

The Nature of Trees
Arnoldia

Propagations

LANDSCAPE VIEW

Narratives at the Margins of Extinction

By Rosetta S. Elkin

1 Most people can name an extinct animal or two, proudly citing woolly mammoths or passenger pigeons. But how many people can name extinct plant species? Plants seep into our lives, our stories, sheltering, scattering, nourishing, and also haunting our world. A solid retort to the question would be to name wild silphium, which may be the first recorded case of plant extinction in human history. It is certain that silphium plants were no longer described in European and Arab texts after the 1st century CE. Writing for *Heritage* magazine in 2022, Lisa Briggs and Jens Jakobson of the British Museum observe that “Any direct evidence for the organic remains of silphium was likely lost in the soil heap of time.”¹ And yet the soil heap of time might just be a momentary resting place for future generations of silphium.

2 Extinction is such a finite word. It evokes annihilation or destruction; to put out, go out, or die out. The term seems insufficient in relation to plants due to its singular, enclosed implication. Singularity inevitably lends itself to lists and tallies, an anxiety over individual species that can be counted, brought to us by an incomplete fossil record, the maze of millions and billions of years, and vivid models of lost vertebrates. We can only define what is extinct in stable terms.

3 Picture a sleepy afternoon along the fringing marshes of Georgia, the air swarming with peregrine falcons riding thermals down the coastline. It is October 1765, and two travelers are botanizing along the southern reaches of the Altamaha River. This is where John Bartram and his son William famously discovered a small grove of trees with white flowers that bore “beautiful good fruit.”² And so begins the story of *Franklinia alatamaha*, and its circuit across the horticultural world, from Bartram’s pocket, to Kew gardens, and back.³ Franklin trees are available for purchase at most garden centers, while heritage trees can be appreciated along the paths of

many arboreta. This shrubby-looking tree is famous for the moniker *extinct in the wild*. The specimens at the Arnold Arboretum are considered the oldest cultivated Franklin trees in the world, thriving under the care of generations of keepers. This shared heritage leaves out why Franklin trees are not thriving across the creeks and coves of the Altamaha in the 21st century.

4 When the study of extinction and the efforts to prevent it turns towards the living, it is often called conservation, since the signature cause of species loss is land transformation, which is to say, habitat loss, a process associated with the production of agricultural fields, plantations, roads, railways, mining, and other consequences of urbanization. We know that extinction accelerates when changes in the environment outpace the ability of a species to adapt; habitat is fragmented more quickly than most populations can adapt, pushing species to the edge of their range or devastating them altogether. These stories leave out more than they include, however, because when land is “transformed,” it undergoes systematized violence that extends to all species, including our own. Consider that much of the world’s biodiversity now survives in landscapes and seascapes maintained by Indigenous or local communities.⁴ A society that trades in accounts of lost species is a curious one, striving for narrative fixity, and the same

kind of stability that leads me to question the limits to the term “extinction” in relation to plant organisms. Perhaps it is hard to name an extinct plant because the word “extinction” slips so easily into a single story of loss. As Thomas King bravely stated; “you have to be careful with the stories you tell. And you have to watch out for the stories you are told.”

5 On the morning of May 25, 2022, a straggly looking tree caught the attention of a research team, its trunk scarred by fire, its thin canopy submitting to a fungal infection.⁵ At the time, *Quercus tardifolia* (Lateleaf oak) was thought to be extinct, after a decade or two of failed attempts to find populations across Big Bend National Park in Texas, a landscape roughly the size of Rhode Island. Despite the bigness of the park, *Q. tardifolia* is still considered a single-site endemic, a species limited to a specific location. A year into the discovery, skilled collectors from arboreta and botanic gardens found a few more isolated trees, offering more signs of persistence despite a scarcity of acorns.⁶ Acorns do not survive well in a traditional seed bank; a buried cache from an ice age-ground squirrel, meanwhile, yielded a living plant from the oldest living seed, 30,000 year old tissue living with the desiccated remains of a mammoth, bison, and woolly rhinoceros.⁷ Those who measure life by counting the boxes and the losses rarely have a metric for persistence. *Q. tardifolia* thwarts the opposition of extinct or alive, reminding us that land is more than property and plants are more than commodity.

6 What is extinction in the present tense? Can plants show us the way towards a livelier extinction, suggesting extinction as a verb? *Extincting* could neither be owned, nor labeled. Rather, *extincting* would be the search for evidence of earthly processes that includes humans; an activity of bootprints and volcanic eruptions, of storytelling and submerged coasts, of humanity arduously represented in the accretions and intervals of instability that mark the durations of the

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great chapters in Earth’s history. *Extincting* moves us beyond the reach of scientific tallies, loss valuations, ecological nostalgia, and conservation policy. It allows us to actively participate in the present, and offers an inclusive vocabulary. It makes extinction a cultural issue.

7 The remarkable Franklin tree prompts a return to the abundance of ecological intrigue that awaits visitors to the Altamaha River. Despite its status as wholly thriving in cultivation, what remains extinct is the habitat that sustained it: the buried Pleistocene rhythms, the deep biotic associations of the marsh and lagoon terraces. I imagine Franklin trees rising from what was once a sand-covered ridge between wet and dry terraces, making the most of a marginal landscape slowly warming since the last glaciation. The subsequent transformation of the land during the colonial era was comparatively violent, as Creek and Cherokee societies were forcibly removed. When the social geography changed, so too did the coastal hydrology: canals and irrigation trenches were dug to make way for plantation estates and fields of rice and cotton cultivation.⁸ Most of these changes are still visible beneath the canopy, evidence of what Aldo Leopold calls “a world of wounds.” Land transformation is not so sudden, it turns out, but unfolds across a cultural environment that drives social, hydrologic, biotic and climate change. This is what it means to be extinct in the wild.

8 *Extincting* is, in part, about teaching and learning from the cultural conditions that normalize ecological violence. When extinction is activated as a cultural issue, it begins the intellectual work of honoring the struggle to get there, as a way to break apart extinction as a finite, closed term. That humans have impacted the land, seas and climate, is not simply a means to apply the historical record to infer past human activities, but can be rethought as a way to celebrate other species’ survival, even survival at the edge. Ignoring existing struggles beyond the singular label

“extinction” can be, paradoxically, an undermining of habitat destruction, because it overlooks the incomplete effort to make sense of it in the present. The margins are precisely what activates attention, as single-site endemics are admired in the wild, just as their spirited ancestors thrive in horticultural worlds.

9 Terry Tempest Williams wrote that the Endangered Species Act is an act of love. I would add that it is an act of love for the late twentieth century, a time of categorical fixity, a century that demanded transactional lines to tally and record species loss. We must ask what kind of love it is, when the Act rejected the addition of *Quercus tardifolia* to the Texas list in 2009.⁹ Up to one-sixth of the tree species found in the continental United States are on the margins of extinction, yet only a handful enjoy federal protection under the U.S. Endangered Species Act. At the same time, plants represent over half the species listed under Act, yet their human stewards, keepers, and explorers receive less than five percent of total funding for endangered-species recovery. The cost of such care is significant: Imagine looking for a thirty-foot tree in an 880,000 acre park. Or rather, imagine that it takes an act of protection at the scale of 880,000 acre to conserve a species.

10 For their fennel-like appearance and thick roots, silphium plants were tentatively reclassified as *Ferula* spp., although quarreling over labels stretches across the centuries between its reference as Greek silphium by Theophrastus and its decline as Roman silphium by Pliny the Elder. Classification aside, both naturalists include a lengthy survey of what is lost when humans love a plant death: the sap or juice called ‘laser’ was a popular flavor for cooking, the resin was an expensive medicine for cures from cough and sore throat to cardiac maladies, but it was most valued as an effective contraceptive. Its wild seed was foraged and recognized for nourishing sheep that produced tender meat, and its stalk was valued at its weight in gold.¹⁰ All of this

while silphium flourished spontaneously as a little herb that resisted agricultural cultivation and was primarily collected in the wild.¹¹ Taken together, humankind did not just lose a plant by wasting its habitat, commodifying its gifts, or grazing it to decline; we lost a familiarity with wildness. Plants that thrive on the margins as buried seed, in botanical collections and in hiding across conservation lands are those that ask us to rekindle our wild selves, and participate in the extinguishing process, not as contributors to demise but as agents of survival. 🌿

NOTES

- ¹ Briggs, Lisa, and Jens Jakobsson. “Searching for Silphium: An Updated Review.” *Heritage*, vol. 5, no. 2 (2022) pp. 936–55 (939).
- ² Plummer, Gayther L. 1977. “Franklinia Alata-maha’ Bartram Ex Marshall: The Lost ‘Gordonia’ (Theaceae).” *Proceedings of the American Philosophical Society* 121 (6): 475–82.
- ³ Del Tredici, Peter. “Against All Odds: Growing Franklinia in Boston.” *Arnoldia* 63:4 (2005), pp. 2–7. See also Plummer, cited above.
- ⁴ There are numerous reports, and varying statistics that bring to light this reality, for instance: Reyes-García, Victoria, et al. “Recognizing Indigenous Peoples’ and Local Communities’ Rights and Agency in the Post-2020 Biodiversity Agenda.” *Ambio*, vol. 51, no. 1 (2022) pp. 84–92.
- ⁵ “Botanic Garden: Researchers Rediscover Oak Tree Thought to Be Extinct.” *Targeted News Service*, 2022.
- ⁶ Morgan, Jack (2023-07-24). “Texas oak tree thought to be extinct discovered in Big Bend National Park.” KUT Radio–Austin, <https://www.kut.org/texas/2023-07-24/big-bend-national-park-oak-tree-quercus-tardifolia-discovered-thought-extinct>, accessed 2024-01-12.
- ⁷ Yashina, Svetlana, et al. “Regeneration of Whole Fertile Plants from 30,000-y-Old Fruit Tissue Buried in Siberian Permafrost.” *Proceedings of the National Academy of Sciences – PNAS*, vol. 109, no. 10 (2012) pp. 4008–13.
- ⁸ Graham, Otis L. “Again the Backward Region?: Environmental History in and of the American South.” *Southern Cultures*, vol. 17, no. 2 (2011) pp. 50–72.
- ⁹ SciTechDaily. “Clinging to Life: Scientists Rediscover Oak Thought to be Extinct.” The Morton Arboretum, July 7, 2022. See: <https://mortonarb.org/app/uploads/2021/08/species-profile-quercus-tardifolia.pdf>, accessed Friday, January 12, 2024.
- ¹⁰ Parejko, Ken. “Pliny the Elder’s Silphium: First Recorded Species Extinction.” *Conservation Biology*, vol. 17, no. 3 (2003), pp. 925–27.
- ¹¹ Briggs, (937).

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