These slides provide a visual guide to the purpose, projects and people who make up United Plant Savers. Through beautiful photos of “at risk” medicinal plants, we hope to increase appreciation of these special plants and awareness about plant conservation.

1 - Our sign at Goldenseal Sanctuary, Rutland Ohio. Carved from the ‘Mother Oak’.

2 - Stewardship

3 - **Statement of Purpose** - This is UpS's reason for existence--creating a bridge between conservation organizations, government, wildcrafters, farmers and the herbal industry, all on behalf of the plants.

4 - **“At Risk” and “To Watch” Lists** - The plants chosen for this peer-reviewed list are commonly traded and there is concern for their sustainability in their natural environment. UpS is currently re-evaluating these lists based on more scientific criteria.

**EASTERN WOODLAND HERBS** All of the plants shown are part of an interdependent community living in the forest. As a whole, they create a healthy and balanced ecology.

5 - **Pink Lady’s Slipper** (*Cypripedium acaule*) - The first medicinal herb that drew the attention of herbalists in the United States due to its over harvest and shrinking habitat. The root, which was used for nervous exhaustion, was traded very actively to Europe, to the detriment of native American populations. There is no legal embargo, but conservation-minded herbalists have generally agreed to not continue using Lady's Slipper as a medicine because of its "at risk" status.

6 - **Showy Lady’s Slipper** (*Cypripedium reginae*) - The tallest of the lady’s slipper species grows in wetland environments, and is considerably less common than pink lady’s slipper.

7 - **Goldenseal** (*Hydrastis canadensis*) - This is the poster child and logo of nation-wide conservation efforts; it was listed on the Convention for International Trade in Endangered Species (CITES list) in 1998. Trade in goldenseal is now being closely monitored. The UpS Sanctuary land has a 7-acre patch of native goldenseal, one of the largest remaining stands in the U.S.

8 - **Goldenseal berries** - Planting goldenseal from seed is a viable method for increasing the plant. Each berry contains 12-30 shiny black seeds. Cultivation from seed helps preserve diversity of the population, and propagating from seed can be accomplished without further harvest of wild goldenseal. Traditionally the root is the part of goldenseal used medicinally, but it is a small root, and it takes many plants to add up to a pound.

9 - **Ginseng** (*Panax quinquefolius*) - Wild ginseng is quite rare, although there is a huge ginseng cultivation industry that ranges from wild propagation in its native environment to large-scale, chemical intensive factory farming under shade cloth. Ginseng has been exported to China for 300 years and is still exported in large quantities. The Chinese consider *P. quinquefolius* to be more of a *yin* tonic than their native ginseng, *Panax ginseng*.
10 - **Ginseng berries** - The bright colors of ginseng in the autumn make it easy to spot. Berries can be planted an inch deep near the parent plant and the yellow tops removed to help protect plants from poaching, still a problem especially on public land.

11 - **Black Cohosh** - *(Actaea racemosa)* - Recent increased demand for the root of black cohosh has lead to wholesale wild-harvest of this plant. An increasing amount of black cohosh is now cultivated, but most of what’s on the herb market is still wild. It is popularly used for menopausal hot flashes, but other, more sustainably sourced herbs like motherwort, oats and sage can also be very helpful for hot flashes.

12 - **Bloodroot** *(Sanguinaria canadensis)* - Deep forest dwelling member of the poppy family. The roots contain the acrid alkaloid sanguinarine, which is used commercially as a plaque-inhibiting ingredient in toothpaste. Also used by the nursery trade. The plant is difficult to propagate from seed and is often taken from the wild. Bloodroot is another small plant, so harvest of many roots has contributed to its ‘at-risk’ status.

13 - **Blue Cohosh** *(Caulophyllum thalictroides)* - Grows in the deepest, darkest, wettest parts of the forest. Fairly easy to grow from seed as long as it’s kept moist and sown in good forest soil soon after ripening. In the first growing season it produces a long rootstock, then in the spring of the second year it makes its first aerial growth. Blue cohosh has traditionally been used to promote productive labor in childbirth.

14 - **False Unicorn** *(Chamaelirium luteum)* - A member of the *Liliaceae* family, this plant is extremely vulnerable and increasingly rare in its native habitat. There is some cultivation of false unicorn, but mostly it is still wildharvested. The root has been used as a reproductive tonic, and again there are other plants that can be used more sustainably, such as motherwort, chaste tree berry or the Ayurvedic shatavari.

15 - **Goldthread** *(Coptis sp.)* - Since this plant contains berberine like goldenseal and Oregon grape, it has been suggested as an analog, but it is a tiny plant. Goldthread grows in the acid-soil environments of the Northeast. Most of the Coptis currently on the market is Chinese Coptis, which has a much larger root than our goldthread.

16 - **Maidenhair Fern** *(Adiantum pedatum)* - A delicate, black-stalked fern of the deep forest. It was used traditionally for the treatment of upper respiratory congestion, colds, flu and rheumatism. This plant, due to its sparse distribution and sensitivity to environmental change is becoming increasingly rare.

17 - **Mayapple** *(Podophyllum peltatum)* - Large amounts were dug in the past because of its use as a starting material for pharmaceutical products, particularly escharotic agents.

18 - **Partridge Berry** *(Mitchella repens)* - A slow-growing forest groundcover, traditionally used as a female tonic, especially in pregnancy and birthing.
19 - **Pink Root** *(Spigelia marilandica)* - The root of this beautiful herb was formerly used to remove intestinal worms.

20 - **Spikenard** *(Aralia racemosa)* Araliaceae family - Utilized extensively by native Americans as a lung and uterine tonic.

21 - **Stonercroot** *(Collinsonia canadensis)* - Lesser known but very important herb because of its unique activities as a non-toxic and effective vascular tonic.

22 - **Trillium** *(Trillium spp.)* - Trillium takes many years to reach reproductive maturity, and is dependant on ants for its dispersal. The root has been used as a uterine tonic and hemostatic in childbirth. More common plants like raspberry leaf and shepherd’s purse work as well for these purposes.

23 - **True Unicorn** *(Aletris farinosa)* - Although no longer commonly used as a medicine, this plant is rare throughout its range. It’s preferred wetland and sandy area habitats are under threat from development.

24 - **Turkey Corn** *(Dicentra canadensis)* - Also known as Squirrel Corn, this very dainty little spring ephemeral was used as an alterative tonic by the Eclectic physicians of the late 19th century.

25 - **Wild Yam** *(Dioscorea villosa)* - A beautiful vine, this plant depends on the shade and trellising provided by trees, and the loss of forest habitat is the most significant factor in the decline of wild yam populations. Many thousands of pounds of wild yam are traded annually, and almost all is wild harvested. It is not a source of progesterone - wild yam contains a steroidal saponin called diosgenin which doesn't have direct hormonal action.

26 - **Virginia Snakeroot** *(Aristolochia serpentaria)* - The root of this diminutive herb was once exported from the American colonies to the Old World by the shipload, and is now extremely rare in the wild. There is no commercial cultivation of Virginia snakeroor, so even though not much is currently traded, all of that is wildcrafted.

**HERBS FROM THE DESERT SOUTHWEST**

27 - **Peyote** *(Lophophora williamsii)* - Desert Cactus once common in a range including southern Texas and northern New Mexico. A combination of oil well development, cattle ranching, over-harvesting and improper harvesting have drastically depleted the population. Peyote is more abundant in Mexico than in the U.S., and has been listed as an endangered plant in Mexico since 1991. The Native American Church states that “Anyone who partakes of the holy sacrament Peyote as part of their religious practice must become actively involved in its propagation and welfare.”

28 - **Chaparro Amargosa** *(Castela emoryi)* - Also called ‘crucifixion thorn’ because it has many, many thorns but no leaves. It photosynthesizes in its stems, and lives in the driest, hottest, least hospitable places in the desert. Medicinally it has been used as a broad-spectrum anti-parasitic agent.
29 - **Elephant Tree** (Bursera microphylla) - In the same family (Burseraceae) as myrrh, and used similarly for stimulating immune response.

30 - **White Sage** (Salvia apiana) - Limited distribution along California coastal bluffs, yet there is much wild harvesting occurring because of its popularity as a "smudging" plant. Readily cultivated in southern gardens or northern planters.

31 - **Yerba Mansa** (Anemopsis californica) - One of the most powerful healing herbs of the southwest, this plant grows in swampy areas throughout the southwest.

**HERBS FROM PRAIRIE STATES, THE ROCKY MOUNTAINS AND THE WEST**

32 - **Arnica** (Arnica sp.) - Still abundant in the United States, the plant has nonetheless become quite rare in Europe, mainly due to over-harvest. It is currently under protected status in most European countries.

33 - **Gentian** (Gentiana spp.) - Favorite of the digestive bitters due to its high level of bitterness and low tannic acid content. These species of gentian are European, where overharvest had severely impacted populations. Conservation measures have helped gentian begin making a comeback.

34 - **Lomatium** (Lomatium dissectum) - The great age of these plants contributes to our concern about the impact of harvest. The plant is also very difficult or impossible to cultivate, so all of the lomatium currently traded is wild harvested.

35 - **Oregon Grape** (Mahonia aquifolium) - Popular western herb; contains medicinally active alkaloid *berberine*, as does goldenseal.

36 - **Osha** (Ligusticum porteri) - A native to the high mountains of Mexico, New Mexico, Colorado, Wyoming and Utah. Osha is found most commonly in association with groves of Aspen. Considered a sacred plant by many native people of the southwest, there is mounting concern that wild stands of Osha are becoming depleted and increasingly isolated due to the combined forces of overharvest, grazing, logging and development.

37 - **Pipsissewa** (Chimaphila umbellata) - Delicate forest plant, threatened due to deforestation and harvested in large quantities. Excellent urinary antiseptic.

38 - **Pleurisy root** (Asclepias tuberosa) - A gorgeous, drought tolerant prairie plant. The roots grow very, very deep and the flowers are a preferred food of Monarch caterpillars. The root has been used as a respiratory remedy.

39 - **Purple Coneflower** (Echinacea purpurea) - The easiest to grow of all Echinaceas, this plant is a perfect substitute for wild-harvested Echinacea angustifolia.

40 - **Cultivated Echinacea angustifolia** - Although this plant is less adaptable to varied growing conditions, an increasing percentage of Echinacea angustifolia on the market is cultivated. Large
amounts were wild-harvested during the Echinacea ‘boom’ of the 1990’s, before large-scale cultivation of E. purpurea, and wild populations have not recovered.

40 - **Pale Purple Coneflower** (Echinacea pallida) - The other main economically significant species of Echinacea harvested for medicinal purposes. Large quantities of this plant, with its nodding, drooping flowers, once graced the American plains.

41 - **Stream Orchid** (Epipactis gigantea) - Widely distributed throughout the west, found in and around pristine rivers and creeks. The root was valued as a sedative and mood enhancer. Propagation by root cutting or by seed, and is very difficult due to the exact growing conditions required.

**HERBS FROM OTHER ENVIRONMENTS**

42 - **Lobelia** (Lobelia inflata) and **Cardinal Flower** (Lobelia cardinalis) - Lobelia inflata was an important remedy to the Thomsonian practitioners of the 19th century. Cardinal flower lobelia prefers damp areas, and has not commonly been traded as a medicinal plant, but as an ornamental.

43 - **Cascara Sagrada** (Frangula purshiana) - Native to the Northwest, Cascara is used by herbalists and pharmaceutical companies alike as a reliable laxative.

44 - **Eyebright** (Euphrasia officinalis) - Northeast coastal plant with a relationship to the grasses with which it grows. Plants that grow in a very limited eco-niche are particularly susceptible to stress from overharvest.

45 - **Kava** (Piper methysticum) - Root is used to make a traditional herbal beverage of the South Pacific, partaken to improve tribal communication, as a relaxant for the mind and as an antispasmodic for smooth muscles. Kava is widely cultivated in Vanuatu, Fiji and Hawaii. There are a few heirloom “wild” stands of kava in Hawaii that date back to the first Polynesian immigrations. These original varieties of kava must be preserved in order to retain diversity in the kava gene-pool.

46 - **Slippery Elm** (Ulmus rubra) - On the “to watch” list because of Dutch Elm Disease. Large quantities are harvested for the inner bark, which is used in health care as a demulcent. The disease continues to kill most elm trees.

47 - **Round-leaved Sundew** (Drosera rotundifolia) - Beautiful, tiny, insectivorous plant of acidic bogs on the U.S. continent and Alaska.

48 - **Venus’ Fly Trap** (Dionaea muscipula) - This strange, insectivorous plant grows only in bogs, and is native to an extremely limited range in North Carolina. Recent discoveries of its anti-tumor effects have led to continued poaching, but much progress has been made in cultivating the plant, both from bulblet divisions and from seed.

49 - **Wild Indigo** (Baptisia tinctoria) - Thriving best in dry, poor soils, wild indigo was used as an antiseptic for old infections characterized by discoloration of the tissue. A powerful herb to be used sparingly.
United Plant Savers’ Goldenseal Sanctuary

50 - Rosemary Gladstar - Founder and visionary leader of United Plant Savers.

51 - Prairie Plantings - The original Ohio prairie was a diverse habitat for plants, animals, birds and insects. Prairie plantings on the sanctuary land have begun to bring back that diversity, and serve as a model for other neighboring farms.

52 - Greenhouse - Improvements are being made on this land; our intention is to cultivate all plants for the UpS plant giveaways on site.

52 - Reclaimed strip-mined area at the Sanctuary - Much of Appalachia has been devastated due to mining, and it continues to be a threat.

53 - Heart Pond - This man-made pond provides gravity-fed water to buildings at the Sanctuary and swimming for interns and visitors.

54 - UpS members planting Slippery Elm - These trees are now over 10 years old and are serving important research and observation on slippery elm and Dutch Elm Disease.

Come visit UpS’s Botanical Sanctuary
Besides being a true sanctuary for many precious medicinal plants, this land also serves as an education / conference center, and a demonstration ground for studying cultivation techniques of “at risk” plants.

These photos are provided courtesy of Mimi Kamp, Liz Butler, Steven Foster, Martin Wall, Deb Soule, Richo Cech, David Bunting, Ed Smith, Ed Johnston, Robert Chartier, Lee Wood, Nathan Rogers, Betzy Bancroft and the New England Wildflower Society.

These slides may not be reproduced for any purpose.