# HAND PAPERMAKING

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FRONT COVER: Imai Hiroaki (member of the Oguni-gami Preservation Society, which is a Preserver of Intangible Cultural Asset Requiring Documentation for Oguni-gami) arranges strips of bark for drying that have been harvested from his kozo field. Photo: Paul Denhoed, December 2009. BACK COVER: Earth pigments on paper made from seed heads of spinifex (Triodia pungens), 35 x 28 centimeters (13.8 x 11 inches). Made by a participant in a workshop in Alekarenge, Australia. Courtesy of Winsome Jobling. FOLDOUT BACK COVER: Frederic Amat and Paul Wong (right), in 1981, at Dieu Donné Papermill (3 Crosby Street location), examining work-in-progress. Courtesy of Dieu Donné, New York.

### Letter from the Editor

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"Dat-daka-chaga, dat-daka-chaga," instructed my papermaking teacher when I was one of a half dozen trainees at a washi center in Japan's Shimane prefecture, circa 1988. He said he did not have the words to describe the way he dips and moves the *sugeta* during sheet formation, but he suggested that we follow the sounds, and imitate. That's how he learned from his father, he explained. So there we were, all mouthing the sounds, trying to repeat the song of the water splashing against the front of the vat and the sloshing of the slurry across the *su*.

As practiced makers of handmade paper, we develop over time a sensibility and intuitive knowledge of our craft. These embedded skills and experiential knowledge often feel like something beyond language, difficult to express to others. At the 2012 meeting of the Friends of Dard Hunter, Winsome Jobling delivered a stimulating talk in which she used a term that I had not heard before—knowledge custodians—which in my mind perfectly describes how papermakers hold the heritage and the know-how in their bodies, their minds, and by extension their spirit.

This issue looks at our field's "knowledge custodians," individuals who accumulate, practice, and propagate the skills and traditions of handmade paper. Winsome Jobling agreed to adapt her lecture into our lead article in which she recognizes aboriginal knowledge in sourcing plants for papermaking. Helen Frederick describes how hand papermaking provides an intersection of cultural values and economic development in China. Paul Denhoed explains the National Treasure system in Japan, and Sue Gosin profiles Paul Wong, whom she distinguishes as our field's American National Treasure. Nicole Donnelly outlines the Hand Papermaking Community Documentation Project with a stunning foldout map of the web of connections in the hand papermaking world. Fred Siegenthaler recounts his development of art watermarks. Steve Miller, along with Martin Vinaver, travels to San Pablito in search of amate. Robert Hauser shares a timeline of the history of Busyhaus Associates with an exceptional 1973 wood engraving by Michael McCurdy, printed for the first time, and exclusively for this issue on Twinrocker paper. Tatiana Ginsberg reports on a series of events celebrating washi in Norwich, England. In addition, Akemi Martin reviews the long-anticipated collection Washi: The Soul of Japan, Minah Song shares her impressions of Aimee Lee's Hanji Unfurled, and Andrea Peterson gives us her take on Helen Hiebert's The Papermaker's Studio Guide DVD.

Papermakers as knowledge custodians hold within themselves tacit knowledge of their craft. This knowledge is not easily explicated, yet one of our goals here in the pages of *Hand Papermaking* is to disseminate this intuitive knowledge across the field. In his book *Tacit and Explicit Knowledge*, Harry Collins calls what we offer, "coaching rules." He repeats an often-used metaphor in developmental psychology, bicycle balancing, as a prime example of tacit knowledge. "When we ride our bikes we do not self-consciously use any physical or mechanical models; somehow with practice and training, the ability to balance on a bike becomes established in our neural pathways and muscles in ways that we cannot speak about. We do not learn bicycle riding just from being told about it (coaching rules and second-order rules aside), or reading about it, but from demonstration, guided instruction, and personal contact with others who can ride—the modes of teaching associated with tacit knowledge." As papermakers, with some coaching rules, we stand at the vat, and find our balance, our rhythm, and our song.

Mina Takahashi



## Recognizing Indigenous Knowledge When Sourcing Plant Fibers for Papermaking

WINSOME JOBLING

Women from the Marthakal Homelands on Galiwin'ku Island participating in a papermaking workshop at the artist's studio in Darwin. All photos by the author unless otherwise noted.

BELOW: In Baun the author and members of the Amarasi community compiled a comprehensive database of papermaking fiber in the local language with samples.



In 1982 I made the best decision of my life and moved 3,000 kilmeters away from Sydney to Darwin, into the remote Northern Territory, and began teaching in the Aboriginal Community of Belyuen. After the initial month or so of culture shock I realized that I had found my niche and discovered a new world view. Belyuen is a small community of about 300 people on the Cox Peninsula near Darwin. They are "saltwater" people who maintain strong ties with their land and traditional culture. I was taken under the wing of the women and immersed. We went hunting and fishing; I learned to make dilly bags and baskets and attended ceremony. I began to see the environment differently and realized that we all live in distinct, culturally constructed universes. My experience at Belyuen has influenced everything I have done since and I am forever indebted to these Indigenous knowledge custodians.

It was in Belyuen where I first started experimenting with papermaking from plants. My first papers were made from their traditional fiber sources: sisal, sand palm, banyan, coastal hibiscus, and sedge. These plants are used to make dilly bags and baskets and prepared in different ways. Sisal (Agave sisalana) is an introduced species planted near Belyuen by colonial market gardeners in the late 1800s. We harvested from a clump of up to ten plants hidden in the bush which generations of women conserved through selective harvesting. We took a few leaves from each plant at the end of the wet season. Sand Palm (Livistona humilus) is an iconic plant of the Top End of northern Australia and utilized by many different communities. The new frond is pulled off and split into separate leaflets and then the top and bottom layer are gently peeled apart. Pandanus (Pandanus spiralis) is prepared in the same way for making baskets. The fibers are then dyed with root, bark, or berry dyes in oranges, yellows, purples, and pinks. More colors are being developed as women across the Top End experiment and share their discoveries.

Indigenous knowledge is "[a] cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sophisticated sets of understandings, interpretations, and means are part and parcel of a cultural complex that encompasses language, naming and classification systems, resource use practices, ritual, spirituality and worldview." The maintenance and protection of Indigenous knowledge is crucial to the

maintenance of Indigenous culture. Unfortunately in many parts of Australia traditional Aboriginal knowledge has been lost. The loss of this knowledge has extremely serious social, biological, cultural, and heritage outcomes for all people, but especially for future generations of the traditional custodians. In the words of an African proverb, "When an elder dies a library is burned."

Aboriginal people relied almost totally upon plants for their material needs and for mortuary, abundance, and initiation ceremonial objects, as well as for domestic objects such as nets, tools, and ropes. In many respects peoples' relationship to their land is embodied in their attitude to plants. In some cultures, plants are viewed as being an integral part of their physical, social, and spiritual worlds. Plants are also used as a kind of calendar, linking fruiting and flowering with hunting seasons and events. For example, when the stringy bark flowers in the community of Garrthalala, the sea turtles are laying their eggs.

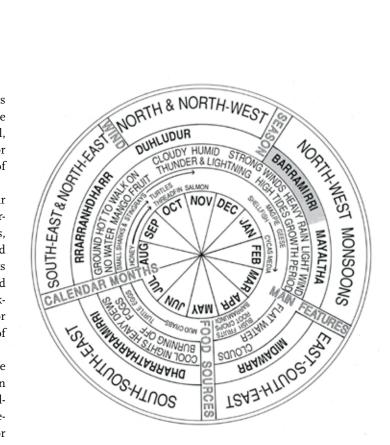
Over the millennia Indigenous peoples have developed a close and unique relationship with the lands and environments in which they live. They have established distinct systems of knowledge, innovation, and practices relating to the uses and management of the biodiversity on these lands. Collecting material for fiber-based production is often linked to ancestral activity, specific places, and past events. Women's knowledge about plants is extensive not only in terms of propagation, habitats, and fiber content, but also ceremonial links between ancestors, country, moieties, and the objects made from the plants.

Minnie Marabachiba, an Aboriginal fiber craftsperson in the Top End, refers to the intent of the artwork/object as a statement of identity and culture, "I know *balanda* (white people) will take it and I'll be sorry and think about it. When I make weaving it reminds me of my grandfather, great-grandmother, my mother and father and the old people. I remember, I will keep doing it until I pass away. I know this is true because of my ancestors the Wanggar Creator Beings."<sup>2</sup>

In Aboriginal culture the strength of the interrelationship between people and their environment is shown through language. Words for parts of the body are metaphors for landforms and plants often related to ancestral creation. For example at Gapuwiyak in the Djambarrpuyngu language, *wana* refers to the arm, a tree branch, or a creek, and the eye is *mel*, a seed or a soak.<sup>3</sup> Plants also link to kin relationships; children know early on which plants are their mothers and sisters.

Indigenous people protect and nurture. The women of Belyuen practiced a selective harvest of plants by visiting different sites each year to allow for regrowth. "We care for the country all year," explained Aboriginal weaver Lak Lak Burarrwanga. "The seasons tell us how to care for country—to care for the songs, dance, nature and people.... [E]verything's connected through the person to the trees, so when we feel hot the fruits are ready." In Indigenous cultures, it is accepted that women are the prime holders of knowledge required for the selection, preservation, and use of plants. This knowledge is passed down orally.

In Western science, plant taxonomists find, describe, classify, identify, and name plants. Western science is based on positivism, not theism; logic, not a belief in ancestor creator beings. It puts humans apart from and above the natural world. In an Indigenous universe, everything—including inanimate objects and material cultural items—are classified into social groups, given a gender





ABOVE: The six-season
Arnhem Land Calendar
shows some of the links
between plants, animals,
and the seasons. Image from
Arnhem Environs, Northern
Territory Department of
Distance Education, 1990.
LEFT: Marjorie Bilbil
(deceased), my Belyuen
"grandmother" making a
dilly bag.

according to certain physical attributes (at Maningrida there are four: male, female, food, and earth, water, and fire) and credited to the actions of certain ancestral beings. Western taxonomists categorize plants according to the eighteenth-century Linnaean system of genus and species based on their reproductive structures that reflects scientific ideas about plant inter-relationships. On the other hand, Yolgnu classification is varied and at Gapuwiyak, for example, classification can be based on physical structure: dharpa are woody trees and shrubs; mulmu are the grasses; and ngatha are mainly tubers. Classification by habitat recognizes six different environments: Gulunbuy (from the waterholes), Larrtha'puy (from the mangroves), Rangipuy (from the beaches), Dilitjpuy (from the forests), Retapuy (from the jungle), and Ninydjya (from the plains). There is often a single name to describe a genus. Most fiber and dye plants come from open forests and the waterholes.5 Indigenous plant taxonomy embraces the spiritual domain as well as the natural. "He pulls all the string out of the bag," says Aboriginal artist Charlie Gunbuna, sharing a story in which he combines the cosmos with an important fiber plant Pandanus spirilis, bush string, and a dilly bag. "He throws the morning star and the star climbs up the pandanus and goes out into the dark sky and does not come



Collecting spinifex near Canteen Creek.

back because all of the string has gone out of the dilly bag. The morning star on the end of its string lies coiled up in the dilly bag of one old man spirit. This dilly bag is called Balthi. It is the mother of the morning star." In this story, Gunbuna illustrates the complex relationships between plants and the objects made from them to the real and spiritual world.

As papermakers we experiment with and use a broad range of plant fibers. By increasing the recognition of the role and the importance of traditional knowledge we can change mindsets about the existence of concurrent knowledge systems. I participated in an ambitious project called Replant—A New Generation of Botanic Art. It was initiated by Nomad Art Gallery in Darwin in 2006 and aimed to increase understanding about the diversity and complexity of cultures, heritage, and concurrent knowledge systems. It was an excursion into the world of plants in the tropical north of Australia seen through the eyes of six Indigenous and non-Indigenous Australian artists, a photographer, a master printmaker, and an ethnobotanist. We worked with the Northern Territory Herbarium and traditional knowledge custodians from the Daly River region to produce a folio of etchings for a touring exhibition. The ethnobotanist was Darwin-based ethnobotanist Glen Wightman. I was delighted to meet him after years of referring to his Aboriginal plant usage booklets in my research and teaching. Wightman has spent the last 27 years working with senior Aboriginal knowledge custodians, associated with 44 Aboriginal languages in northern Australia. He has coordinated the publication of 24 books detailing the knowledge of plant usage in each community. "It is important that we continue to record, preserve and promote traditional plant and animal knowledge before it gets lost as elders pass away," explains Wightman, "[to] help resolve the issue of the passing on of this plant and animal knowledge from elders to their children."7

Glen Wightman is my plant hero! He is a humble holder of vast botanical knowledge, an advocate for the recognition and recording of Indigenous plant knowledge, and a friend to a great many Aboriginal people across the Northern Territory. His aim is "to link white-fella science with traditional knowledge." He also makes the

perfect cup of tea: drunk from a thermos in the middle of the bush.

During the project, knowledge custodians of the Nauiyu community accompanied our group into the bush to look at plants. Mysteries of the local plants were unveiled as we all shared our own cultural stories, plant uses, and scientific knowledge. The women at Daly River traditionally used the inner bark of the banyan tree (Ficus virens) for rope. They showed me how to prepare the long underground roots for fiber rather than the tough aerial roots. The outer bark is scraped off first and then the long root is hammered to loosen the inner bark. On contact with the air the inner bark turns a pink color. The fiber is shredded into strips, the width of which depends on its final use. For string it is spun and plied (rolled) on the thigh in one movement. I used the banyan fiber to make paper for chine-collé in some of my prints.

As part of the My Print My Paper project in 2009, I conducted a series of papermaking workshops in different Aboriginal communities across the Barkly under the auspices of Barkly Regional Arts, an organization based in Tennant Creek and servicing a vast, remote 283,648-square-kilometer region between Darwin and Alice Springs. To prepare for this project I was sent a box of spinifex to test. Spinifex, called *alatyeyt* by the Alyawarre people of the Barkly, is avoided by explorers, cursed by surveyors, and collected with thick gloves by papermakers!

Spinifex is the tough, spiky, evergreen grass that grows in the arid and semi-arid areas that cover 27 percent of Australia. There are two species, hard and a soft. The soft species *Triodia pungens*, traditionally a source of adhesive resin, is the most common in the Barkly region. Indigenous knowledge about spinifex as a fiber source has greatly declined since European colonization. Most information comes from museum collections. There is a spinifex dilly bag in the British Museum. The explorers Gregory and Gregory documented the use of spinifex for making nets for fishing and dilly bags in Northern Western Australia around 1856. In a recent study, it is noted that spinifex was "pounded between two stones until fibrous, like cotton wool, and then spun into string." A newspaper article of 1884 declared that "though short, spinifex

fibers were stronger and better than those of Indian jute and were sufficiently long to be made into rope." *The Northern Territory Times* reported that paper was being made from spinifex in South Australia in 1887 and recent research is being done into using the fiber in the production of composite board.

I led the first My Print My Paper workshop in Alpurrurulam, a seven-hour drive from Tennant Creek, across the Barkly Highway and nearly halfway to the east coast, then to Canteen Creek at the end of a dirt road to the south east, both in Alyawarre country. Another workshop took place at Alekarenge to the south, and two additional workshops were held at the Aboriginal Art Centers in Tennant Creek. In each community we set up at the Women's Center where the Aboriginal women usually met to cook for the elderly and sick, paint on canvas, and work on other projects. We always started with a bush trip to get to know the women and to learn about country and plants. The women usually do not have ready access to a vehicle. Any opportunity to go hunting or collecting bush tucker (bush food) or medicine is always welcome. We would head "out bush" in a Troopie (a ten-seater, four-wheel-drive vehicle) full of women and kids. At the time, the semi-desert Barkly country was verdant as the result of a wet season. We collected olive-green spinifex with tall, golden seed heads that looked like fields of wheat. At Canteen Creek the elder women, Judith and Rosie, collected the soft variety "blue" spinifex. We found water grasses (Chrysopogon fallax) and sedges (Cyperus) along dry creek beds, and a native lemongrass—fibers we wanted to try for papermaking.

Alice at Alekarenge showed us trees used for carving, plants for dye, and plants for bush tucker. Her knowledge of the bush was extensive, sprinkled with anecdotes and history. The kids hung on her every word. On our way back to the Women's Center, we made several stops. We checked the water level in a tiny, permanent waterhole up in the rocks. We loaded firewood onto the top of the Troopie. The kids dug up sand lizards or picked yellow



The Troopie being used as a press and the big mould and deckle at Canteen Creek.



Ida and Dorothy, elder women in the community at Alpurrurulam, making and "singing" their spinifex paper artwork of a woman's story. The work is a 160 x 60-centimeter (63 x 23.6-inch) spinifex base sheet with pulp painting using spinifex pulp colored with earth pigments.

grevillea flowers for the sweet nectar. The women dug meter-deep holes in the red sand for handfuls of long yams. We collected bush coconuts, a tasty parasitic gall, by knocking them off the trees with sticks. We gathered the sticky sweet fruit of the mistletoe, and leaves from two different shrubs to be dried, boiled, and mixed with fat to make medicines for congested chests.

This knowledge has accumulated through a long series of observations transmitted orally from generation to generation and can be viewed as a kind of "capital" which should be formally recognized and protected. It is my belief that this knowledge should be used only with the approval, involvement, and recognition of the Indigenous people. Otherwise it can become bio-prospecting; objectifying the knowledge and dispossessing the traditional custodians.

The workshops varied depending on each community's set of considerations. Sometimes we set up inside, sometimes outside. We adjusted the workshop depending on the availability of water, number of participants, and whether participants had prior art experiences. We used different types of drying surfaces. We turned wheelbarrows into papermaking vats; and at one site we had to shoo away wild donkeys! To press the paper we always jacked the Troopie up on top of our post of papers.

After processing the fiber in each community we pulled plain sheets before introducing color in the form of local earth pigments either mixed with pulp and formation aid in squeeze bottles or just mixed with water and painted on gently with brushes. The traditional imagery in local ochres became impregnated into the paper



Banyuwa cutting stringy bark for painting. Courtesy of Buku-Larrnggay Mulka Centre, Yirrkala.

made from local spinifex, an embodiment of their land. I brought a couple of simple big moulds and where possible we made a large vat from building materials and lined it with plastic sheeting.

Dorothy and Ida were elder women in the community at Alpurrurulam and were experienced painters. Although papermaking was new to them it struck a chord because they were using plants they knew to make the paper substrate for their earth imagery. Their way of working was similar to traditional sand painting and they could see the potential of paper pulp as a new form of expression. They sang the story in language as they worked on their woman's story of important local sites.

Indonesian West Timor is just a two-hour flight from Darwin and has the same monsoonal weather patterns of extreme wet and dry as the Top End of Australia and similar plants grow there as well. In 2007, I participated in a six-week residency in the Kupang region of Indonesian West Timor in the village of Baun, the ancient capital of the Amarasi Kingdom. Funded by Asialink and the Ford Foundation, our collaborative project with Sanggar Uim Nima, a cooperative of noted textile artisans, aimed to provide opportunities for long-term economic benefits, a revival of cultural activity within the community, and to encourage the maintenance of cultural traditions.

Textile production is an important source of income for the Amarasi people. The ikat cloths are central to their ceremonies associated with life events and rituals; they are treasured family heirlooms. The traditional practice involves growing, spinning, dyeing

using plant dyes, and weaving cotton by hand. A single cloth can take six to nine months to make. Each region has distinctive styles, colors, and designs that have been handed down through generations. I leaned on the Amarasi community's Indigenous knowledge of local fiber plants, natural plant dyes, and textiles, as my starting point for papermaking. At the same time Leon Stainer, a partner in the project, was developing printmaking skills, focusing on copper engraving using traditional iconography.

I arrived with a smattering of basic words in Bahasa Indonesian, but it was Latin that came in most handy! Community member Pak Mel had studied agriculture at Kupang University and by using the Latin botanical names we could identify different fiber plants. I bought a copy of *Kamus Pertanian Umum*, a comprehensive Indonesian–Latinate dictionary of agriculture that fortunately included the local dialect. We referred to it constantly in our plant discussions; it brought our two bodies of environmental knowledge together. With it, we compiled a database folder of the 17 plants we experimented with, recorded the plant names in both Latin and in the local dialect, outlined the processes used, and included a sample of each paper.

Some of the local fiber plants we used included the culturally significant lontar palm (*Corypha utan*), *Ficus* varieties, and four different banana trees (*Musa*). We also tried alang-alang grass (*Imperata cylindrica*) that is used for thatching, rice straw after the local harvest, and sedges. We installed basic papermaking equipment that we left in place for the community to continue to use. The traditional wooden pestle and mortar called a *lesung* was an effective beating tool for the bast fiber but very time consuming. Everyone much preferred the *lesung listrick*—the community's name for the electric blender!

By promoting collaboration and recognizing the Indigenous community's extensive botanical knowledge, the Baun workshops resulted in new papermaking research, and provided a practical link to this traditional knowledge—a tangible expression of the past, the present, and the future.

I am currently working in conjunction with Buku-Larrnggay Mulka Arts Centre in Yirrkala and Nomad Art in Darwin exploring the potential of using stringy bark (*Eucalyptus tetradonta*) for papermaking. The surname Mulka means a sacred but public ceremony, and to hold or protect. Buku-Larrnggay Mulka's mission is to sustain and protect Yolngu cultural knowledge in Northeast Arnhem Land under the leadership of community members to provide a knowledge center for future generations. Nomad Art focuses on art that involves cross-cultural collaborations between artists and master practitioners. One goal of the project is to make paper "on country" with the artists to produce new artworks for exhibition.

Stringy bark is one of the two most common trees of the Top End landscape. It is a source of timber for canoes and for tools.



Winsome Jobling, The Wet, 33 x 25 centimeters (13 x 9.8 inches), etching on chine-collé of banyan paper with black palm and cotton pulp painting, edition of 20. Courtesy of the author.

As a calendar tree cueing events and cycles in the environment, stringy bark has important mythic and totemic associations. Called *wanambi* the stringy bark tree is filled with wild honey and in ancestral times it is said that the huge honey-laden tree crashed to the ground creating rivers and the Mulka ceremonial ground. It is linked to the Marrakulu clan of the Dhuwa moiety.

The bark is collected at the end of the wet season when the sap is rising and the bark is supple enough to be cut and peeled off in large sheets. The outer and some of the inner bark are peeled away and the sheets are flattened under weights after heating over a fire. We use the layers of discarded bark to make paper.

Early colonization references to stringy bark include an 1887 letter to the *Adelaide Times* from W.B. Caw who recounted the negative response he received when he sent stringy bark fiber samples to London to test for papermaking: "the fibre was only fit for making woolpacks and corn-sacks." I am having mixed success so far with my papermaking experiments with stringy bark by-products from the bark painting preparation that Buku-Larrnggay sends to me. I have found that some batches of the coarse, high-shrinkage fiber have a peculiar aversion to formation aid leading to inconsistent fiber distribution in the final sheets. It is not an easy paper to make even though the stringy bark is my sister! I have yet to test it as a printing or chine-collé paper. This project may or may not be successful in incorporating new ideas and techniques into another culture. My sense is that its success depends on how the ideas fit into the complex matrix of existing traditional practice and understandings. In Yirrkala, it is said:

"Plants and animals are related to us, to each other and the land, through ceremonies, through songs, through Law and through our common creation history. In short, plants are treated with the same respect and held in the same regard as all other parts of the natural environment, including ourselves." <sup>110</sup>

Traditional custodians of Indigenous lands are under increasing pressure particularly from mining companies with promises of royalties to exploit their lands. Fiber-based projects can provide an alternative income, enabling Indigenous peoples to meet their cultural obligations to their land and resources. There are many examples of fiber and papermaking projects around the world that facilitate and develop the capacity of Indigenous communities to conserve and apply their knowledge in an increasingly globalized economy. We can learn a great deal by recognizing and incorporating Indigenous knowledges developed by people with extended histories of interaction with the natural environment. For Indigenous people these sophisticated sets of understandings embody language, naming and classification systems, use of the resources, and ritual spirituality. For us, Indigenous knowledges convey an awareness of the broad relationship between people and their environment, the existence of concurrent knowledge systems, and the recognition of culture as the core of our fundamental essence.

#### NOTES

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