around 50-75 bulbs to make a pound. Can you imagine what a wild population being dug to make up say even 10 pounds looks like? That would be nearly 500 wild trillium, and this is being sold for \$40.00.

Then you have those in the native plant community that propagate these plants via seeds/divisions and sell trillium for around 5 dollars for an individual plant. **This is the paradox that plants harvested from the wild for the medicinal plant markets have little to no value, but yet in the native plant nursery trade for the home gardener they do.** These two cultural contexts operate in two completely different paradigms within the same region. I further want to make the point that it is in the southern Appalachia region where these trillium are still dug for the medicinal plant trade, and this is also

where there is the southern sessile (without stem) species, especially those of limited distribution, that are the most vulnerable. Our duty is to ensure the perpetuation of these plants in the wild by minimizing collection from the wild. Commercial production via seed is making propagated plants available, and tissue culture is just around the corner, but the price points will never compete with wild collected plants sold at pennies on the dollar. **Though historically it is *T. erectum* most notable for medicinal value, it seems trilliums are dug indiscriminately in the wild trade from the region with the most vulnerable species.**

Though the wild harvesting is an issue, it is drastically compounded by the loss of habitat to development and resource extraction that is devouring our native plants, and in the case of trillium, the over-population of deer also deeply impacts the plant's populations. The threats are coming from

all angles, and I would like to highlight those efforts towards conservation and research.

## Trillium Conservation and Gardens

The Huntsville Botanical Garden has 28 Eastern US Species and over 200 selected forms and cultivars displayed throughout the garden. Its collection is officially recognized by the Plant Collections Network of the American Public Gardens Association. <http://publicgardens.org/news/article/huntsville-botanical-garden-joins-plant-collections-network>

Mount Cuba, located in Delaware is a public garden and research center for native plants. They have a trillium trail with a diverse collection and conduct research on propagation, seed dispersal and ecological relationships of native plant communities.

A book is available online that covers the trillium collection and research. <http://www.mtcubacenter.org>

Cottage Lake Gardens in Washington State is a repository of trillium diversity, as they have 48 species, nearly every species found in North America. This is the passion of one dynamic couple's vision, Kevin and Susie Egan. You can visit the gardens or stay at their B&B that they operate. <http://cottagelakegardens.com/thegarden.aspx>

## How to Be a Plant Saver

What can we do? Trillium should not be used in the commercial medicinal plant trade and for this reason Mountain Rose Herb does not sell trillium and has partnered with United Plant Savers through our Adopt an "At-Risk" Plant Program. The financial support from Mountain Rose Herbs helps UpS continue our outreach and educational efforts. I also encourage you to become a member of United Plant Savers. We are a membership organization, and it is our membership fees that allow us to continue this work.

If you have land and want to grow trillium, learn about your regional diversity and buy from a reputable native plant nursery that sells propagated plants. United Plant Savers has a Botanical Sanctuary Network that anyone who is passionate about native medicinal plant conservation can join. You can go online to our interactive map to read about sanctuaries in your region. One such sanctuary is the Trillium Center in Ohio ([www.trilliumcenter.org](http://www.trilliumcenter.org)). I have watched this sanctuary grow in its mission over the years. I love their logo as it shows the ant dispersing the trilliums seeds, noted for the seeds that have an alisome (a small fatty food that the ants love to eat). To stop and think about a fly or a bee pollinating the flower and a single ant carrying a trillium seed just a few feet and that seed germinating over the next two years, and then seven years before it flowers, eventually creating a trillium population over the next 100 years, and that population having its own variation perhaps taking a 1000 or so years, leading to a region where you can now find over 40 different species going back in time to 11,000 years ago when parts of the region were covered in advancing glaciers and species were forced into refuge, that has left us these pockets of unique diversity.



Meditating on the thousands of years of ecological interactions that create the composition of native plant communities places our role in this moment in time as vitally important. Right now we are holding the future of these fragile plants in our hands and, as Rosemary

reminds us, they are asking for our help; they are asking for us to give back; and we need to be a collective voice for the love potion. So aptly named bethroot, its medicine for me is now a deep metaphor for birthing a movement of plant conservation. As herbalists we need to be healing the earth as we heal ourselves.

ANALOGUES: Wonderful alternatives to trillium as an astringent for the female reproductive system are raspberry leaf and motherwort. ■

## Resources:

<http://vnps.org/princewilliamwildflowersociety/botanizing-with-marion/trillium-a-family-to-call-its-own/>

<http://www.mtcubacenter.org/images/symposium-files/Weakley-Alan-Lecture-2.pdf>

<http://www.goldsword.com/sfarmer/Trillium/>

## AMERICAN TRILLIUM SPECIES LISTED AS ENDANGERED, THREATENED OR VULNERABLE

### SESSILE:

*Trillium decumbens* — Tennessee

*Trillium discolor* — North Carolina

*Trillium lancifolium* — Florida, Tennessee

*Trillium parviflorum* — Washington

*Trillium recurvatum* — Michigan

***Trillium reliquum*\* — Georgia**

*Trillium sessile* — Michigan, New York

*Trillium viride* — Illinois, Michigan

### PEDICILLATE:

*Trillium cernuum* — Illinois, Indiana, New York, Ohio, Virginia

*Trillium erectum* — Illinois, New York, Rhode Island

*Trillium flexipes* — Maryland, New York

*Trillium grandiflorum* — Maine, New York

*Trillium nivale* — Kentucky, Maryland, Michigan, Pennsylvania, Wisconsin

***Trillium persistens*\* — Georgia**

*Trillium pusillum* — Kentucky, Maryland, North Carolina, Tennessee

*Trillium rugelii* — Tennessee

*Trillium undulatum* — Kentucky, Michigan, New York, Ohio

\**Trillium persistens* and *T. reliquum* are both listed as endangered under the Endangered Species Act. This is the most critical designation, meaning the plant is in danger of extinction



# PROFILE OF COMMUNITY HERB CLINICS

By Atlanta Duncan

Community herb clinics are spaces of resilience, resistance, and support in a bleak and tumultuous climate. Herbalists are standing up to give support for direct action at Standing Rock and during Black Lives Matter demonstrations, as well as in the wake of tragedies like the Pulse nightclub massacre and the Ghost Ship fire in Oakland.

I spoke with several inspiring herbalists and organizers who create and participate in grassroots systems of healthcare.

## FARMACY HERBS

Mary Blue is an herbalist/social justice activist based out of Providence, Rhode Island.

Blue's work includes organizing Radical Herb Gatherings in the northeast, running the community apothecary and farm at Farmacy Herbs, speaking on a panel at the UN on women's health, doing plant walks at the prison, running a sliding scale herbal clinic, and putting together a health justice training program for herbalists and alternative healthcare providers.

During our conversation, Blue discussed the benefits of staying in one place in order to build cross-cultural connections within the community, doing one thing well before moving on to the next, and giving generously through free classes and herbal donations.

### How do you support your community through herbalism?

BLUE: "Herbs are a non-toxic preventative way of healing. Herbs are cheap; you can grow them yourself, creating more accessibility for pretty much anybody who wants them. It's choosing medicine that supports my health but also planetary health."

"There is a lot more than just herbs. If your community is a diverse community, you need to learn different skills to interact with that community, and that is understanding where other people are coming from, language, understanding history, and generational trauma. We

weave that kind of stuff into the program. You can't be a community herbalist for a diverse community without at least thinking about those ideas. It's about building trust in a community—staying in one place, being consistent, doing free classes, the sliding scale clinic that's on an honor system, neighborhood discounts. We offer services that are accessible. It's all through word of mouth."

### How have you been taking action this year in supporting various communities in resistance?

BLUE: "Pretty much if we hear a call for herbs we send it immediately. We sent a ton of stuff to Standing Rock. It's big boxes of herbs that you send out in the world and hope it gets used and doesn't get confiscated. We had a couple people come back who had been at Standing Rock and had gone to the clinic and used our herbs, and an herb student came back with a photograph of our herbs in the clinic. We did a fire cider action, trying to get folks to send fire cider to Standing Rock. We sent herbs to Ghost Ship and to Black Lives Matter [demonstrations]. There has been a great outpouring of support from the herbal community."

Blue uses social media, Facebook, and Instagram to keep current on calls for donations. Blue recommends checking lists of needed supplies on social media before sending odds and ends from the apothecary.



Herbal donations pour in from around the country.

(Photo credit: Jessaca Ann)

Blue is currently working with Tradition Not Trademark, which aims to protect commonly owned herbal names and recipes from trademarking, and is working with Lauren Giambrone of Good Fight Herbs on an up-to-date Health Justice training manual for herbalists and healthcare providers.

## FUNDRAISING

Grassroots fundraising gets money and supplies to support community and pop-up clinics, with money going directly into the hands of the people that need it most. Fundraisers have taken the shape of community events such as concerts, poetry readings, film screenings, dance parties — some with large turnouts and generous donations. It's not a revolution if you can't dance.

Jessaca Ann, a social justice organizer and co-founder of the Racial Justice Collective in Port Angeles, Washington, put on fundraisers in our area after the Pulse shooting and to raise funds to support a caravan of indigenous activists traveling to Oceti Sakowin to participate on the ground at Standing Rock.

### Can you speak to fundraising on the Olympic Peninsula?

ANN: "Fundraising is something that I learned to do out of necessity. It has been a lot of trial and error, especially living in a small community. One thing that I have learned is that small town folk have big hearts and tend to show up in a face to face way that is sometimes harder to get in a city setting (though you might have more turnout in general in a city, it's about the proportion). Having that face-to-face interaction seems to be important."

"When fundraising this year for the Pulse Orlando shooting victims and families, I organized a poetry reading and music show. These were special events where the community came together to support folks far away and ended up supporting themselves in the process. People were able to gather in a room, in safe space and see the faces of their community, and it was really special. My expectations were exceeded both in warmth and support as well as financially. I was surprised to see that not only was the collective sum of funds raised more than I had expected but individuals were making donations larger than I had anticipated folks would give."

### Can you tell us about your experience working with the healers at Standing Rock? What were some of the challenges in organizing support and getting donations of supplies?

ANN: "I was moved to raise funds and gather donations after seeing volunteers working tirelessly, literally around the clock, at this very important protest/protector camp. Herbalists had come from all over the country to keep people well. Some were doctors, nurses, massage therapists, energy healers, and more. Some stayed for months on end, making a temporary home and some came for short visits at a time."

"There was an overwhelming amount of herbal donations. There was an abundance of common herbs like nettles, chamomile, lemon balm, etc. and sometimes shortages of the less common medicinals. One of the biggest challenges in getting donations for the Wellness tent was just getting the most current supply lists out to the greater public. It was difficult for those on the outside to know what the current needs were because the needs fluctuated, and communication between camp and the outside is challenging due to lack of phone service, electricity, and time to make such communications. One of the biggest needs was actually for glass jars! Herbalists were making individualized decoctions and teas for people, and they just needed something reusable to drink out of. They also needed (still need I'm sure) glass jars of varying sizes to safely store the herbs, as some donations were coming in paper bags and such. Another need

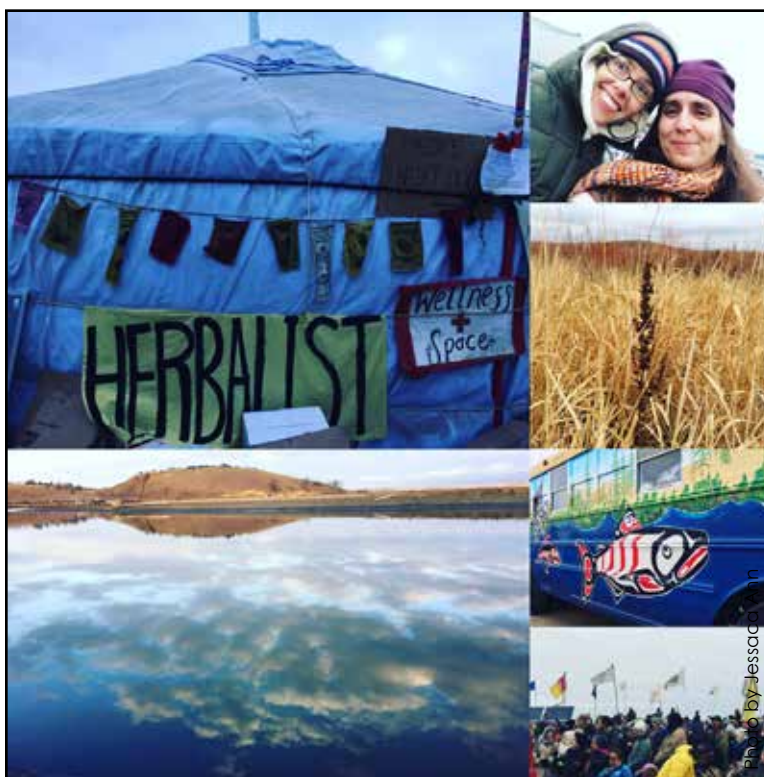
was dropper bottles so that they could make bulk glycerites (no alcohol at camp) and give them out in individual bottles."

"The herbalists were able to support protectors in a way that many people were coming in for ailments they had not had access to care for outside of camp. It was really cool to see people getting that care, having someone listen and take care of them in a way that our western system does not allow for (assuming the person had access to healthcare at all in the first place). The most common issues people were getting care for were stress and anxiety, colds and flu, maintenance of chronic

conditions, minor injuries, and then as time went on, injuries as a result of police violence: pepper spray, trauma from rubber bullets, hypothermia, etc."

### COMMUNITY CLINICS ON THE ROAD AND IN THE SOUTH

Larkin Diem has been traveling with an apothecary in her backpack, offering herbal medicine to communities around the country, including at the Stone Cabin Collective that supports the Dine (Navajo) and with the Healers tent at Standing Rock. Larkin bases out of the South, also working at free herb clinics in Atlanta and rural Tennessee.



The herb tent at Standing Rock.

DIEM: "There was an overflowing abundance of herbs donated to the Standing Rock movement. It was really beautiful to see all the donations pouring in daily. I ended up working the herbal medic space at Red Warrior Camp, an indigenous direct action group that formed together during the Standing Rock movement. Once I introduced myself and made myself available for herbal support at Red Warrior Camp, I was non-stop busy blending and brewing. There had been a big need for herbal medicine, and there were a lot of herbs available in the main camp; they just weren't all getting to the people. People expressed their enthusiasm and gratitude to connect with the plants, and also gratitude for a non-white space to seek medical attention. It's important to remember there's a lot of serious trauma around the colonization of medical care, and we need to prioritize creating spaces that feel comfortable for the people we are offering services to."

**Describe your work with the Stone Cabin Collective. What services do they provide?**

DIEM: "The Stone Cabin Collective is another all-volunteer group of herbalists, massage providers, acupuncturists, energy workers, and lay people that offer free health services in the Big Mountain/Black Mesa area of Arizona. This started as a solidarity-not-charity project in support of the Dine (Navajo) people of Black Mesa as they continue to resist massive coal and uranium mining operations and for those affected by the forced relocation policies of the US government.

We organize two Elder Wellness Weeks a year, in the spring and fall offering foot baths, acupuncture, herbal consultations, and body work each day at a different Chapter House or Senior Center in the Big Mountain/Black Mesa area."

**How is the collective working to break down colonial models in healthcare?**

DIEM: "The Stone Cabin Collective aims to break down colonial models by following indigenous leadership and taking time before clinics to learn some of the local protocol and etiquette to show respect to the hosts. The group holds space outside of clinic for collective discussions on decolonization and what it would look like for the clinic to shift into a majority or all indigenous-run clinic if that was locally desired. It's important to make time between all the clinic work to prioritize discussions on decolonization and what that looks like in the work we provide."

**What's going on with the Herbalista Free Clinic in Atlanta?**

DIEM: "The Herb Cart project is going on its 3rd year now. We have been providing holistic health services for people who don't have great access to healthcare in the Atlanta area. We have held pop up clinics alongside Food Not Bombs in Woodruff Park, as well as at the local Catholic Worker House during the hours they open for free meals and showers. We didn't have to put the word out about our services so much; we just showed up where people already gathered around food. We also host the Herbalista Community Health Fair once a month, offering free herbal consultations, body work, acupuncture, classes, and tea throughout the day. The free clinics are partially fueled by Herbalista's Grow-A-Row project and Pay it Forward Medicine Making Workshops. The Grow-A-Row project hooks up with local farmers to provide the clinic with donations of sustainably grown local herbs, while a lot of the medicine used in the free clinics is prepared in the

Pay it Forward Medicine Making Workshop and all funds go right back to operating clinic."

**Can you talk about the Med Shed at Ida, a queer land project in rural Tennessee?**

DIEM: "The Med Shed itself was built at a work party a couple of years back, and now it serves as a medic station for Ida's gatherings. Ida is home and refuge for the radical queer community, and it feels good to run a free clinic for queers, by queers. In the queer community, like in black, indigenous, and people

of color communities, there has been a lot of trauma around getting medical care. It feels good to be able to create a safer space to share medicine and empower one another." ■



Standing Rock's application to become a botanical sanctuary in 2005. Monica Cady and Linda Black Elk kneeling in center photo.

*Atlanta Duncan is a community herbalist from Rhode Island currently living on the Olympic Peninsula in Washington. She makes herbal medicine and shares her knowledge and resources within her queer community, grows medicinal herbs, and engages with health empowerment and justice on a personal and social level. She studied at The Evergreen State College and at Farmacy Herbs in Rhode Island and is largely self taught. She is also in a punk band called Johnny Ointment. You can contact her at [avantgardenz@yahoo.com](mailto:avantgardenz@yahoo.com).*

# BUILDING THE CENTER FOR MEDICINAL PLANT CONSERVATION



Appalachia is the hot spot for medicinal plant diversity – yet our botanical wealth is disappearing. The history of folk medicine in Appalachia has taken many twists and turns. Once a sacred tradition, the respectful harvesting of medicinal plants has now evolved into a dire situation for many species due to habitat loss, over-harvesting of remaining populations all compounded by the economic challenges of the region.

Our 360-acre botanical sanctuary, the first center to be placed under state and federal conservation easement for the protection, research and education of at-risk medicinal plants of the Appalachian region, is host to one of the richest concentrations of native medicinal plants in Appalachia. It is the destination for teaching best practices in plant conservation, land management, and community action for environmental and social causes.

With education and outreach at the core of our mission, the United Plant Savers board recognizes the need for a center at our Botanical Sanctuary in Rutland, Ohio that can host small conferences and have a resource library, teaching kitchen, herbarium, and office.

United Plant Savers is the only organization of its kind advocating for the conservation of native medicinal plants and a model for Native Medicinal Plant-based economic redevelopment. The UpS Sanctuary is a sister sanctuary to Finca Luna Nueva and a part of the Sacred Seeds Sanctuary Network.

The forest floor cries for the bounty that once blanketed it and yearns for the love of its keepers. Stand with us for the plants that heal the land and heal the people as we grow the forest farming collective of native Appalachian medicinal plants, and build The Center for Medicinal Plant Conservation.

*The Medicinal Plant Conservation Center is to be dedicated to Jim and Peggy Duke, a couple that has touched the lives of many in the herbal community and who have each in their own way given endlessly to further our collective knowledge of our green pharmacy. ■*



# STORIES FROM THE BOTANICAL SANCTUARY NETWORK

The mission of United Plant Savers is to preserve, conserve and restore native medicinal plants and their habitats of the USA and Canada while ensuring their abundant, renewable supply for future generations. To this end, United Plant Savers established one of our most important projects: the Botanical Sanctuary Network. As we became more deeply involved in the complexities of medicinal plant conservation, we realized that one must first preserve and protect the habitat in which our native plant communities thrive.

## Benefits of becoming a member of the Botanical Sanctuary Network include:

- A beautiful sign (metal w/yellow and green lettering) with the UpS logo on it to place at the entrance to your Sanctuary signifying this as a UpS Botanical Sanctuary
- Priority Consideration for UpS Community Grants. Our Community Grants award \$200-\$500 dollars for community projects involving at-risk plant restoration and preservation. Sanctuary members are given first priority.
- Two weatherproof signs that designate the property as a Sanctuary being used for plant research and educational purposes.
- Botanical Sanctuary Resource Guide which includes where to order botanical signs for medicine trails, sources of grants and funding raising, useful books and information sources, etc.
- Listing on the UpS Website and social media channels.
- Opportunities to promote classes and workshops at your Sanctuary on our website and social media channels.
- Opportunities to publish your Sanctuary story on our website and in our annual *Journal of Medicinal Plant Conservation*.



Wasabi Springs

## WASABI SPRINGS BOTANICAL SANCTUARY

Barnardsville, NC

Sanctuary Stewards: Jennifer Bass and Jon Hampton

Four years ago in the evening's darkness, we ascended a frighteningly steep driveway on the search for land and home to buy. Our truck's headlights skimmed across magnificent white umbels, and I declared to my husband, Jon, "There's angelica growing all along the driveway! This house might be the one!" Indeed it was. Later we would find a dense patch of goldenseal (*Hydrastis canadensis*) just five feet off the driveway and a couple of four prong ginseng (*Panax*

*quinquefolius*) plants growing out of gravel just a foot from the pavement. We would discover next spring that the bloodroot (*Sanguinaria canadensis*) unfurls and flowers through the gravel that sits alongside our paved driveway, extending up our north facing mountain throughout the rich, wet, shady coves. These plants called us here to help them flourish, to spend days hiking all over the mountain, filling our pockets with juicy red ginseng berries to eat, stratify, and plant. We enjoy harvesting the above ground parts of the sang after the berries have ripened to hide the plants from poachers and to enjoy the leaves and stem as tea. Our plan is to never dig the roots of our preexisting or planted sang, but to instead enjoy the above ground medicine. The multitude of gifts our forest sanctuary provides is the

center of our daily tasks. It is a tremendous journey to share together a lifetime of enhancing, caretaking, and learning from our land. Four years in, I have never felt so content with the way my life unfolds each day.

Named “Wasabi Springs”, our Botanical Sanctuary resides twenty-five minutes north of Asheville, NC and a couple minutes to the east of the small and magical town of Barnardsville. We named our land for our ongoing project of planting wasabi (*Wasabia japonica*) in our natural cold mountain springs. Our twenty-five acres are all forested except for approximately an acre that was all grass yard around our home. What was once grass is now organic guilds of fruiting trees and bushes, medicine, flowers, and vegetables. Some of my favorite plants we grow in the garden include Tibetan gentian (*Gentiana tibetica*), sea kale (*Crambe maritima*), sea buckthorn trees (*Hippophae rhamnoides*), aronia (*Aronia melanocarpa*), Chinese licorice (*Glycyrrhiza uralensis*), New Jersey tea (*Ceanothus americanus*), codonopsis (*Codonopsis pilosula*), false unicorn root (*Chamaelirium luteum*), grindelia (*Grindelia robusta*), and goumi (*Elaeagnus multiflora*). The forest was last logged about 75 years ago, and the very top of the land was never logged. Those ancient old growth trees call us to make the trek to the top to celebrate birthdays and anniversaries while marveling at the large patches of ramps (*Allium tricoccum*), trilliums (*Trillium spp.*), blue cohosh (*Caulophyllum thalictroides*), and black cohosh (*Actaea racemosa*) with many sightings of wild yam (*Dioscorea villosa*) and stoneroot (*Collinsonia canadensis*). The majority of our property boundary is with Pisgah National Forest, and the Big Ivy River flows below our home. Mount Mitchell, the tallest mountain east of the Mississippi River, is six miles away as the crow flies, and our homestead is around 3,000 feet in elevation.

While most homesteaders seek out bottomland that is south facing, we continue to revel in the gifts of north facing forest. The list of benefits is long for us, but it includes mind-blowing biodiversity, perfect cool summer weather, the ideal habitat to grow goldenseal, ginseng, and so many other “At Risk” medicinals and long lasting snow to go tracking in. We do have an unusual northern situation because our house and garden sit almost at the top of a ridge and receive full sun, with an open western view extending for thirty miles. To the north, Tharp Mountain looms large above, sheltering us from the northern winds. Our land extends onto the southern facing side of our ridge, which we explore, finding very few of our favorite rare medicinals. North facing mountains are so under-appreciated!

As I write nestled between our Maine Coon cats, pregnant with our first child, snow is moving sideways across the sky, and my husband is finishing up collecting the fourth cord of firewood for next winter, our heat source for the house and the hot tub. During the winter months, I like to create paintings of the plants and sit around the wood stove with dear friends, sewing brain



Mountain Top Hot Tub

tanned buckskin into backpacks and purses. We discuss our gardens for next year, swap forest management strategies, and share seeds; these connections inspire each other. Being in a community of other land stewards, herbalists, and homesteaders is a deep gift Barnardsville, NC holds.

As we pass by our botanical sanctuary sign each time we return to our home, gratitude for all those who have worked to create and support United Plant Savers, preserve our “At-Risk” medicinals, and teach future generations flows from our hearts. The community that is created in our lives by sharing our medicinal plants as they multiply, teaching and learning the intricacies of these plant beings, and celebrating the seasons together continues to expand my hope for the future of our species. The healing we receive from humble years of weeding, mulching, planting, chopping wood, digging out the springs, and making medicine is a source of power, fulfillment, and endless good times. I must say that life has never been as satisfying as these last four years together on Wasabi Springs. ■

“ We need the medicine; it's part of our ecosystem.

— Lori Quesinberry,  
Bearz Mountain ”



## HERB PHARM

WILLIAMS, OR

Sanctuary Stewards: Sara Katz and Ed Smith

The UpS mindset changes everything. It all starts simply enough. And since you're reading this journal, you know what we mean. One day, you make a straightforward statement like, "I want to grow and source plants ethically." And the next day, you're making a hundred choices about how to make that happen.

At Herb Pharm, we've been tackling these issues for almost 40 years. What started in the soil with sustainable growing practices has spread all over the farm. Because once you've decided to preserve valuable plant species for generations to come, it's natural to look at the rest of your ecosystem with the same point of view.

We started with some of the smallest things on our farm, the pollinators. Herbs co-evolved with the creatures that pollinate them. Indeed, each of our herbs has a specific pollinator that helps it propagate—skipper butterflies for our yarrow, swallowtail butterflies for our echinacea, etc. So we decided to do what we could to support these insects, bats, and birds on our farm.

Nature thrives on diversity. So we make our farm as diverse an ecosystem as we can. Depending on the year, we grow 70-75 species of herbs. As you walk through our fields, you can hear the buzz and see the tiny movements in the soil, up the stem, along the leaves, and in the air around you. A single plant may create a habitat for three or five or eight different insect species.

We increase that diversity by growing an additional 500 species in a garden on our farm. We make sure to include night-blossoming plants to support moth and bat populations. We even have bat houses on our property to create a safe habitat.

Our harvesting methods change as well. We cultivate all our crops through the flowering stage to provide food to the pollinators. Our plants go through the full cycle from seed to flower. Yes, we harvest many flowers for our products. But many others, like angelica or marshmallow, we cultivate solely for their root. For those, we maintain their floral growth, rather than mow it to

the ground. We let our pollinators eat all summer then we harvest the roots in the fall.

One thoughtful choice leads to another. Once you start treating your farm as an ecosystem, it's only a short step to making that ecosystem a sanctuary to species under threat. That's what we've done with local bees, butterflies, and salmon.

### Calling the bee rescue squad



Matt Dybola carefully inspects the bees.

Ninety to ninety-five of the plants on our farm are reliant on bees to do the work of reproduction. No bees, no reproduction. We have 10 or more local bee species on our farm. And they share a basic life cycle with the plants they support. The population spikes when more food is available. Then it crashes when the weather cools for the winter. Honeybees are the only bees we have that store food for the winter (their honey). The rest decline down to just eggs or a queen. As some of you may know, bee populations nationwide are pretty fragile right now, even in the summer.



So we take an active role in maintaining local bee populations. First, we provide diverse food sources. This habitat step alone has earned us the Bee-Friendly certification. But then we keep going. Next, we keep bee houses. We help them breed for pest and disease resistance, even feed them if their honey runs low in winter months.

Last, we rescue threatened bees from the wild. Many of our bees started their tiny lives feral. But then life intervened. Local loggers call us when they've felled a tree with a hive. Without a hive, the bees don't have long to live. A cold night could be devastating.

So Matt Dybala, our head farmer, will drive out into the woods with a spare bee box. When he arrives, he usually finds the bees clustered around the queen in a big ball, using their body heat to keep her alive. Slowly, Matt inches his bee box near the branch where they're clustered. Carefully, Matt picks up the branch and shakes it over the box, letting the swarming ball of bees fall in. Then he waits.

The bees have to make a choice. Their broken hive with a familiar branch in unstable, often worsening weather—or a strange wooden box like nothing they've ever seen. Unfortunately, bees aren't great at quick decisions. The move can take hours.

But anything worth doing is worth doing right. Those once-feral honeybees are basically the most efficient pollinators we know. They're up to three times faster than some of our other bees and butterflies.

## Improving the butterfly survival rate

Monarch butterfly populations are under threat due to loss of habitat. So we've done our part to become a certified Monarch Butterfly Sanctuary. Again, the solution starts at the seed. We grow the milkweed that Monarchs need to lay eggs and survive to adulthood.

Monarchs don't just hatch under the milkweed leaves. Monarch larvae sequester milkweed's toxic steroids and use them as defense against predators. The milkweed toxins give them a bad taste and a toxicity that predators come to associate with the Monarch's distinctive coloration.

But we don't stop at habitat. We had entomologists come to our farm and study our Monarchs. Their research suggested our Monarchs would have a higher survival rate if we raised some of them to adulthood ourselves. Since then, we've collected a portion of our Monarch eggs off the milkweed leaves, raised them through larvae and pupae stages, and then released them into the wild.

## We all live upstream from somebody

Our fields and gardens are not the only habitats on our farm. Here in the Pacific Northwest, salmon swim upstream to spawn miles and miles from the ocean. And the salmon too, like the bees and butterflies, suffer from habitat loss.

So we retrained our eyes to see beyond our plants to the water dripping off their leaves and the dirt running off into the brooks and creeks across our property. We took steps to limit runoff. Then we planted trees along the shallow banks of the narrow waterways. As they took root and grew, the trees stabilized the banks to limit erosion. As they soared higher, the trees provided shade and lowered water temperatures to protect delicate salmon eggs.

We brought in help from our local Williams Watershed Council to begin in-stream restoration. Together, we placed pea-sized gravel and tree-sized logs at strategic points in the streams. Behind the logs, silt and debris pooled up with the gravel at just the right depth for salmon to feel comfortable laying their eggs. All this work earned us a Salmon-Safe certification.

One thoughtful choice leads to another. We are a charter member of United Plant Savers. It's what drives us to make sure that anything and anyone that interacts with our farm is better off for the encounter. These steps may be invisible to our customers. But we see them. And the bees and butterflies and salmon and bats and birds and endless tiny insects see them. So for our farm in Oregon, there's no choice too small to make an impact. ■



Inspiring children to embrace the study of botany and to learn about Virginia's ecological diversity.

“A brilliant as well as a delightfully well written book that will surely inspire any child with an inquisitive mind to appreciate the beauty and diversity of plants. Susan has artfully woven history, science, and botany into a tale that captures the rich complexity of plants. Though written for children, adults, too, will find it equally interesting and informative.”

— Rosemary Gladstar  
Herbalist and Author



To purchase this book,  
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## ENDANGERED PLANTS THRIVE IN UNLIKELY ZONE IN SUPPORT OF HEALING

ALBERTA, CANADA  
Sanctuary Steward: Samantha Orthlieb

Tucked into a quiet 10 acres northwest of Cochrane, Alberta, Canada, four at-risk species of medicinal plants have found a place to call home. Senses of the Soul Botanical Sanctuary and Farm specializes in propagating at-risk medicinal plants and herbs to educate and facilitate healing on all levels. This year, goldenseal (*Hydrastis canadensis*), stoneroot (*Collinsonia canadensis*), black cohosh (*Actaea racemosa*), and blue cohosh (*Caulophyllum thalictroides*) decided to make an appearance—a timely appearance, in fact, when one considers their medicinal properties and the needs of the collective consciousness at this time: a shift into a more fluid, compassionate, and co-creative way of being.

At an elevation of roughly 1,159 m and a climate ranging in Zone 2b-3a, the Senses of the Soul Botanical Sanctuary and Farm is an unlikely growing place for these four plants. Goldenseal typically prefers Zones 5-8, stoneroot likes Zones 4-8, and blue and black cohosh thrive in Zone 5. Senses of the Soul owner and herbalist Samantha Orthlieb decided to take a chance at growing this unique combination in part because she knew the healing offered by these particular plants matched the needs of what was showing up in her clients and in the world. Her strong conviction and faith in the need for these plants combined with her special green thumb (like any successful botanist, she talks to them every day) has resulted in nothing short of a botanist's miracle.

Goldenseal, stoneroot, black cohosh, and blue cohosh all have a unique role to play in Samantha's psycho-spiritual healing practice and the needs of her clients.

Those familiar with blue and black cohosh know that they support female reproductive and endocrine systems, and from a psycho-spiritual perspective, they support the rising of the feminine. "We need feminine values to hold strong and bring in more peace, love, and compassion into the world." The values of the feminine include forgiveness, love, acceptance, compassion, mindfulness, and peace. black and blue cohosh help individuals incorporate these values to heal deep inner wounding.

Stoneroot is commonly used for treating ailments in the urinary tract and respiratory system, as well as venous problems. On a deeper level, Samantha uses stoneroot to help break apart toxic thoughts and emotions that have accumulated in the lower extremities and lymph system. This stagnation, which can lead to feeling burdened by the weight of the world, is then released thereby restoring one's sense of purpose and joy.

Strengthening the feminine also requires the healing of the feminine's own wounding; that's where goldenseal comes in. "While most people associate goldenseal with respiratory issues and common colds, from a psycho-spiritual perspective goldenseal is about dropping victim-mentality. There is a great need for all of us to take responsibility for our self and for us to join together in co-creative partnership," explains Samantha.

When the plants reach maturity and are ready to harvest, Samantha will create tinctures and teas for use in her Senses of the Soul product line. She will also sell seedlings and rhizomes to encourage the propagation of at-risk plants in the area. As well, part of her relationship with this plant group and all of her plants is to educate people about their healing qualities and the contribution of at-risk plant species to our planet. To do so, Samantha holds regular walking tours of the Senses of the Soul Botanical Sanctuary and Medicine Man/Woman courses where people can come to experience the healing energy of the plants firsthand and learn about the preservation and sustainable



A view of the garden.



black cohosh (*Actaea racemosa*)



stoneroot (*Collinsonia canadensis*)



goldenseal (*Hydrastis canadensis*)

growing of their own gardens. According to Samantha, it is these at-risk plants that the world needs most right now. "Plants have so much to offer us. If we believe in them and support them to thrive, they will serve us in ways we can't even imagine." Her success with growing goldenseal, stoneroot, and blue and black cohosh in the dry and chilly Alberta climate is a testament to that! ■

*Samantha is the author of [Opening the Senses of the Soul: Healing into Wholeness with Nature's Vibrational Medicine](#) (2011) and is currently working on her second book expected in Spring 2017. For more information or to donate to the Senses of the Soul Botanical Garden and Farm, please visit [sensesofthesoul.ca](http://sensesofthesoul.ca).*



Shaw Black Farm  
ginseng patch

## SHAW BLACK FARM

NORTHERN KENTUCKY  
Sanctuary Stewards:  
Terry Black & Courtney Shaw

Shaw Black Farm is a family-owned Botanical Sanctuary located in Northern Kentucky, just across the Ohio River from Cincinnati. Run by Terry Black and Courtney Shaw, we

grow wild-simulated ginseng (*Panax quinquefolius*) and goldenseal (*Hydrastis canadensis*) on our property, along with several other threatened native medicinal plants, such as black cohosh (*Actaea racemosa*), bloodroot (*Sanguinaria canadensis*), and trillium (*Trillium* spp.).

Terry's family background got him interested in wildcrafting and native medicinal plants at a young age when his great-grandma told him stories about "digging sang" and collecting other herbs as a child in Appalachia. We knew that we wanted to start a forest farm and especially wanted to grow American ginseng and goldenseal. We started out looking for a property where we could grow wild-simulated ginseng for local markets and create value-added herbal products to help people stay healthy naturally. After almost two years of searching, we finally found this space, a lovely 32-acre, mostly wooded place with a little house. The trees were indicative of a good ginseng growing area, with lots of sugar maple, oak, beech, hickory, and ash and a few redbud and pawpaw trees. There were indicator plants growing throughout the woods, which made us think that we had a good site for planting and growing American ginseng.

Our woods were a good place to start, though we knew they needed some restoration. The previous owners had selectively logged the forest before we got the place, so we decided to go back into the logged areas and replant trees. We put in a lot of poplars and oaks, especially in places where the tree canopy was too thinned out to have enough good shade to support ginseng. Where the trees were too little to provide ginseng enough shade to grow, we planted goldenseal. We are growing goldenseal in these areas until the trees are mature enough to grow ginseng in their shade.

We have a few acres of open pasture beyond the woods where the house is located. We use this open space to put in our large annual vegetable and culinary herb garden, as well as a few young fruit trees and bushes. This spring we are working on putting in a perennial Medicinal Herb Garden. In this garden, we plan to have areas that focus on herbs used to treat specific ailments. For example, one section will contain herbs useful in treating skin issues, another section will have plants used for coughs and colds, and so on.

The rest of the pasture area has been left fallow, and there is plenty of wild yarrow (*Achillea millefolium*) and milkweed (*Asclepias syriaca*). We planted other pollinator-friendly flowers and plants and became a monarch butterfly way station. This helps us maintain healthy native pollinator populations, such as native bumblebees. This is helpful in maintaining a healthy ecosystem and ensures pollination for our forest gardens and trees as well as the herb gardens. Our own honeybees definitely also appreciate the extra flowers growing all around.

After growing these native medicinal plants and learning more about them, we created an American ginseng tincture. We work with the professors at the University of Cincinnati's Chemistry Department, who test our tincture in a high-pressure liquid chromatography system to ensure that it is in the range of potency that has a real therapeutic effect. For those who are interested in learning how to grow ginseng on their property, we also offer a Ginseng Consulting Service. All our products and services are available on our website [www.ShawBlackFarm.com](http://www.ShawBlackFarm.com). We truly enjoy working with such an incredible medicinal plant that has so much interesting history around it. We hope that others will also consider growing native medicinal plant species to preserve them for future generations. ■



Terry of Shaw Black Farm catches bees.

# EAGLE FEATHER ORGANIC FARM

MADISON COUNTY, NC

Sanctuary Steward: Robert Eidus

## 2016 was a great year for Eagle Feather Organic Farm.

Our farm is nestled in a rare hardwoods cove, northwest of Asheville, far enough from Asheville for people to think it's really isolated and close enough to occasionally go into the big city.

## WHAT A YEAR!

We were blessed with a *producing* spring during the bad drought while springs to the north and south dried out. Our talked to and prayed over main spring's reservoirs were full, and our rain barrels were extensively used. The rain barrels were a backup for plants — we even had one rain barrel left over! Yes, we had a lot more Japanese beetles on the raspberries and the beechnut tree, but this is permaculture, and we just pick them off in the morning. We were remarkably protected from the drought around us and also protected from the fires.

We hosted our well attended annual spring and fall classes, and the biggest new thing was that we helped produce the first Organic American Ginseng Marketplace in November here in Madison County. We worked hard to make that happen and are really proud of the seven episodes of this event on... Yes! We now have a Facebook page — the North Carolina Ginseng Association [www.facebook.com/NCGinsengAssoc/](http://www.facebook.com/NCGinsengAssoc/) and on our YouTube channel: PlantFriends. This medicinal plant haven has branched into cyberspace.

We had four interns: Ed from Richmond, VA, Steve from Hickory, NC, Amanda from Greenville, SC, Jessica and Michael from Virginia Beach. Our most exciting birthing was that the goji berry bush actually produced berries, and the native passionflower for the first time produced abundant fruit. We sold over 350 ginseng plants, 35,000 stratified ginseng seeds, and 1,000 goldenseal planting rhizomes. We did tree removal for future solar panel solar access, increased our shiitake log production, put in rock stairs, had a great garlic harvest, and learned a lot about bird netting (the cinder blocks need to be buried and the bamboo needs angle bracing).

Our farm has been part of the Botanical Sanctuary Network since the late 1990s, almost 20 years. We are preparing to offer a 5-acre plant/tree nursery for sale to a new partner(s). This will allow a rare opportunity to own and continue the historic work of spreading the plants and educating the people in the southern Appalachian region. From the beginning, Eagle Feather Farm has been a champion for ginseng and goldenseal through the N.C. Ginseng & Goldenseal Co. However, we now have over 45 medicinal plants and trees as well for sale.

The farm will host the annual spring and fall classes on growing both ginseng and goldenseal as well as Jiaogulan in 2017 we are also hosting a Fall Ginseng Hunt on Sept. 3rd. More events can be found at [www.ncgoldenseal.com](http://www.ncgoldenseal.com)

This coming year will see the construction of the Garden Cabin and the Cabin in the Woods, expanding the housing options for interns and guests. This year an electric vehicle charging station will be installed with the help of an energy farm grant. ■

~ In the spirit of the plants



# SACRED MOTHER SANCTUARY

PEABODY, KS

Sanctuary Stewards: Debbie and Noel McSweeney

When we think of the word Sanctuary, it brings to mind many different things for different people. For me, personally it brings to mind hope. When I was a little girl, my grandfather, Ben Avery, a conservationist, gave our family the gift of a Sanctuary in the Northern White Mountains of Arizona. It was a place where we could escape the craziness of the city of Phoenix. No cars, no sirens, just a one-room humble cabin and the occasional thunderstorm over the valley chasing the cawing crows. It was a powerful place for me, as it was my first strong connection with Mother Earth. I was taught there to care for the land, to be aware of the impacts I have on it, and most importantly I was set free from a very early age to wander the woods on my own. The connection to that Sanctuary saved my life many times when life got difficult.



For us here at Sacred Mother Sanctuary, it offers many different things. We are a Certified Bee Friendly Farm where for 5 years we have created habitat for all pollinators and tried to figure out the answers to the very difficult question of how to save them. We are sanctuary to a rare breed of dairy goats, the British Guernsey, which we nurture as we are gifted with wonderful milk for cheese and soap making. Ancient seeds of corn, beans, and squash, gifted from Elders, have a place here as our food and a different kind of medicine. The Medicine Garden, the center of the Sanctuary, contains a diversity of close to one hundred medicine plants, including many "At-Risk" and "To-Watch" plantings.

One very special planting of *Echinacea laevigata*, a federally listed Endangered Species, is the center of a growing project with the local high school horticulture department. A student there is attempting to grow out seed that we were blessed with this last summer for his horticulture project. Whether it works or not, the seed has been planted in a young person of the very reality



of conservation and its necessity. Hope is planted in the young—the most precious planting we can ever tend to.

We are also blessed with an ancient Native site, which is cherished, honored, and blessed with the prayers of many Native Elders from around the world, and humbly we are caretakers. Mother is very sacred in that area, and so the name of our sanctuary was born out of that space—Sacred Mother Sanctuary. We welcome all of our relations and are blessed with a diversity of wildlife from birds such as hawks, bald eagles, falcons, pheasant, quail, dove, and prairie chickens to turkey, deer, coyotes, bobcats, and mountain lions. The air is always filled with the sound of birds singing, and the nights are full of several different owls and the calls of coyotes, while no lights obstruct the breathtaking night sky. Many feel like they have come home when they stand here and feel at peace. If I can give that gift to one person, the gift that was given to me long ago from my Cherokee Grandfather, well then, we have achieved our goal of Sanctuary.

May all of you reading this create Sanctuary, sacred space for those whose hearts are heavy, in despair, and in need of healing. It is now needed more than ever in our current situation. May you open the door for those who seek the Mother and bring them home to who we all really are. ■



# SPIDER WOMEN

By Marguerite Uhlmann-Bower

It's those quiet moments in the garden, when there's no other human but just you and the whole outside world, where our greatest gifts and shifts occur. Spring time for me is that special time of the year when I so look forward to just touching the sweet scented cold soil, swirling it around with the tips of my cold fingers... just because. It's simply too early to plant. Too early to uncover the beds, but just being there with all the early spring scents to relish in our dynamic relationship with all garden beings. One never knows what experience lies ahead.

Well, this one happened to me some years ago when I was doing my usual early spring garden stroll through the shaded UpS protected beds, taking notice of who might be sending up it's first spring shoots so that I could be the first to say hello. I was sitting down on the stone wall that my friend Yemana and I built to get a closer look at the wild ginger patch and, you know, to just touch and swirl the soil around. No words are necessary here—I just surrender my wants and needs to the needs of the Nature outside of me.

As I sat on this cold, damp stone wall, I touched the leaves that covered the soil and began moving them aside to see who I might find under their cover. Slowly and methodically, I gently moved the leaves and maybe a little too quickly, too, as before the next stroke of my hand, I stopped because my eye caught the movement of a tiny rolling white spider egg which belonged to a garden wolf spider. And there the spider went, scurrying in the other direction, surely wanting to save herself from my clumsy freezing hand. But then, she stopped. Turned around and looked right at me! She said to me, "give me my egg", or maybe she said "that's my family there", or maybe even, "I need my egg." Whatever she said, I knew that she wanted her egg.

She looked at me, then at her egg, and then back at me again. Yep, she wanted her egg.

Okay, well I did not doubt any of what I heard. So, I followed her requests and did what she asked. Here's how it all unfolded. I slowly moved my hand over to carefully pick up the white egg, holding it carefully between my thumb and forefinger, and then I slowly moved towards her, stopped, and showed her that I had her egg between my fingers. First from a long distance so that she could see what I was doing, and then I got a little closer. She then walked a little closer to me. My hand advanced a little closer to her. She advanced a little closer to me. Gradually we both got closer and closer.

Now my giant hand approached her tiny body, my hand on top of the soil now with my fingers carefully holding her egg. Cautiously she came up to my two fingers holding her egg. She reached up and clamped onto her egg with her front legs. I didn't put it down on the ground; I actually gave her, her egg! She let me hand it to her! Spider picked up the egg right out from my fingers.

And then, she scurried away. I don't think she was too fearful of me. We both followed and trusted our instincts—mother to mother, creator to creator.

This was about us knowing our place in the garden. We are from the same mold, somewhere in our distant connections. Mothers. Both givers of life, dynamic forces in deep mutual relationship. ■

## Marguerite Uhlmann-Bower

R.N., Herbalist, Wild Forager

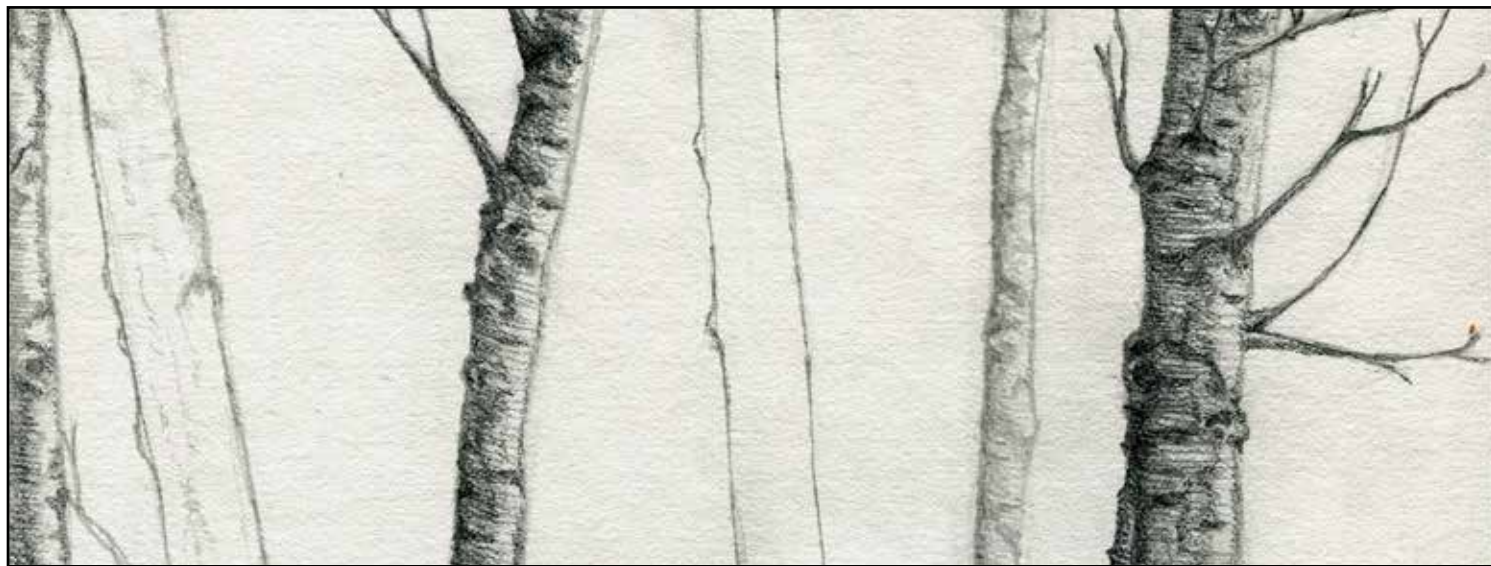
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Paper Birch (*Betula papyrifera*) by Tessa Scheele

# UPS BOTANICAL SANCTUARY NETWORK: ACTIVE MEMBERS

## **7 Acre Wood Farm**

Burnsville, VA

## **Appalachia Ohio Alliance**

Logan, OH

## **Ataga'hi "The Healing Lake of the Cherokee"**

Marengo, IL

## **Avena Botanical**

Rockport, ME

## **Bartram's Garden**

Philadelphia, PA

## **Bastyr Herb Garden**

Kenmore, WA

## **Bean Tree Farm**

Tucson, AZ

## **Bee Fields Farm**

Wilton, NH

## **BeeGood Gardens**

Columbus, OH

## **Bluebird Botanical Plant Sanctuary**

Eureka Springs, AR

## **Broadwell Hill**

Stewart, OH

## **Buck Mountain Botanicals**

Miles City, MT

## **California School of Herbal Studies**

Forestville, CA

## **Catskill Creek Native Plant Nursery**

Greenville, NY

## **Cedar Mountain Medicinals**

Newport, WA

## **Cherokee Medicine Woods**

Bloomington Springs, TN

## **Diana's Garden Herb Farm & Sanctuary**

Sturbridge, MA

## **Dandelion Herb Center**

Kneeland, CA

## **Desert Canyon Farm**

Canon City, CO

## **Dibble Hill Native Plant Sanctuary**

Saegertown, PA

## **Dragonfly Medicinals**

Vashon Island, WA

## **Eagle Feather Farm**

Marshall, NC

## **Earth Remedies**

New Hartford, CT

## **Earthcrafts Botanicals**

Uxbridge, MA

## **Eden Hyll Botanical Sanctuary**

Natural Bridge, NY

## **Equinox Botanicals**

Rutland, OH

## **Fern Hill Nursery**

Cottage Grove, OR

## **Fire Om Earth**

Eureka Springs, AR

## **Florida School of Holistic Living**

Orlando, FL

## **Gaia's Peace Garden**

Iowa City, IA

## **Garden Farme**

Ramsey, MN

## **God's Gardens**

Robbinsville, NC

## **Goldenseal Botanical Sanctuary**

Rutland, OH

## **Green Comfort Botanical Sanctuary**

Washington, VA

## **Green Farmacy Garden**

Fulton, MD

## **Green Turtle Botanicals**

Nashville, IN

## **Hawthorne Way Botanical Sanctuary**

East Meredith, NY

## **Healing Wheel Sanctuary**

Hancock, NY

## **Heartmoor Farm**

Kents Store, VA

## **Heartstone Herbal School**

Van Etten, NY

## **Herb Pharm**

Williams, OR

## **Herb Mountain Farm**

Weaverville, NC

## **Herbminders of Maine**

Lubec, ME

## **Hidden Garden**

## **Ethnobotanical School**

Brooklyn, NY

## **Highwoods Heaven Botanical Sanctuary**

Yacolt, WA

## **Hootenanny Hill**

Avoca, NY

## **Idlewild Native American Plant Sanctuary**

Wilburton, OK

## **Indian Pipe Botanical Sanctuary**

Linden, VA

## **Knowlton Farms**

Sebastopol, CA

## **Labyrinth Gardens**

Mulberry Grove, IL

## **Light Footsteps Herb Farm and Learning Center**

Chardon, OH

## **Luna Farm Herbal Gardens and Botanical Sanctuary**

Troy, IL

## **Meadowsweet Botanicals**

Shepherdstown, WV

## **Mequon Nature Preserve**

Mequon, WI

## **Mill House**

Arrington, VA

## **Mockingbird Meadows Eclectic Herbal Institute**

Marysville, OH

## **Morze Tree Farm**

Canaan, VT

## **Millhouse Sanctuary**

Arrington, VA

## **Motherland Botanical Sanctuary**

Willits, CA

## **Mycoevolve**

Burlington, VT

## **Nature Cares Nursery and Botanical Sanctuary**

Portland, OR

## **Native Earth Teaching Farm**

Chilmark, MA

## **Oak Creek Botanical Sanctuary**

Corvallis, OR

## **Perry Hill Farm**

Millbrook, NY

## **Peterman Brook Herb Farm**

Porterfield, WI

## **Phoenix Farms**

Augusta, ME

## **Plattsburgh Botanical Sanctuary**

Plattsburgh, NY

## **Restoration Herbs**

Franklin, PA

## **Sacred Mother Sanctuary**

Peabody, KS

## **Sacred Plant Traditions**

Charlottesville, VA

## **Sacred Plant Sanctuary at Seattle School of Body-Psychotherapy**

Seattle, WA

## **Sage of the Woods**

Cedar Falls, IA

## **Sage Mountain**

E. Barre, VT

## **Seeds and Spores Family Farm**

Marquette, MI

## **Seven Arrows Farm Botanical Sanctuary**

Seekonk, MA

## **Shaw Black Farm**

Morning View, KY

## **Shindagin Hollow Woodland**

Willseyville, NY

## **Singing Brook Farm**

Worthington, MA

## **Sister Sanctuary**

Guilford, VT



# UPS BOTANICAL SANCTUARY NETWORK: ACTIVE MEMBERS

## Standing Rock Botanical Sanctuary

Cannon Ball, ND

## Stark Natural Herb Farm

Salt Spring Island, BC CAN

## Soulflower Farm

Asheville, NC

## Sweetwater Sanctuary

Danby, VT

## The Green Spiral

Middleburgh, NY

## The Herb Crib

Blairsville, GA

## The Rare Seed Sanctuary

New Gloucester, ME

## The Trillium Center

Conneaut, OH

## The Wellspring Valley

Stahlstown, PA

## Three Leaf Farm

Louisville, CO

## Three Springs Farm

Waitsfield, VT

## Two Creeks Organic Farm

Shiloh, GA

## Vajra Herb Farm

Oskaloosa, KS

## Walker Mountain Botanical Sanctuary

Deerfield, VA

## Wasabi Springs

Barnardsville, NC

## Weeds For Wellness LLC

Nescopeck, PA

## Wellspring Mountain

Lowgap, NC

## Wellspring Valley

Stahlstown, PA

## Wildcroff Hollow Botanical Sanctuary

Amerst, VA

## Wildflower School of Botanical Medicine

Cedar Creek, TX

## Windsong

Honor, MI

## Wise Woman Center

Woodstock, NY

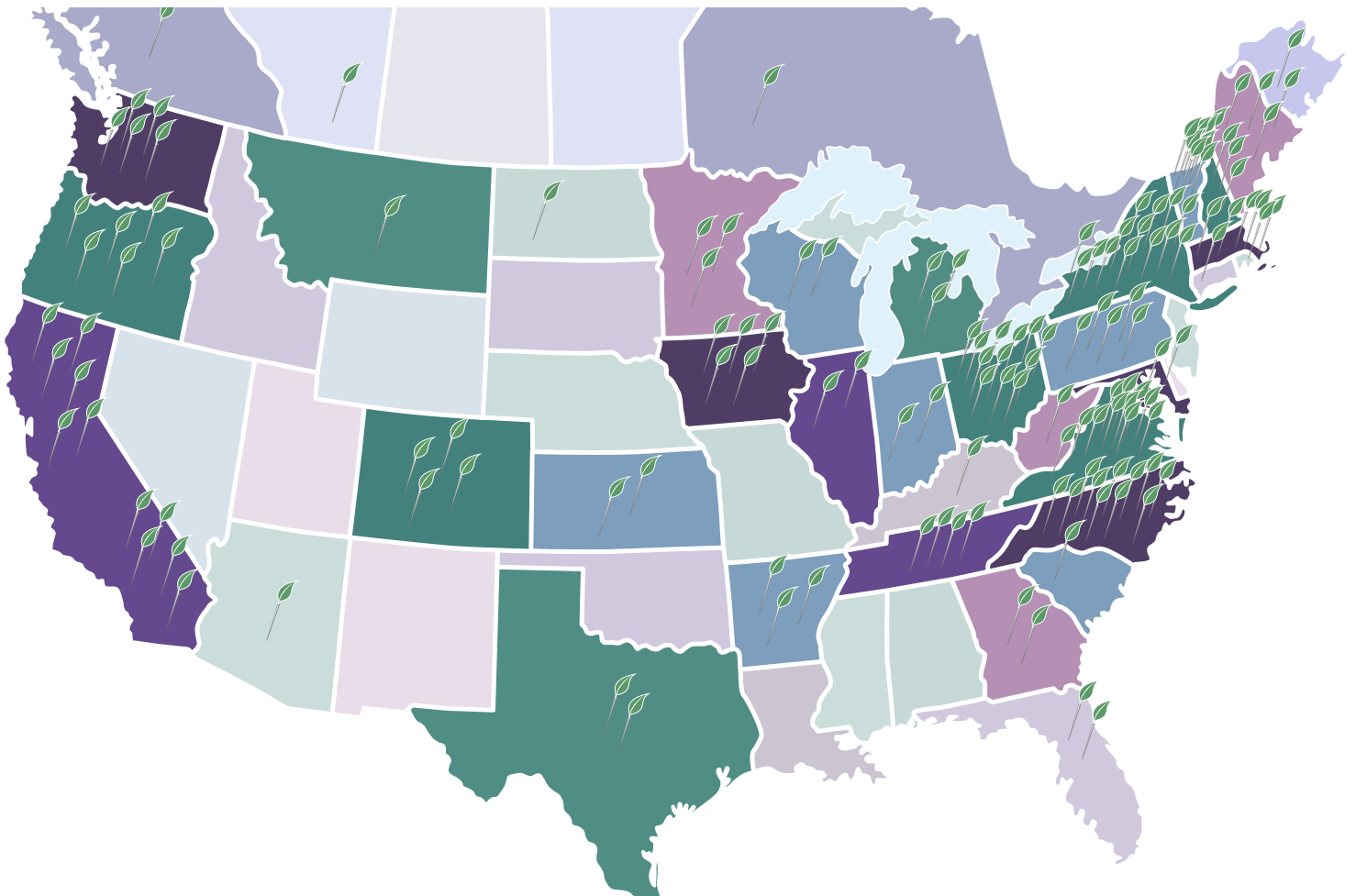
## Woodlands Medicinal Sanctuary

Cosby, TN

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■ = recently joined

## REGISTERED SANCTUARIES THROUGHOUT THE US & CANADA



# VISIT THE SANCTUARY



John Stock,  
Outreach Coordinator

“Most mornings I feel like the luckiest person on the planet as I make my 3½-mile drive over the ridge and through the woods to my job at the United Plant Savers Botanical Sanctuary in Rutland, OH. To be surrounded by the hills, trees, creatures, and plants is an extraordinary experience even on the most hectic day.”

As a member of UpS you can experience the power of our botanical sanctuary yourself. Along with your *Journal of Medicinal Plant Conservation*, sticker, and discounts to United Plant Savers events, UpS members have special privileges at the United Plant Savers Botanical Sanctuary.



The UpS Botanical Sanctuary is the exact location where, 23 years ago, Rosemary Gladstar, Paul Strauss, and a few others first began to talk about the idea of conserving these plants that were providing medicine and income to an ever-growing population of people.

Members are invited to hike The Medicine Trail where, if your timing is right, you will see American ginseng, black cohosh, bloodroot, blue cohosh, false unicorn root, trillium, one of the largest patches of goldenseal anywhere in the world, and more. Beyond the Medicine Trail lie The Main Hollow Trail, Oak Walk, Reclaim Trail, Heart Pond, and miles of additional paths to explore.



Come for the day or spend some extended time with us and really allow yourself to fall in pace with the plants. We have overnight lodging including The Yurt, which offers kitchen, bathroom with shower, and gas heat; Barn Rooms with two single beds, electric heat, and shared bath; the rustic Tornado Cabin nestled in the middle of the forest with two single beds; and in addition we have plenty of primitive camping sites. For more information visit [www.goldensealsanctuary.org](http://www.goldensealsanctuary.org). If you would like to visit, just email [office@unitedplantsavers.org](mailto:office@unitedplantsavers.org) or call 740-742-3455 to get on the calendar. I look forward to sharing this sanctuary with you!



(Photo by Zi Xiang Chan)

## PRICING\*

Hike the sanctuary as a member:	no charge
Guided herb walk (approximately 2 hours):	\$100 for up to 10 people, then \$10 each add'l person
Yurt rental:	\$75 first night, \$50 each additional night
Tornado Cabin:	\$50 first night, \$25 each additional night
Barn Rooms:	\$50 first night, \$25 each additional night
Primitive camping:	\$10 per person per night
*For non-member pricing add \$35.	

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# Medicinal Plant Conservation Certificate Program

*Hard Working?*

*Motivated to learn about medicinal plants?*

*Want to experience United Plant Savers' 360-acre plant sanctuary in Ohio?*

**FALL 2017 SESSION:  
September 5 - October 13**

~ & ~

**SPRING 2018 SESSION:  
Mid-April to May**

**Apply now for  
early acceptance!**

## **A HANDS-ON PRACTICAL APPROACH**

Interns work 30 hours per week doing a variety of medicinal plant conservation & cultivation projects. **Classes & opportunities to work with Chip Carroll, Program Manager, as well as UpS staff teachers.** Interns learn general plant propagation techniques working with "At-Risk" and endangered species, general farm upkeep and maintenance, landscape care and maintenance, greenhouse work, medicinal plant identification, sustainable wild harvesting principles and practices, medicine making & more!

**Application available online at**  
[www.unitedplantsavers.org](http://www.unitedplantsavers.org)  
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**740-742-3455**



Left to right: Meredith Bury, Reagan Hooton, Chip Carroll, John Stock, Lindsay Knecht, Paul Strauss, Bailey Grenert - Spring 2016.

**New for 2017-2018**

## **DEEP ECOLOGY ARTIST FELLOWSHIP PROGRAM**

We are seeking artists looking to spend time at the sanctuary to explore their artistic perspective in regards to the role of native medicinal plants in the ecosystem through photography, writing, and mixed media. We will accept applications throughout the year on a rolling admission basis. Applicants can apply for up to four weeks. We will provide free lodging to those who are accepted. To apply please submit a one-page description of what your interest is in applying for the fellowship and an example of your art work along with a CV.

We also ask that those who are accepted to participate in the artist fellowship to share their work in our annual *Journal of Medicinal Plant Conservation*. We hope that this fellowship will offer an opportunity for those seeking sanctuary for artistic inspiration to have the time and space to connect with the healing plants. We look forward to attracting a diverse range of individuals who will explore the meaning of sanctuary and share their artist experience with our membership and the broader plant community.

\*\*\*

Deep ecology is an ecological and environmental philosophy promoting the inherent worth of living beings regardless of their instrumental utility to human needs, plus a radical restructuring of modern human societies in accordance with such ideas. Deep ecology argues that the natural world is a subtle balance of complex inter-relationships in which the existence of organisms is dependent on the existence of others within ecosystems. Human interference with or destruction of the natural world poses a threat therefore not only to humans but to all organisms constituting the natural order.

# PARTNERS IN EDUCATION (PIE)

United Plant Savers Partners in Education program is designed to enrich school programming and students' education through instilling awareness and ethics in regards to the conservation of our native medicinal plants. Schools and apprenticeship programs that have enrolled in the Partners in Education program have provided their students the opportunity to receive all of the benefits of membership at a discounted 'student-friendly' price. These schools and programs are also given educational

resources and curricular support as well as provided the opportunity to promote classes and workshops on our website and social media channels. For more information about our Partners in Education program, please visit our website: [www.unitedplantsavers.org](http://www.unitedplantsavers.org). United Plant Savers holds a special place in our heart for our Partners in Education Schools and would like to **thank the following participating 2016-2017 schools and programs:**

**ArborVitae School of Traditional Herbalism**  
New York, NY  
[arborvitaeny.com](http://arborvitaeny.com)

**Appalachian Ohio School of Herbal Medicine**  
Rutland, OH

**Bastyr University Herbal Sciences**  
Kenmore, WA  
[bastyr.edu](http://bastyr.edu)

**Blue Otter School of Herbal Medicine**  
Fort Jones, CA  
[blueotterschool.com](http://blueotterschool.com)

**Botanica**  
New River, AZ

**Chestnut School of Herbal Medicine**  
Weaverville, NC  
[chestnutherbs.com](http://chestnutherbs.com)

**Dandelion Herbal Center**  
Kneeland, CA  
[dandelionherb.com](http://dandelionherb.com)

**Florida School of Holistic Living**  
Orlando, FL  
[holisticlivingschool.org](http://holisticlivingschool.org)

**Florida Herbal Conference**  
Orlando, FL  
[floridaherbalconference.org](http://floridaherbalconference.org)

**Green Comfort School of Herbal Medicine**  
Washington, VA  
[greencomfortherbschool.com](http://greencomfortherbschool.com)

**Green Girl Herbs**  
Hopewell, NY  
[greengirlherbs.com](http://greengirlherbs.com)

**Green Turtle Botanicals**  
Nashville, IN  
[greenturtlebotaniclas.com](http://greenturtlebotaniclas.com)

**Greenwood Herbals**  
Limerick, ME  
[greenwoodherbals.com](http://greenwoodherbals.com)

**Herbal Academy of New England**  
Bedford, MA  
[herbalacademyofne.com](http://herbalacademyofne.com)

**Herbal Sage Tea**  
Pomeroy, OH  
[herbalsage.com](http://herbalsage.com)

**Heartstone Center for Earth Essentials**  
Van Etten, NY  
[heart-stone.com](http://heart-stone.com)

**Jean's Greens**  
Castleton, NY  
[jeansgreens.com](http://jeansgreens.com)

**Magnolia School**  
Glouster, OH

**Maryland School of Integrative Health**  
Laurel, MD  
[muih.edu](http://muih.edu)

**Milagro School of Herbal Medicine**  
Orlando, FL  
[milagroschoolofherbalmedicine.com](http://milagroschoolofherbalmedicine.com)

**Mockingbird Meadows Eclectic Herbal Institute**  
Marysville, OH  
[mockingbirdmeadows.com](http://mockingbirdmeadows.com)

**Northwest School of Botanical Studies**  
McKinleyville, CA  
[herbaleducation.net](http://herbaleducation.net)

**Omnigreen**  
Port Clinton, OH  
[omnigreen.com](http://omnigreen.com)

**Owlcraft Healing Ways**  
Scottsville, VA  
[owlcrafthealingways.com](http://owlcrafthealingways.com)

**Sacred Plant Traditions**  
Charlottesville, VA  
[sacredplanttraditions.com](http://sacredplanttraditions.com)

**Sage Mountain**  
East Barre, VT  
[sagemountain.com](http://sagemountain.com)

**Sweet Herb Medicinals**  
Ben Lomond, CA  
[sweetherbmedicinals.com](http://sweetherbmedicinals.com)

**Thyme Herbal**  
Amherst, MA  
[thymeherbal.com](http://thymeherbal.com)

**Twin Star Herbal Education**  
New Milford, CT  
[twinstarherbal.com](http://twinstarherbal.com)

**Vermont Center for Integrated Herbalism**  
Montpelier, VT  
[vtherbcenter.org](http://vtherbcenter.org)

**Wintergreen Botanicals Education Center**  
Allentown, NH  
[wintergreenbotanicals.com](http://wintergreenbotanicals.com)

**Yerba Woman Herbal Apprentice Program**  
Willits, CA  
[motherlandbotanicalsanctuary.com](http://motherlandbotanicalsanctuary.com)

# 2016 MEDICINAL PLANT CONSERVATION AWARD

— Recipient —

## MARC WILLIAMS

By Helen Lowe Metzman

United Plant Savers is pleased to have selected ethnobotanist Marc Williams as the recipient of the 2016 Medicinal Plant Conservation Award. Marc is a modern day itinerant preacher of all kinds of plant knowledge from his hands-on experiential workshops to his philosophical discussions of human and plant interactions. When first encountering Marc, one might notice him toting a well read and tattered *Botany in a Day* by Thomas Elpel while donning a Green Man t-shirt with the words "Eat something wild everyday." Everyday with his encyclopedic botanical knowledge and wisdom, Marc inspires people he encounters to examine and look deeper into the plants around them, whether it is in a magical climax forest or a city sidewalk. Marc teaches about plants with a taxonomic family perspective. He encourages all who are accustomed to modern cuisine to taste wild roots, shoots, and ferments and to simply use the local plants for medicine. Marc asks his students to think in terms of a "cultural topsoil" with layered stories of how plants and people twine together and to always act in regard to the importance of plant conservation. Marc will be one of the speakers at the United Plant Savers "The Future of Ginseng and Forest Botanicals Symposium" this July in Morgantown, West Virginia.

Marc is the executive director of Plants and Healers international ([www.plantsandhealers.org/about-phi/phi-executive-director](http://www.plantsandhealers.org/about-phi/phi-executive-director)), where he is carrying on the mission of the late Frank Cook. Both Frank and Marc have inspired many folk to walk the Green Path in a sustainable mindful manner. *Botany Everyday* [www.botanyev-](http://www.botanyev-)



Erika Galentin, Marc Williams and Susan Leopold

[eryday.com](http://www.botanyev-eryday.com) is an online course where Marc manages and teaches botany identification, medicinal plant medicine, wild edibles, and plant families. The course runs from March through December. In addition, Marc travels the globe to numerous countries with myriads of ecosystems and visits botanical gardens to further his own education of plant families and to impart his knowledge onto other travelers who wish to join him or come to one of his many workshops.

Marc is a graduate of "Warren Wilson in Environmental Studies concentrating in sustainable agriculture and has a master's degree from Appalachian State University in Appalachian studies and sustainable development, with a minor in geography and planning." Marc's classroom extends far beyond the doors of any academic institution as he continues to walk the plant talk for all who are fortunate to get to his hometown of Asheville, North Carolina or wherever he journeys. As a humble, yet tireless and consummate plant educator everyday, Marc highly deserves to receive this award. ■

## LESSER KNOWN FACTS ABOUT THE SANCTUARY

- The sanctuary is the heartbeat of United Plant Savers.
- In 2015, the movie *The Sanctity of Sanctuary* ([www.sanctityofsanctuary.com](http://www.sanctityofsanctuary.com)) was released, highlighting the life of Paul Strauss and the story about how the Sanctuary was conceived. The Sanctuary and the surrounding community are now known globally for herbal biodiversity, conservation, and entrepreneurship.
- Our 360-acre Sanctuary in Rutland, Ohio, gifted to us in 1996, is home to the largest wild population of goldenseal ever to be documented.
- United Plant Savers is part of a consortium awarded a three-year USDA grant to train future Forest Farmers.
- United Plant Savers was awarded a grant from the Ohio EPA to develop an interpretive trail highlighting the reclamation of the Sanctuary from strip mining.
- Many of the hundreds of interns and visitors who go through programs at the Sanctuary have gone on to become leaders in the herbal community.



## SACRED SEEDS

To read about and connect with sacred seed gardens around the world visit

[www.sacredseedssanctuary.org](http://www.sacredseedssanctuary.org)

**Sanctuario Semillas Sagradas, Finca Luna Nueva:** Costa Rica

**Missouri Botanical Garden:** United States

**Semillas Sagradas de Huamachuco:** Peru

**Crow Creek Indian Reservation:** United States

**Ambalabe:** Madagascar

**Jardin Botanico de Semillas Sagradas de Chan Chan:** Peru

**Sacred Seeds at the Intervale Center: The Abenaki Heritage Garden:** United States

**Rodale Institute:** United States

**Bastyr University:** United States

**American Botanical Council:** United States

**Sitting Bull College:** United States

**Kindle Farm School:** United States

**The Green Farmacy Garden:** United States

**Hosagunda:** India

**Jardin Botanico Medicinal de los Llanos:** Colombia

**Sacred Seeds at Reserva Natural La Pedregosa:** Colombia

**Institute of Ayurveda and Integrative Medicine - I-AIM:** India

**Native Forest Foundation:** Sri Lanka

**Tel Aviv University Botanical Garden:** Israel

**The Rattanakiri Living Library for Seeds and Culture:** Cambodia

**Bronx Green-Up:** United States

**Chaikoni Jonibo Garden:** Peru

**Forest School for Traditional Health Practitioners - PROMETRA Uganda:** Uganda

**Punta Mona Center for Sustainable Living:** Costa Rica

**Goldenseal Sanctuary:** United States

**L'Herboretum:** France

**IITA Forest Reserve Ethnobotanical Garden:** Nigeria

**Jardin Etnobotanico Pueblo Chacobo-Pacahuara:** Bolivia

**Southern Cross University Medicinal Plant Garden:** Australia

**Bakuriani Alpine Botanical Garden:** Georgia

**Tertulias Herb:** United States

**Tafi Atome Monkey Sanctuary & Cultural Village:** Ghana

**Maryland University of Integrative Health (MUIH) Herb Garden:** United States

**Florida School of Holistic Living Bodhi Garden:** United States

**Pha Tad Ke Botanical Garden:** Laos

**Forest Garden Organics (Pvt) Ltd:** Sri Lanka

## RACE, RIGHTS, AND RESEARCH IN CARIBBEAN ETHNOBOTANY

by Rachel Thomas



Ethnobotanist Richard Evans Schultes with Indigenous Experts

It was almost twenty years ago when I first arrived in Costa Rica. Already a student of herbalism in a classroom setting, I was attracted to the possibility of learning about plants directly from those who used them ancestrally. Lucky for me, and many others like me, Costa Ricans tend to be open in sharing stories about their botanical allies. I was in herbalist heaven.

Over time, I have come to see the other side of that heaven. I started to realize that while my knowledge was increasing, the general population was losing its traditional wisdom. The easy part has been finding ways to conserve the medicinal plants. The real challenge is to help community elders to conserve the traditional ways of life that are interdependent with the natural world, the living context in which their herbalism thrives.

I share this story to raise consciousness and encourage advocacy of the survival of traditional wisdom amongst any peoples who are practicing their culture in the face of modern life and assimilation, and especially those peoples who have been forcibly separated from their traditions or their homelands.

When I settled in the remote fishing village of Puerto Viejo, I was hoping to find a local healer to study with.

I learned that there were a few Caribbean women in town and a few Indigenous men in the nearby mountains, but that none of them were taking on students or apprentices. In the decade that it took me to find a Caribbean Herbalism teacher, my research came from the local population's knowledge about basic self-care using plants. Although many Caribbean people now go to the doctor in the case of extreme pathology, a majority continue to use herbal and other wellness traditions for prevention and basic health maintenance (Picking et al, 2011).

Unlike in a structured environment, learning folk medicine out in the field meant that not all of my teachers were shamans, granny healers, or ethnomedicinal experts. My research has relied on a healthy combination of quality (a well-known healer giving advice) and quantity (10 non-experts all giving similar advice). For example, we can validate the use of lemon grass (*Cymbopogon citratus*) for fever reduction in the Caribbean without an expert, simply by learning its local name, fever grass. This methodology allows ethnobotanists to do research in communities where there are no longer traditional healers practicing or teaching, and to harvest important remnants of ancestral knowledge in situations where significant loss of cultural practice has occurred.

Despite the ubiquity of home remedies in modern Caribbean homes, academia has traditionally neglected the ethnomedicine of the African Diaspora of the Americas (Voeks & Rashford, 2013). The largely untold story is that Africans brought their wellness traditions with them to the Americas, including their herbal medicine, food preparation, permaculture, spirituality, music, dance, and their sacred relationship with nature. These were the healing tools that facilitated the survival of Africans and their descendants in the Americas (Carney & Rosomoff, 2009).

To what extent are these survival tools still available in the African Diaspora of the Americas? There are only a few areas where remote communities have conserved large amounts of their original African culture. There are, for example, villages in Surinam and Brazil where African descendants have lived almost independently for centuries (Van Andel, 2015). A classic ethnobotanical goldmine, these villages maintain language, agricultural, cultural, and medicinal practices that can be traced directly back to Africa. However, as in many parts of the Americas, these African-descendants are still in a struggle for land rights and political representation.

The complicated history of Costa Rica's Caribbean coastal areas has also resulted in a land rights struggle and a lack of cultural protection for African descendants. The majority of Afro-Costa Ricans and their ancestors came from the Caribbean islands, where centuries of slavery had institutionalized a lack of respect for native African cultures. Interestingly, although customs such as dress and language were targeted for assimilation, Africans were not uniformly discouraged from using their wellness traditions, including their knowledge of plants, to stay healthy (Carney, 2003). These practices reduced the amount of "medical" attention required by slaves, and therefore



18th Century African Herbalist Quasi

would have been seen as advantageous. There are many examples, in fact, of Africans using their plant wisdom to help their captors. The most legendary is the 18th century African man known as Quasi, for whom the powerful bitterwood, *Quassia amara*, was named. Although he was abducted into slavery as a child, Quasi was an herbalist and healer, whose plant medicine brought him his freedom and helped him live for almost a full century (Carney & Rosomoff, 2009, p.90).

In addition to the wellness traditions that Africans brought with them from Africa are those which they learned from the Indigenous people of the Americas. These cultural exchanges have been poorly documented for centuries. Up until recently throughout the Caribbean, Indigenous people have been incorrectly portrayed by academia as having been annihilated. Anthropological and ethnobotanical studies, as well as DNA testing, now tell a different story. In Jamaica, many scholars believe that Taino people living inland had integrated with escaped slaves, intermarrying as well as sharing tools of medicine that still exist in Maroon communities today.

Centuries later, this process repeated itself, when Jamaican immigrants in Costa Rica intermixed with the local Bri Bri people of the Caribbean coast. From my personal experience, ethnomedicine has been the primary form of sharing between these two groups, more than their other cultural practices such as food preparation, music, or dress. It is very clear when studying Afro-Caribbean herbalism that many important Indigenous remedies have been adopted. In remote areas and under difficult conditions, interdependence



Teacher, Wilfred Cornwall, making one of his medicinal meals.

and wisdom-sharing helped both of these groups to survive.

In the 1980's the coastal communities of the Caribbean Costa Rica received electricity, tourism bloomed, and in the common fashion, a slow but steady decline in wisdom-sharing began. Before then, most health care took place at home, with a rare visit to the village healer or midwife when necessary and the even rarer visit to the far away hospital in Limon. As roads were built, government clinics were installed and health regulations from the far away capital started to be enforced.

By the time I arrived in the village two decades later, there were two granny healers left, but neither woman had an apprentice to pass their knowledge on to. The modern cultural and political climate of Costa Rica would make it difficult for their grandchildren to become financially successful as herbalists. Although local village elders still practice many of their ancestral herbalism and home remedies, community dynamics have changed, and younger generations are no longer seeking ancestral wisdom as they did in the past.

From an ethnobotanical perspective, the village of Puerto Viejo is still traditional enough that there is useful information to be harvested. Local friends who are my age were born into a time when subsistence living, permaculture and fishing were survival skills that they inherited from their grandparents. Living in harmony with nature was an ancestral mandate and botanical medicine was the only option available. Academically,

we know that we can trace these practices back to those of Africa, as well as Native America. The question is, do these practices qualify as indigenous, enough to be promoted by the government and protected by the law?

A number of international agreements address the rights of different groups to practice their traditional cultures, some of them referring specifically to the use of medicinal plants. In 1992, the Convention of Biodiversity even went so far as to include the promotion of widespread practice. It recognizes that cultural practices must be encouraged proactively and re-institutionalized if they are going to survive. To what extent this Convention and other treaties are implemented into practice depends on the country, local politics, economics, and more.

In 1994, Costa Rica ratified the Biodiversity Convention and has since been known as a leader in biodiversity. Over the past quarter century, Costa Rica has focused its conservation efforts on environmental protection more than on the protection of cultural diversity. So far, there has been no government mandate to study, document, promote or implement the ethnomedicine of Costa Rica. In addition, it is unclear whether Costa Rican law protects the cultural practices of those who are non-Indigenous, or whether health code regulations are legally superior to cultural practice rights.

There are a number of academic, non-profit, and Native groups who work on documenting and passing down traditional knowledge, including medicinal plants. Other more corporate efforts, such as those funded by the pharmaceutical industry, may harvest their information less sustainably. This means that information that is collected might be hidden or not intentionally shared back to the communities from which it was collected. Many traditional peoples are more likely to have their wisdom stored in an inaccessible library or laboratory than have it passed down to future generations.

Since the invention of the internet, I have had the luxury of access to information about plants. Even mainstream search engines and online sites provide traditional uses of plants in addition to allopathic analyses. How many times have I accessed ethnobotanical research so as to increase my potential benefit from a plant? How can I give something back to help to ensure the survival of the peoples and their cultural practices which have fed my research?

After almost two decades, my desire to collect information about Caribbean medicinal plants has shifted to a desire to conserve anything and everything that I can about the cultural practices that have stewarded these plants. This includes creating safe spaces for wisdom-sharing, promoting wellness traditions, practicing sustainable eco-tourism, advocating for Afro-Caribbean rights and envisioning a new health care system in which traditional knowledge is respected and even integrated.

As a student of herbalism, I absorbed information without considering its origin or the people who originally shared the information with ethnobotanists. But the truth is that every plant that we learn to use for



healing has a community with whom it has evolved. As a teacher and conservationist of herbalism, I feel a sense of responsibility to these wisdom carriers. Everyone can find their own way to contribute, and mine was creating Hidden Garden's Ethnobotanical Sanctuary. In addition to protecting the plants themselves, we are also digitalizing as much information about the plants as possible, so that the community can have free access to our research results. This year we are going a step further, installing a botanical collection of the ethnobotany of the African Diaspora, rooted in African botanical traditions and incorporating transformations created by the migrations and settlements of African people around the world.

Now we are propagating the plants so as to give them back to the community that they once served. We are creating opportunities for elders to share their personal experiences with younger generations who are seeking plant wisdom. We are helping the community to access information collected by our students and others around the world using modern communication technology. All of the research that we produce is for sharing with the community and we join with other groups who are advocating for the rights of our plant stewards.

As we re-awaken and enhance our connection with the healing power of nature, may we remember those who fought to carry plant medicine through into this century. May we share back and conserve as much wisdom as we collect. ■

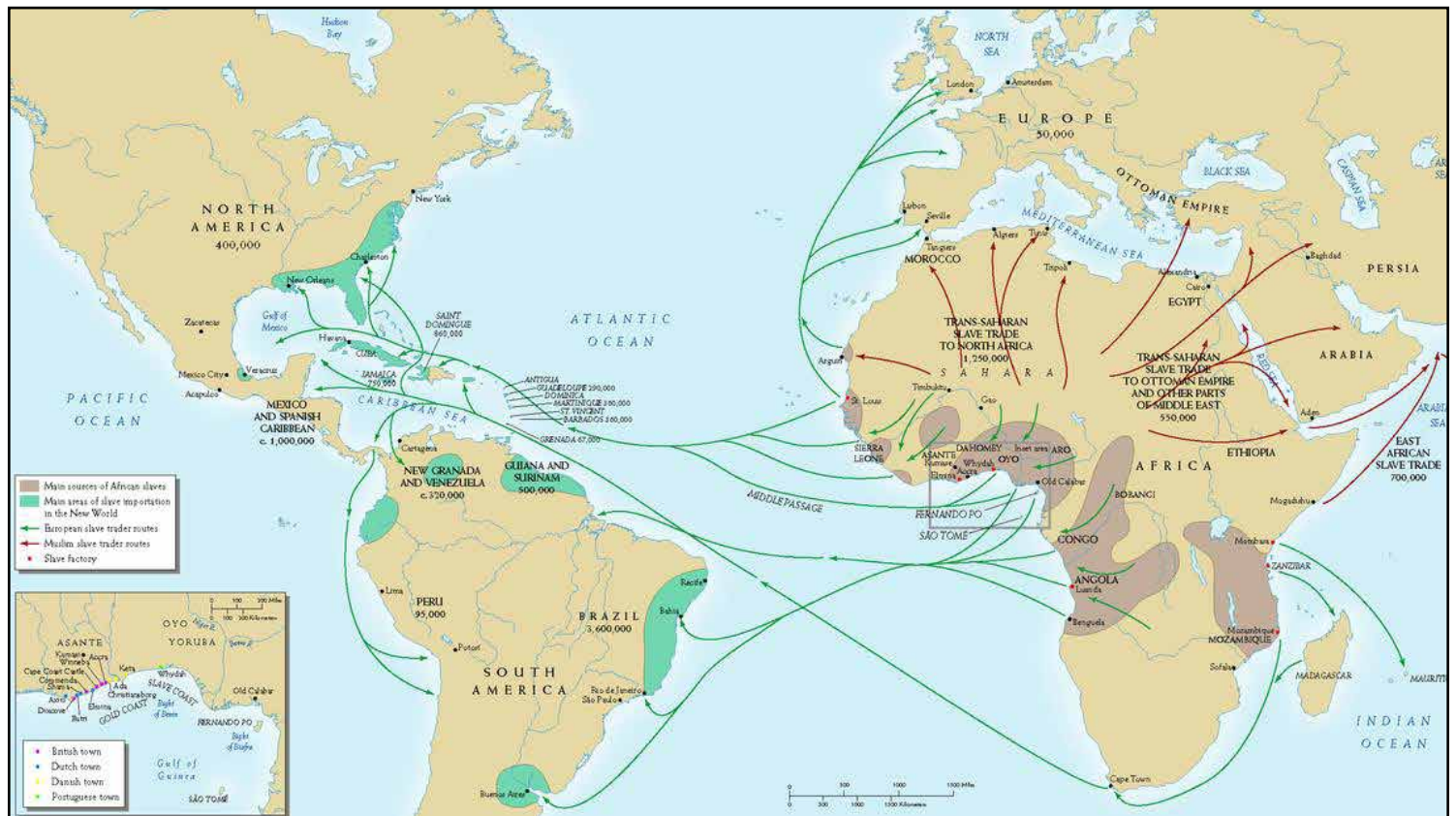
*Rachel Thomas teaches internationally and at her Ethnobotanical Sanctuary in Puerto Viejo, working on plant collection, documentation, dissemination, advocacy and wisdom sharing. Using her combined*

*degree in Africana and Education Studies from Brown University, and two decades of field research, Rachel creates educational opportunities for students of all ages and backgrounds to explore, study and defend the magic of ancestral plant medicine. Visit Hidden Garden's website for more information or to get involved!*

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Puerto Viejo de Limon, in relation to the slave trade

# QUASSIA AMARA; STRONG MAN OF THE TROPICAL FOREST

by Susan Leopold, PhD

Enjoy reading the foreword to the newly published and updated English version. Contact United Plant Savers if you wish to purchase the book.

*Quassia amara* is a member of the Simaroubaceae family, which consists of 19 genera and 95 species of trees and shrubs that are mostly tropical in distribution. Folks in the temperate region may be familiar with the Tree of Heaven (*Ailanthus altissima*), which is also in the Simaroubaceae family. It is known as an invasive to eastern North America but a native medicinal to those in China. *Quassia*, with 40 species in the rainforests of tropical America and Africa, contains trees and shrubs. *Quassia amara* is the source of bitter-tasting compounds and is used currently in commercial products as a vermifuge and as an insecticide. Among those in Costa Rica it is known commonly as Hombre Grande, translated as the strong man, to make a tea that can cure pain in the stomach, rid parasites, help with diabetics, and treat fever.

As folklore goes Gramman Quacy or Kwasi (1692-1787) was a slave brought to Surinam from Ghana, who had earned a reputation as a powerful medicine man. He helped the Dutch fight the maroons, earned his freedom and traveled to the Netherlands. One of his famous remedies was a bitter tea used for internal parasites and made from the bark of mysterious shrub. Linnaeus (1707-1778) named the mysterious medicinal shrub after the famous healer, *Quassia amara* thus meaning the bitter *Quassia*. John Uri Lloyd wrote about the species in 1897 in the *Western Druggist* regarding how it was being used in the European pharmacopeia as early as 1788. *Quassia amara*, being a smaller tree/shrub, was quickly over harvested in Suriname, and a larger tree found in Jamaica that has similar properties quickly became its substitute. It was commonly called Jamaican quassia (*Picrasma excelsa*). Though it is a larger tree, its range is much smaller and due to deforestation it was added to the IUCN redlist in 1988,

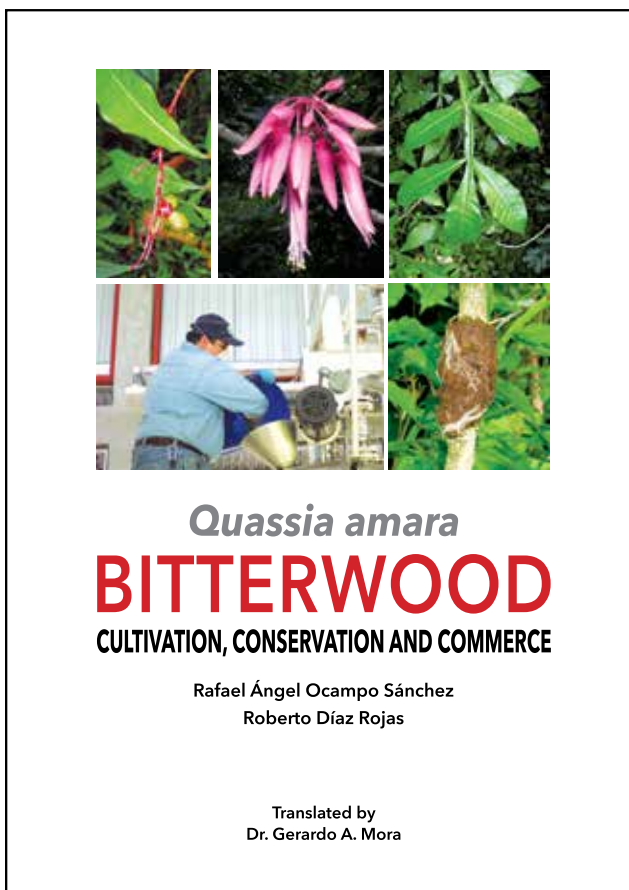
and to date, *Picramnia. excelsa* is an endangered species (Areces-Mallea 2009). There is also a related plant, *Picramnia antidesma* that is a smaller shrub and known medicinally with similar distribution as *Quassia amara*. In Argentina *Quassia amara* has been confused with *Picrasma crenata*, another species of bitter wood. Interesting to note that in Brazil *Quassia amara* is known as false quinine (Ocampo and Balick 2009). The common names can be confusing within the historical context of *Quassia amara* use and demand in trade over the last 300 years.

In 1994 I transferred from Boston University to Friends World College in Costa Rica. I was a Geography major, but my passion was to study ethnobotany, and relocating south allowed me to pursue this path. It

was not long after arriving in Costa Rica that I learned of Rafa Ocampo's work as the preeminent and pioneering ethnobotanist. I also became intrigued with the Caribbean/Limon region of the country, known as the wet side with its Amazonian feel, as river tributaries flow from the Central and Talamanca Mountains down through tropical wet rainforest. The Limon region is a mix of indigenous cultures such as the BriBri and Cabekar with the afro-Caribbean people, who have a long history of respectful co-existence resulting in a rich and dynamic ethnobotanical reservoir of knowledge. It is in this region that Rafa Ocampo has his research farm, Bougainvillea, where he has meticulously studied agro-ecological/forest systems of important native species, one of those being *Quassia amara*. In this book he has gathered his knowledge

and that of others to concisely describe critical data that is useful in the transition towards intentional management and cultivation of an economic and medicinally important species whose wild populations are under threat due to overharvest and loss of habitat.

Rafa Ocampo is one of the founding members of the Sacred Seeds Sanctuary located at Finca Luna Nueva Eco Lodge and certified biodynamic farm near the majestic Arenal Volcano. Rafa is co-author (with Michael Balick) of the *Sacred Seeds* book that highlights the collection of 300 medicinal plants that are tended to in the garden. The Sacred Seeds garden sparked the establishment of an international network of gardens located around the world that share in



the same mission — conservation of biodiversity and cultural knowledge of sacred plants.



Rafa shows Susan his research on the quassia bark

United Plant Savers is a non-profit organization founded just around the time I set off on my journey to Costa Rica. UpS is the umbrella organization to the Sacred Seeds Network of Botanical Sanctuaries. It is with deep respect and admiration that I write the foreword to Rafa's English version of his book "Bitter Wood: Cultivation, Conservation, and Commerce". We are in a time of rapid changes to the landscape with

unprecedented global and local demands on important medicinal plants, the majority of which come from complex forested ecosystems. Agroforestry is critical because we can more intentionally cultivate and manage for economic and medicinally important species, instead of unsustainable harvesting from wild populations. Rafa Ocampo is a pioneer in the field of ethnobotany taking on the challenge to conserve native medicinal plants while also providing viable incentives to those living in the forest, embodying UPS mission of conservation through cultivation. *Quassia amara* is just one example of his many scientific contributions to the field of tropical ethnobotany. This book will serve as a valuable resource to those looking to weave *Quassia amara* into the disturbed wet tropical forest. It is the perfect addition to a tropical permaculture/ forest garden with its use as an important natural pesticide, de-wormer for animals, medicine for fevers and stomach ailments. In a time

when mosquitos are carrying multiple tropical diseases it's an easy preventive to add the bark to water to eliminate larva in stagnant water. It is a plant with an important conservation story and a timely medicinal with unique chemistry that provides tangible solutions to important needs. ■



Susan and Rafa in the quassia forest



Rafa with Jennifer Gerrity of Mountain Rose Herbs



The quassia seeds.



This quassia bark will soon to be ready for sale.



Rafa with the first quassia tree he planted.

# GERMINATION OF GARCINIA KOLA, A HIGH VALUED NON-TIMBER PRODUCT OF NIGERIA

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*Garcinia kola* (Heckel) belongs to the Guttiferae (Clusiaceae) family (Geeta *et al.*, 2006). The tree produces edible and medicinal seeds, which are widely consumed (Okigbo, 1997). Its distribution ranges from West Africa to Central Africa, extending from Sierra Leone to Congo,

(Gledhill, 1977). *Garcinia kola* is endemic in the humid lowland rainforest vegetation of the West and Central African sub regions. It is found in coastal areas and lowland plains up to 300m above sea level with an average of 2000 - 2500 mm rainfall per annum and temperatures ranges from 21.4°C to 32.15°C and a minimum relative humidity of 76.34% (Ntamag, 1997). *Garcinia kola* (Heckel) otherwise known as 'bitter kola' is one of the several non-timber forest products that are of socio-economic importance in Nigeria with high consumption rate (Okafor, 1980). Its economic contribution to both domestic and national markets raises the standard of living of those involved in its trading activities, both in the rural and urban centers (Yakubu *et al.*, 2014).

Okoro (1993) stated that *Garcinia kola* seeds are used as extractive in dietary food supplement while the FDA, 1995 reported that they are used as a flavor enhancer in the beverage industry and also as a hop substitute in several indigenous alcoholic drinks. Medicinally, the seeds are used as an antidote for *Strophantus gratus* infection. The seeds are used for the treatment of bronchitis, throat infections, anti-purgative, and anti-parasitic (Madubunyi, 1995). Other known uses include guinea worm remedy, anti-atherogenic effects, and anti-lipoperoxative effects (Adaramoye *et al.*, 2005). According to Iwu *et al.* (1999),

*Garcinia kola* is known to exhibit a complex mixture of phenolic compounds including anti-inflammatory, anti-microbial, anti-diabetic, and anti-viral properties. The indigenous practices used by farmers to protect the species include selective clearing, during land preparation for cropping sustainable bark, harvesting of stands in wild populations and recognition of individual property ownership on certain wild of the tree.

*Garcinia kola* is safe consumed with or without other foods. Its consumption an hour before or after meals may help to increase the absorption of key ingredients. Food does not affect the metabolism of *Garcinia kola* and may suffer the effects of mild indigestion (Iwu, 1986). Kolaviron does not appear to have a pronounced effect on drug metabolizing enzymes (Farombi *et al.*, 2000) and no known interaction with orthodox medications has been reported (Okoli, 1991). *Garcinia kola* seeds are recalcitrant seeds; however, it is unlikely that rural farmers would plant *G. kola* on a large scale because the

untreated seeds are difficult to germinate. Due to dormancy, *Garcinia kola* seeds can take 18 months to germinate.

Despite its socio-economic importance, the cultivation of the plant is very much limited. Factors that have discouraged farmers from growing *Garcinia kola* include difficulties encountered in the germination, which reduces the availability of seedlings in the nurseries for possible plantation establishment (Yakubu *et al.*, 2014). The natural regeneration of the species is poor, and seedlings are uncommon and slow-growing (Gyimah, 2000;

Abbiw, 1990), making the species now close to commercial extinction (IUCN, 2004; Hawthorne, 1995). Most of the productive trees are those which were left in the wild when farm plots were cut out of the forest (Adebisi, 2004). In Nigeria, low populations of *G. kola* are found in home gardens, and few stands are found in the wild due to rapid deforestation and heavy exploitation in the natural forests. These factors seriously deplete the populations of the species. But demand for *G. kola* is currently very high in Nigeria and though few seeds are available in the markets, production of the species is limited due to problem of seed dormancy (Yakubu *et al.*, 2014). The seeds need to be treated to enhance germination.

**A study of germination was conducted and it was concluded that duration of soaking and packing seeds in dark polythene bag significantly ( $p < 0.05$ ) affected the**



bitter kola (*Garcinia kola*)

**number of days to germination, number of germinated seeds, and length of plumule. It was recommended that; *Garcinia kola* seeds should be soaked for 72 hours and packed in dark polythene bags as this medium proves the method for successful germination.**

The results were determined by a study on “effect of seed soaking and light intensity on the germination of Bitter kola (*Garcinia kola* (Heckel) seeds)” that was carried out at the green house of the School of Agriculture and Agricultural Technology, Federal University of Technology Owerri, Imo State, Nigeria. The research aimed to determine the effects of light intensity on the germination of *Garcinia kola* seeds. The experiment was laid out in Complete Randomized Design (CRD) with four replications. Different seed parts (whole seed, head part and tail part) were packed in transparent polythene bags (TPB) and dark polythene bags (DPB). The seeds (collected from the trees at Ozara village in Ngor/Okpala LGA of Imo State, Nigeria) used for the experiment were de-coated and subjected to different soaking regimes (12, 48, 72 and 96 hours), while the un-soaked seeds formed the control experiment. The soaked seeds were placed in the transparent and dark polythene bags. Data were collected on the following parameters; number of days to germination, number of germinated seeds and the length of plumule measured at 14 days' interval. Results showed that germination was first recorded in both seeds soaked for 72 hours and the control with the tail part germinating in 10 days after bagging for seeds packed in transparent polythene bag and seeds soaked for 92 hours from the whole seed and the tail part germinated in 5 days for the seeds in dark polythene bag. Germination was delayed and scanty in the control with seeds soaked for 12 hours compared to other treatments. The germination period ranged between 5 to 26 days for seeds parked in dark polythene bag and 9 to 30 days for seeds parked in transparent polythene bag.

Please see the United Plant Savers website for the full article of this study. ■

*Dr. A.E Ibe traveled from Nigeria to attend the United Plant Savers internship program. He touched all of our lives in his brief stay in Ohio. His research includes climate change, soil nutrient dynamics in agroforestry systems, and work with Moringa olifera and Jatropha spp. He has also written an amazing chapter “Sustainable Forest Resources Management for Rural Livelihood and Forest Security in Imo State, Nigeria”, for the book, Food Security and Poverty Reduction in Africa. He is a strong advocate for bringing awareness to the fact that it is impossible to eradicate poverty without paying attention to the 410 million people (including 60 million indigenous people) who live in or near tropical forest areas and depend on these forests for their subsistence and survival needs.*

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# ON THE GROUND AND RUNNING: HERBAL ACUTE CARE, ENVIRONMENTAL RESILIENCE AND REGENERATIVE STRATEGIES

by Sarah Wu

If you want to practice herbalism, really practice, the first thing you need besides an herbal education, whether it is a class or direct mentoring, are sick people to practice on. Many herbalists are well read and studied, but few have practical on-the-fly skills in the instance where someone hurts themselves or needs immediate medical attention. These skills include cleaning and bandaging wounds, lancing, bracing or treating acute inflammation. Some herbalists have taken Wilderness First Responder Courses, CPR or EMT trainings, and many just have wild children, nieces/nephews or neighbors. Herbalists are not always thought of as the initial responders in acute situations, but with the proper training, herbalists can actually be your community's best first line of defense and relief.

There are few educational scenarios offering these types of classes and trainings. Often, when students have the opportunity to practice in a clinic, they are dealing with chronic conditions, acute flair-ups of chronic disease and/or offering preventative medicine.



In these situations, the herbalist becomes sleuth, seeking the cause and formulating a series of protocols: herbal, nutritional, lifestyle and psycho-spiritual for the patient to follow in the hopes of a healthy outcome, with protocols being adjusted over various spans of time.

In acute care, the process of diagnostics is much shorter, with a focus on outward appearance of imbalance, rapid reference to patient history and aggressive treatment protocols that can last anywhere from a few minutes to hours or over the course of days, if the patient stays in your vicinity and has good compliance.

The idea to offer a training course in acute care began with my time in the jungle at a *Semilla Segrada* sanctuary garden, the Punta Mona Center for Regenerative Design and Botanical Studies, on the southern Caribbean coast of Costa Rica, treating everything from staph infections to weird rashes, insect bites, parasites, machete wounds and digestive disorders, as well as common colds, flu, dengue fever, menstrual pain, lice, homesickness and bad dreams—even treating chickens, ducks, cats, dogs and the occasional wild animal! Being a hive for plant lovers, earth lovers, botanists, biologists, eco-tourists and volunteering hippies, it was my best training as an herbalist in my 16 years of practice and study. In 2014, I had the opportunity to work with 7Song, director of the Northeast School of Botanical Medicine and the Ithaca Free Clinic, and in Nicaragua at the free Natural Doctors International Clinic on the island of Ometepe, where we treated patients with urgent and chronic needs from the immediate community. There I also learned how to work in a busy, fast paced practice and how to operate an apothecary in a clinical setting. This volunteer job helped me to solidify my belief that as herbalists, we are the best situated to be the first responders in our communities in times of trouble. Whether it is a flu epidemic or an earthquake, when it happens to our community, we are the ones who live there, first on the scene, with an arsenal of plant medicines, backyard crafting skills, knowledge of the local terrain and personal relationships with our neighbors.

My passion is to get more herbalists on-the-ground learning skills for community resilience and ecological wellbeing, so I created an opportunity to practice and learn acute care. For the past two years, we have hosted an Herbal First Aid Clinical intensive workshop at Punta Mona followed by a clinical immersion at the annual arts and cultural event, Envision Festival also in Costa Rica. At Punta Mona, students are living off-the-grid in the humid rainforest, surrounded by dense flora and abundant fauna. Participants of all skill levels are mentored by 7Song and yours truly. During the one-week training at Punta Mona, students learn on-the-fly diagnostics and formulation, triage skills, identification of red flag symptoms, taking vitals and how to work with a stocked apothecary of a global *materia medica* of teas, tinctures, glycerites, powders, pills, oils, salves and

sprays. We travel to Envision Festival, with some fun excursions along the way, to the Kekoldi Indigenous Reserve and The Ark Herb Farm. On site at Envision the students set up the clinic and get ready to receive patients over the course of seven days. With product sponsored by Gaia Herbs, we also wildcraft and cultivate a fair amount of our stock that 7Song, myself and the crew at Punta Mona harvested and processed months ahead of time. Many of our temperate herbs were purchased from Mountain Rose Herbs, an ethical bulk herb supplier, and a supporter of United Plant Savers.

What did we treat?

We saw around 800 patients with acute bacterial and viral diarrhea, constipation, bacterial skin infections, such as staph, strep throat, swimmers ear, female reproductive distress, ringworm and other weird rashes, colds and soft tissue wounds. We worked adjacent to the conventional



7Song with students at Envision clinic.

medics and the Zendo (psychedelic harm reduction services) to provide a truly integrated offering for all in attendance. Students communicated and worked fluidly with the other modality's practitioners, providing the most well rounded care to those in need. The environment is harsh, equatorial hot and stimulating with music and entertainment all night and a population of 7000 people from around the globe. Above the clinic was a rain shower of orange flowers from the Poro (*Erythrina fusca*, Fabaceae), epic Pacific beach sunsets, inspirational classes all day long, sunrise howler monkeys at the Luna Stage, many new friends and insights. Students left really inspired and ready to keep working! We plan on offering this same experience each year.

Resilience training can start in many places, often from necessity or fear of the future, do people decide to get into this. Myself, being a permaculture educator, one of our most critical units is design for disaster. In this unit, we explore all the possible natural and human made scenarios that we would have to deal with as a community from landslide, agricultural collapse, epidemic and war. We explore strategies to put into place and ways to prepare ourselves without being fatalists. Herbal First Aid and kitchen remedies are always one of the topics people are most interested in during our "People Care" unit of the Permaculture Design Course. In light of that, I am writing curriculum for "Permaculture for the Herbalists Path". This is a merging

of two vast multidisciplinary studies that will take in review the interconnection between the wellbeing of the planet and the wellbeing of individuals and communities. Hosting this 120+ hour training in March, 2018 is very exciting and is an expanding endeavor. Students will get a 75-hour Permaculture Design Course with 40+ hours in herbal medicine, focusing on planetary *materia medica*, regeneration strategies for the internal and external ecosystems and community building, as well as basic anatomy, biology, botany and ethnobotany. In permaculture, we say that we look to the past to design for the future. In herbalism, we study

the past, learn from our elders and try to reclaim what has been lost. While witnessing the current collapse of our healthcare and ecosystems, the herbalist's practice looks to the future to help people awaken to their memory of the time when they too once knew how to care for themselves by working with the living plants. Learning herbalism is empowering and brave and

an integral piece of human survival. I suggest all who are reading this article, look to their yard and their nearest woods/meadows/parks for their herbal allies that will be with them through hard times. Look for the people in your community who also love plants and talk to them. Keep the memory alive, and get skills. ■

*Sarah Wu is a practicing herbalist of 16 years, working with plants from the Tropics and Temperate regions, living full time in Costa Rica. She is the co-director of the Punta Mona Center for Regenerative Design and Botanical Studies, where she teaches Permaculture Design Course and Workshops in Herbal Medicine and eco-lifestyle. She is one of the co-founders of both Envision Festival and Medicines from the Edge: A Tropical Herbal Convergence.*

[www.puntamona.org](http://www.puntamona.org)

[www.envisionfestival.com](http://www.envisionfestival.com)

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# ETHNO-BOTANY IN LAOS, THE ROOTS OF CULTURE

By Biba Vilayleck



PTK Ethnobotanic Garden

Photo © Paul Wager

Man lived first of all in, on and with nature, and to forget this is dangerous. The goal of ethno-botany is to show how plants have always been faithful companions to man. It inventories and examines the vast collection of knowledge, which different cultures have developed across the millennia to tame and master the plant world. Laos remains a plant-based society, and we want to preserve that. The plant wisdom of Laos is a part, albeit a small one, of Laotian heritage. Though new techniques and new materials are employed, in the villages people still live “in nature” and with nature.

Our ethno-botanic garden, artificial though it may be, is necessary to show the plants utilised by the Lao today and these number approximately a thousand, but the floristic wealth of Laos is much larger and should comprise, when fully inventoried, more than 12,000 different species.

Showing always involves choosing, making categories where none existed, eliminating details and not considering the complexity, the variability and the spirit of invention of individuals. Food plants are too numerous to present on such a small scale, but here you can admire some specimens of traditional plants, such as those used to colour various fibres, of which we have several examples.

Not every plant is good for humans or animals; you will see some in our garden, which you should be careful of. Others are reputed to coax or repel spirits, and should be approached with caution. Like us, animals are part of nature, and one of the largest – the elephant – finds its food and medicines from the same plants as we do.

Nature has provided us with a certain number of plants which are useful for humans. These are important for a healthy lifestyle, life philosophy and are sometimes considered mystical.

In Laos a large part of the population has no choice other than plants to treat ailments, and the

effectiveness of these treatments is directly linked to animist or Buddhist beliefs. Each village has its *mò ya*, the plant specialist, but also a *mò mòn* who knows the mantras, and most times it is the same person who performs both roles. Medicinal plants can also be purchased in the marketplace: dried leaves, brown bark and twisted roots of mysterious origin (which are not easily identifiable).

Like many other traditional medical practices, Lao medicine is preventative rather than for healing.

You *di mi hèng*, “being in good health, having strength”, is its basic principle. This condition of well-being depends on good circulation of the internal breath, *lôm*, which passes through all the organs; its disturbance leads to disorders called *padong*. Some illnesses have external causes – natural or supernatural – that are called *sannibat*. Another source of problems is not respecting the cold/hot equilibrium, which governs living beings.

A human being is made up of 32 elements, or *khouane*, which must be maintained in harmony by rites that are renewed when anything dangerous occurs.

These rites are called *soukhouane* (or *baci*), which can be translated as “attachment of souls”.

You will see several small medicinal gardens here, each devoted to a particular type of problem: those experienced by women; those of the skin (which envelops the body and so requires continual care); those of injuries to the arms and legs, which are numerous due to the hard agricultural work undertaken by most Lao people; those related to the stomach and the whole digestive system.



Ethnobotanic Garden at Pha Tad Ke

The spirits are among us. Mankind is not alone in nature. Many spirits, called *phi* in Lao, surround us. The term *phi* is very general and encompasses several categories of genies and supernatural beings who can be either well-intentioned or evil.

## Ethno-botany in Laos, the Roots of Culture

(Continued from page 47)

Good phi are generally found in particular locations. They are guardians of places, like the phi ban, the phi muang, the phi heuan – spirits of the village, of the city, of the house. They are honoured with offerings of candles, incense, flowers or fruits. Spirits inhabit the great and beautiful trees. The ton pho (*Ficus religiosa*) represents Buddha in the pagodas, but in the forest other trees are honoured. They preside over certain curative rites such as “the propping up of the fig”, during which a branch of the tree is held up by a stake so that the sick person (the subject of the rite) is supported as well. Supporting the tree is supporting the person.

Evil phi are everywhere. There are the phi phet, phantoms of people who have accumulated bad karma. Particularly frightening is the spirit of a stillborn child or that of a person killed in an accident. The phi kong koy walks backward to hide its tracks, and the phi pop possesses its victim, who then becomes in turn a phi pop. Fortunately, we can protect ourselves against these intruders by nailing a branch of gna kha (woolly grass, *Imperata cylindrica*), or a leaf of lep nguak (*Euphorbia antiquorum*) onto the door of the house, or by burning an irritating wood like that of ton mi (*Schima wallichii*).

In the courtyard in front of the house we can plant spiny cactuses, which frighten spirits. It is also helpful to wear beneficial leaves like phi seua noy (*Vitex trifolia*) on one's body, keeping evil at bay. If a sorcerer has already attacked someone, the sick or possessed person can be struck with a whip made of the leaves of cardamom, kavan (*Amomum spp.*), to break the spell.

Enjoy a visit to our Ethno-botanical garden to learn more! ■

*Biba Vilayleck is an ethno-linguistics and author of several publications on ethno-botany. She lived in Laos for over ten years and now visits every year as resident ethno-botanist at Pha Tad Ke. As a regular contributor to the French/Lao magazine Le Renouveateur she wrote a weekly column that published over 600 plant descriptions. She wrote “Fleurs de la Devotion” with Baj Strobel, published by Pha Tad Ke in 2011 as the first book in our ethno-botanic series, followed in 2014 by “Jouer la nature”, illustrated by Tiao Somsanith Nithakhong.*

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## PROGRAM: THE FUTURE OF GINSENG AND FOREST BOTANICALS

JULY 12, WEDNESDAY

### American Ginseng

#### HIGHLIGHTS

WELCOME AND OPENING KEYNOTE:  
“Taking the Broad View: How Are Wild Ginseng Populations Faring and When Does Conservation Policy Need to Change?” – Jim McGraw, West VA University

PRESENTATIONS:  
CURRENT RESEARCH ON AMERICAN GINSENG

Topics include:

- Management of wild populations, wild harvest, and policy
- Multi-stakeholder sustainable-sourcing medicinal plant
- Economic development initiatives in Appalachia – lessons learned from various projects

PANEL DISCUSSION ON CONSERVATION,  
MANAGEMENT, AND POLICY

PANEL DISCUSSION ON LAW ENFORCEMENT

EVENING DINNER AT HOTEL AND SPEAKER: “Ginseng in Appalachian Folk Medicine” – Phyllis Light

JULY 13, THURSDAY

### Appalachian Forest Botanicals

#### HIGHLIGHTS

PRESENTATIONS:  
CURRENT RESEARCH ON APPALACHIAN FOREST  
BOTANICALS AND CONSERVATION/MANAGEMENT OF  
WILD POPULATIONS

Topics include:

- Current research on Appalachian forest botanicals
- Conservation/management of wild populations
- Sourcing/cultivation/forest farming presentations
- Market/trade and roundtable discussion
- Policy input/next steps/recommendations

HERBALIST PANEL: PAST AND PRESENT USES  
AND ANALOGS AND SOURCING –  
Kathleen Maier, Mimi Hernandez,  
Phyllis Light, Steven Yeager

SOCIAL MIXER: POSTER SESSION  
WITH MUSIC AND LOCAL PRODUCTS

DINNER ON YOUR OWN — participants  
are free to explore Morgantown.

JULY 14, FRIDAY

### Forest Farming – Growing the Network by Supporting the Cultivation

#### HIGHLIGHTS

APPALACHIAN BEGINNERS FOREST FARMERS  
BREAKFAST MIXER

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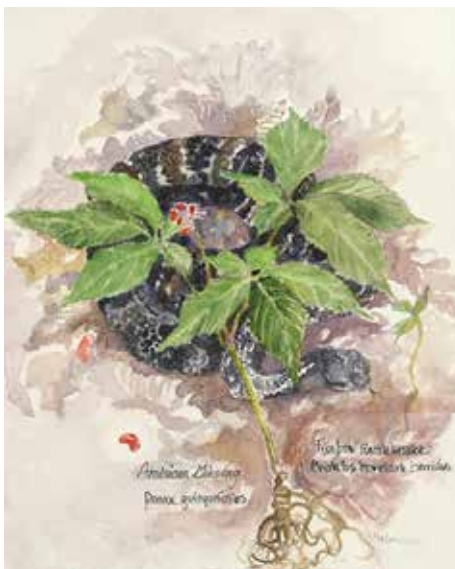
FOREST FARMING PANEL DISCUSSION ON RESOURCES,  
GRANTS AND OPPORTUNITIES

FIELD TRIP: FOUNDATIONS OF FOREST FARMING AT  
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## FOREST FARMING FOR NEW FARMERS

By Holly Chittum

Forests represent 65% of the land base within the Appalachian region. Along with timber production and harvest, farming of non-timber forest products provides a potential income source for Appalachian forestland owners. There is a long history of the sale of wild harvested forest edible, medicinal, and decorative plants in the Appalachian region. As consumer knowledge of and demand for these products has grown in recent years, forest cultivation has been considered an economically viable option and sustainable alternative to wild harvest. This increased demand has piqued the interest of new farmers



Photo of a participant's grandfather with wild ginseng find taken at Pine Mountain Settlement School in Kentucky. (Photo credit: Susan Leopold)

who are looking for ways to either diversify current production or make better use of wooded land that requires minimal site preparation and keeps the forest ecosystem intact.

The Appalachian Beginning Forest Farmer Coalition (ABFFC) is a project dedicated to increasing opportunities for farmers and forestland owners in Appalachia and beyond who are interested in starting or expanding/diversifying a forest farming operation. Funded by NIFA under the Beginning Farmer and Rancher Development Program (BFRDP), the ABFFC is the first of its kind within the BFRDP program to focus specifically on forest farming. The ABFFC promotes and expands cultivation and conservation of native non-timber forest medicinal products. The Coalition helps prepare forest farmers to supply a forest grown verified and certified organic raw material to nutraceutical and herbal product industries. This is done by providing technical, administrative, and market sales training, and opportunities for farmer-farmer and farmer-industry representative networking. The Coalition also improves access to farm resource inventory and plant habitat management support services by training extension and other agency personnel. Additionally, opportunities are provided to link them with forest farmers in their area in order to learn more about these enterprises.

The project is a collaboration across multiple academic institutions, governmental and non-governmental organizations including the USDA Forest Service, Virginia Tech, Penn State, North Carolina State, United Plant Savers, Appalachian Sustainable Development, Rural Action, the Blue Ridge Woodland Growers, the USDA National Agroforestry Center, the Pennsylvania Department of Conservation and Natural Resources, and the Southern Regional Extension Forestry Network.

Year 1 wrapped up in December 2016 at the ABFFC and much was accomplished. The coalition website is rolling at [www.appalachianforestfarmers.org](http://www.appalachianforestfarmers.org). It includes a substantial and growing collection of forest farming resources and learning tools, as well as social media forums for connecting coalition members. ABFFC membership is now almost 1000 strong and growing. Two newsletters have been published with a third on the way this spring 2017. Eight forest farmer training events and two external training sessions took place at multiple locations across the Appalachian region in year 1 including locations in Virginia, Tennessee, Ohio, Kentucky, and Maryland.

For the first events in November 2015, people gathered together from across the forest medicinal products supply chain to discuss new opportunities for growers and buyers in collaboration with United Plant Savers, Mountain Rose Herbs, Pennsylvania Certified Organic, North Carolina State, and Penn State. Summer 2016 events took place in Kentucky and Ohio for the United Plant Savers 1/2-day and 1-day introductory forest farming workshops with collaborators from the Kentucky Department of Agriculture, Pine Mountain Settlement School, and Mountain Rose Herbs. Attendees got an introduction to the forest botanicals market and supply



All ages participated at the UpS Forest Farming event in Kentucky.

chain and learned about a Forest Grown cost-share program funded by United Plant Savers. The Blue Ridge Woodland Growers hosted their ABFFC event in late summer in Floyd, VA. Attendees got a glimpse of the grounds and drying facilities at the of the Appalachian Herb Growers Consortium at the Blue Ridge Center for Chinese Medicine during a field trip. They learned about different aspects of production from site selection and propagation to post-harvest handling and value-added production.

In late August the coalition joined forces with Appalachian Sustainable Development in the forests of northeastern Tennessee near Mountain City. Participants dove into a diverse set of topics from how to make value-added products like wild cherry bark syrup to forest farm management and budgeting strategies. In September, the ABFFC presented forest farming sessions at the Small Farms Conference in Virginia Beach and the International Herbal Association Conference in Columbia, MD. Finally, the coalition journeyed up to Rutland, Ohio and the United Plant Savers Goldenseal Sanctuary in late September with Rural Action. The weekend was full of events in the classroom and in the field. Some attendees spent time in the woods discussing site selection and related topics while others learned the process of tincture making with a local herbalist. Evening found everyone around the bonfire sharing thoughts about valuable things gleaned from the event and sharing excitement for what is to come.

Results are in from the events, and attendee feedback showed much was learned and that understanding of the opportunities and challenges related to forest farming increased substantially. Many also felt they were highly likely to use the information gained during the trainings in their forest farming endeavors. Venues used for the trainings and catering were also rated as excellent!

Planning for year 2 of the project is well underway. In addition to offering several trainings that give a detailed survey of forest farming industry and practices, the ABFFC also plans to offer next-step curriculum. Participants will zoom in on specific, important forest farming topics from propagation and seed sourcing,

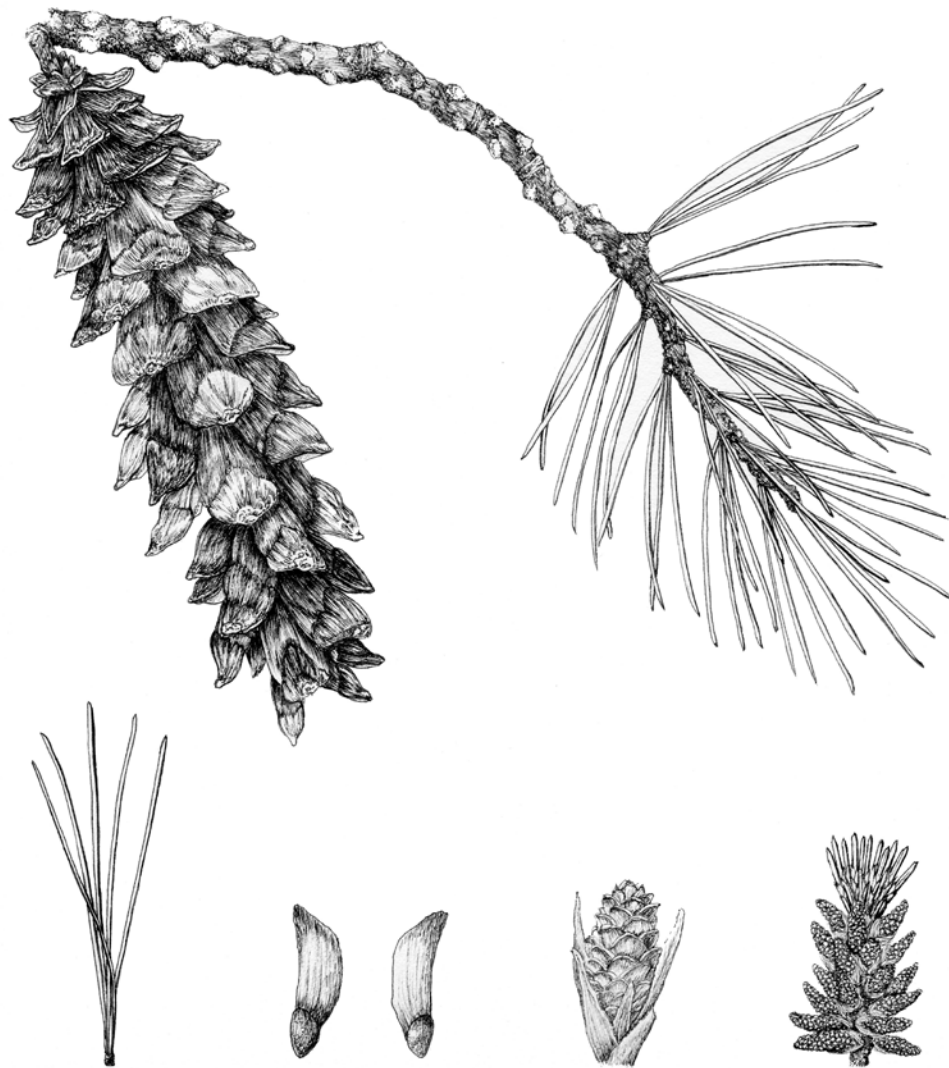
to harvest and post-harvest processing, to business planning and more in order to build depth knowledge and offer opportunities for specialization. Information about the early 2017 events is available on the ABFFC website calendar with more to follow as events are confirmed for future dates. Along with second year program events, the Coalition has partnered with other organizations to offer trainings and programs earlier this spring including conference sessions at the CASA Future Harvest Conference in College Park, MD in January and the PASA Farming for the Future Conference in State College, PA, and a one-day introductory training at the Organic Growers School Annual Spring Conference in Asheville, NC. The list of 2017 events is growing, so be sure to check the ABFFC website calendar often for updates at [www.appalachianforestfarmers.org](http://www.appalachianforestfarmers.org). ■



Elwood Jerome "Bud" Carr's Appalachian medicinal plant collection housed Pine Mountain Settlement School.

# Eastern White Pine

*Pinus strobus*



Eastern White Pine (*Pinus strobus*) by Tessa Scheele



## UNITED PLANT SAVERS AT THE IUCN WORLD CONSERVATION CONGRESS

By Alison Ormsby



Susan Leopold and Alison Ormsby from United Plant Savers/ Sacred Seeds attended the 2016 International Union for the Conservation of Nature (IUCN) World Conservation Congress in September in Honolulu, Hawaii. The World Conservation Congress is only held every four years. This

year's gathering brought 9,000 people from around the world together to discuss conservation successes and challenges and set goals for the future. The IUCN is a well-known global conservation organization, based in Switzerland, that sets international conservation policy and produces the Red List publication that assesses that status of species.

United Plant Savers became an official member of the IUCN this year. As an official voting member of the IUCN, UpS was able to take an active role in the WCC as part of the Members' Assembly, where only members can vote on motions put forward during the Congress. For example, UpS was able to vote in favor of motion 48, support for "Protection of primary forests, including intact forest landscapes."

In addition, Susan and Alison helped facilitate a workshop, "Better Deals for Nature and People: Collaborations for Responsible Sourcing of Wild Plant Ingredients." This workshop was a collaboration of UpS/ Sacred Seeds, TRAFFIC, Traditional Medicinals, AERF, and FARM. Susan and Alison gave a talk, "Conservation Through Cultivation: A Focus on American Ginseng" (see photo). Details about the workshop are available online at <https://portals.iucn.org/congress/session/10224>

Outcomes from the Congress include a fruitful collaboration with the IUCN's Medicinal Plant Specialist Group (MPSG) (see photo). Susan and Alison will be helping to re-launch the MPSG newsletter that has a global readership. ■



Our team prepares for their workshop — Better Deals for Nature and People: Collaborations for Responsible Sourcing of Wild Plant Ingredients



Danna Leaman (co-chair, IUCN Medicinal Plant Specialist Group); Susan Leopold; Alison Ormsby; Anastasiya Timoshyna (TRAFFIC)

# GREEN THANKS & GRATITUDE

## THANK YOU FOR YOUR GENEROUS CONTRIBUTIONS & SUPPORT

We extend a special thank you to all members of UpS who continue to support us with memberships and donations. Your support, efforts and concern are the only thing that can really make a difference in the protection and conservation of our important medicinal plants. All donations and help, whether it be organizational, cultivating, educating or choos-

ing medicinal herb products more consciously are appreciated. Great gratitude goes to the many in-kind donations of goods and services from companies and friends that support our work. Thank you to all our supporters and members who continue to rally for the plants.

### 2016 DONATIONS: \$5000+

Clif Bar  
Family Foundation

Sara Katz

Rosemary Gladstar,  
Women's Herbal Conference

New Chapter

New Tudor Foundation

Wiancko  
Charitable Foundation

### ORGANIZATION/COMPANY 2016 DONATIONS: \$100 - \$4,999

Empowered Herbals

Equinox Botanicals

Fern Hill Nursery and BSN

Fleegal Family Fund

Florida Herbal Conference

Gaia Herbs

Heart of Texas Herb Symposium

Herb 'N Health

Herb Pharm

Herbalist & Alchemist, Inc.

Homestead Apothecary

Leaf People, Inc.

LearningHerbs.com

Mama Jo's Sunshine Herbals

MoonMaid Botanicals

Mountain Rose Herbs

North Country Herbalists Guild

Sweetwater Sanctuary

The Gleason Family Foundation c/o

The Ohio Moulding co./

Dorothea and Fletcher Gleason

The Thalia & George  
Liberatos Foundation

The White Pine Fund

Traditional Medicinals

Wells Fargo -  
Community Support Campaign

Woodland Essence

Zack Woods Herb Farm

### INDIVIDUAL 2016 DONATIONS: \$100 - \$4,999

Steve Ambrose

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Gina/Wick Bondurant/Fary

Mayche & Richo Cech

Tom Challenger

Shay Clanton

Bevin Clare

Margaret Dyson-Cobb

Sara Eisenberg

Debra Elliot

Margaret FitzGibbon

Camile Freeman

Eve Giannetta

Rosemary Gladstar

Mindy Green

James Green

Palo Hawken

Erin Hollister-Grover

Beth Hood Burnham

Deb Jackson

Kelly Kindscher

Lara Landrum

Lynda Lemole

Susan Leopold

Judy Lyall

Kathleen Maier

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of Maggie Philipsborn

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Maribel Rodriguez

Emily Ruff

Mark Sieffert

Susan Smile, MD

Deb Soule

Joy Stallings

Pamela Tate

Tanya Woke

Stephen Yeager



# CORPORATE MEMBERS PROGRAM

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## **21 Drops**

Delray Beach, FL  
[21drops.com](http://21drops.com)

## **ABRA Therapeutics**

Dallas, TX  
[abratherapeutics.com](http://abratherapeutics.com)

## **Alkemist Lab**

Costa Mesa, CA  
[alkemist.com](http://alkemist.com)

## **American Ginseng Pharm**

Preston Hollow, NY  
[americanginsengpharm.com](http://americanginsengpharm.com)

## **Ancient Order of Druids in America**

Indiana, PA  
[aoda.org](http://aoda.org)

## **Angelina Organic Skincare**

Bend, OR  
[angelinaskincare.com](http://angelinaskincare.com)

## **Aromafloria**

Huntington Station, NY  
[aromafloria.com](http://aromafloria.com)

## **Boline Apothecary**

Columbus, OH  
[bolineapothecary.com](http://bolineapothecary.com)

## **Elemental Herbs**

Morro Bay, CA  
[elementalherbs.com](http://elementalherbs.com)

## **Equinox Botanicals**

Rutland, OH  
[equinoxbotanicals.com](http://equinoxbotanicals.com)

## **Frontier Natural Products**

Norway, IA  
[frontiercoop.com](http://frontiercoop.com)

## **Gaia Herbs**

Brevard, NC  
[gaiaherbs.com](http://gaiaherbs.com)

## **Gaia Rhythms Tea Co.**

Auburn, CA

## **Galen's Way**

Sebastopo, CA  
[galenswaystore.com](http://galenswaystore.com)

## **Golden Needle Acupuncture**

Fletcher, NC  
[goldenneedleonline.com](http://goldenneedleonline.com)

## **Goldthread Herbs**

Florence, MA  
[goldthread-herbs.myshopify.com](http://goldthread-herbs.myshopify.com)

## **GRD Healing Arts Clinic**

Dunwoody, GA  
[grdhealth.com](http://grdhealth.com)

## **Green Girl Herbs & Healing**

Hopewell Junction, NY  
[greengirlherbs.com](http://greengirlherbs.com)

## **Greenstar Farm and Apothecary**

Blacksburg, VA  
[greenstarfarm.com](http://greenstarfarm.com)

## **Guayaki Sustainable Rainforest Products**

Sebastopo, CA  
[guayaki.com](http://guayaki.com)

## **Heart of Texas Herb Symposium**

Wimberley, TX  
[heartoftexasherbsymposium.com](http://heartoftexasherbsymposium.com)

## **Health & Wisdom Inc.**

Arcola, MO  
[health-and-wisdom.com](http://health-and-wisdom.com)

## **Herb Pharm**

Williams, OR  
[herb-pharm.com](http://herb-pharm.com)

## **Herbalist & Alchemist, Inc.**

Washington, NJ  
[herbalist-chemist.com](http://herbalist-chemist.com)

## **Herbiary**

Asheville, NC  
[herbiary.com](http://herbiary.com)

## **Herbs Etc.**

Santa Fe, NM  
[herbsetc.com](http://herbsetc.com)

## **Herbs For Life**

York, ME  
[herbs-for-life.com](http://herbs-for-life.com)

## **Homestead Apothecary**

Walnut Creek, CA  
[homesteadapothecary.com](http://homesteadapothecary.com)

## **Housewerks Salvage**

Baltimore, MD  
[housewerksalvage.com](http://housewerksalvage.com)

## **Jade Bloom**

Herriman, UT  
[jadebloom.com](http://jadebloom.com)

## **Jean's Greens**

Castleton, NY  
[jeansgreens.com](http://jeansgreens.com)

## **Johnston Chiropractic Health and Wellness**

Hot Springs, AR  
[thebackninja.com](http://thebackninja.com)

## **Kim Manley Herbals**

Dillon Beach, CA  
[kmherbals.com](http://kmherbals.com)

## **Kroeger Herb Products**

Boulder, CO  
[kroegerherb.com](http://kroegerherb.com)

## **Kuumba Made**

Tucson, AZ  
[kumbamade.com](http://kumbamade.com)

## **Laura Bearskin**

Milwaukee, WI

## **Leaf People Skin Care**

Basalt, CO  
[leafpeople.com](http://leafpeople.com)

## **LearningHerbs.com LLC**

Shelton, WA  
[learningherbs.com](http://learningherbs.com)

## **Life by U**

Holly Hill, FL  
[lifebyu.com](http://lifebyu.com)

## **Loess Roots**

Stanton, NE  
[landscapingrevolution.com/Loess\\_Roots/loess\\_roots.html](http://landscapingrevolution.com/Loess_Roots/loess_roots.html)

## **Lunaroma Aromatic**

Burlington, VT  
[lunaroma.com](http://lunaroma.com)

## **Mama Jo's Sunshine Herbals**

Indian Harbor, FL  
[mama-jos.com](http://mama-jos.com)

## **Moonmaid Botanicals**

Cosby, TN  
[moonmaidbotanicals.com](http://moonmaidbotanicals.com)

## **Morning Myst Botanics**

Northport, WA  
[morningmystbotanics.com](http://morningmystbotanics.com)

## **Mother Earth Foods**

Parkersburg, WV  
[motherearthworks.com](http://motherearthworks.com)

## **Mountain Rose Herbs**

Eugene, OR  
[mountainroseherbs.com](http://mountainroseherbs.com)

## **Mountain Run Farm**

Big Island, OR  
[mountainrunfarm.com](http://mountainrunfarm.com)

## **Natural Healing Veterinary Acupuncture**

Oregon City, OR  
[drjester.com](http://drjester.com)

## **Natural Hope Herbals**

Millersburg, NY  
[naturalhopeherbals.com](http://naturalhopeherbals.com)

## **New Chapter**

Brattleboro, VT  
[newchapter.com](http://newchapter.com)

## **Northica Media**

Winnipeg, MB, CAN  
[northica.com](http://northica.com)

## **Oshala Farm**

Grants Pass, OR  
[oshalafarm.com](http://oshalafarm.com)

## **Rebbl**

Berkeley, CA  
[rebbl.co](http://rebbl.co)

## **Red Moon Herbs**

Asheville, NC  
[redmoonherbs.com](http://redmoonherbs.com)

## **Ridge Runner Trading Co.**

Boone, NC  
[ridgerunnertrading.com](http://ridgerunnertrading.com)

## **The Royal Treatment Veterinary Center**

Chicago, IL  
[royaltreatmentveterinarycenter.com](http://royaltreatmentveterinarycenter.com)

## **Sacred Moon Herbs**

Dripping Springs, TX  
[sacredmoonherbs.com](http://sacredmoonherbs.com)

## **Sacred Plant Traditions**

Charlottesville, VA  
[sacredplanttraditions.com](http://sacredplanttraditions.com)

## **Sage Mountain Retreat Ctr.**

East Barre, VT  
[sagemountain.com](http://sagemountain.com)

## **Seam Siren**

Paia, HI  
[seamsiren.com](http://seamsiren.com)

## **Shaw Black Farm**

Morning View, KY  
[shawblackfarm.com](http://shawblackfarm.com)

## **Southern Oregon Bokashi**

Talent, OR  
[sobokashi.com](http://sobokashi.com)

## **Starwest Botanicals**

Sacramento, CA  
[starwest-botanicals.com](http://starwest-botanicals.com)

## **TFS Ltd**

Nedlands, Western Australia  
[tfsLtd.com.au](http://tfsLtd.com.au)

## **The School for Aromatic Studies**

Chapel Hill, NC  
[Aromaticstudies.com](http://Aromaticstudies.com)

## **Traditional Medicinals**

Sebastopol, CA  
[traditionalmedicinals.com](http://traditionalmedicinals.com)

## **Urban Moonshine**

Burlington, VT  
[urbanmoonshine.com](http://urbanmoonshine.com)

## **Vitality Works**

Albuquerque, NM  
[vitalityworks.com](http://vitalityworks.com)

## **Way Out Wax**

North Hyde Park, VT  
[wayoutwax.com](http://wayoutwax.com)

## **Wild Carrot Herbals**

Enterprise, OR  
[wildcarrotherbals.com](http://wildcarrotherbals.com)

## **Stephanie Wilkinson**

Herriman, UT

## **WishGarden Herbs**

Louisville, CO  
[wishgardenherbs.com](http://wishgardenherbs.com)

## **Wise Woman Herbals**

Creswel, OR  
[wisewomanherbals.com](http://wisewomanherbals.com)

## **Woodland Essence**

Cold Brook, NY  
[woodlandessence.com](http://woodlandessence.com)

## **WTS Med Inc.**

Montpelier, VT  
[wtsmmedproducts.com](http://wtsmmedproducts.com)

## **Zack Woods Herb Farm**

Hyde Park, VT  
[zackwoodsherbs.com](http://zackwoodsherbs.com)

## **Zensations Apothecary**

Baltimore, MD

Corporate members have a unique opportunity to educate their customers about issues surrounding the sustainable supply of our native medicinal plants. More information about the corporate member program is on our website.

# Adopt an "At-Risk" Plant Program

American Ginseng



Trillium



Osha



Slippery Elm



Goldenseal



Bloodroot



Wild Yam



Lady's Slipper



Echinacea



Black Cohosh



Sandalwood



## Adopt an "At-Risk" Plant Program

Adopting an "At-Risk" healing herb is your five-year commitment to sponsor your adopted herb's page on UpS's website. The web page will include your logo, a brief description of your organization, and any relevant information you provide. The web page will be regularly updated with current research towards the conservation and propagation of your adopted healing herb. Your adoption fee also helps fund the many programs which fulfill the mission of United Plant Savers.

To learn about how to adopt and the benefits of adopting an "At-Risk" healing herb, download our PDF brochure from our website [www.unitedplantsavers.org](http://www.unitedplantsavers.org).

Eyebright



# UPS EVENTS & GREEN NETWORK

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## 2017 HERB EVENTS

JUNE 9 - 11

### **International Herb Symposium**

Wheaton, Massachusetts

[www.internationalherbsymposium.com](http://www.internationalherbsymposium.com)

Keynote speaker: Robin Wall Kimmerer

JULY 12 - 4

### **The Future of Ginseng and Forest Botanicals Symposium**

Morgantown, West Virginia

[www.unitedplantsavers.org](http://www.unitedplantsavers.org)

AUGUST 3 - 6

### **AIA International Aromatherapy Conference**

Rutgers University - School of Plant Biology

New Brunswick, New Jersey

[www.alliance-aromatherapists.org](http://www.alliance-aromatherapists.org)

Susan Leopold, PhD will be speaking

AUGUST 12

### **Medicinal Plants of the Driftless Region**

United Plant Savers Event

Kickapoo, Wisconsin

[www.unitedplantsavers.org](http://www.unitedplantsavers.org)

AUGUST 17 - 23

### **The Oregon Eclipse: a total solar eclipse gathering**

Summit Prairie, Oregon

[www.oregoneclipse2017.com](http://www.oregoneclipse2017.com)

Susan Leopold, PhD will be speaking

AUGUST 25 - 27

### **The 30<sup>th</sup> Anniversary Celebration of the New England Women's Herbal Conference**

Hebron, New Hampshire

[www.womensherbalconference.com](http://www.womensherbalconference.com)

SEPTEMBER 7 - 10

### **Breitenbush Herbal Conference - Reunion Year!**

Breitenbush, Oregon

[www.breitenbushherbalconference.com](http://www.breitenbushherbalconference.com)

SEPTEMBER 30 - OCTOBER 1

### **MidAtlantic Women's Herbal Conference**

Kempton, Pennsylvania

[www.womensherbal.com](http://www.womensherbal.com)

Keynote speakers: Rosemary Gladstar and Susan Leopold, PhD

OCTOBER 5 - 9

### **American Herbalists Guild 28<sup>th</sup> Annual Symposium**

Silverton, Oregon

[www.americanherbalistsguild.com](http://www.americanherbalistsguild.com)

FEBRUARY 23 - 25, 2018

### **Florida Herbal Conference**

Lake Wales, Florida

[www.floridaherbalconference.org](http://www.floridaherbalconference.org)

Keynote speakers: Linda and Luke Black Elk



**CHRISTMAS FERN**

*Polystichum acrostichoides*

Tessa Scheele



## United Plant Savers

PO Box 147

Rutland, OH 45775

[www.unitedplantsavers.org](http://www.unitedplantsavers.org)

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# *Medicinal Plant Conservation in the Driftless Region*

A full day of informative talks & herb walks with Sam Thayer, Matthew Wood, Jess Krueger, Jim McDonald, Linda Conroy, Erin LaFaive, Jane Stevens, Lora Krall, Kathleen Wildwood, Wayne Weisman and others.

# PLANTING THE FUTURE *conference*



SATURDAY  
**August 12, 2017**

Kickapoo Valley Reserve, WI

A United Plant Savers Event

Please Register at  
[www.unitedplantsavers.org](http://www.unitedplantsavers.org)

*Aconitum noveboracense*, also known as northern blue monkshood.