

Enhancing the Edibility of New England's Landscapes with Native Species Presented by <u>Russ Cohen</u> at the <u>2017 National Native Seed Conference</u>, Omni Shoreham Hotel, Washington, DC, Wednesday, February 15, 2017.



•There has been a burgeoning interest in recent years in <u>restoring</u> <u>native plants to our gardens, yards</u> <u>and landscapes</u> (e.g., as evidenced by the 2010 formation of the group <u>Grow Native Massachusetts</u>).

•This movement got a major boost several years ago from the publication of the book <u>Bringing</u> <u>Nature Home: How Native Plants</u> <u>Sustain Wildlife in our Gardens</u>.

•In Bringing Nature Home, author and University of Delaware Entomology Professor Doug Tallamy makes a compelling case for the key role that native plant species play in supporting our native species of wildlife, particularly insects (such as butterflies and moths), which (in addition to their intrinsic value) serve as a major source of nourishment for nestling birds. BRINGING NATURE HOME



How Native Plants Sustain Wildlife in Our Gardens

DOUGLAS W. TALLAMY

<u>Hometown Habitat</u>, a documentary film that extols the virtues of native plants, and features Tallamy, was released in the spring of 2016



Volunteers planting native plant species along the banks of the Housatonic River just east of downtown Great Barrington, MA as part of the <u>River Walk</u> community project

A few examples of outreach materials intended to promote and facilitate the planting of native species --

Connecticut Native Tree and Shrub Availability List





Connecticut Department of Environmental Protection Bureau of Natural Resources Wildlife Division

Recommended Native Species for Planting in Lexington, MA

National Wildlife Federation's Community Wildlife Habitat Program

Mass. Coastal Zone Management's Coastal Landscaping with Native Species



Native Plant Site Solutions for Backyard Habitat

A how-to guide for designers and homeowners interested in enhancing wildlife habitat value in urban and suburban areas



UNIVERSITY OF RHODE ISLAND OUTREACH CENTER

Excerpt from <u>Rhode Island Coastal Plant Guide</u> - while extremely informative and user-friendly, note the lack of an "edible by humans" column

University of Rhode Island

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RHODE ISLAND COASTAL PLANT GUIDE

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University of Rhode Island ELS Cooperative Extension Education Center Recovered

College of the Environment and Life Sciences

[Select from dropdown list to filter plant list by attributes]



Help

Enter	all	or	part	of	name	above	to	filter	list]	

50 of 231 Species

Clear Filter

		-		-	+ -	-	-	-	-	-	-	-	-			•	-	-	
Species	Common Name	Zone	Plant Type	-	Native Status	Full Sun	Shade Toleran	Drough t Toleran	t Wet t Sites	Wind Toleran	Na:Spray	y Na:Soi t Toleran	Acid t Tolerar	pH nt Ada	Ra pt Gard	in Du ens Pla	ne nt Height		Width
Alnus incana ssp. rugosa	Speckled Alder	1	Shrub	4	t	+	+	+	+	+	+	-	+	-	-	-	>10'		6-12'
Alnus serrulata	Common Alder	1	Shrub	1.4	+	+	+	+	+	+	+	+	+	-	-	14	>10'		6-12'
Amelanchier arborea !	Serviceberry	1	Tree		+	+	+	+	÷	+	+	÷ C	+	÷	+	-	>10'		15-25'
Amelanchier canadensis !	Shadbush	1	Shrub	-	ŧ.	+	+	+	+	+	+	+	+	+	+	+	>10'		variable
Amelanchier laevis !	Allegheny Serviceberry	1	Tree	1	+	+	+	+	-	+	+	+	+	+	+	-	>10'		15-25'
Amelanchier stolonifera	Running Serviceberry	1	Shrub	ł	÷	+	+	+	+	+	+	+	+	+	-	-	2-6'		variable
Ammophila breviligulate	American Beach Grass	1	Grass	- 13	+	+	-	+	-	+	+	+	-	-	-	+	2-6'		
Andropogon gerardii	Big Bluestem	1	Grass	-	+	+	-	+	-	+	+	+	÷	-	-	-	6-10	۰ I	2'
Andropogon glomeratus	s Bushy Bluestem	2	Grass	- 13	+	+	-	+	+	-	÷	÷	÷	÷	÷	+	<2'		÷
Andropogon virginicus	Broomsedge	1	Grass		+	+	-	+	-	+	+	+	+	-	-	-	2-6'		1-2'
Arctostaphylos uva-urs	Bearberry	1	Shrub	- 13	+	+	+	+	-	+	+	+	+	÷	+	+	<2'		variable
Asclepias tuberosa	Butterfly Milkweed	2	Per.	-	+	+	-	+	-	÷	-	+	-	-	+	+	2-6'		2'
Atriplex sp.	Salt Bush	1	Shrub	- 13	+	+	-	+	-	÷	+	+	÷	÷	÷	+	<2'		6'
Baccharis halimifolia	Groundsel-bush	1	Shrub	-	+	+	2	+	-	+	+	+	+	+	-	-	>10'		5-12'
Baptisia tinctoria	False Indigo	1	Per.	- 13	+	+	-	+	÷.	+	+	÷	÷	-	100	-	2-6'		2-3'
Betula populifolia	Gray Birch	2	Tree	-	+	+	+	+	+	+	÷	+	-	+	-	+	>10'		10-20'
Carex flaccosperma	Thin Fruit Sedge	2	Grass	- 13	+	+	+	+	-	-	÷	4.1	+	+	÷	+	<2'		6-12"
Carex pensylvanica	Pennsylvania Sedge	1	Grass	-	+	+	÷	+	-	+	÷	+	+	-	-	-	<2'		6-9"
Carex platyphylla	Broadleaf Sedge	2	Grass	- 13	+	-	+	+	÷	+	÷	÷	+	+	4.00	-	<2'		10"
Carex stricta	Tussock Sedge	2	Grass	1	+	+	÷	+	+	÷	-	+	+	-	+	-	<2'		1.5-2'
Carya ovata	Shagbark Hickory	2	Tree	- 13	+	+	+	+	-	é, s	÷.	÷.	+	+	- Part	-	>10'		-
Ceanothus americanus	New Jersey Tea	2	Shrub	-	+	+	+	+	-	-	-	+	+	+	-	-	2-6'		3-5'
Celtis occidentalis	Common Hackberry	2	Tree		+	+	-	+	+	-	÷	÷	+	+	-	-	>10'		40-60'

The *RI Native Plant Guide* (<u>http://web.uri.edu/rinativeplants</u>) now <u>does</u> include information on each species' <u>edibility</u> (see the "ED" column below), and the list is sortable by category (i.e., the image below is the beginning of an alphabetical listing of all the edible plants in the database.) Also note the related "<u>Rhody Native</u>" program, which informs people about local nurseries where many of these plants are ethically propagated, and are available for purchase.



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Acknowledgements

Resources Contact

RI Native Plant Guide developed in collaboration with the Rhode Island Natural History Survey and their Rhody Native Initiative. R H O D E I S L A N D NATURAL HISTORY SURVEY

locally sourced | locally grown



Databasa Caarab Dasulta							Logi	n I 🔄	Printt	his p	age
Latin Name	Common Name	Ţ	ES	SU	ED	ME	80	EL	Û	141	G
Acer rubrum	red maple	т	Х	х	х	Х	х	Х	х	Х	Х
Acer saccharinum	silver maple	т	х	x	х			Х		х	
Acer saccharum var. saccharum	sugar maple	т	х	х	x	X	х	х			
Allium canadense	meadow garlic	Ρ		х	x				х	х	
Allium tricoccum var. tricoccum	ramps, wild leek	Ρ		х	х	х					
Amelanchier arborea	common serviceberry, downy shadbush	Ţ	x	x	x		x	x	x	x	x
Amelanchier canadensis	Canadian serviceberry, eastern shadbush	s	x	x	x		x	x	x	x	x
Amelanchier laevis	smooth serviceberry, smooth shadbush	S	x	x	x	x	x	x	x	x	x
Amelanchier spicata	dwarf serviceberry, dwarf shadbush	s	х	x	x		x	x	x	x	x
Angelica atropurpurea	purple-stemmed angelica	Ρ	х	х	х	x		х		х	X
Apios americana	common groundnut	V	х	x	x	х			x	х	
Arctostaphylos uva-ursi	kinnikinnick, red bearberry	P	х		х	Х			х		х

► Take-home message from this talk: the "you can eat it too" attribute of many native species offers a powerful incentive for people and organizations to "go native" in their landscaping, that were insufficiently swayed to do so by the ecological rationale alone.





What this presentation is about:

- Extolling the edibility of many of the plant species native to the Northeast, some of which you might want to consider adding to your properties if they aren't already there (NOTE, however, the Precaution on a subsequent slide)
- Expounding on the premise that enabling people to connect to nature via their taste buds helps strengthen their support for land conservation, and that owners/managers of parks, open spaces and other conserved lands might consider edible native species as an opportunity to "spice up" (literally as well as figuratively) their properties and make them more attractive to people as well as wildlife
- Learning that many native species edible by people are directly /indirectly edible/useable by wildlife too, and so planting them enhances wildlife habitat and biodiversity as well as people's enjoyment of open spaces
- In other words, we can have our acorn cake and eat it too

• The places to plant natives I'm focusing on in this talk: <u>parks and open space lands</u> where the natural plant communities have been significantly disrupted and native <u>species diversity reduced through past and/or current human activity</u> (e.g., farming, mowing, land clearing)

Precaution regarding introducing new plants to conserved lands

• If you know or suspect that <u>the property in question contains rare species and/or</u> <u>a relatively pristine and intact native plant community</u>, do <u>not</u> add new plants or seeds to those sensitive, ecologically significant sites

That said --

• If you are restoring a disturbed plant community (through, e.g., the removal of invasive plants), it is OK to reintroduce members of that plant community that are missing, or to enhance the numbers of plants of species that are already there (wintergreen and partridgeberry, e.g.)

• It's also OK to introduce native plants to other highly-disturbed, humaninfluenced sites, such as plantings in gardens and around buildings, parking lots, farms or playing fields

Precaution regarding picking edible plants on conserved properties

• Importance of respecting applicable policies and regulations ("no collecting" policy at Audubon sanctuaries, e.g.)

• Importance of foraging in an environmentally-responsible manner (fruits vs. roots)



► You may want to consult appropriate reference works to determine which plant species are deemed to be native to your area. See, e.g., <u>The Vascular Plants of</u> <u>Massachusetts: A County Checklist, First</u> <u>Revision</u> (2011) (a.k.a., the "yellow book"). Below is an example of what the info inside the yellow book looks like (the two-letter abbreviations stand for the county names).

Tricolpates	The Vascular Plants of Massachusetts - 2011										
JUGLANDACEAE WALNUT FAMILY	Status	S-Rank	BE FR	HS H.	D WO	MI	ES SU	NO	BR	PL BA	DU NA
Juglans cinerea L. Butternut	WL	S4?	NN	NN	N	N	NN	N	N	N ·	
nigra L. Black Walnut		SNA		•	T	·	• 1	•	•	Ī	••

See also the MA Natural Heritage Program's info on Natural Plant Communities.

Documents like this exist for other states, so it is advisable to consult them as well to be informed about which plant species are considered to be native to which locations (counties, states, regions). Two other resources helpful in figuring out which species are/are not native to your region:

• the "Go Botany" website (<u>http://gobotany.newenglandwild.org</u>), set up and maintained by the <u>New England Wild Flower Society</u> (NEWFS); and

• the book <u>Flora Novae Angliae</u>, by NEWFS research botanist Arthur Haines.





Click <u>here</u> to download <u>Edible Wild Plants Native to the Northeast U.S. and E.</u> <u>Canada</u>, a recently updated compilation of >150 species, that originally accompanied my Native Edible Plants presentation at the 2013 Ecological Landscape Alliance Conference. Below is a sample of the info contained in that document.

Edible Northes	Wild Plants Na ast U.S. and Ea d Copyrighted © by Rue	ative to the astern Can ss Cohen, eatwild	e ada @rcn.com <u>http://users.r</u>	Thursday, December 22, 2016 3:38:52 PM <u>sers.rcn.com/eatwild/bio.htm</u>						
Common Name	Botanical Name	Native to MA	Type of plant	Preferred habitat	Comments					
Box Elder	Acer negundo	Yes	small to medium tree	wetlands and other damp areas; floodplains	a species of Maple; sap may be tapped + boiled down for syrup					
Maple, Red	Acer rubrum	Yes	medium to large tree	red maple swamps (of course)	can be tapped for sap like Sugar Maple					
Maple, Silver	Acer saccharinum	Yes	medium to large tree	forested floodplains and other wet ground	can be tapped for sap like Sugar Maple; seeds are edible raw					
Maple, Sugar	Acer saccharum	Yes	medium to large tree	hardwood forests; roadsides	sap is source of maple syrup and sugar					
Sweet Flag (Calamus)	Acorus americanus	Yes	herbaceous perennial	wet fields and meadows; sunny wetlands; along waterways	the similarly-appearing A. calamus is apparently non-native to MA					
Wild Leek (Ramps)	Allium tricoccum	Yes	herbaceous perennial	rich, mesic woods, such as those pref. by maidenhair fern + Dutchman's breeches	over-collecting by commercial diggers is harming ramps + habitat - pick 1 leaf/plant only					
Juneberry/Shadbush	Amelanchier spp.	Yes	Shrub/small tree	likes to grow near water, but often planted in parks and other landscaped areas	fruit ripe in late June; flavor is a cross between cherries and almonds					
Hog Peanut	Amphicarpaea bracteata	Yes	herbaceous perennial vine	damp spots in woods w/ some sun; often on old woods roads	small subterranean seeds are available from late summer onward; tiny peas may be edible too					
Angelica	Angelica atropurpurea	Yes	herbaceous perennial to 6 ft -large spherical flower cluster	wet ground along rivers and streams, in full or partial sun	tender, emerging leaves are edible raw or cooked, young, boiled stems are sometimes candied					
Seacoast Angelica	Angelica lucida	Yes	herbaceous perennial	rocky areas near the ocean	tender, emerging leaves are edible raw or cooked					

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<u>Seeds of Native Edible species I have collected</u> as of February 10, 2017: (species I have successfully propagated plants from are in gold type) *p. 1 of 2*

Angelica atropurpurea Apios americana Arctostaphylos uva-ursi Amelanchier spp. Aronia melanocarpa Asclepias syriaca *Caltha palustris Carya ovata Celtis occidentalis Chamerion angustifolium Corylus americana *Fragaria virginiana Hibiscus moscheutos Gaultheria procumbens Juglans cinerea Juglans nigra Lactuca canadensis Lathyrus japonicus Ligusticum scoticum Lindera benzoin Maianthemum racemosum Maianthemum stellatum

Angelica Groundnut Bearberry Juneberry/Shadbush Black Chokeberry **Common Milkweed** Marsh Marigold Shagbark Hickory Hackberry Fireweed **Common HazeInut** Wild Strawberry Swamp Rose Mallow Wintergreen Butternut **Black Walnut** Wild Lettuce Beach Pea Scotch Lovage Spicebush False Solomon's Seal Starry False Solomon's Seal

*seed obtained from others

<u>Seeds of Edible Native species I have collected</u> as of February 10, 2017: (species I have successfully propagated plants from seed are in gold type) p. 2 of 2 *seed obtained from others

Medeola virginiana *Monarda fistulosa Nyssa sylvatica Osmorhiza longistylis Phytolacca americana Prunus maritima Prunus virginiana Quercus alba Rhus copallinum Rhus typhina Sambucus nigra Smilax herbacea Solidago odora Vaccinium macrocarpon Vaccinium vitis-idaea Viburnum edule Viburnum lentago Viburnum nudum Vitis labrusca Vitis riparia

Indian Cucumber Wild Bergamot Tupelo/Black Gum Sweet Cicely Pokeweed **Beach Plum** Choke Cherry White Oak Winged/Shining Sumac Staghorn Sumac Black Elderberry **Carrion Flower** Sweet Goldenrod Bog Cranberry Mountain Cranberry Squashberry Nannyberry Wild Raisin Fox Grape **Riverside Grape**

So far, since I began my "Johnny Appleseed for edible natives" initiative in the summer of 2015, I have collected the seed of **39** species, and successfully propagated **18** species from seed.

One of the main reasons I have not successfully propagated more than **18** species from seed is that it is simply too early to tell; many of the woodland species go though a "double dormancy", and their seed does not germinate until more than a year after sowing.



A couple of peeks inside the stratification fridge in our basement, where I store seeds that need a prolonged cold period in order to break their dormancy. I check the contents periodically to look for seeds that have "woken up" (more about that later).



View of a section of the nursery I have established to grow edible native plants I have propagated from seed (see, e.g., the Beach Plum seedlings in the milk cartons) as well as plants I have obtained from elsewhere, such as from the New England Wild Flower Society.



The following slides cover some of the 150+ species of edible plants native to New England for which I have been collecting seed, for propagation by myself or sharing with others, and then partnering with others to add to their properties.

Groundnut (Apios americana), a tuber-bearing member of the Pea Family (Fabaceae)



Groundnut tubers (see below) are harvestable and edible year-round. One fun and easy way to cook/eat Groundnuts is to slice the tubers thinly crosswise and then pan fry in oil until golden to make Groundnut Chips.







Groundnut (Apios americana) - ripe seedpods (see right) collected in Leominster, MA. This species can be propagated by seed or from the tubers.





Carrion Flower (Smilax herbacea) – fruits/seed collected in Ipswich, MA Carrion Flower shoots at the right stage for eating, in the spring



Steamed Carrion Flower shoots, ready to be folded into an omelet

Juneberry/Shadbush/Serviceberry, <u>Amelanchier</u> spp. - an early-blossoming tree (a week or two before apples/crabapples) - flowering time is also a good time to spot (and remember) the trees for later fruit-picking opportunities



Juneberry (Shadbush/Serviceberry) - <u>Amelanchier canadensis</u> and other species - fruit is purple when ripe and tastes like a cross between a cherry and an almond





One of the fun (and yummy) items to make from, Juneberries, Beach Plums and other wild fruit strudel Juneberry (*Amelanchier* spp.) seed, obtained via the "extraction by mouth" method (i.e., I ate the sweet pulp surrounding the seeds), after collecting the ripe fruit the last week of June.



Following this process, the seeds were stored in small plastic bags, mixed with a little moist vermiculite, and then placed in my stratification fridge. At least half of the seed "woke up" (i.e., radicles emerged) in January, though, so I had to sow those seeds right away. As of early February, the first true leaves had emerged.



Wild Strawberry (*Fragaria virginiana*) - while the berries are small, they are exceptionally tasty. The leaves (when fresh or thoroughly dried) can be used for tea. While wild strawberry plants can tolerate some shade, the fruit production will be better in sunny, grassy areas. This species certainly has great potential for adding to many home and other landscapes, including (natural) lawns.



Wild strawberries propagate easily from seed, sown indoors or outdoors.



On 3/31/16, I brought the seeds of Wild Strawberry and several other edible native species to Miss Hall's School in Pittsfield, MA, and worked with Greenhouse manager Marian Rutledge and her students to sow them (into used produce containers, such as the one at right). The Wild Strawberries germinated and grew well, and the plants were big enough for the students to sell them at their May plant sale. Marian says the plants were a "bit hit" with their customers.





Wild Bergamot or Bee-Balm (*Monarda fistulosa*) - A savoryflavored (sage or thyme-like) native wild mint, popular with bees and other pollinators. Like most mints, this species can spread assertively, a desirable trait when you are reclaiming a site from invasive species. This species also grows readily from seed.





Sweet Goldenrod (Solidago odora) - the leaves and flowers have a licorice-like flavor. This is one of the native species the American Colonists made tea from when they were boycotting the British tea during the Revolutionary War era.



Sweet Goldenrod (Solidago odora) grows readily from seed; no stratification is required. Here I have just transplanted baby S. odora plants that self-sowed in the summer, from a plug I obtained and potted up from the New England Wild Flower Society.





Spicebush (*Lindera benzoin*) - yet another of the "Revolutionary tea" plants - the dried berries make a fine Black or Szechuan Pepper-like substitute

- Migrating birds like these high-energy berries, though, so be sure to leave some on the plant
- Spicebush likes to grow as an understory plant in hardwood forests, often near streams

As Spicebush is dioecious (male and female flowers are borne on separate plants), make sure you plant at least one female if you want to get berries

Spicebush (along with **Sassafras**) also serves a host plant for the coollooking <u>Spicebush Swallowtail</u> caterpillar (i.e., another reason why you might want to consider adding this species to your property if it isn't already there)







Beach Plum - <u>Prunus maritima</u>



Beach Plum – Prunus maritima



Beach Plums, gathered many miles inland from the ocean



Beach Plum (*Prunus maritima*) – the yellow-fleshed variety – collected in Dennis, MA, September, 2015
Some of the Beach Plum pits I had stored in my stratification fridge since having collecting them in September, 2015 "woke up" (i.e., the radicles emerged) in February, so I had to sow them right away. Here they are, about a month later, growing up on a window sill in my basement.



One of the places where Beach Plums I propagated from seed were planted: Bassing Beach, Scituate MA, a barrier beach owned by the Cohasset Conservation Trust. Here I am with volunteers from the Trust, just after a lobster boat had ferried us, the beach plums and other edible native species out to the island.



Wild Raisin (*Viburnum cassinoides*) - can tolerate drier, rockier soils (still likes sun) - produces pretty clusters of edible fruit (ripe when purple)



Nannyberry (*Viburnum lentago*) – a shrub that likes damp, meadowy areas – the fruit ripens in September and resembles stewed prunes in flavor and texture





Hobblebush or Moosewood (*Viburnum alnifolium*, aka <u>V. lantanoides</u>) – a common understory plant in cool, northern hardwood forests – pretty spring flowers, and fruit with prune, clove-spiced flavor ripe (when black) in late summer









... and Hobblebush leaves can put on quite a colorful show in the fall





Squashberry (*Viburnum edule*), collected in Hartland, VT in Oct. 2015 – made a very yummy sauce (with sugar added, of course) – seeds saved for propagating

Staghorn Sumac - Rhus typhina

All red-berried Sumacs native to New England are edible - that includes Smooth Sumac, Rhus glabra, and Winged (aka Shining) Sumac, Rhus copallinum.



Ripe Staghorn Sumac berry clusters, ready to be made into Sumacade





To make Sumacade:

- (1) Place berry clusters in a bowl;
- (2) Add 1-2 quarts lukewarm or colder water;
- (3) Knead /rub the berry clusters in the water for 4-5 minutes (see how the water takes on a pinkishorange color);
- (4) remove and discard the spent berries;
- (5) pour the liquid through a paper towel or equivalent filter; and
- (6) Serve the Sumacade hot or cold, sweetened or unsweetened (I usually serve it cold and sweetened, like lemonade).







Sumacade (aka "Rhus Juice" or Indian Lemonade).

Staghorn Sumac propagates easily from seed - perhaps too easily. About six years ago, I made the mistake of putting some spent R. typhina berries in my compost pile. I am still getting sumac plants sprouting from that seed in my raised beds where I use my "finished" compost. So now I just pot those Sumac babies up, and grow them out for planting elsewhere.



Staghorn Sumac produces brilliant autumn plumage



Wild Grapes - Riverside and Fox (Concord) Grape, <u>Vitis riparia</u> and <u>V. labrusca</u>



This photo is of a Fox Grape vine laden with ripe fruit, which are often first detected by smell



A basket of Fox Grapes, Vitis labrusca

Wild Grape Cheesecake with a Wild Hazelnut Crust and a Wild Grape Glaze



Riverside Grape (Vitis riparia) leaves (note smooth, green undersides) at the right stage for stuffing



Stuffed Riverside Grape Leaves





Hackberry *(Celtis occidentalis)* – collected in Hingham, MA



Starry False Solomon's Seal (*Maianthemum stellatum*) collected in Ipswich, MA



Common Hazelnut (Corylus americanus) flowers, husks and nuts

female

male





Beaked Hazelnut - Corylus cornuta



While Hazelnuts (*C. americana* or *cornuta*) readily grow from seed, the nuts are "hydrophilic", meaning they will lose their viability if allowed to dry out. They should be sown outdoors soon after collecting, or may be cold moist stratified for up to a year, or possibly longer, and then sown in the spring. Do not forget to protect sown nuts from rodents. I use a half-inch mesh metal hardware cloth for this purpose; the sprouts can grow through the mesh. Leave the mesh on until the nut has been completely used up by the developing tree.

Oaks/Acorns (Quercus alba and other spp.) - note the rounded lobes on the White Oak leaves on the left, versus the pointy lobes of the other oak leaf, which produces more bitter acorns due to higher tannic acid levels



White Oak (Quercus alba) acorns start sprouting soon after falling off the trees in late September, so they can't be stored in a stratification fridge for longer than a month without their radicles rotting. So better to sow them soon after collecting them in the fall, and protect the sown nuts from rodents and other critters.





A basketful of freshly-gathered Shagbark Hickory Nuts, some still in their husks, and one still attached to the tree (see photo at right) – and a close-up (below), showing the four-parted husks, the de-husked shells, and a pair of nut meat halves extracted from a shelled nut (note the penny for scale).







Maple Hickory Nut Pie

Examples of three cookie recipes utilizing Shagbark Hickory Nuts:



Thumbprint Cookies, filled with Wild Fruit Jelly (left) Hickory Nut Wafer Cookies (center) Triple Maple Hickory Nut Sandwich Cookies (right) While Shagbark Hickory readily grows from seed (I have been getting about an 80% germination rate on the nuts I have planted), the nuts are "hydrophilic", meaning they will lose their viability if allowed to dry out. They should be sown outdoors soon after collecting, or may be cold moist stratified for up to a year, or possibly longer, and then sown in the spring. Do not forget to protect sown nuts from rodents. I use a half-inch mesh metal hardware cloth for this purpose; the sprouts can grow through the mesh (see below). Leave the mesh on until the nut has been completely used up by the developing tree.



I sow C. ovata nuts in 14"-deep "Treepots", to accommodate the species' notoriously-long taproots. Four of these otherwise very tippy Treepots fit very snugly into a standard milk crate.



C. Ovata nuts begin to sprout within a week after being moved from cold to warm moist stratification. I have also passed along many *C. ovata* nuts to others for them to propagate into trees. In the photo below, Keene State (NH) greenhouse manager Katie Featherston shows off Shagbark Hickory tree seedlings she grew from nuts I supplied her. Some of these trees were later deployed (along with many other edible native species supplied by Katie and myself) to <u>revegetate a site along Falls</u> <u>Brook in Swanzey, NH</u> following a <u>culvert replacement project</u> (see next slide).



"As Planted" Schematic for the Falls Brook Culvert Replacement Project, Swanzey, NH, October 3, 2016, listing and showing the location of the edible native species used in the revegetation of the project area post-construction.



A list of where I have been planting edible native plants at various sites in New England over the past year:

- Planted Beach Plums on Crowninshield Island, Marblehead, MA
- Planted a variety of edible native species on Bakers Island, Salem, MA
- Planted beach plums, persimmons and shagbark hickories at a new paddler access campsite on the Connecticut River in Whately, MA
- Planted a variety of edible native species at Graylag Ccabins, Pittsfield, NH
- Planted a variety of edible native species in conjunction with the Falls Brook culvert replacement project, Swanzey, NH
- Planted Beach Plums, Sweet Goldenrod, Wild Strawberry, Rose Mallow and Milkweed at Bassing Beach in Scituate, MA
- Planted 10 species of edible natives at the Mill Pond Conservation Area in Westport, MA
- Planted a variety of native edible plants at Strawberry Hill, Ipswich, MA; and
- Planted a variety of edible native plants at the Acton Arboretum, Acton, MA

Planting Beach Plums on Crowninshield (aka Brown's) Island, Marblehead, MA, a 10-acre island owned by The Trustees of Reservations (TTOR). The numbers indicate the approximate location of where the plums were eventually planted.







A <u>reconnaissance trip to the island on 8/28/15</u> revealed several locations which appeared to be suitable habitat for Beach Plums.



After getting the OK from TTOR, I purchased fourteen local ecotype, wildseed-propagated Beach Plum plants from the New England Wild Flower Society, then headed out to the island on November 10 to locate and pre-dig the holes into which the Beach Plums will be planted.





Volunteer Jonathan Gawrys (of SumCo Engineering of Salem, MA) carting out some of the fourteen Beach Plum bushes over to Crowninshield Island across the mud flat at low tide on November 18



Volunteers from the Marblehead Conservancy planting the Beach Plums, and trimming back invasive buckthorn and bittersweet to help make room for them



Posing for photo at the end of the planting project (see one of the new beach plum bushes at arrow).

Checking in on one of the beach plum plants the following spring, at blooming time

▶ I helped to initiate and implement eight other similar edible native species planting projects by the end of 2016, and anticipate undertaking a similar number in 2017, as well as checking on the plantings at the previous projects.


The End -- Questions? --

More information on Russ' wild edibles programs, recipes, book/articles, etc.: <u>http://users.rcn.com/eatwild/sched.htm</u>

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"Encore" slide

(1) "Man vs. Wild"/Wolfeboro NH story





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This and additional presentations available at http://nativeseed.info





