

reconsider their appropriateness. Even though much thought goes into conservation decision-making, there can still be blind spots especially when considering materials that defy traditional expectations. It requires an openness on the part of the conservator to continue to learn and adjust their practices and perceptions. When Siobhan came on board as archivist working with Brooks, I think that original inclination deepened for all sorts of reasons, not least of which being a commitment to making not just the repairs themselves visible, but the labor behind those repairs visible as well. That shift alone has huge ramifications, from the awareness of the public regarding cultural-heritage conservation, to the experience of the individual user whose interaction with an object may change drastically if they are able to see how something may have been cared for in the past.

SIOBHAN: I agree with everything Quinn said. When we started thinking critically about how to engage this discussion, I kept thinking over and over about how much of our work, in different ways, is invisible. Most folks aren't coming to these objects in our care with much thought about what work is done to make them available long-term for viewing and that's just fine. We're not the main attraction. However, I do think that in dealing with the question of whose invisible hands make these decisions, both our fields would benefit greatly from radical transparency. We have a duty to present material "as faithfully as possible" as Quinn put it but I think we also have a duty to allow folks to use all their senses to engage with the work to extend the life of the material and create a point of entry for folks who didn't realize this was a career option. I always think about what I would've done if I'd known about conservation or archival work during college or even high school. If we could introduce more folks to this work earlier, think of the shifts and conservations that could be happening in our fields.

Visit http://handpapermaking.ws/images/HPN/132/QMF_ICONPoster2018.pdf to view a poster on research that Quinn Morgan Ferris and Siobhan McKissic presented to ICON (the Institute of Conservation).

—Maria Olivia Davalos Stanton

Maria Olivia Davalos Stanton is a visual artist and art conservator to be in San Francisco, California. In this column series, Davalos Stanton shares interviews, resources, and news about paper conservation—bringing the paper cycle full circle.

STUDYING HAND PAPERMAKING

Being Still with Kozo

In this issue, Amy Richard discusses the origins of the paper mulberry tree [aka kozo] and what it has meant for her to "be still" with this ancient papermaking plant.

Still in major reading mode, I have been enjoying Michael Pollan's best-selling book *The Botany of Desire*, which caught my attention last month while moving bookshelves in preparation for painting the living room (because that is what we do when stuck at home for weeks on end). Browsing the pages after many years, I was fascinated by the author's discussion of our hopelessly anthropocentric attitude toward nature.¹

As Pollan ruminates in the introduction, "What existential difference is there between the human beings' role in this (or any) garden and the bumblebee's?"² Continuing the thread for several pages, he describes an epiphany of sorts: "All these plants, which I'd always regarded as the objects of my desire, were also, I realized, the subjects, acting on me, getting me to do things for them they couldn't do for themselves."³

It was a fun perspective and I found myself thinking about it days later while checking up on the paper mulberry plants in my kozo garden.⁴ Working in the late afternoon, I was glad to be under the large, fuzzy tri-lobed leaves, providing precious shade from the intense Florida sun. Snapping off leaf stems and trimming off the twigs and lateral branches that were protruding from the smooth trunks,⁵ I realized this little forest, about twenty by forty feet, had become a sanctuary from the constant assault of worrisome news each day.

And then I had my own little epiphany. Have I been "manipulated" by this plant, as Pollan suggests? Its presence certainly "strongly encouraged me"—so much that I quit a perfectly good day job and talked my husband into moving to Iowa so I could attend grad school (specifically to learn to make paper using this very fiber, among other things).

Indeed, like Pollan, I found myself wondering, *who was actually in charge?*

Ready for some air conditioning, I returned to the studio where I was determined to find out once and for all where this plant was from; it was a question I'd been asked several times when teaching and was frustrated by the ambiguous and sometimes conflicting information I'd found over the years. Maybe it was just me finally being focused but this time was different; I found a number of articles that grabbed my attention immediately, beginning with "A Holistic Picture of Austronesian Migrations Revealed by the Phytogeography of Pacific Paper Mulberry."⁶

As explained by the authors (and greatly summarized here): Because paper mulberry was so integral to the Austronesian culture for the production of bark cloth and cordage, researchers used DNA sequences from over 600 plant samples to track its migration patterns, with hopes of applying this information as circumstantial evidence for unlocking some of the contentious mysteries about the people who utilized it, people who are thought to have traveled vast distances of the Pacific ocean more than 7,000 years ago transporting animals and plants—including paper mulberry cuttings—with them to the resource-poor islands of Oceania in their ocean-going canoes!⁷



Trimming the paper mulberry in the late afternoon, I was glad to be under the canopy of large, fuzzy tri-lobed leaves, providing precious shade from the intense Florida sun.



Numerous times I've trimmed paper mulberry branches, placing the discarded material in empty garbage cans, amazed to see the bare stalks sprouting tiny green leaves days later with no access to soil or water.

Their research was also able to use “unambiguous DNA evidence” to establish Taiwan and southern mainland China as the place of origin for the paper mulberry, based on the genetic diversity in specific locations, strongly supporting the theory that both the plant and the Austronesian people share Taiwan as their ancestral homeland.

Complementing existing archeological, linguistic, and human genetics data, the study is considered the first of its kind to use commensal⁸ plant species data to track the migratory patterns of prehistoric human populations.⁹ (The authors cited the use of some animal species being used in a similar way but explained that the plant is a more reliable source for analysis due to its extraordinary distribution in the Pacific, among other factors.)

It might have been the heat but I felt a little light-headed as I tried to absorb it all. Like the apple, potato, tulip, and hemp plants discussed by Pollan in his book, the paper mulberry seems to be another quintessential example of a plant that has been able to utilize humans to help it spread in ways it couldn't do on its own—hopping from island to island, continent to continent to establish itself.

Like the spread of the apple seed, the result has been profound with countless cultures using the paper mulberry's inner bast fiber for a wealth of textiles including bark cloth, rope, clothing, building materials, and lanterns, etc. not to mention the sumptuous paper that has been used as a primary vehicle for communication and artistic expression for millennia.

Living in close proximity to this plant and being able to observe it closely for the past few years, there is no doubt in my mind that it would be able to survive travel across “major water gaps” in a canoe or raft, as proposed by the researchers. Numerous times I've trimmed paper mulberry branches, placing the discarded material in empty garbage cans, amazed to see the bare stalks sprouting tiny green leaves a week later with no access to soil or water! While this is strictly anecdotal, they seem to be able to survive solely from the thick Florida humidity, sprouting even more when treated to less than an inch of rainwater. Last year, one 6-foot stalk was set on a concrete floor in my studio and abandoned for weeks, before it began to sprout on its own.

* * *

Back in the kozo garden this week, I imagined ancient people traveling across a cobalt blue ocean with precious bundles of paper

mulberry cuttings in stow, with nothing more than a moist cloth or a small vessel of fresh water at the base to keep them alive. I marveled to think of their seafaring abilities and how brave they were to have endured traveling such great distances in search of new lands. It made me appreciate our shared connection to this plant—an amazingly resilient tree that is able to flourish in disturbed soils, tenaciously holding onto the earth for stability with its underground rhizomes, but remaining flexible enough to endure stormy weather. I am trying to do the same, like everyone these days, while also wondering what the future will bring.

Tending to my kozo garden, I continue to be comforted by its presence. While trimming the leaves and branches, I smile just as (the late) Buddhist monk Thich Nhat Han encourages us all to do in his wonderful recorded meditations. In my mind, I can hear his gentle voice reminding me to be still, to breathe, and be grateful.

AUTHOR'S NOTE: The theories discussed here are limited to the migration of kozo to regions of Oceania [Australasia, Melanesia, Micronesia and Polynesia] and does not speak to the origins of kozo in Japan or Korea. Stay tuned.

1. Michael Pollan, *The Botany of Desire: A Plant's-Eye View of the World* (New York: Random House, 2001).
2. *Ibid.*, xiii.
3. *Ibid.*, xv.
4. Paper mulberry and kozo are both common names for the plant *Broussonetia papyrifera*.
5. I've found that regular trimming allows the plant to put its energy into growing straight and tall, making it easier to harvest and process the bast fiber in the winter.
6. A sampling of articles found:
 - Chi-Shan Chang et al., “A Holistic Picture of Austronesian Migrations Revealed by Phylogeography of Pacific Paper Mulberry,” *Proceedings of the National Academy of Sciences* 112, no. 44 (November 2015).
 - Gabriela Olivares et al., “Human Mediated Translocation of Pacific Paper Mulberry [*Broussonetia papyrifera* (L.) L'Her. ex Vent. (Moraceae)]: Genetic Evidence of Dispersal Routes in Remote Oceania,” *PLoS ONE* 14, no. 6 (2019).
 - Daigu Sigua, “Austronesian Tapa Cloth,” *Taiwanese Poetry and Songs* (blog), *Austronesian Origin*, January 2018, austronesianorigin.wixsite.com/austronesianorigin/tapa-cloth.
7. Chi-Shan Chang et al.
8. The term commensal refers to a species that benefits from the association with another host species (of plant or animal) to obtain nutrients, shelter, support, or locomotion from the host species, which is substantially unaffected.
9. Elizabeth A. Matisoo-Smith, “Tracking Austronesian Expansion into the Pacific via the Paper Mulberry Plant,” *Proceedings of the National Academy of Sciences* 112, no. 44 (November 2015).

—Amy Richard

Amy Richard is a visual artist, writer, and proprietor of Amy Richard Studio in Gainesville, Florida where she produces original artwork, teaches papermaking, and tends to her kozo garden. In this column series, Richard explores the unique energy of handmade paper, the spiritual and healing characteristics of the process itself, and the opportunities for studying papermaking in colleges, universities, and other established art centers in the United States and abroad.