

Handmade Paper with Colored Pulps, Created for the Printed Image

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Above: Triptych of pulp painting made with unbleached abaca, cotton linters, and pigments.
Below: Completed triptych of Constructing Layers of Time, 1990.

The flowering of handmade paper as an art medium seemed to be fated for the 1970's, 80's, and perhaps even more aptly for the 90's, with its ease in adapting to and combining with so many other art media. As a printmaker working with handmade paper, I have often felt like a sculptor, constructing many layers of the printed image while at the same time constructing the paper with its layers of colored pulp images. Perhaps I was fated to work in the multiple image with my life beginning as an identical twin. My twin sister, Kathryn Clark, introduced me to handmade paper as we founded Twinrocker Handmade Paper in 1971 with our husbands, Howard and Kit. From that point on, my life continued to be punctuated by the rhythms of papermaking and printmaking.

Coloring pulp with pigment seemed natural for me, having also drawn and painted for years. The work first began as one-of-a-kind images, using colored pulp as paint might be used. However, I soon began to explore techniques that would produce repeatable colored pulp images that could be editioned and combined with printmaking techniques. Here are some of those techniques, explained through the procedures I used on two different projects, one including woodcut and one intaglio printmaking.

A recent project called *Constructing Layers of Time, I, II, III* consisted of three etchings, each 30" x 22", completed this year. This project began with a trip to southern Utah in June of 1989 and a visit with Lucy Wallingford, also a seasoned papermaker, in Moab. Lucy and two of her friends took me on an amazing kayak trip down the San Juan River to view the petroglyphs and the ruins of the Anasazi Indians. We traveled and camped for six days along the river, often walking for miles into side canyons. After photographing and sketching many of the petroglyphs, I was inspired to create a series of images that would visually respond to the ancient images of the Anasazi. Perhaps my strong affinity to the petroglyphs was partly because they were literally intaglio images carved into the rock wall. After returning to my studio, I began to plan a series of intaglio prints and drawings.

Constructing Layers of Time, the first project I planned, was to be three intaglio prints forming a triptych. After completing full-size preliminary drawings, 30" x 22", the sheets of handmade paper with colored pulp images could be planned. The pulp imagery in the paper's surface was intended to reflect the rock stratification in the canyon walls, using pigments of yellow ochre and bunt sienna, while the etched images would appear to float on and, at the same time, submerge in that surface. The pulp for the base sheets was made of unbleached abaca fiber, beaten in a Clark hollander beater for eighty-five minutes and internally sized. The appropriate paper for printmaking is often thought of as rather soft and absorbant. Well-beaten abaca fiber



Prentice preparing for pulp painting by referring to working drawing.



Pulp painting being done for far right section of "Constructing Layers of Time".

is certainly the opposite of that; however, I prefer a strong, crisp paper such as abaca. I have found that when abaca is soaked prior to intaglio printing it will print the most subtle of aquatints. The pulp to be later used for the poured image laminations was beaten in the same beater; cotton linter fiber was beaten for a relatively long time (forty minutes) and was internally sized with Hercon 40. It was important to beat the fiber for the colored laminations short enough so that it could easily be applied to the base sheet through squeeze bottles later.

Water-dispersed pigments were used to color the cotton linter pulp by adding the diluted pigments to the internally-sized cotton pulp, creating an anionic/cationic bond. Adding the pigments to the pulp allowed the colored pulp to be mixed as spontaneously as paint. It was important to add the diluted pigments gradually, always maintaining clear water while the pigments bonded to the fibers. If the fibers became over saturated with pigment, color would stay in the water and, when applied to the work, the colored water would flow with the pulp and thus the images would lose definition.

I always make dry samples of the colored pulps first so that the desired colors in the finished dry paper can be determined. All of the colored pulps needed to produce the entire edition were mixed before beginning. A wet pulp sample of each color was also saved in case more pulp was needed to match it. The colored pulps were put in clear plastic squeeze bottles before being applied to the base sheet with spontaneous and rather "painterly" strokes.

The preliminary drawing was marked at each point where colors changed by measuring from the edge of the paper so that the colored pulp image could be repeated many times in the handmade paper edition. With the preliminary drawing pinned to the wall as a model and guide, the abaca base sheet was dipped and couched. In order to copy the colored image indicated on the drawing, the same measurements on the drawing were repeated on the base sheet of pulp by measuring from the edge of the pulp and making a light dent in the pulp with a plastic knife. The edges of the colored areas that were straight were then marked on the base sheet with a metal straight edge by placing it on the corresponding measured points of indentation. Then the proper colored pulp was poured from a squeeze bottle, allowing the straight edge to determine the edge of the colored pulp area. It was important to make a clear notation of the proper order in which the colored pulps should be layered because the color of the under layer could show through the pulp poured over it, affecting the total outcome.

Even though the edges of the colored areas could be exactly repeated, eye/hand memory was needed in order to repeat similarity in the pulp pours. For this reason, all of the sheets belonging to one edition were made the same day. Twenty-two sheets were made in all, which meant working a fourteen hour day. Eighteen prints were made in the edition, with four artist's proofs.

Another colored pulp technique used in the prints, an irregular patchy image, was made by first dipping a 4" x 4" piece of nylon window

screen into a mixture of water with a very small amount of colored pulp. A thin layer of pulp was collected on the screen and then the screen was turned over and tapped unevenly onto the base sheet.

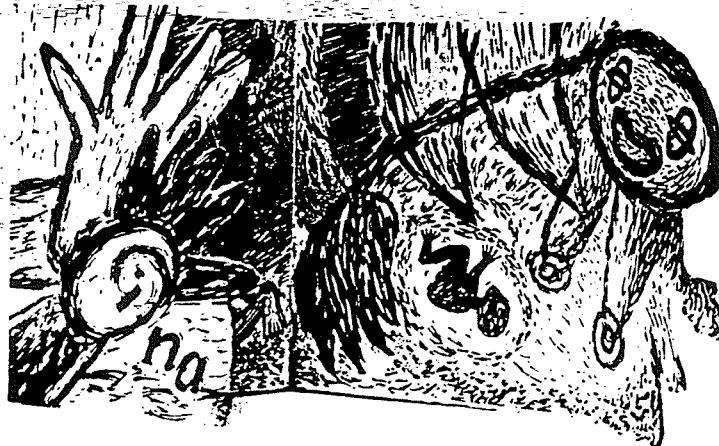
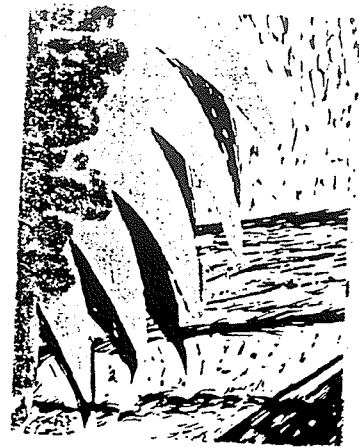
It is best to dry paper made for printmaking under pressure so that no shrinkage occurs. Paper remembers the way it was first dried and always wants to return to that form. Because of that, paper first dried against a smooth surface, under pressure, will try to dry with that same surface after it is resoaked and then printed. Also, when making paper for prints, it is necessary to have a fully expanded sheet that will not expand further when resoaked, so that the preliminary drawing for the etching can be planned for registration onto the handmade sheet. Because of this, the paper for the triptych was restraint dried.

When planning the etching plate, it was necessary to go back to the preliminary drawing and make a tracing of it with a soft graphite pencil. The tracing was then placed on the finished handmade sheet so that a more complete drawing could be made, anticipating the combination of the etched image with the finished colored pulp image. A soft graphite pencil was used so that it would later transfer to the etching plate. The copper etching plate was covered with a layer of liquid asphaltum or hard ground, which was allowed to dry. Then the tracing was turned over, the graphite side touching the plate, and put through the etching press, transferring the drawing to the ground. The elements in the image needed for correct registration were recorded on the plate by scratching through the ground where indicated by the drawing and then the copper plate was etched in a Dutch mordant acid. The etching could then continue to develop through proofing stages.

An earlier project, completed in 1986, used different techniques to combine colored pulp imagery in handmade paper with a relief printmaking process. The book project, *Inangaro*, was published by the Logan Elm Press at Ohio State University, with Bob Tauber director. Four artists were invited to collaborate in teams with four designers. Each team, consisting of an artist and a designer, created a book with the same text, a traditional Polynesian creation myth about the origin of the coconut tree. I was one of the artists invited to create a book, with Bob Tauber acting as the designer. There were no restrictions in the collaboration except that we were not allowed to see what the other teams were doing while our book was in its planning stages. After all of the books were completed, each being a different size and shape, the box maker was given the creative challenge of designing a box to hold all four of the books.

Briefly, *Inangaro* is the story of a little girl, Ina, who was born with a face that looked like the face of an eel. Because her parents felt great disgust at her deformity, they gave her no love.

The etching process is a complex one, involving the transfer of a drawing to a copper plate. The process begins with a tracing of the drawing onto a sheet of paper. This tracing is then placed on a copper plate that has been covered with a layer of liquid asphaltum or hard ground. The tracing is pressed against the plate, transferring the drawing to the ground. The plate is then etched in a Dutch mordant acid, which removes the ground where the drawing was transferred. The etching process is repeated until the desired depth and detail are achieved.



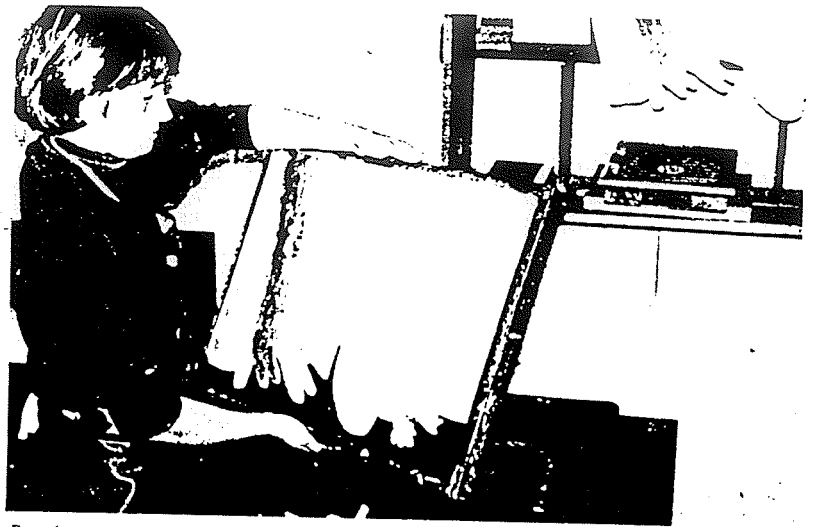
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Top and bottom page spreads show the relationship of text to images. Center page spreads show illustrations with flap extensions partially opened. Photos by W.H. Schilling.

After much suffering, she eventually died from a lack of love, but before her death she announced that from her grave would grow a fruit tree. Her face would appear on the fruit to remind those she left behind of the lost love they could have shared. Thus the coconut holds Ina's face to remind everyone that all children deserve to be loved.

During my two week visit to the Press, I created a full-size model for the book with a central image, a double page spread that folded out again. That image was a linoleum cut, to be printed in relief on externally shaped handmade paper with colored pulp images. The lino cut images were planned for both sides of the pages. The colors in the paper were bright and cheerful, reflective of the Polynesian culture and perhaps the choices of a little girl. In contrast, the relief prints were black and the marks made with the sharp knife were intended to reflect the emotional pain that Ina felt before she died. Ina, in a fetal position, floats alone while the adults are shown unable to touch physically. Ninety handmade sheets with colored pulp were made, with a finished edition of seventy boxed suites.

The central image, a double page spread with each page folding out again, extended out thirty-three inches, the book's height being twelve inches. Because of the long narrow shape resulting, the page was divided and arranged in a more compact shape on the paper mould, allowing it to fit on an 18" x 24" mould. Diagram A shows the orientation of the pages on the mould with the intended tear line that would later separate the two sheets. Diagram B shows how the two sheets would then be joined at the spine. A separate green sheet shaped like a palm leaf was made so that both sheets could be glued to it at the spine, allowing the double page spread to be sewn into the book (diagram C).



Prentice prepares to couch paper made for Inangaro. A simple pulp painting was done on the first side before couching. Notice the shape of the paper corresponds to Diagram A below.

Because the central image had an irregular edge, a shaped exterior deckle was made by first placing the paper mould's wooden deckle on 3/4" industrial Styrofoam and tracing the inside shape onto the Styrofoam. The Styrofoam was cut along the tracing, allowing it to fit inside the deckle. Then the model for the double page spread was placed on the Styrofoam and its edge was traced, leaving the shape of the desired paper. That tracing was cut with a sabre saw. The top and bottom edges of this Styrofoam deckle were slightly beveled to insure a consistent thickness in the sheet when dipped. The Styrofoam deckle was then taped to the wooden deckle with duct tape to secure it throughout the sheet forming process.

All of the pulp was made of cotton rag fiber which was beaten for ninety minutes in a Valley

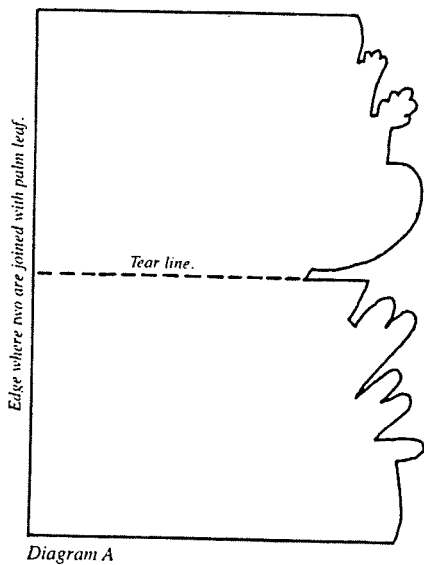


Diagram A

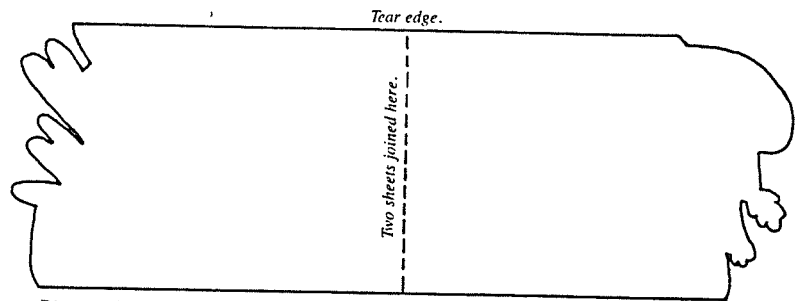


Diagram B

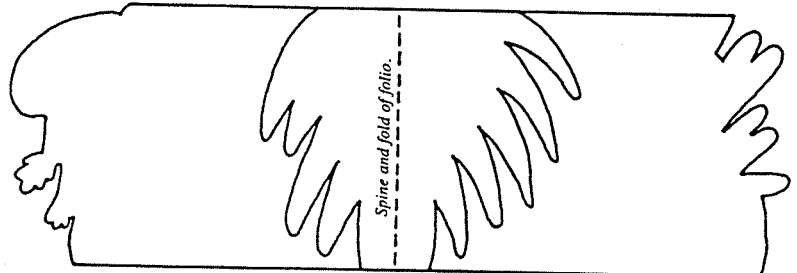
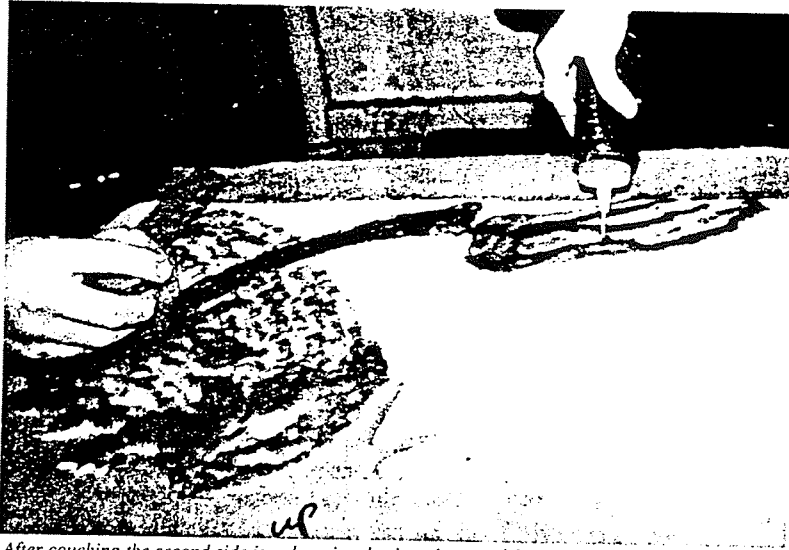


Diagram C

hollander beater at the Logan Elm Press. It was important that the pulp have a smooth, almost creamy consistency in order to dip consistently even sheets. It was also important that the paper have a neutral pH for archival quality. Some of the pulp was colored with pigments, as described in the other project. After dipping the sheet in a traditional manner, colored pulp was poured from squeeze bottles onto the freshly dipped sheet before the deckle was removed. This was necessary because images were intended for both sides of the sheet. A simple colored pulp image was planned for the first side, with the shaped deckle directing the freehand pour, because pulp still on the mould drains less well and is more fragile. After couching the sheet, the other side was exposed for coloring.



After couching the second side is pulp painted using pigmented finely beaten cotton rag in squeeze bottles.

In order to reproduce a more complicated colored pulp image that could be repeated on the couched sheet throughout the edition, heavy acetate or mylar stencils needed to be cut. In preparing the stencils, the mylar was laid over the book's model and openings were cut where the colored pulps would be placed on the base sheet. The stencils were marked with permanent ink markers indicating orientation and showing all outside edges of the base sheet. The corners of the openings were taped to reinforce them so they would not tear.

After the base sheet was couched, the stencil was laid on it and the proper colored pulps were poured into the openings from the squeeze bottles. The first sheet was then pressed and ironed dry in order to reveal an immediate result of the finished image. With the approval of that sheet, it was pinned to the wall and used as a model for the rest of the edition. As with the other project, it was important to make a clear listing of the proper order of the stencils and colored pulps. To keep the images clear, the stencils were rinsed after every use.

The paper was restraint dried, because of registration requirements with the linoleum blocks to follow. The type-high blocks were prepared from a tracing made of the original drawings on the model, which was then transferred to the blocks using carbon paper. They were then cut. Once the paper was dry, it was dampened and printed from the linoleum blocks, using a Vandercook press.

There is no tradition in the western world using colored pulps to create images in the surface of handmade paper. When using it within the tradition of printmaking, this process could be compared to the hand colored print, if one were concerned about such things. However, the unique vitality added to the paper's surface by a colored pulp image is unlike any other medium. With the new techniques of controlling the fiber content within the paper, the fiber preparation and formation, the exterior shape of the sheet, and repeatable colored pulp images within the sheet before adding the print, the tradition of edition printmaking may expand with infinite possibilities.