

HAND PAPERMAKING

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FRONT COVER: Mulberry plant growing outside the book and paper studio at Penland School of Crafts in North Carolina. August 2009. Photo by and courtesy of Amy Richard.

BACK COVER: Patterson Clark, White Mulberry, June 18, 2009, 17 x 11 inches, artist-made invasive white mulberry (*Morus alba*) paper, ink, and block. Photo by and courtesy of the artist.

Letter from the Editor

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When we open up the fiber cabinet to select the raw material(s) for a paper project at hand, we scan our options, weighing the aesthetic qualities and working properties that each fiber can lend to the pulp we would like to prepare. Sometimes our considerations are financially based. Throughout history, papermakers have gladly employed materials discarded by other industries as a way to obtain readily available fiber and to minimize costs. Adding to the economic argument, we recognize that recycling is a beneficial and necessary practice to conserve our planet's resources. Papermakers are also seeing a potential role in the control of "invasive" plants by processing the nonnative fibers into pulp. Like the invasives themselves, papermakers too are opportunistic. To draw on the papermaking-culinary arts connection, we are always on the lookout for interesting and novel ingredients to cook up new, distinctive, innovative papers.

In this issue, we will investigate new fiber sources in the field, look at how and why we seek to turn today's cast-off materials into handmade paper, and benefit from the experience and expertise of papermakers who employ nontraditional fibers in their work. We begin with Gin Petty who outlines her favorite Kentucky invasive plants for papermaking. Mary Tasillo shares her experience with urban guerrilla weeding for an ambitious paper/print project in Philadelphia. Julie Johnson describes how to use invasive plants responsibly, and contributes two paper samples that compare the qualities offered by Japanese knotweed harvested at different times. Amy Richard examines the use of Florida's wild kozo, one of the state's Category 2 invasive plants. Peter Thomas introduces Arch Shred, a 100-percent-recycled fiber source for papermaking. Steve Miller takes us through the processing of banana stalks from annual garden trimmings, accompanied by a sample of Alabama banana paper produced by MFA students at the University of Alabama. Barbara Beisinghoff discusses her use of nettles fiber in her artwork. And Eugénie Barron introduces artist Duke Riley who used invasive phragmites fiber to create paper related to an extraordinary public art performance in New York City. In reviews, Helen Frederick tells us about Joan Hall's recent exhibition at George Mason University, and Dan R. Goddard gives us his take on "Engaged and Fragmented," a group exhibition presented at the Southwest School of Art & Craft.

As always, I appreciate hearing your feedback, comments, and suggestions. Please let us know if you are working with unusual fibers and would like to share your experience. In conjunction with this issue, we are devoting a section of our website to "Fiber R&D."

Many thanks for your continued support and readership.

Mina Takahashi



Making Paper from the Banana Plant: An Alabama Approach

STEVE MILLER

A banana tree in August. All photos by and courtesy of the author.

In West Central Alabama we have had a longtime affair with the banana plant—*Musa basjoo*. It is the hardiest of all bananas, and grows freely in our part of the world, though the leaves and stalks die down after the first frost. In late spring stalks poke out of the rhizomes and, depending on the amount of water in a season, can grow up to eighteen feet. Its heavy stalks can easily grow to nine inches or more in diameter, and lend an exotic look to the subtropics.

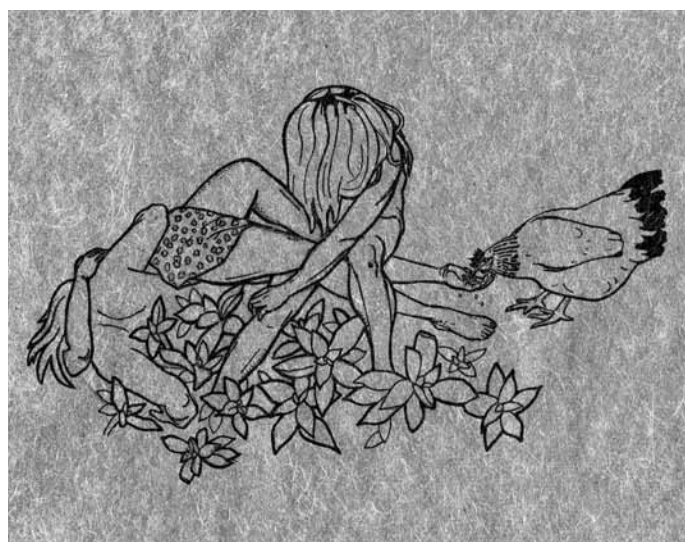
Students in the MFA in the Book Arts Program, School of Library & Information Studies at The University of Alabama love to make paper from the watery banana stalks. I must admit, though, that our first experiments in making paper from bananas did not go well.

One semester I asked students to freeze their banana peels. This seemed like a good plan at the time. On the appointed day we collected everyone's blackened banana peels and fed them into our new 2-pound David Reina beater. Slimy, sticky banana glue stuck to every surface. The pulp was a mess and never touched our precious moulds and deckles. It took forever to scrape and sand banana crud from every part of the beater that day. We set aside our hopes for banana peels as the next great papermaking fiber.

That was four years ago. Two years ago we decided to take another look at bananas—this time the plants were growing in my yard. Ordinarily, we would cut down the dead plants and haul the stalks to the curb. What better way to use this readily available garden waste than to make paper from it? It has become one of the students' favorite fiber sources. Banana plants are now at a premium every fall. We go as far as Glenn House's territory, Gordo, Alabama, in our annual search for banana plants.



Banana stalk fiber cooking in soda ash solution on a propane burner.



Hen and Chicks, a drawing by Sarah McDermott printed letterpress on Alabama banana paper.

After a few attempts, we now follow the process that I outline below. There are many ways to make this paper but this is the method that seems good and true.

After a first frost saw the stalks down and cut off the tops. The leaves look so insubstantial that we work only with the stalks. Strip off ugly or damaged outer layers to end up with pieces around six feet long. We store them in our Lost Arch Papermill on sticks, and put a fan nearby to keep air moving around them.

Anytime from immediately after harvesting to a month or two later, strip off the darkened outer layer of the stalks and saw them into 1- to 2-inch cross sections. These pieces go into a 5-gallon stainless steel cooking pot until it is half full. Then fill the pot with water to within 2 inches of the top. Now you know how much water to use in the cook. Pull the banana pieces out of the pot and start heating the water to a boil on a propane burner. While the pot is heating up, put the banana pieces into another container filled with hot water. We do this to start warming the pieces before we put them in the boiling water, so the cook takes less time.

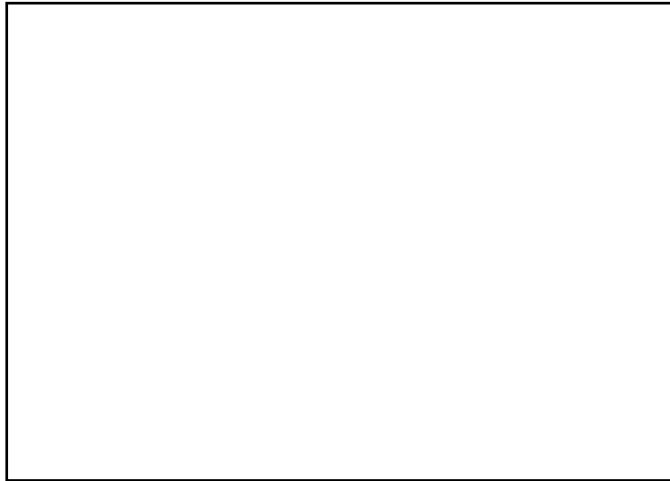
When the pot begins to boil add 3 ounces of soda ash, for a light-handed cook, and step away. Do not inhale the fumes. All of this should be done outdoors. I tried an experimental cook at home on the stove and was ordered *never, ever* to do that again. Also, if you find yourself without soda ash we have successfully cooked using one 8-ounce box of baking soda. After the cooking agent dissolves and the water comes to a boil, put the banana pieces back into the pot. When the pot comes to a slow boil, cover it with a lid and cook the fiber for about 45 minutes. Every 15 minutes tend the fiber by gently mixing the pieces for an even cook. The final fiber will appear somewhat transparent and feel fairly soft.

Rinse the cooked fiber in a stainless-steel colander. Use a gentle spray to remove the soda ash and other noncellulosic material. Two such cooks provide enough fiber for one load in a 2-pound Reina beater. Add water to half the depth of the beater, turn the machine on with the beater roll well above the bedplate (we set the counter to “30”), and within a few minutes lower the roll to “10” then “5” then as low as you can go while listening to make sure it is “working.” Howard Clark once said to me that his beater was not *really* working until it was really loud. We do not go quite that far.

The alarming thing about a proper beat is that the banana pulp goes to soup. The first time this happened I did not believe we would be able to get a sheet from the liquid goop. But we are able to form beautiful, thin, crackly, though short-fibered sheets. We do not dilute the pulp with water. The pulp goes straight from the beater into the empty vat. My students are able to make large 18 x 24-inch sheets but we tend to use smaller moulds for a higher success rate.

Mixing banana pulp with other fibers produces unusual sheets, and our graduate student Sarah McDermott is successfully printing letterpress and serigraphy on her banana papers.

At Alabama we love working with banana stalk fiber. One possible drawback is that the fibers are fairly short, so repeated folding might be a problem. Mixing banana with other pulp may be the best use of this unique and beautiful fiber.



Banana paper made from the stalk of Musa basjoo.

*Paper Sample:
Alabama Banana*

Sample sheets were made by students of the University of Alabama MFA in the Book Arts Program: Mukti Cerio, Ellison Graham, Robert Lomascolo, Allison Milham, Mary McManus, Shea McManus, Stephanie Jacobs, Krysten Nevarez, Sonja Greentree Rossow, and Elizabeth Wuestefeld.