Chapter 7

WHITE ASH, GREEN ASH

StandingNation-Human Alliance Bulletin

Growing the Bottomline

- **TREES reduce heating and air-conditioning costs**, conserving energy by lowering air temperature and humidity, maintaining temperature control via their cooling shade.
- **TREES increase a community's tax base** by increasing property values and increasing business traffic as people shop and linger more on tree-lined shaded streets.
- **TREES provide jobs** as visitors flock to the nation's forests and parks.
- **TREES can improve public health and may save billions of dollars** (as well as people's lives)**.** Dr. Kathleen Wolf describes the positive outcomes of people having access to nearby nature in cities that impact public health include:

> "Experiences of metro nature – meaning the entire sweep of native, cultural and built nature in cities – contribute to healthier birth weight in babies, reduced ADHD symptoms in children, stress and anxiety reduction for adults, reduced neighborhood crime, faster healing in hospitals, and improved mental health for seniors. . . . Having access to small bits of nature is important across the entire life cycle, from cradle to grave."[1]

[1] Wolf K, "Nature's Riches" the Health and Financial Benefits of Nearby Nature, *The Green Cities: Good Health* website at *http://www.naturewithin.info/New/2016.11.Economic_Benefits_of_Nature_in_Cities.KWolf.pdf* (accessed 2/26/21).

Dr. Wolf provides some preliminary economic valuations estimated for the entire U.S. on an annual basis of one dozen areas of savings. For example, pregnant women who “have more tree canopy and green space near their homes generally have babies with healthier birth weights. Greater birth weights represent a potential $5.5 million savings on annual healthcare costs.”

The other potential areas of public health cost savings when nature is brought into our cities include:

- For infants:
  - Immune function
  - Family dynamics
- For children:
  - Overall health and well-being (increased physical activity, reduced asthma, and reduced risk of adult skin conditions)
  - ADHD (representing an amazing $396 M - $1.9B of savings, alone)
  - Future financial success
- For adults:
  - Depression and stress
  - Cardiovascular disease
  - Crime and safety
- For seniors:
  - Mobility and quality of life
  - Hypertension
  - Cognitive disorders

Green space can both save money and make it.

Diplomatic Relationships

- Ash is a food source for the larva of some butterflies and moths.
- The tree's common English name, "ash," traces back to the Old English *æsc*, which relates to the proto-Indo-European for the tree, while the generic name [*Fraxinus*] originated in Latin from a proto-Indo-European word for birch. Both words are also used to mean "spear" in their respective languages, as the wood is good for shafts.[2]
- In Norse mythology, a vast, evergreen ash tree named Yggdrasil (meaning "the steed (gallows) of Odin"), watered by three magical springs, serves as axis mundi ["the axis of Earth between the celestial poles"], sustaining the nine worlds of the cosmos in its roots and branches. *Askr*, the first man in Norse myth, literally means "ash."[3]
- Norse Viking mythology also refers to the ash as the "Tree of Life."
- The Ojibwe may have used a part of the Green Ash as a food source: "*Fraxinus pennsylvanica*, Green Ash, cambium layer scraped down in long, fluffy layers and cooked. They say it tastes like eggs."[4]

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[2] James Mallory and D.Q. Adams, eds., *Encyclopedia of Indo-European Culture* (Oxfordshire, England: Routledge [imprint of Taylor & Francis], p. 32 as used in "*Fraxinus"* from *Wikipedia* (accessed 1/10/21).
[3] Simek, Rudolf, translated by Angela Hall, *Dictionary of Northern Mythology* (Rochester, NY: Boydell & Brewer Inc, 1993) as referenced in "Mythology and folklore" in "*Fraxinus"* from *Wikipedia* (accessed 1/10/21).
[4] Daniel E. Moerman, Native American Food Plants" *An Ethnobotanical Dictionary* (Portland, OR: Timber Press, 2010), p. 118 as quoted by a contributor on "Survivalist Boards" June 23, 2011 in the thread on Green Ash (https://www.survivalistboards.com/threads/green-ash-seeds.175317/)

- In Britain, the Common Ash (*Fraxinus excelsior)* was regarded as a healing tree. "In the past a naked child was passed through the split trunk of an ash in a ritual to cure a broken limb or rickets."[5]
- Even today, in Britain, foragers make Pickled Ash Keys, from Europe's Common Ash (*Fraxinus excelsior)* used as a condiment, similar to capers. The original recipe may have come came the country gentleman, vegetarian advocate, and diarist John Evelyn in his book *Acetaria, a Disclosure of Sallets*[6], written in 1699:

> "Gather them [ash keys of Europe's Common Ash tree] young, and boil them in three or four Waters to extract the Bitterness; and when they feel tender, prepare a Syrup of sharp White-Wine Vinegar, Sugar, and a little Water. Then boil them on a very quick Fire, and they will become of a green Colour, fit to be potted as soon as cold."

More contemporary recipes for pickled ash keys emphasize the need to pick keys very early in their development while they are tender and add a piquancy factor and/or warm spices to Evelyn's sweet (sugar) and sour (vinegar) basic recipe.[7]

- The ash is sometimes referred to as the "Venus of the woods."

A Tourist's Testimonial

The Ash Grove

Down yonder green valley, where streamlets meander,
When twilight is fading I pensively rove
Or at the bright noontide in solitude wander,

[5] Jim Langley, "Ash – *Fraxinus excelsior", Nature's Work, https://www.natureswork.co.uk/ash/* (accessed1/10/21).
[6] "Acetaria" means "salads" in Latin, as does "sallets" in an older, pre-Samuel Johnson and Noah Webster English.
[7] For a contemporary recipe, go to "Ash Key Pickle" May 31, 2012 posting by dBL on *wilderness guide* (https://wildernessguide.wordpress.com/2012/05/31/ash-key-pickle/ (accessed 1/10/21).

Amid the dark shades of the lonely ash grove;
'Twas there, while the blackbird was cheerfully singing
I first met that dear one, the joy of my heart!
Around us for gladness the bluebells were ringing,
Ah! then little thought I how soon we should part . . .

—a traditional Welsh song[8]

Tree-Tripping

Take a trip down memory lane:

- Have you ever seen an American chestnut?
- Do you know of any relationship between your any of your forbearers and an American chestnut tree?
- Are you old enough to remember seeing an American elm alive?
- Did you or someone you know lose one or more American elms to the Dutch elm disease?
- Have you lost one or more ash trees to the emerald ash borer?
- Can you recall the location and stature of specific ash trees?
- Can you find a mature American chestnut tree that survived the Chestnut Blight to visit? Remember, today a few hundred chestnut trees, resistant to the blight, still exist. (Do an internet search, entering: "American chestnut" and the name of your state.)

[8] The Wikipedia entry for the traditional Welsh song "The Ash Grove" (Welsh: "*Llwyn-Onn*") states that the first known English-language version of "The Ash Grove" was published in 1862, in Volume I of Welsh Melodies, with Welsh and English Poetry, compiled by the harpist John Thomas, with Welsh words by John Jones (Talhaiarn) and English words by Thomas Oliphant.

- Can you find a mature American elm that survived the Dutch elm disease to visit? A number of American elms survived in the U.S. (Do an internet search, entering: “American elm” and the name of your state.)
- Can you find an ash in your area that proved resistant to the emerald ash borer?

Tree Dreams

- **The American Chestnut Foundation (TACF)** is a partner in the USDA Forest Service’s effort to restore the American chestnut tree. Founded in 1983, in 2005, the organization harvested the first potentially blight-resistant chestnuts and is close to being able to make a blight-resistant American chestnut available. See: https://acf.org/ At the site, you’ll find a page to help you distinguish chestnut trees from trees that are often confused with them and to identify several species of chestnut trees. You will also find answers to just about any question you might have about the Chestnut tree family, the American chestnut tree, the history of chestnut blight and the future for a blight-resistant chestnut tree. Is there a TACF chapter in your state? (Michigan, despite having some blight-resistant mature chestnut trees growing—does not have a TACF chapter; however, we did have Dennis Fulbright (1952-2019), a Michigan State University scientist who spent his career working on developing a blight-resistant chestnut[9]) If you had the opportunity to plant an American chestnut, where would you plant it?

[9] Tom Coon, “Anyone for Chestnuts,” *MSU Extension Spotlight,* December 2, 2010, https://msuespotlight.com/tag/dennis-fulbright/ and Brittanie Chludzinski, “MSU Helps Revive State’s

- **The American Elm Restoration Project** was initiated in 2003 by the Northern Research Station (NRS) of the USDA Forest Service as a project to restore the American elm to Ohio.

> "The effort to plant tolerant strains of elm trees in parks and wild forests in Ohio was made possible with assistance from the Ohio Department of Natural Resources Division of Forestry, Franklin County Metro Parks, and The Wilds. In subsequent years, the restoration effort . . . spread to Iowa, Wisconsin, Minnesota, Vermont, New Hampshire, Massachusetts, Connecticut, Kentucky, West Virginia, Pennsylvania, Virginia, Tennessee, and Alabama through partnerships."[10]

Is your state a partner in restoring the American elm? Does your state have any "survivor elms" still growing? "In partnership with the U.S. Forest Service, state natural resource agencies throughout the Midwest have come together to bring back the American elm tree through the collection of branch samples."[11] To this end, conservation clubs are publicizing state's department of natural resources request for the public's assistance in identifying locations of American elm trees that are still standing and healthy in the state. Individuals can make an impact on bringing the American elm back. Read the story of one such individual, Massachusetts and horticulturalist and "elm activist," Bruce Carley, in "Saving the American Elm" online at: https://www.elmpost.org (who also has a post, at the same website, entitled "New Hope for the American Chestnut.") Included on the

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Chestnut Industry," *Research@MSU*, https://research.msu.edu/msu-helps-revive-states-chestnut-industry/ (both sites accessed 1/16/21).

[10] "Restoring American Elms to their Native Range" Northern Research Station of the USDA Forest Service at https://www.nrs.fs.fed.us/partners/elm/ (accessed 1/12/21).

[11] Makhayla LaButte, "Bringing Back the American Elm" *Michigan United Conservation Club*, July 16, 2020 at https://mucc.org/bringing-back-the-american-elm/ (accessed 1/16/21).

elm post is a list of perspective nurseries at which to buy DED-tolerant American elm varieties throughout the U.S.

- Because of the presence of emerald ash borer, *no* species of ash should be planted at this time. What can you imagine planting to replace an ash tree lost to the emerald ash borer in your area?

- Are you in relationship with any species of tree for which you should be on the lookout for symptoms of a tree pandemic?

Tree's Big Idea: **COEVOLUTION**

Why do non-native insects and/or fungi cause the decimation of entire populations of tree species?

> "In their native ranges, trees and pathogens evolve in tandem: Trees acquire resistance, pathogens try harder, trees ramp up their defenses another notch — and so on until they reach a sort of truce where trees tolerate infection and the pathogen does little harm. Transport the pathogens elsewhere, though, and all bets are off. Loosed among defenseless trees, seemingly mild microbes can turn nasty and fell whole forests."[12]

In our global world of commerce and travel, humans are the guilty party for introducing species that have not co-evolved—that have not become a part of an ecosystem, where the species would have evolved in tandem with, what is now, given

[12] Stephanie Pain, "Why Tree-Killing Epidemics Are on the Rise," *Smithsonianmag.com*, September 28, 2020 R https://www.smithsonianmag.com/science-nature/why-tree-killing-epidemics-are-rise-180975917/ (accessed 1/11/21).

the situation, a pathogen. Pathogens can be viruses, bacteria, or fungi. Each of these types of pathogens has caused many tree diseases when they have not co-evolved within an ecosystem.

Consider the pathogens that have attacked ash trees in addition to the EAB:

Pathogen type	Disease	Affected Ash	Symptoms
Virus (nepovirus)	Tomato ringspot virs (TOMRSV)	Green ash	"Ringspots," vein yellowing, or an overall yellowing of leaves
Virus (nepovirus)	Tobacco mosaic virus (TMV)	Green ash	"Ringspots," vein yellowing, or an overall yellowing of leaves
Bacteria (a phytoplasma): *Candidatus fraxinii*	Ash yellows	White ash & green ash (less severe)	Ash decline: Loss of tree's vigor over 2 to 10 years before tree dies.
Fungus: *Gnomoniella fraxini*	Ash anthracnose	Most, but green ash is relatively resistant.	Green-brown spots that turn into tan blotches spreading from leaflet edge to midrib, and early leaf fall.
Virus (of the soil): Verticillium dahliae.	Verticillium wilt	All ash	Foliage turns light green and then yellow, followed by leaf scorch and gradual foliage die-back; eventual death; incurable.