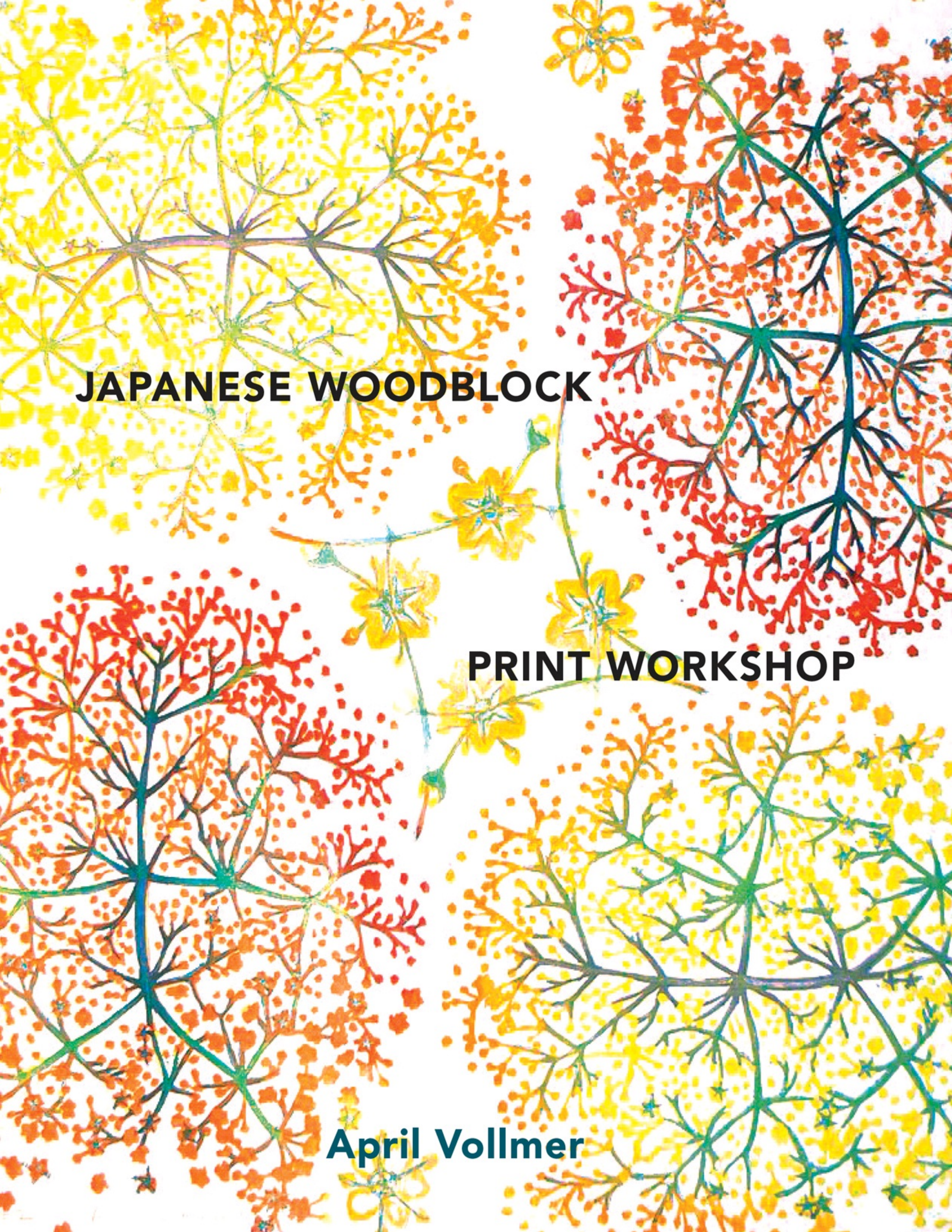
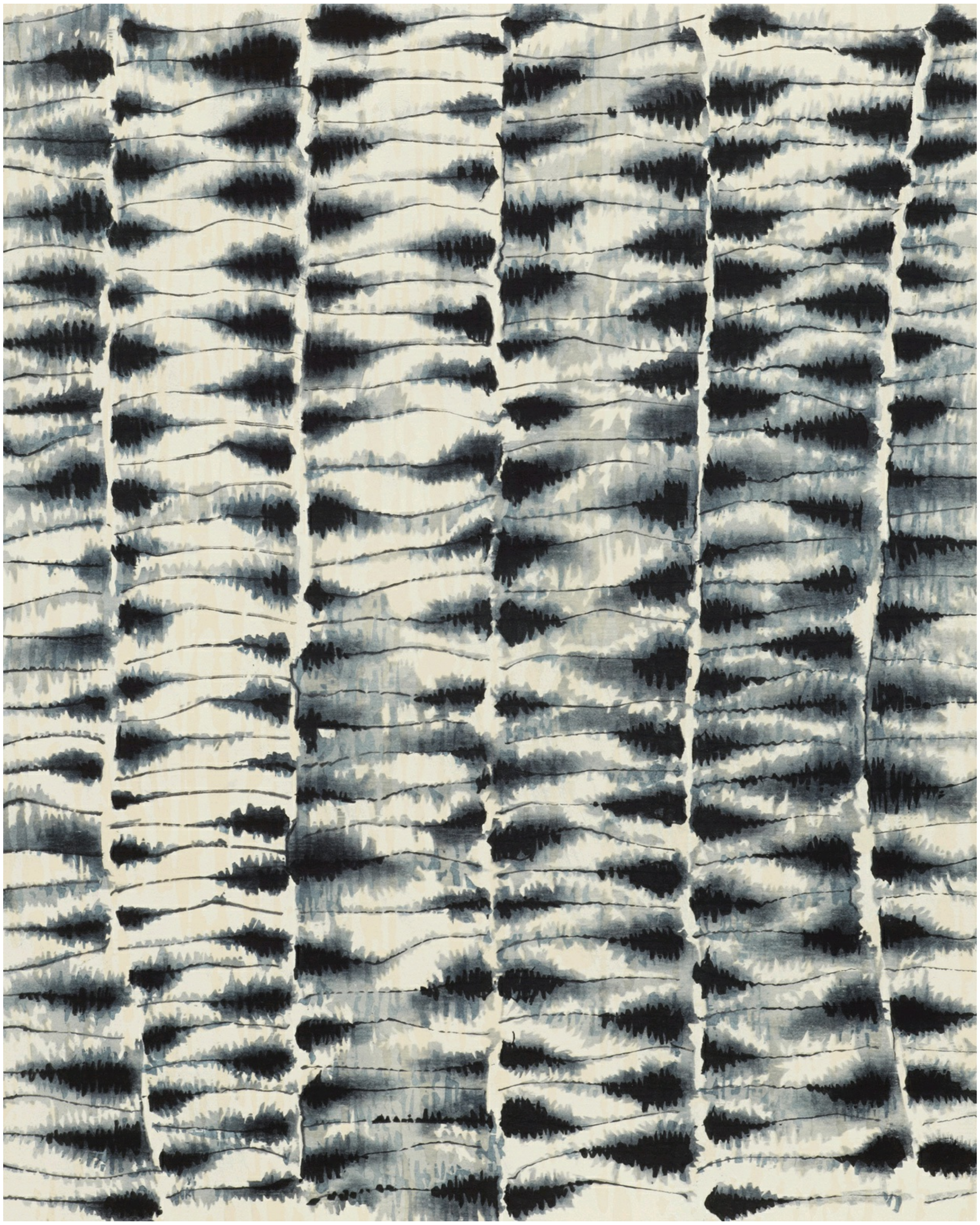


JAPANESE WOODBLOCK PRINT WORKSHOP

April Vollmer



Rebecca Salter, *Quadra 2*, 2010, 12 x 12 in (30.5 x 30.5 cm)

Woodblock on torinoko paper, printed by the Sato Woodblock Workshop, Kyoto.

Photo courtesy of Rebecca Salter

JAPANESE WOODBLOCK PRINT WORKSHOP

A Modern Guide to the Ancient
Art of Mokuhanga

April Vollmer

WATSON-GUPTILL PUBLICATIONS
Berkeley

Published in the United States by Watson-Guptill Publications, an imprint of the Crown Publishing Group, a division of Penguin Random House LLC, New York.
www.crownpublishing.com
www.watsonguptill.com

Library of Congress Cataloging-in-Publication Data
Vollmer, April.
Japanese woodblock print workshop : a modern guide to the ancient art of mokuhanga / April Vollmer. — First Edition.
pages cm
Includes bibliographical references and index.
1. Color prints—Technique. 2. Wood-engraving—Technique. 3. Color prints, Japanese. 4. Wood-engraving, Japanese. I. Title.
NE1300.V65 2015
761′.2—

2015002918

Hardcover ISBN: 978-0-77043-481-6
eBook ISBN: 978-0-7704-3482-3

Design by Nami Kurita
Cover design by Toni Tajima

v3.1

Ursula Schneider, *Chaning River*, 1996, 13 x 38 in (33 x 96.6 cm)

Florence Neal, *Wildwood 2*, 2011, 8.5 x 10.5 in (21.6 x 26.7 cm)

Bokashi gradation printing gives dimension to this print of overlapping shapes.

Photo courtesy of Florence Neal

INTRODUCTION

JAPANESE WOODBLOCK PRINTMAKING

Mokuhanga, the traditional Japanese form of woodblock printmaking, is a complex craft with a long history that is beginning to be used by contemporary artists outside Japan. *Moku* means “wood” in Japanese, and *hanga* can be translated as “printmaking.” This process developed from Chinese precedents into the refined multicolored woodblock technique of Japan during the Edo period (1603–1867). This is the technique that was used to print the famous ukiyo-e prints of the time. “Ukiyo-e” is translated as “pictures of the floating world” and refers to a style of art that included painting and decorative art as well as prints. Prints are the most widely recognized form of ukiyo-e because they were produced in large numbers and shipped around the world. This water-based technique shares much with Chinese and Korean woodblock printmaking, but master printers in Japan developed special characteristics such as the *kento* registration system that make mokuhanga uniquely Japanese.

THE PURPOSE *of* THIS BOOK

This book was conceived as an introduction to the basics of mokuhanga for creative artists outside Japan. While it includes some information about professional practice in Japan, it is written with the belief that this flexible technique can be adapted for use by individual artist-printmakers. With experience, artists can develop an approach to woodblock printing that reflects their particular situation, technical ability, and available resources.

In addition to the step-by-step chapter that outlines how a print is made, the book includes a chapter on tools and materials, and a chapter on *washi*, handmade Japanese paper. The materials used to produce mokuhanga were developed in Japan during the country's evolution from a feudal agrarian culture with rice as the medium of exchange into an urban money-based culture. An understanding of the special materials developed during that time allows artists to use them most effectively. The manufacture of paper and sumi ink for calligraphy, introduced from China and Korea, set the stage for the production of woodblock multiples using the same materials. The especially sharp cutting tools used for woodblock are forged from the same kind of bonded steel used in samurai swords and are sharpened on the same kind of water stones. These materials provided the foundation for the rise of mokuhanga during the Edo period.

The refined techniques of mokuhanga, developed by experts in specialized workshops, give the craft a complexity that takes time to master. Professional printers created sophisticated methods that took them many years of practice to perfect in order to print a wide variety of books, prints, and advertisements. Creative artists pursuing distinctly different goals can learn many technical details about carving and printing from these professionals that will help them make prints in their own studios.

Making mokuhanga prints since the mid-nineties, I developed the skills I needed to print my own images, working as simply as possible to make creative rather than reproductive artwork. When I began doing research for this book, I looked beyond my own practice to find additional information about the working methods of professional Japanese printers. My respect for these specialists has only increased over time, and yet I believe there is an important place for artists who develop an individual way of working that reflects their aims as creative printmakers. I remain

convinced that contemporary artists can learn the basic technique well enough to use mokuhanga for their own work. I have tried to convey some of the flavor of the impressive work of professionals, but this book focuses on making the technique accessible. Maintaining sensitivity to materials is the one essential key to using this technique successfully.

Yoonmi Nam, *More Beer … For Instance*, 2013, 18 x 12.75 in (45.7 x 32.4 cm)

Photo courtesy of Yoonmi Nam

In my research, I was surprised again and again at the intimacy with the natural world evidenced in the approach to materials used in mokuhanga. The craftsmen of Japan paid careful attention to working methods, and also to the plants and animals around them. Often I had to check the binomial names for plants that were used for color, for paper, and for many other functions in the world of woodblock. Swedish botanist Carl Linnaeus (1707–1778) developed scientific taxonomy during the same period that ukiyo-e prints evolved. His binomial nomenclature is the foundation for a systematic understanding of the natural world. The Japanese use of materials that evolved during the same time reflects a similarly systematic impulse.

A note about language use: I have used the English convention for Japanese proper names, with family name last, to be consistent with the many Western names in the text. A variety of translations for Japanese terms exist, and I have tried to use the most common spelling. For example, the word “mokuhanga,” while composed of three characters, is most commonly used as a single word. Where two versions exist, I have opted for a hyphenated use so that the structure of a compound name is most clear; for example, the registration chisel is *kento-nomi*. I have avoided pluralizing Japanese terms. Sizes of prints are all approximate.

BACKGROUND *of* THE AUTHOR

I became interested in learning mokuhanga after I completed my MFA in printmaking at Hunter College in New York in 1983 and moved to a small studio on the Lower East Side. While pursuing my MFA, I had worked with Vincent Longo, an abstract artist who moved easily between painting and printmaking, one informing the other. He encouraged my work in woodblock. His technique was oil based and founded in Abstract Expressionism, which in turn was rooted in the vigorous, individual cutting style of the German Expressionist woodblock artists. At the Hunter print studio, I learned to enjoy the collaborative character of printmaking as well as its immediacy and direct involvement with materials. The progression of steps involved in making a print gave me many opportunities to refine and enrich my images. I worked mainly in oil-based woodblock and etching, which were the classic techniques of Western printmaking, widely used before the invention of lithography or silkscreen.

I sought out mokuhanga after graduate school because it was a water-based technique that suited my needs as an artist-printmaker with a small studio. Mokuhanga was only offered at a few universities at the time I studied printmaking and was still considered a subject for specialists. There were a few Japanese experts in the United States who worked in mokuhanga, including Ansei Uchima (1921–2000), who taught at Sarah Lawrence College, and Keiji Shinohara, who began teaching at Wesleyan University in 1995. Both artists learned mokuhanga in Japan and included it in their teaching programs.

For me, the possibility of learning mokuhanga presented itself in 1990 when I found a short class with master printer Kathy Caraccio. She suggested further study with the artist Bill Paden, who had lived in Kyoto in the 1960s where he had learned mokuhanga working with Clifton Karhu, a Western artist whose prints are well known there. Bill taught at New York University and privately and turned out to be amazingly generous: my private lessons extended from ten lessons to twelve and really only ended with his death in 2004. He was a dedicated instructor who kept in touch with many of his students, feeling he should be available for “hanga emergencies” when someone needed help with a printing problem in the middle of the night. His students also include the artists Miwako Nishizawa, Matt Brown, and Ursula Schneider. He took mokuhanga seriously and was extremely precise and

patient. His prints reflect the care with which they were made.

I began teaching mokuhanga in 1998, when I was a participant in the Keyholder Program at the Lower East Side Printshop in New York City. Executive Director Dusica Kirjakovic invited me to give a talk about the technique to a class from New York University. The students were all fascinated by this unusual process and asked a lot of questions. It was a special opportunity at that time because few artists knew how to print this way.

I continued to look for opportunities to learn more, and in 1998 I was able to join a class at the LeRoy Neiman Center for Print Studies at Columbia University with Professor Tetsuya Noda from the Tokyo University of the Arts (called Tokyo Geidai). He was pleased to find one student in the large class of printmakers who had a basic familiarity with mokuhanga. I was able to help him during class, and I learned a great deal from him. He demonstrated sizing paper, softening brushes on sharkskin, and other procedures that I had not seen before. At the conclusion of the class, he invited me to visit him in Tokyo if I was ever in Japan.

It was six years before I was able to follow up on Tetsuya Noda's invitation, but in 2004, I was invited to Japan to participate in the Nagasawa Art Park program on Awaji Island, where Keiko Kadota had organized a program of mokuhanga training for Western artists. This was a unique program that did much to promote mokuhanga outside Japan. I learned an enormous amount during my stay, and during the six weeks I spent in Japan, I also visited Tetsuya Noda at Tokyo Geidai. To promote an understanding of mokuhanga, he invited professional master printers from the Adachi Institute of Woodcut Prints to his class each year. He invited me to join them during a special three-hour demonstration: this was my first experience seeing professional printers and carvers at work. These craftsmen (and nowadays a few women) work together in a shop organized by a publisher and maintain the skills of the Edo period. They generally make reproductions of ukiyo-e prints, although some work with contemporary artists. Their skills are refined by years of experience, and their expertise is remarkable to see.

April Vollmer and Keiko Kadota at MI-LAB in Yamanashi Prefecture, Japan, 2013.

Photo: Hayato Fujioka

Learning mokuhanga gave me more creative options than I had anticipated. Initially I wanted to learn to print without a press or toxic solvents, but the flexibility of the technique convinced me to begin using it for all my work. Using watercolor and pigment dispersions gave me a clearer understanding of color, and using the handmade Japanese paper recommended for mokuhanga made me think more deeply about the character of paper in general. Over the course of time, using the technique began to change the character of my images by allowing me to develop work through the physical process of making prints, printing blocks in different colors and different orientations to create multiple images from the same blocks.

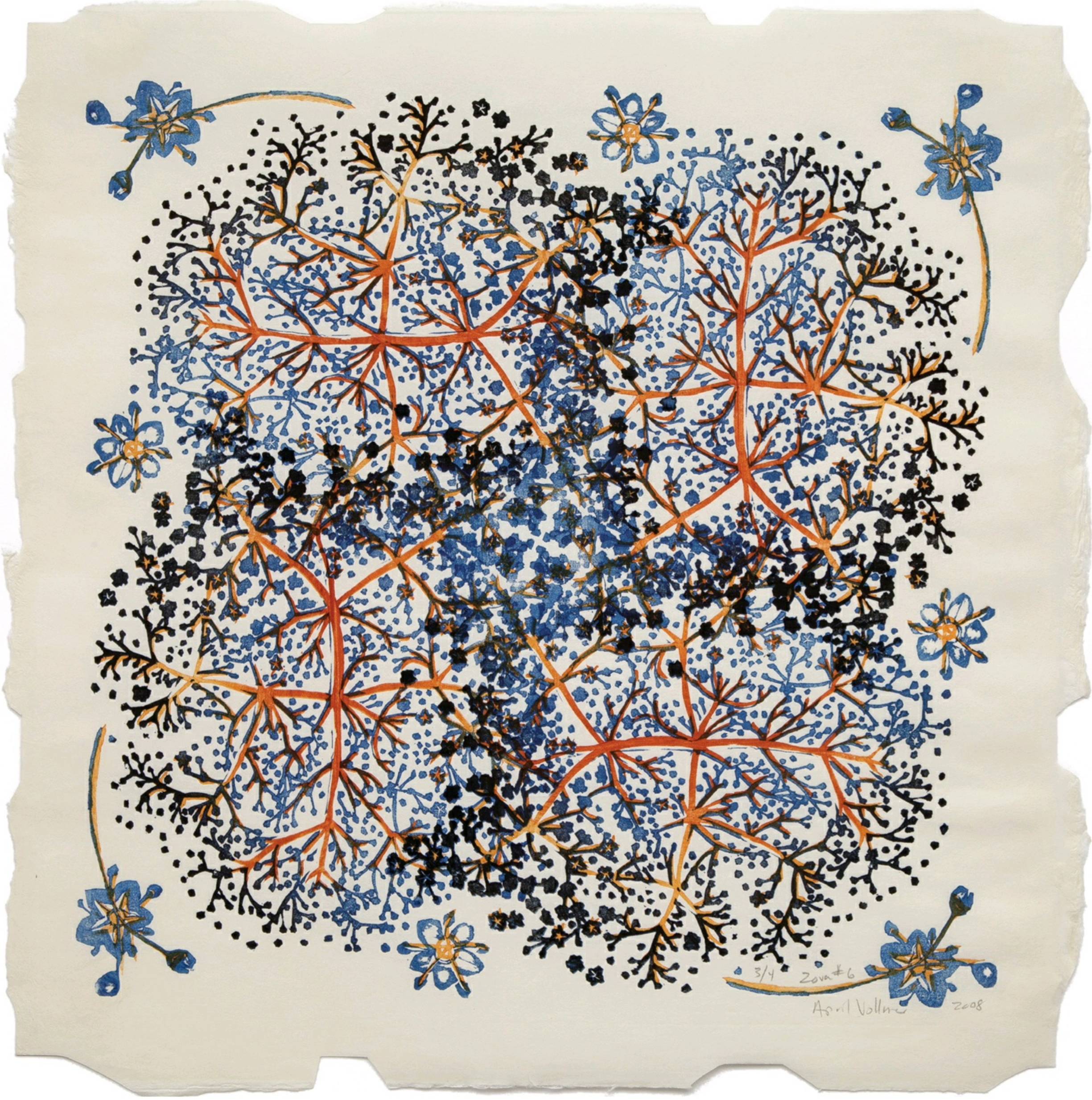
I also began to create complex patterns by printing the same block multiple times. This way of working is accomplished easily by hand printing with the Japanese registration system, rotating blocks in a way that would be hard to imagine doing on an etching press. In addition, printing with water-based pigments made it easier to layer many colors without a buildup of oily ink on the surface of the paper. I have kept a library of older blocks that I can incorporate in a single print to create unexpected juxtapositions. Working with a library this way has allowed me to

create autobiographical work that includes blocks made over many years (see *Delirious Birds and Bees*).

April Vollmer, *Delirious Birds and Bees*, 2007, 26 x 26 in (66 x 66 cm)

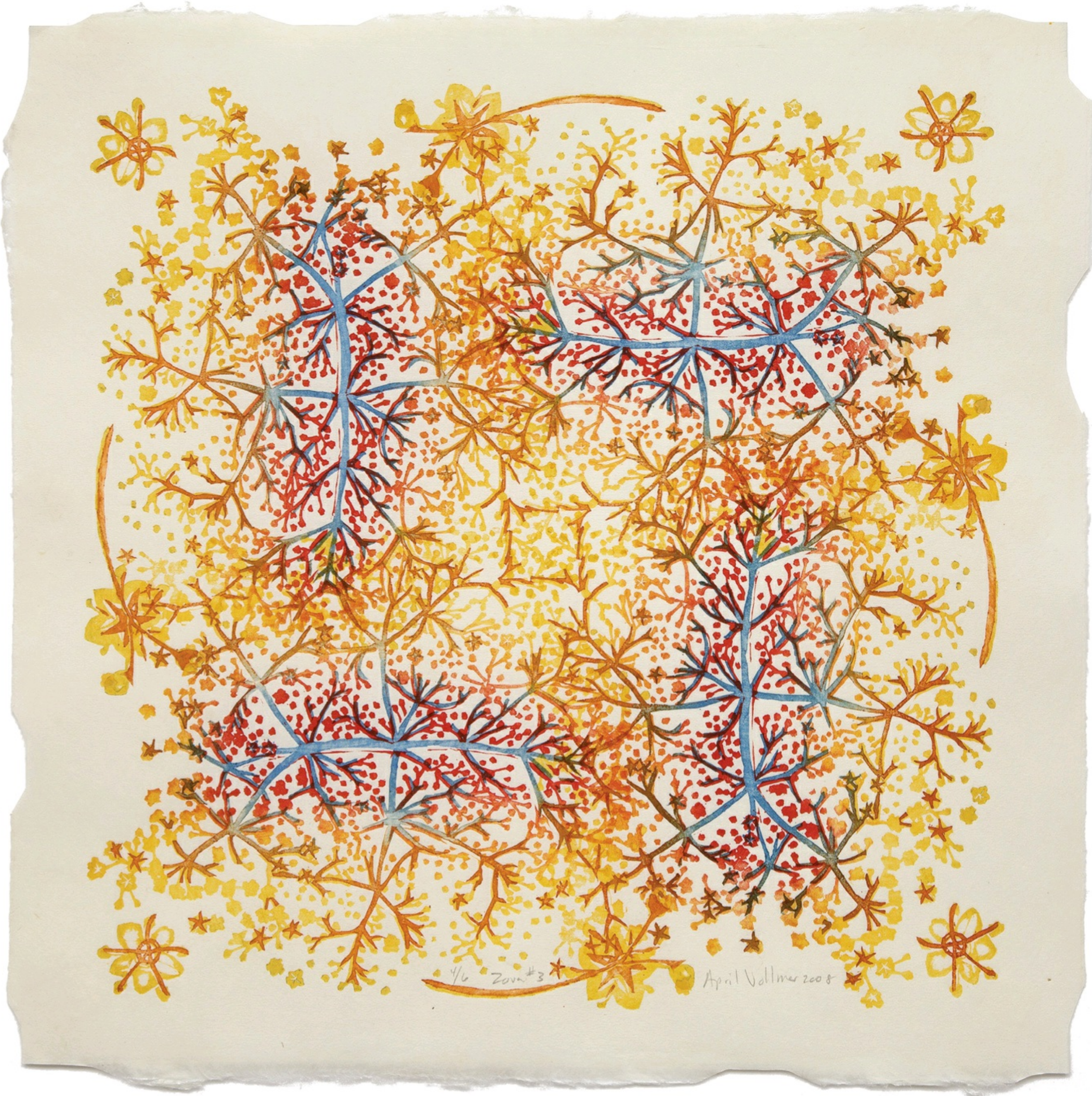
This autobiographical print incorporates blocks cut over a ten year period.

Photo: D. James Dee



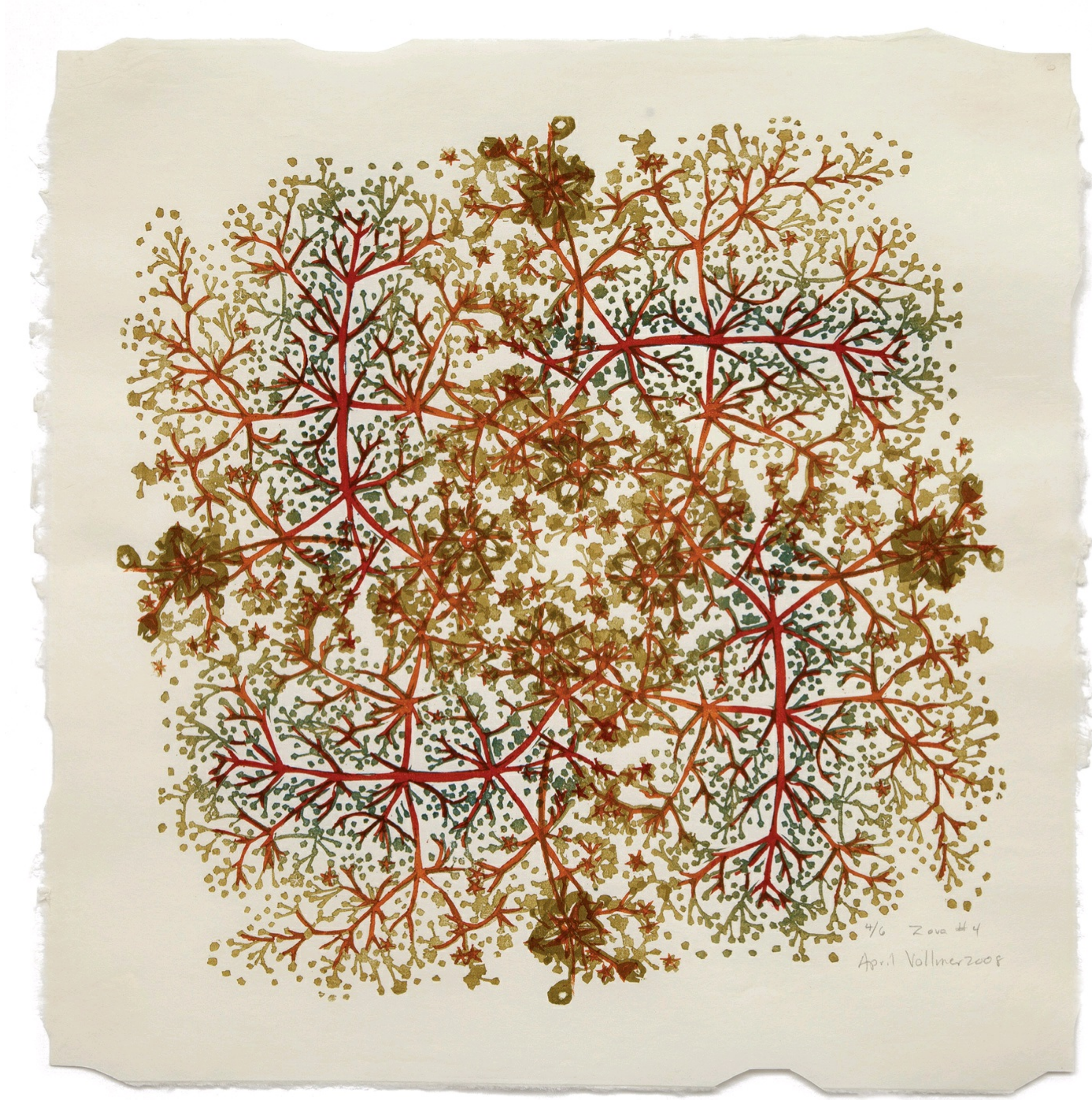
April Vollmer, *Zova #6 (blue)*, 2008, 18 x 18 in (45.7 x 45.7 cm)

Photo: Jean Vong



April Vollmer, *Zova #3 (gold)*, 2008, 18 x 18 in (45.7 x 45.7 cm)

Photo: Jean Vong



April Vollmer, *Zova #4 (brown)*, 2008, 18 x 18 in (45.7 x 45.7 cm)

Photo: Jean Vong

This series of prints was created by rotating two blocks to create a variety of patterns.

Over the years that followed, I became increasingly committed to mokuhanga. I shared my understanding by teaching workshops at the Lower East Side Printshop in New York City; Anderson Ranch Arts Center in Snowmass, Colorado; Frogman’s Print and Paper Workshops in Vermillion, South Dakota; the Farnsworth

Museum in Rockland, Maine; Cabrillo College in Santa Cruz, California; and many other locations throughout the United States.

I returned to Japan in 2011 as a board member of the First International Mokuhanga Conference in Kyoto and Awaji, which featured an exhibition of creative mokuhanga prints from around the world and demonstrations by master craftsmen. I was also a member of the board of the Second International Mokuhanga Conference, held in conjunction with Tokyo Geidai 2014, which provided another excellent opportunity to witness demonstrations by Japanese master printers, to hear lectures by historians and educators, and to see a wide range of impressive contemporary work in mokuhanga.

In 2013, I was invited to Japan to work on this book as the first writer and researcher at Keiko Kadota's new MI-LAB Residency program in Yamanashi Prefecture on Lake Kawaguchi, outside Tokyo. This program is a successor to the Nagasawa program, which ended in 2011, and focuses primarily on teaching mokuhanga to foreign artists.

A sculpture of the baren printing disk marks the entrance to the MI-LAB Residency building.

Photo: April Vollmer

In addition to this study, I feel fortunate to have been able to take two short classes in New York with master printer Yasu Shibata: one at Cooper Union in 1999 and a second at the Japan Society in 2013 in which I was able to refine my understanding of mokuhanga printing.

April Vollmer, *Migrating Gyre #6*, 2008, 26 x 26 in (66 x 66 cm)

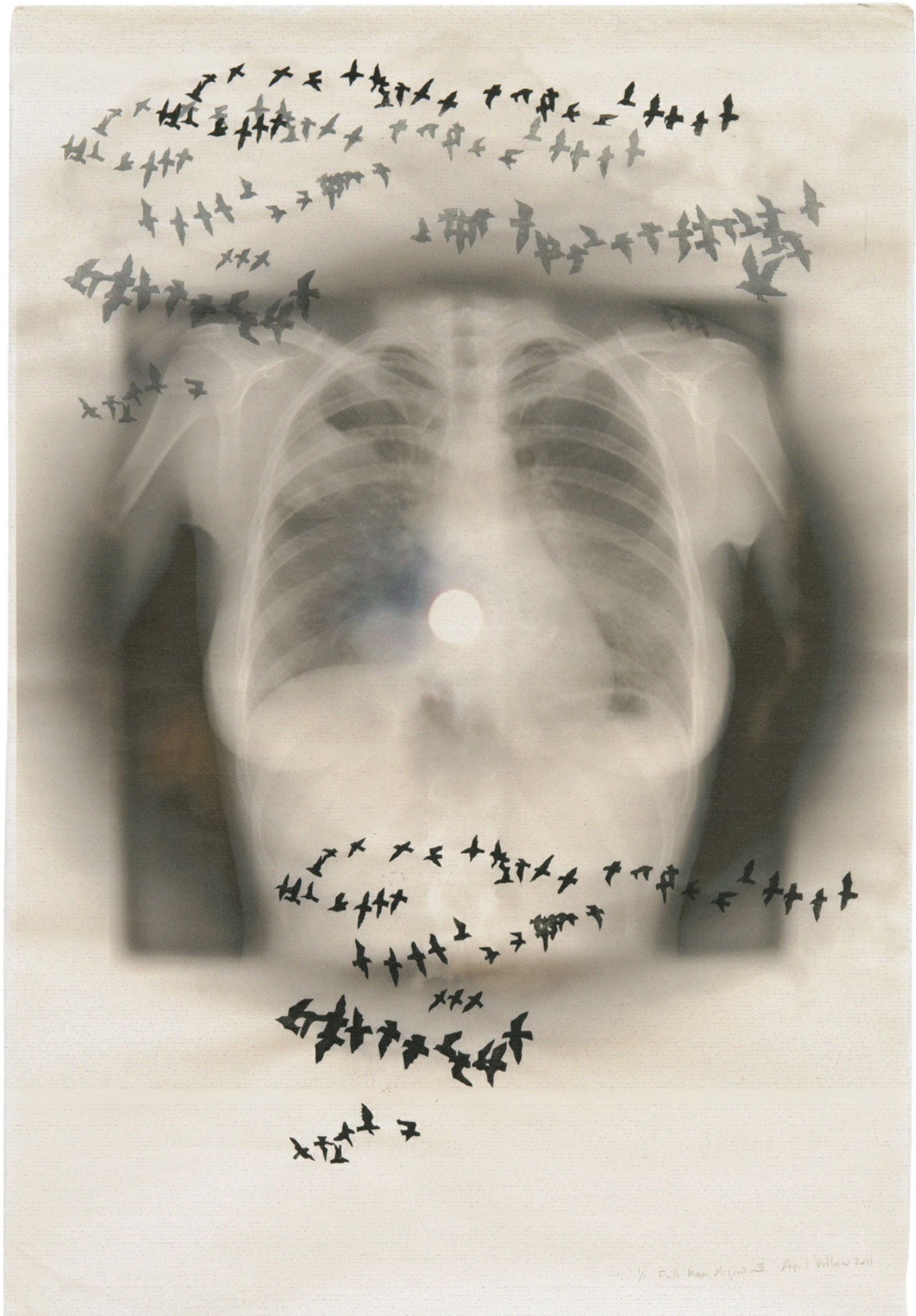
This is a complex print created from only one block printed multiple times with sumi ink.

Photo: D. James Dee

My trips to Japan gave me a deeper understanding of mokuhanga and its place in the culture and history of Japan. I met creative printmakers, master printers, and educators who were all gratified that I was interested in their technique and that I was teaching it in the States. Everyone I spoke with felt that this special Japanese technique was being neglected in Japan. Although recognized as an important craft tradition, it is often considered old-fashioned and inappropriate for creative use today. Printmaking departments include techniques imported from the West such as etching, lithography, or silkscreen more often than traditional Japanese woodblock.

I am not unique in my enthusiasm for mokuhanga. Many artists have traveled to Japan to study it. Two excellent books in English attest to the expertise of Westerners who learned mokuhanga. London-based abstract artist Rebecca Salter and Finnish printmaker Tuula Moilanen both studied mokuhanga with Akira Kurosaki in Kyoto, where they learned the technique intimately, and both have shared their expertise in writing for English-speaking artists.

Today I continue to use mokuhanga alone and in combination with other techniques. I have printed simple blocks multiple times to create complex patterns, juxtaposed the physicality of printed wood blocks with subtle digital printing on handmade Japanese paper, and made books incorporating mokuhanga.



April Vollmer, *Full Moon Migration*, 2011, 32 x 26 in (81.3 x 66 cm)

This is an example of mokuhanga printed over a digital image on smooth, uncoated Gozen washi. The birds are mokuhanga.

Photo: D. James Dee

April Vollmer, *Alternating Currents*, 2013, 11 x 8 in (28 x 20.3 cm)

This digital and mokuhanga double accordion book was initiated during a residency in Bosnia and incorporates mokuhanga and digital printing. The woodblock portion represents the arches of the sixteenth-century bridge at Višegrad and is printed on a heavy weight kizuki kozo paper; the digital portion is composed of altered photographs from the area printed on lighter weight machine-made kozuke paper.

Photo: Scott Dolan

When teaching classes in mokuhanga, I have received an enthusiastic response from artists and educators eager to learn about this alternative water-based method. Today mokuhanga is included in many print programs around the country. There are many reasons for its increasing popularity: materials have become more readily available, technical information is accessible online, and the print community has sought more nontoxic ways of working. Many print shops—such as Zea Mays in Florence, Massachusetts; New Grounds Print Workshop in Albuquerque, New Mexico; and the Wyeth Family Studio Art Center at the University of Maine, Orono—have established programs that emphasize safer printmaking processes. This book documents the information that I convey in my workshops and reflects the

reality of practicing mokuhanga in the United States with materials and information available here, for an audience of artists more familiar with Western printmaking.

April Vollmer, *Attractor*, 2006, 15 x 16 in (38.1 x 40.6 cm)

Photo: D. James Dee

UNDERLYING THEMES

I have tried to balance my respect for the careful craftsmanship of Japanese professionals with my desire to make the technique accessible. Learning mokuhanga requires practice, and I have often found that students are able to absorb verbal explanations better after the trial and error of studio experience, which is essential to all forms of printmaking. The indirect approach, creating a matrix in one material and then producing finished prints in another, requires a feeling for handling materials that is developed by practice rather than through words.

The evolution of mokuhanga in Japan is tied to the land and the seasons, to the local plants and animals. For contemporary artists in other locations, it still provides a tactile engagement with materials. Working in mokuhanga promotes sensitivity to the character of steel and wood, fiber and moisture, that is profoundly satisfying. In the age of virtual reality, this sensory engagement is an important element in the enthusiastic reception of mokuhanga outside Japan.

The constellation of individuals who share a fascination with mokuhanga includes people with an interest in printmaking, Japanese culture, and the interplay of historic and contemporary ideas. As an artist, focusing on this corner of creative printmaking has given me access to a technique that embodies important ideas about history, material culture, and a way of life. When I first studied it, I was struck by the zealous dedication of artists like my first mokuhanga teacher, Bill Paden. Now I find myself in a similar position, bridging cultures by promoting the technique of a foreign place. In the process of learning mokuhanga, Japan has become more familiar, and I have made longlasting friendships with artists from Japan and from other countries who share my enthusiasm for mokuhanga and the ideas it embodies.

Ando Hiroshige (Utagawa Hiroshige) (1797–1858). *Naruto Whirlpool, Awa Province*, from the *Sixty-Odd Provinces*, ca. 1853. 14 x 9.7 in (35.6 x 24.4 cm). Polychrome woodblock print; ink and color on paper.

In part a response to sumptuary laws restricting the use of figures, Hiroshige made many landscapes. The Naruto Straits are tidal whirlpools between the islands of Awaji and Shikoku, an area where much paper is produced. A bridge was built in 1998.

The Metropolitan Museum of Art, New York, NY, USA. © The Metropolitain Museum of Art.

Photo: Art Resource, NY

CHAPTER 1

HISTORY AND SIGNIFICANCE

One of the most exciting aspects of the study of printmaking in eighteenth-century Japan is the parallel that it reveals between cultural changes made possible by new printing technology then and the vast transformations today due to the advent of the digital technologies of the information age. This chapter offers a brief overview of the beginnings of woodblock as a magical and religious practice and an outline of its evolution as the technique that embodied the new ideas of popular culture in the rapidly developing urban centers of Edo-period Japan. Its significance to contemporary artists who make creative prints is tied to this history as well as to its practical advantages as a printmaking method that does not require the use of petroleum-based solvents or a mechanical press.

DEFINITION *of* MOKUHANGA

Mokuhanga, the traditional hand-printing technique of Japan, evolved from Chinese and Korean precedents during the Edo period (1603–1867). This water-based woodblock method was used to print everything from books to advertisements to playing cards to the single sheet prints that are seen most often in the West. *Moku* means "wood," and *hanga* can be translated as "printmaking." In Japanese the word *hanga* consists of two characters, representing two concepts, *han*, meaning "print" or "impression," and *ga*, meaning "picture."

While the expression refers to the print as an object more than to the printmaking process, it is a convenient way to identify this special technique, which in English could be called "traditional Japanese water-based woodblock printmaking." Mokuhanga is most recognized as the technique that was used to print the famous woodblock prints of the Edo period, known as *ukiyo-e*. Ukiyo-e is generally translated as "pictures of the floating world," suggesting images tied to a Buddhist notion of impermanence and the short-lived beauty of the transient world, as contrasted with the permanence of religious transcendence. During the Edo period, popular ukiyo-e prints referenced the floating world of the senses, the pleasure quarters, the theater, all fleeting pleasures that could be bought with money. *Ukiyo* was a style that included paintings and objects as well as prints, *-e* being the suffix that indicates "picture." The prints are the best-known example of ukiyo-e artwork because they were made in multiples and traded around the world. Because of the wide distribution of these prints, they were the form of Japanese art that influenced the French Impressionist painters and were key in the development of Japonisme and Art Nouveau styles in Europe.

In spite of the wide appreciation for ukiyo-e woodblock prints, the mokuhanga printing technique was not well known outside Japan until recently. Thanks to increased travel and exchange with Japan, the virtues of this flexible water-based technique are being discovered in the West. Contemporary artists are learning about its possibilities, and university departments are broadening their printmaking programs to include Japanese woodblock.

TECHNICAL UNDERSTANDING OUTSIDE JAPAN

The first mokuhanga prints to arrive in Europe during the last half of the nineteenth century profoundly influenced the Impressionist painters. The outlines, flat colors, and compositional eccentricity of these ukiyo-e prints inspired formal changes in the work of painters including Manet, Van Gogh, and Bonnard. However, these painters and the master printers they worked with imitated the compositional innovations rather than the technique of the prints.

Félix Bracquemond was the prolific French painter-printmaker who brought the prints of Hokusai to the attention of the Impressionist painters. He first saw a copy of one of Hokusai's manga sketchbooks in 1856 at the shop of his etcher friend Auguste Delâtre, who had discovered the book used as packing material in a shipment of porcelain. However, most prints reached European buyers through Asian import stores.

Innovative prints by Edgar Degas, Marie Cassatt, Henri Toulouse-Lautrec, and others clearly show the liberating influence of Japanese prints, but they were all created using variations on the Western etching and lithographic techniques of the time. Paul Gauguin was one of the few artists inspired by Japanese prints to carve his own woodblocks. He carried Hokusai prints with him on his travels, and his work owes a profound debt to the compositional originality and calligraphic line of ukiyo-e prints. He approached woodblock in a fresh way, with idiosyncratic carving and impressionistic coloring, qualities he identified with Japanese prints. During the early twentieth century a few adventurous Westerners traveled to Japan: Emil Orlík (1870–1932) from Prague; Helen Hyde (1868–1919) and Bertha Lum (1869–1954) from the United States; and a few others were recognized for their work in mokuhanga. An important artist who used the technique was Arthur Wesley Dow (1857–1922), who was inspired to study Japanese woodblock after being introduced to Hokusai's prints by art historian Ernest Fenollosa. Dow used the technique to create multiple color variations in his landscape woodblock prints and promoted Japanese woodblock techniques during his influential teaching career in Boston and New York.

SCHOLARSHIP IN THE UNITED STATES

Several of the most important collections of Japanese woodblock prints are in the United States. Ernest Fenollosa (1853–1908) collected many examples of Japanese art, which ultimately formed the foundation for the Asian art collection of the Museum of Fine Arts, Boston, where he worked as curator of Asian art from 1890 to 1896. Fenollosa lived in Japan for many years and was instrumental in preserving Japanese cultural heritage as Japan modernized rapidly during the Meiji period (1868–1912). He created the first inventory of Japan's National Treasures and worked to preserve Buddhist art. He collaborated closely with Japanese scholars and helped found the Tokyo School of Fine Arts (now part of Tokyo University of the Arts), initiating a Western-style university system.

The Museum of Fine Arts, Boston, and the Art Institute of Chicago, which boast two of the greatest collections of ukiyo-e prints anywhere, were joined in the 1950s by the Honolulu Academy of Arts, which became a third important collection when novelist James A. Michener donated his extensive print collection. Another noted collector was the architect Frank Lloyd Wright, who financed his architectural work by buying prints in Japan and selling them on his return home. The Museum of Fine Arts, Boston, the Art Institute of Chicago, and the Metropolitan Museum of Art in New York all acquired substantial portions of their outstanding collections of ukiyo-e prints from him. The Van Vleck Collection of the Chazen Museum of Art (formerly the Elvehjem), at the University of Wisconsin–Madison also holds a significant portion of Frank Lloyd Wright's personal collection. These museum collections are important repositories for an art form that was considered ephemeral where it was made; they have become resources for both Western and Japanese scholars.

OVERVIEW *of* THE HISTORY *of* MOKUHANGA

The earliest Japanese woodblocks were black and white copies of Buddhist sutras from the eighth century. Ukiyo-e, the distinctive multicolored woodblock prints that would become synonymous with Japanese art, evolved much later, during the two and a half centuries between the establishment of the Tokugawa shogunate in 1603 and its dissolution in 1868 with the upheavals of the Meiji Restoration. Mokuhanga was the technology that allowed the growth of literacy in early modern Edo and was used to reproduce everything including books, advertisements, games, votive name slips, shop signs, and, most well known outside Japan, individual prints. These popular "pictures of the floating world" glorified the pleasures of the city and celebrated famous sites along the travel routes visitors took to the city. They were an expression of a growing urban popular culture at a time when the Tokugawa government continued to maintain control by enforcing a feudal class system. The values of the Tokugawa elite were reflected in more traditional art forms such as calligraphy and sumi-e painting that were enjoyed in private and had been handed down from the Kyoto imperial court.

The Edo period was established by the Tokugawa clan when it unified Japan after years of war and social conflict, during which local warlords, called *daimyo*, fought to gain control over parts of Japan. Once the Tokugawa shogunate established supremacy, it consolidated power by moving the capital from the city of Kyoto in the Kansai region, Japan's rice-growing center, to Edo, a small fishing village several days' travel to the north that quickly grew into the metropolis of Tokyo. This move gave the shogun the opportunity to create a new form of government, distanced from the emperor and the powerful Buddhist monasteries, all left behind in Kyoto.

Real power moved with the shogun to the new capital. The shogunate controlled the power of the daimyos by creating an "alternate-attendance" system, which was in effect from 1635 to 1862. This system required local daimyo from all over Japan to spend every other year in Edo, leaving their families hostage there when they traveled home. This arrangement was designed to prevent the rise of provincial armies. It also united Japan, giving residents from across the country an understanding of the nation as a whole by necessitating travel between their homes and Edo. These temporary residents were a ready audience for the entertainments

of the capital and brought money to spend on printed souvenirs of these pastimes.

While the alternate attendance system was designed to strengthen the power of the shogun, it also created a demand for images of famous locations along the roads. Hiroshige's famous print series *Fifty-three Stations of the Tokaido Road* documents the stopping places along the most traveled of these five important highways, which connected the old imperial residence in Kyoto with the shogun's new seat in Edo. The audience for popular entertainment included many retainers who accompanied the daimyos from the provinces who did not bring their families, so this population included more men than women. Their number was augmented by the many workmen from the countryside who were hired to build the new city in short order. This was the audience for popular prints and novels, Kabuki theater, sumo wrestling, and other popular entertainment. The wealthier among them also spent time and money in the Yoshiwara, the licensed pleasure quarter of Edo.

Fine art in the emperor's court in Kyoto was displayed at intimate gatherings of the well-educated elite, while ukiyo-e prints were widely marketed products aimed at the growing urban population of Edo and other cities. There were distinctive styles of ukiyo-e prints associated with Osaka, Kyoto, Yokohama, and other urban centers outside Tokyo. The subjects of the prints included Kabuki popular theater (which evolved from refined Noh plays during the same period), famous actors and courtesans, sumo wrestling, street festivals, and views of travel destinations that were newly part of the national consciousness. In addition to the extensive production of *bijin-ga*, or prints of beautiful women, ukiyo-e artists made explicitly erotic *shunga*, or spring pictures, often produced in series by well-known artists. While these clever images were often considered inexpensive substitutes for visits to the pleasure quarters, they retain an echo of apotropaic magic that connects them to the fertility rituals of ancient agricultural Japan.

Because of their formal innovation and technical refinement, the transgressive character of ukiyo-e prints is often overlooked. However, the artists and publishers, and the urban demimonde their prints illustrate, were frequently targets of official repression. The "floating world" of idle pleasure was seen as a distinct threat to civil harmony by the Tokugawa state. Order was maintained during the Edo period by assigning each citizen a specific role to fulfill. Everyone was expected to work hard for the common good and to practice extreme thrift, owning a minimum of material goods. While this system insured peace by preventing the rise of armed conflict, its inflexibility left little room for inevitable cultural changes as Japan modernized. Samurai warriors were the highest class in feudal

Japan, followed by farmers, who were honored in theory, but taxed heavily and exhorted to eat little in order to produce more rice. Below the farmers were artisans, and lowest of all were the merchants, who produced nothing useful. Artists, along with actors, wrestlers, dancers, prostitutes, and any displaced people were identified by the Tokugawa shogunate as marginal and undesirable.

Kitao Masanobu, *Fan Vendor*, ca. 1795, 27 x 4.6 in (68.6 x 11.7 cm), pillar print (hashira-e).

Courtesy of the Lyon Collection of Japanese Prints, woodblockprints.org

During the second half of the Edo period, the fiction that the feudal class hierarchy was the inevitable natural order of things began to break down because of the increased wealth of merchants who became more powerful than the impoverished but higher-status samurai.

Because ukiyo-e prints documented profound changes in society and glamorized the pleasures of city life, the prints and the artists who made them were seen as a genuine threat by the authorities. A common form of restrictive legislation aimed at publishers were the sumptuary laws designed to reduce the appeal of popular prints by restricting the size, limiting the materials or colors, or forbidding particular subject matter. Occasionally publishers or artists were arrested, as happened to Kitagawa Utamaro (1753–1806), one of the most established artists of the ukiyo-e demimonde, famous for his sensitive portraits of beautiful women from all classes. Toward the end of his life he was placed under house arrest with his hands bound as a warning to print publishers and artists.

Because of their perceived threat to order, ukiyo-e prints required the approval of censors after 1790. The censor's seal, stamped on the face of a print, is often used to determine the date of a print. Shunga erotic prints were unsigned and functioned outside this system of control, as were privately published *surimono* prints. Surimono were lavish prints commissioned by a private club to be distributed to their exclusive membership. Because they were not subject to sumptuary restrictions, publishers of surimono were free to display fully the skills of their artisans; these prints often incorporated special materials and printing effects that were not permitted in prints sold publicly.

Books and prints were the most significant products made using mokuhanga during the Edo period. However, the technique of printing water-based woodblock existed before and continued after the creative flowering of that time. Today mokuhanga is still practiced by specialized craftsmen mainly for fine art reproduction of ukiyo-e prints and is taught at a few universities to creative arts students. It fell out of favor during the twentieth century, when it came to be considered old-fashioned, suitable for teaching schoolchildren or for printing New Year cards. It was not taken as seriously as Western fine printing techniques, such as etching, lithography, or silkscreen. There have been exceptions to this trend in Japan, notably the commitment of dedicated teachers like Teruo Isomi in Aichi, Akira Kurosaki in Kyoto, and Tetsuya Noda in Tokyo.

EARLY WOODBLOCK HISTORY

The earliest dated woodblock is a printed scroll of the Diamond Sutra, with a frontispiece of the Buddha teaching, discovered in 1907 by Aurel Stein in the Mogao caves at Danhuang in central China. Other printed documents of a similar age exist, but without a written date. Bearing a dedicatory inscription corresponding to 868 CE, the artifact is now housed in the British Museum. A sutra is an ancient Indian text of aphorisms, highly condensed to facilitate memorization. Before the invention of printing, early sutras were recorded in palm-leaf books. The Diamond Sutra is a dialogue with the Buddha about the nature of reality. Printed on a scroll five feet long, its text is transcribed from Sanskrit into Chinese. The scroll includes an intricate image of the Buddha surrounded by attendants that suggests it evolved from a much older woodblock tradition.

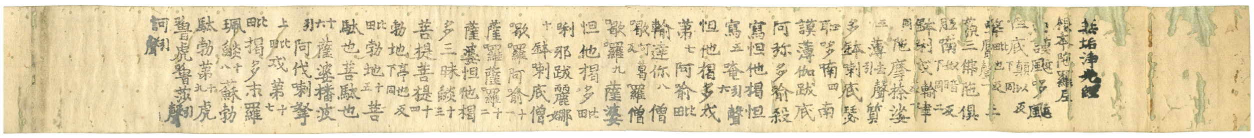
This type of sutra scroll spread the technology of printing across Asia along the silk routes. The earliest woodcuts in Japan probably arrived in the fifth century with the introduction of Buddhism. The first dated printing in Japan itself was the astonishing project of *One Million Pagodas and Dharani Prayers*, created between 767 and 769.

This cypress and cherry wood container is made in the shape of a small stupa that’s just under 9 in (32 cm) tall. The finial is removed to place a scroll printed with a Buddhist Sutra inside (pictured on this page). The project as a whole is sometimes called *One Million Pagodas and Dharani Prayers*.

Courtesy of the Lilly Library, Indiana University, Bloomington, Indiana

The million pagodas are three-level wooden structures under a foot tall, each painted white. For each ten thousand three-story pagodas, a seven-story pagoda was made (for a total of one hundred), and for every ten seven-story pagodas, a thirteen-story pagoda was made (for a total of ten). Pagodas evolved from the Indian *stupa*, a religious structure designed to contain precious relics. These small

wooden versions house an equivalent in the form of printed *dharani*, short sacred texts sometimes described as the essence of longer sutras. The top level of the pagoda, the finial, could be removed so the text, printed on a tightly rolled long, narrow sheet, could be placed within the hollow center. These scrolls were not intended to be read but embodied a supernatural significance. Protective in character, the pagodas were charms that provided their creators with Buddhist merit.



The interior scroll of the stupa pictured on this page is a relief print of a condensed Buddhist Sutra transcribed into Chinese characters.

Courtesy of the Lilly Library, Indiana University, Bloomington, Indiana

The Empress Shotoku set this project in motion during the Nara period (710–794). She used this labor-intensive project to unite the country after a rebellion, to consolidate power, and to promote Buddhism. The *One Million Pagodas* were distributed to ten Buddhist temples around Nara. Many examples still exist. Nara was the imperial capital before it was moved to Kyoto at the start of the Heian period (794–1185). While the technology of this project set the stage for woodblock printing, its specifics were quite different from those of Edo period printing. More than one printing matrix was used in the production of the dharani and may have been made of metal rather than wood.

The woodblock technology of Ming period painting manuals from China provided a more concrete foundation for the development of the Japanese ukiyo-e printing. The printing in these early books closely imitated the nuances of calligraphy and colored-wash painting. One of the first color woodblock books published was the sixteen-volume *Ten Bamboo Studio Manual of Calligraphy and Painting* (1619–33). It was followed by the widely distributed fifteen-volume *Mustard Seed Garden Painting Manual* (1679–1701). Such books would have been available as training and inspiration to artists in Edo. Like Japanese mokuhanga, these books were hand-printed with water-based color but with a different kind of baren and a different registration system. Their purpose was to illustrate classic painting techniques for artists to imitate.

UKIYO-E PRINTS IN EDO PERIOD JAPAN

Ukiyo-e prints were created by groups of individuals working together, including the artist, publisher, carver, and printer, as well as poets and calligraphers, who were a significant element in many projects. While publishers initiated print projects, selected the subjects, and coordinated and financed the work of the group, it is the artist who is most closely identified with prints. None of the ukiyo-e prints could have been produced without the collaboration of others.

In Japan, the first examples of prints that reflected the reality of life in the Edo period were lively monochrome prints from the early 1700s. The influential artist Hishikawa Moronobu (1618–1694) developed a vigorous, sophisticated use of black and white printing aimed at a popular audience. A masterful draftsman who first trained as a painter, Moronobu created varied and amusing books and many explicitly erotic shunga prints known as “spring pictures.” He laid a solid foundation for mature ukiyo-e printmaking during this early phase.

Hishikawa Moronobu, *Two Lovers*, ca. 1675-80, 9 x 13.25" (23 x 33.7cm), woodblock print. The Francis Lathrop Collection, Purchase, Frederick C. Hewitt Fund, 1911

This image is the first sheet of a progressively more explicit erotic album.

While Moronobu's prints are technically straightforward, publishers gradually embellished black and white prints with additional effects. Areas of pattern were burnished to create shiny areas representing fabric; embossments were added; some prints were hand-colored. In the 1740s, prints called *benizuri-e* were made using multiple blocks for color. *Beni*, meaning "red," was made from the safflower, *Carthamus tinctorius*, a yellow flower in the aster family that had been used in dyes in Egypt and India since ancient times. Gradually other vegetable and mineral colors were added. Except for black, these early colors were mostly fugitive and faded with exposure to light.

The first full-color prints employing these new colors were made by Suzuki Harunobu (1725–1770), who was not only an artist but also a publisher with connections to wealthy patrons who could support his use of the best paper and materials. Many of his prints were created in limited quantities in the form of privately published calendar prints, called *e-goyomi*, for an elite audience. The calendar text, indicating the long and short months of the year, was hidden somewhere within the image of the print, perhaps in response to government regulations limiting the number of publishers licensed to print calendars. The innovation Haronobu is remembered for is full-color *nishiki-e* (brocade picture) prints, first dated to 1765. He made books, paintings, and a large quantity of prints, including many sophisticated e-goyomi calendar prints.

Kitagawa Utamaro (1754–1805) was an innovator in the production of large color prints. His specialty was portraits of women, drawn with great delicacy and piercing observation, in multiple series organized by portrait type. Many depict women who worked in various occupations within the rigid social hierarchy of the Yoshiwara pleasure quarters. He also produced exquisite nature studies as shown in the book *Gifts of the Ebb Tide*, which pairs delicate images of tide pool life with playful short poems in flowing calligraphy. In these poems, poetry club members read meaning into the variety of small shells and creatures they found on a drinking excursion to Shinagawa Bay. In the illustrated books *Picture Book of Crawling Creatures* and *Myriad Birds*, naturalistic images of insects, birds, and clearly recognizable plants provide an opportunity for embellishments such as

embossing, metallic printing and sprayed color. They are supreme examples of the closely interconnected work of publisher, artist, and writer and the unity of text and image—all hallmarks of mokuhanga prints in the Edo period.

Katsushika Hokusai (1760–1849) was active for the longest period of any ukiyo-e artist. He is often quoted as saying that, although he was improving, he needed at least 110 years to become the artist he wished to be, one whose every line would jump to life. His manga sketchbooks are a compilation of images from every area of life, from the often-reproduced images of men in straw hats performing the sparrow dance, to wrestlers, workers, ghosts, blind men, mice, types of fish, and dragons. His quick hand seems to document every imaginable activity, and his sharp eye misses nothing in the Edo scene. The bold draftsmanship of the series he began in 1826, *Thirty-Six Views of Mount Fuji,* made him famous and broadened the scope of ukiyo-e prints, which until then had focused on actor prints and bijin-ga, images of beautiful women. A nonconformist with a distinct point of view, he created prints that show him to be a sharp and amused observer of everyday life. A prolific designer, he continued with other dynamic print series including waterfalls, flowers, bridges, and illustrations of poetry into his eighties.

Suzuki Harunobu (1725–1770), Eyogami (calendar print): *Show-Woman with a Monkey*, ca. 1865, 12.5 x 8.1 in (31.9 x 20.6 cm), color woodblock print

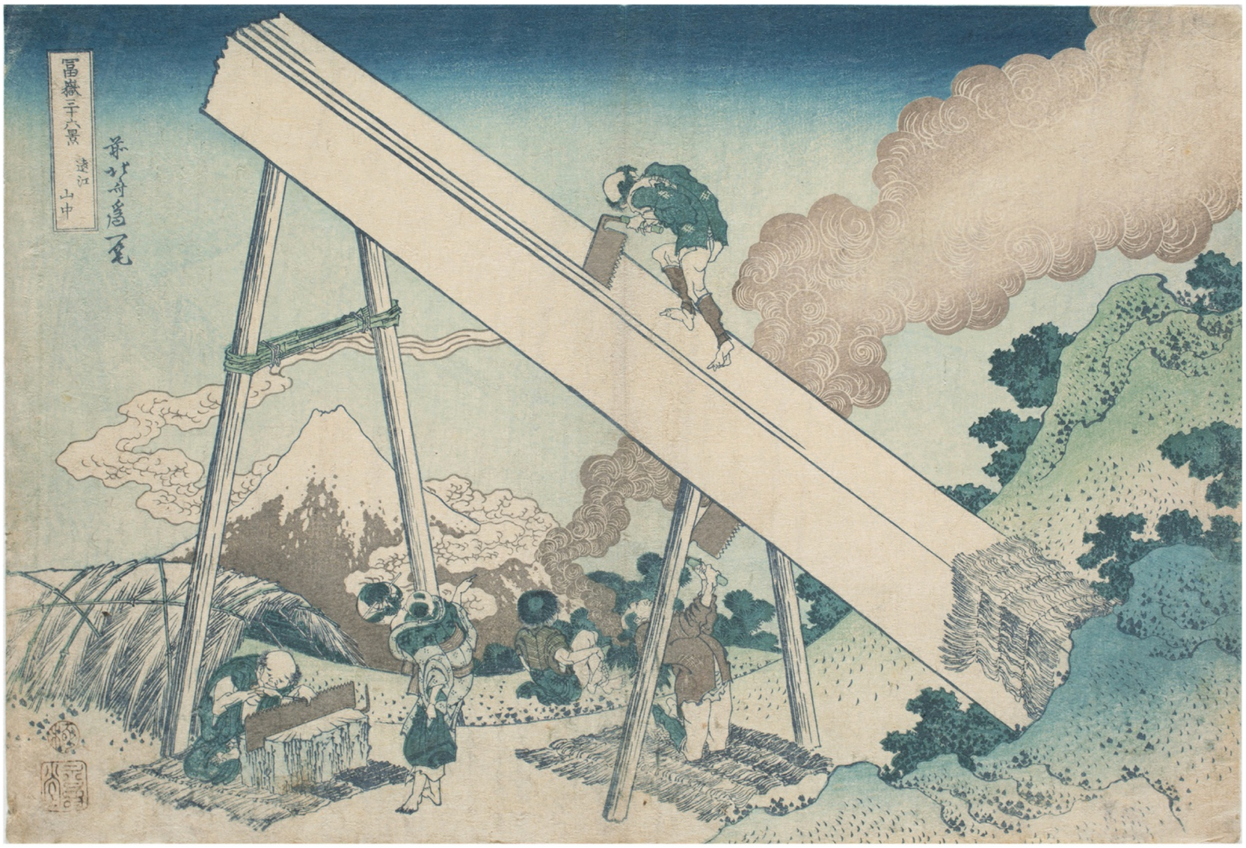
Museé des Arts Asiatiques-Guimet, Paris, France

Photo: Harvy Bréjat ©RMN-Grand Palais/Art Resource, NY

Kitagawa Utamaro, *The Courtesan Hanaogi of the Ogi Establishment Composing a Letter*, ca. 1795, 15.5 x 9.6 in (39.4 x 24.4 cm), from the series *Six Famous Beautiful Women*.

This print has a shiny gray mica background that shows off the color of skin, represented by the uncolored washi.

Courtesy of the Chazen Museum of Art, University of Wisconsin–Madison, Bequest of John H. Van Vleck, 1980.3220;
Photo: Tadsen Photography, 2012



Katsushika Hokusai, *In the Mountains of Totomi Province*, from the series *Thirty-six Views of Mount Fuji*, 1830–1835, 10.15 x 15 in (25.75 x 31 cm)

Sawyers cut a huge log by hand while another worker sharpens the saw blade.

Courtesy of the Chazen Museum of Art, University of Wisconsin–Madison, Bequest of John H. Van Vleck, 1980.3220

Thirty-seven years Hokusai's junior, Ando Hiroshige (1797–1858) expanded on the growing interest in landscape and travel prints initiated by Hokusai, with a more poetic sensibility, focusing less on the activities of people and more on the feeling of the landscape itself. In 1858 he made a series of prints titled *Thirty-Six Views of Mount Fuji*, which competed in popularity with Hokusai's earlier series of the same name. He was responsible for a huge number of print series illustrating scenes along the highways that united Japan during his lifetime, the most famous being *Fifty-Three Stations of the Tokaido Road*, where he created iconic images of specific famous views and incorporated new ideas from his study of Western perspective.

Kitagawa Utamaro, *Fishing with a Four-Armed Scoop*, ca. 1801, 30 x 15 in (76.2 x 38.1 cm)

The three panels of this complex triptych are tied together by the novel addition of a fishing net.

The prints of Tsukioka Yoshitoshi (1839–1892) reflect the remaking of Japanese society after the Meiji Restoration (1868) when changes in the power structure of the country resulted in the relocation of the emperor from Kyoto to Edo, which was then renamed Tokyo, meaning "eastern capital." Yoshitoshi's many violent images of famous murders and scenes of horror and war reflect the climate of upheaval and revolution. In response to the threat of Western colonization at this time, Japan instituted a program of rapid modernization along Western lines. The series for which Yoshitoshi is most famous, *One Hundred Aspects of the Moon*, made between 1885 and 1892, was extremely popular and is close in spirit to today's manga and anime, which also emphasize fantasy and the grotesque. Yoshitoshi incorporated Western vanishing-point perspective and used saturated imported pigments in his prints, but he remained dedicated to the traditional technology of mokuhanga, creating prints of astonishing technical finesse at a time when photography and lithographic reproduction were becoming more common. While the new government enforced the adoption of many scientific and technological advancements that had taken place outside Japan during the seclusion imposed by the Tokugawa shogunate, Yoshitoshi continued to promote the preservation of the arts and crafts of old Japan, which were threatened by rapid cultural changes during his lifetime.

Tsukioka Yoshitoshi, *Aoyagi Harunosuke*, from the series *Sagas of Beauty and Bravery*, 1866, 9.6 x 7 in (24.4 x 17.8 cm)

Yoshitoshi turns expectations upside down in this underwater struggle, where the protagonists float and turn.

Both images courtesy of the Lyon Collection of Japanese Prints, woodblockprints.org

SHIN-HANGA AND SOSAKU-HANGA

Shin-hanga, or new printing, is the name used to describe the early twentieth century movement reviving the fine printing of the *hanmoto* shops, the specialized traditional workshops run by a publisher, which had been responsible for the high quality of prints made during the Edo period. While the new productions were no longer part of the innovative printmaking of earlier days, high technical quality and pleasing imagery made these prints highly esteemed outside Japan. The publisher Shozaburo Watanabe (1885–1962) commissioned many new prints from contemporary artists for the Western market. These were printed by some of Japan's remaining master printers and were popular in the West as nostalgic reflections of old Japan; they often show a delicate wistfulness that contrasts with the vitality of Edo period prints. The artist Hiroshi Yoshida (1876–1960) published prints that could be considered part of the shin-hanga movement. Although he was a master printer himself, he and his son Toshi both produced prints with the assistance of master craftsmen in a hanmoto-style shop. The Yoshida family of artists has continued to be active to the present day and has helped keep mokuhanga viable by using it in their creative work and by training many Western artists.

Sosaku-hanga is the name used to describe Japan's modern creative printmaking movement, often identified as beginning in 1907 with the print *Fisherman* by Kanae Yamamoto (1882–1946). Yamamoto's print and those that followed were created and printed by the artists themselves, without the help of master printers. In reality, the categories of sosaku-hanga and shin-hanga are not mutually exclusive; some primarily creative printmakers learned techniques from professional printers and some shin-hanga artists, like Hiroshi and Toshi Yoshida, were perfectly capable of printing their own blocks. However, these were the two divergent impulses in early-twentieth-century woodblock in Japan.

Shiko Munakata (1903–1975) was a prolific sosaku-hanga artist whose roughly cut woodblock imagery was based on Buddhist iconography and influenced by the Mingei (folk art) movement. Munakata is perhaps the sosaku artist whose work is best known in the United States because of his connection with the Japan Society in New York City, where he was given a six-month residency by the Rockefeller Foundation in 1959. During his stay, he gave lectures and demonstrations at

universities across the country. The Japan Society has had several exhibitions of his work since then, and his mural-sized print *In Praise of Flower Hunting* from 1954 is on public display there. Munakata is remarkable for his ability to maintain a clear connection to early prints by using traditional materials and Buddhist subject matter, while bringing his work into the present tense with the immediacy of his carving and printing.

Shiko Munakata, *Eulogy to Flower Hunting*, 1954, 57 x 69 in (144.7 x 175.2 cm)

This woodblock print was made from fifteen irregularly sized blocks. It shows Munakata's creative use of mokuhanga in its free cutting and also in its scale, accomplished by piecing sheets together.

Permission of the Japan Society, New York;

Photo: Go Sugimoto Reproduction

During the first half of the twentieth century, as the West became interested in

Japanese prints, Japanese artist-printmakers began to explore novel Western oil-based techniques. At the same time, artists in the United States were influenced by the new ideas flooding in from Europe, including the rough immediacy of the German Expressionist oil-based woodblock prints. By the end of the twentieth century, mokuhanga was considered a technique of only historic interest, mainly in relation to prints from the Edo period. In the West, Japanese tools and paper were not readily available and only a few specialists knew Japanese printing techniques. In Japan, the few remaining master printers often could make a modest living by printing copies of ukiyo-e prints, decorative papers, games, and votive name cards, many exquisitely printed.

Senjafuda votive name sticker collection in a book; the standard size was approximately 2.25 x 6.8 in (5.7 x 17.3 cm) for each sticker.

These stickers were designed to be pasted to temples to commemorate a visit; they were also used as a type of business card.

Courtesy of the Chazen Museum of Art, University of Wisconsin–Madison

Today there has been a revival of interest in mokuhanga for creative printmaking, and the master printers who survive in Japan have become influential as repositories of expertise from the past. Mokuhanga is being taught in a few independent printshops in the West and is increasingly included in university printmaking programs. Its nontoxic character, its use of handmade materials, and its easy integration with other techniques make it attractive to contemporary artists, whose concern with health and the environment, use of mixed media, and desire to make artists books have given mokuhanga a new currency.

SIGNIFICANCE TO CONTEMPORARY PRINTMAKERS

The reevaluation of mokuhanga is part of a larger revolution in fine-art printmaking that has come about since the turn of the twenty-first century because of changing attitudes tied to the introduction of digital imaging. Printmaking in the United States was once defined as oil-based woodblock, etching, and lithography, with silkscreen added in the 1960s, but the conceptual boundaries of printmaking have exploded since the advent of the computer. Printmaking is the area within the fine arts that most easily assimilated the profound changes in the way images can be manipulated and presented. With their usual ingenuity, printmakers were able to incorporate digital technologies seamlessly with the older methods they had been using for decades. Rather than being displaced by digital departments, printmaking studios began to include the computer as an important tool. Initial fears that fine-art printmaking was finished were replaced with the realization that printmakers were in an excellent position to benefit from the new technology.

Printmaking studios have expanded to include many new processes that reflect the broad technological and cultural changes in the States. The ease of creating templates from digitally manipulated images has made computer-generated positives the standard for photo silkscreen. Digital files are used to make simple photopolymer plates and refined photogravure; they are incorporated into a multitude of other methods, including mokuhanga. Safer printmaking methods have become widespread, studios are built with better ventilation systems, more care is taken to limit the use of solvents, and more water-based materials are being used.

Monoprints, etchings, and silkscreens can all now be made utilizing the new water-based inks; printmaking techniques are used in combination; and a wide range of alternative materials are being explored. This flexibility has drawn artists who might not otherwise try printmaking to print workshops. The Print Center in Philadelphia and the International Print Center in New York are examples of galleries that focus on prints and interpret printmaking broadly to include mixed techniques like stencil, collage, and hand coloring. Further expanding the idea of what constitutes printmaking are workshops that focus on handmade books like the Center for Book Arts in New York (with counterparts in San Francisco, Minneapolis, Seattle, and other cities across the United States) and galleries that showcase prints and artists’ books. Images made with paper and paper pulp are

also included in this broader definition, with an expanded interest in all varieties of handmade paper nurtured by organizations like Dieu Donné Papermill in New York, Carriage House Paper in Brooklyn, Timothy Barrett's Center for the Book at the University of Iowa, and smaller papermaking facilities across the country.

A final reason that mokuhanga has gained more attention today is that the worldview of artists has expanded to include Asia, where many Westerners have now traveled. A growing number of contemporary artists in the United States are of Asian descent, so the study of Asian techniques and materials is a natural area of interest. The multicultural character of America has influenced the way we think about printmaking options. Not only does mokuhanga seem more relevant, but the centrality of paper to Asian art has caused artists to reevaluate assumptions about the primacy of paint on canvas. Ubiquitous Western papers such as Arches and BFK are no longer the only papers available to printmakers. The study of mokuhanga affords contemporary artist-printmakers a broader historical foundation for thinking about materials and methods by bringing artists in touch with the long history of image making in Asia.

In New York, the Metropolitan Museum of Art is joined by the China Institute, the Japan Society, and the Asia Society in presenting a wide range of contemporary Asian art, including historic and contemporary Japanese woodblock. The New York Public Library's 2006 show *Ehon, the Artist and the Book in Japan*, was a commitment to the exploration of this Asian heritage as part of world culture. This broader way of thinking is reflected in the art departments of universities where students are taught about paper and book making and a wider range of printmaking techniques that were not visible in contemporary art before the twenty-first century.

This expanded concept of what printmaking can be has given mokuhanga a significant place within the greener, more culturally inclusive print workshops and universities. Because mokuhanga is water-based, many printshops became interested in including it in their class offerings. Once introduced to the technique, artists immediately appreciate its refined cutting and printing tools and the accuracy of its kento registration system.

Mokuhanga provides a connection to an important chapter in print history, when printmaking was at the center of cultural change in Japan. A product of the increased urbanization of Japan, mokuhanga was the medium that made possible the quick distribution of information to a popular audience, echoing the way digital technology is rapidly changing the information landscape today. Learning about the

technique of mokuhanga gives insight into a wide history of cultural exchange, providing a link between East and West.

After an eclipse during the first half of the twentieth century, interest in mokuhanga as a tool of contemporary art has been growing since the 1980s. Today mokuhanga is being used both inside and outside Japan, by professional printers and individual artists, alone or in combination with other techniques to create provocative prints that combine old and new ways of thinking about multiples.

Jacqueline Gribbin, *Kisaragi I*, 2013, 20.25 x 14.5 in (51.5 x 37 cm)

Photo courtesy of Jacqueline Gribbin

CHAPTER 2

TOOLS AND MATERIALS FOR PRINTING

Mokuhanga differs from Western woodblock in three significant ways. It is printed with water-based sumi ink and watercolor brushed onto the block with stiff brushes rather than rolled onto the surface with brayers; it is printed with a handheld baren rather than a hard rubbing tool or mechanical press; and it employs the accurate kento registration system, cut directly into the block, rather than having the blocks aligned in a jig. The kento registration system is a Japanese invention that makes it easy to align paper accurately for printing multiple colors.

Although it is not part of the printing process itself, washi, Japanese handmade paper, could be considered another essential characteristic of Japanese woodblock. Papermaking has its own refined craft tradition parallel to printmaking. In order to create the detailed prints of the Edo period, printmakers relied on papermakers for strong and dimensionally stable washi. These papermakers designed paper specifically for mokuhanga printing, processing the strong, resilient fibers so they remained absorbent but didn't stretch during multiple printings while damp. (Paper is dampened before printing so that it is soft enough to easily absorb color throughout printing.)

The tools and techniques of mokuhanga evolved over the course of the Edo period (1603–1867). Over time the commercial demand for more colors and more unusual printing effects resulted in more refined tools, paper, and other materials, as well as advanced printing techniques for creating special effects. These technical refinements are reflected in the tools and materials available today.

FAMILIES *of* CUTTING TOOLS

Specialized mokuhanga tools were developed as prints evolved from elegant but simply printed black and white images made from a single block to the rich nishiki-e "brocade picture" prints first developed by Harunobu in the 1760s. These technical masterworks of the Edo period were created from ten or more color blocks, requiring detailed cutting, accuracy of registration, and precise control over the quality of the printing.

To achieve the clarity and precision of carving needed for the fine detail of ukiyo-e prints, Japanese toolmakers produced knives and chisels specifically designed for the shallow cutting of wood blocks. High-quality tools are still handmade by craftsmen in small workshops. As in the fabrication of samurai swords and other Japanese woodworking tools, these are hand-forged by bonding steel to iron. The hardened steel edge of these tools is thin and brittle, cutting cleanly, but easily chipped. For this reason the cutting edge is bonded to a softer iron body that adds strength and stability. The families of tools include the *hangi-toh* (knife); the *maru-nomi* and *komasuki* (large and small u-gouge); the *soai-nomi* and *aisuki* (large and small fan-beveled chisel), and the *sankaku-toh* (v-gouge). The fan-beveled chisels, sometimes referred to as bullnose chisels, are designed for shallow carving and have no true equivalent in the Western tool set.

Each of these tool families is made in a variety of sizes. The handle of the smaller tools is designed to swivel open, revealing additional blade length within. Larger long-handled tools (indicated by the suffix -*nomi*, translated as "chisel") are made with a tang inserted into a fixed wooden handle. They have a ferrule around the wood where the tang is inserted; professional long-handled tools also have a hoop around the end to protect the handle from splitting when it is struck with a mallet when cutting harder woods. The *kento-nomi*, a 15mm straight chisel, is designed specifically for cutting the registration notches at the corner and bottom of a block. It has a shorter handle and longer blade than other long-handled chisels.

Cutting tools can be used freely for creative effects, but to cut the detailed blocks used in printing ukiyo-e prints, the cutting tools are used in a specific order. First all the printing areas are outlined with the hangi-toh (knife), then the non-printing areas are cleared with the maru-nomi (u-gouges), and finally the uneven surfaces are smoothed and remaining details cleared with the large soai-nomi and small

aisuki (fan-beveled chisels). Japanese ukiyo-e carvers developed cutting strategies that allowed them to quickly carve blocks that accurately reproduced the drawing they were given, blocks that would print clearly when handed over to professional printers. This way of carving is a useful touchstone for contemporary artists; it remains an efficient working method that can be adapted to the needs of creative printmakers, even when they are no longer concerned with producing the same careful reproductive work.

HANGI-TOH: The Japanese Knife

The hangi-toh is the classic Japanese tool that allowed professional carvers to cut the thin outlines of ukiyo-e key blocks. It was used to cut the outline or key block, called the *sumi-ita* in Japanese, since it was traditionally printed with sumi ink. The hangi-toh is not held like a pencil, but grasped in the fist to engage the larger arm muscles. This may take time to become accustomed to, but it allows longer sessions of carving without tiring. The blade is made in widths varying from 1mm to 9mm, but always has a short handle so that the tip can be controlled easily. It is also made in a left-handed version. The 6mm knife is a useful size, broad enough so the tip will not easily break and narrow enough to follow curved lines smoothly.

The hangi-toh grip is the classic hand position for holding the Japanese knife to engage the arm muscles for long periods of carving.

Photo: Doug Schneider

Master carvers sometimes have multiple hangi-toh made from different kinds of steel for cutting different kinds of wood. They may also keep duplicate sharpened knives to avoid interruption when the knife dulls. Professional carver Shoichi Kitamura carries seven hangi-toh in his toolkit: four for cutting shina basswood plywood and three for cutting cherry planks.

A box holding a variety of hangi-toh used by a professional carver.

Photo: April Vollmer

4.5 mm and 6 mm hangi-toh, knives designed for cutting accurate outlines. Additional blade length is concealed in the handle.

Photo: Doug Schneider

MARU-NOMI AND KOMASUKI: The U-Gouge Family

The maru-nomi is a long-handled clearing gouge, generally between 4.5mm and 18mm in width. The deeper version is called *fukagata maru-nomi* and the shallower, *asagata maru-nomi*. The professional version of these large gouges has a long handle with a hoop on the end to keep the handle from splitting when struck with a mallet. The short komasuki is made in sizes from 1mm to 9mm. These

professional short-handled u-gouges (along with the other short-handled professional tools) are hinged to open like a fan to reveal the additional blade length inside, which can be extended as it wears down from sharpening. Inexpensive versions of these tools are available without the extra blade length, so that they have a shorter useful life.

The short-handed komasuki and the long-handed maru-nomi, the u-gouge family of tools.

Photo: Doug Schneider

SOAI-NOMI AND AISUKI: The Fan-Beveled Chisel Family

These chisels are sharpened in a complex curve. When used in carving, the edges of the tool are higher than the center, so they do not catch the surface of the wood, allowing easy smoothing of ridges. (In contrast, the 90-degree corners of the kento-nomi straight chisel will catch and tear wood if used for clearing, which can damage the delicate corners of the tool.) These tools are not precisely bullnose chisels with rounded edges; instead, the entire beveled edge fans out from the center of the blade. The cutting action is similar to that of a shallow u-gouge, but these tools create a smoother surface with fewer ridges.

After clearing and smoothing the large non-printing areas, the smaller aisukis can be used to clear waste from smaller areas. As with the other tools, it is efficient to work with the largest tools first, progressing each time to a tool half as wide. In addition to smoothing, the small aisuki can effectively clear the small area of waste wood left next to printing areas after clearing is completed. For this task the tool is held at an angle to the raised area, removing a strip of wood precisely to the initial hangi-toh cut, revealing the sharp beveled edge that was cut first in the block.

The short-handled aisuki and long-handled soai-nomi fan-beveled tools are used for clearing.

Photo: Doug Schneider

SANKAKU-TOH: The V-Gouge

The sankaku-toh v-gouge is a later addition to the Japanese toolkit, likely imported from the West. It creates a v-shaped cut, similar to the cut made by two adjoining hangi-toh lines, but with a fixed cutting angle. It is useful for creating texture and repeated patterns, but does not replace the hangi-toh for flexibility or for the definition of detail. The sankaku-toh is held in the same manner as the komasuki, pushed with the leading hand and restrained with the other.

TOP: Cutting with the aisuki using both hands.

BOTTOM: Cutting with the soai-nomi.

Photos: Doug Schneider

The sankaku-toh, the v-gouge, is used to create texture.

HOLDING THE GOUGES WITH BOTH HANDS

The various sizes of gouges are held by the carver in the stronger hand (the right hand for right-handed carvers) and pushed away to remove a curl of wood. Small tools are nested in the crook of the hand between thumb and index finger, larger tools are gripped under-handed in the fist. The opposite hand is held in front of the tool to restrain and control the forward cutting movement.

KENTO-NOMI: Straight Chisel *for* Kento Cutting

The kento-nomi is a straight chisel with a 15 mm-wide square end, designed for cutting the kento registration notches. It is also used to bevel the edges of blocks where the image extends to the edge. It does not have a ring on the end because its specific function, cutting registration notches, is not done with a mallet. A less expensive version of the kento-nomi can be made by cutting down the plain wood handle of the 15mm chisel. While this tool will have a shorter blade than the true kento-nomi, it is perfectly serviceable and will last many years.

The kento-nomi registration chisel with a substitute made from a 15 mm chisel.

Photo: Doug Schneider

Tuula Moilanen, *Full Moon, Inspired by Tsukioka Yoshitoshi*, 2010, 10.25 x 13 in (26.7 x 33 cm)

Photo courtesy of Tuula Moilanen

Photos: Scott Dolan

HOW TO CUT ACCURATE KENTO REGISTRATION NOTCHES

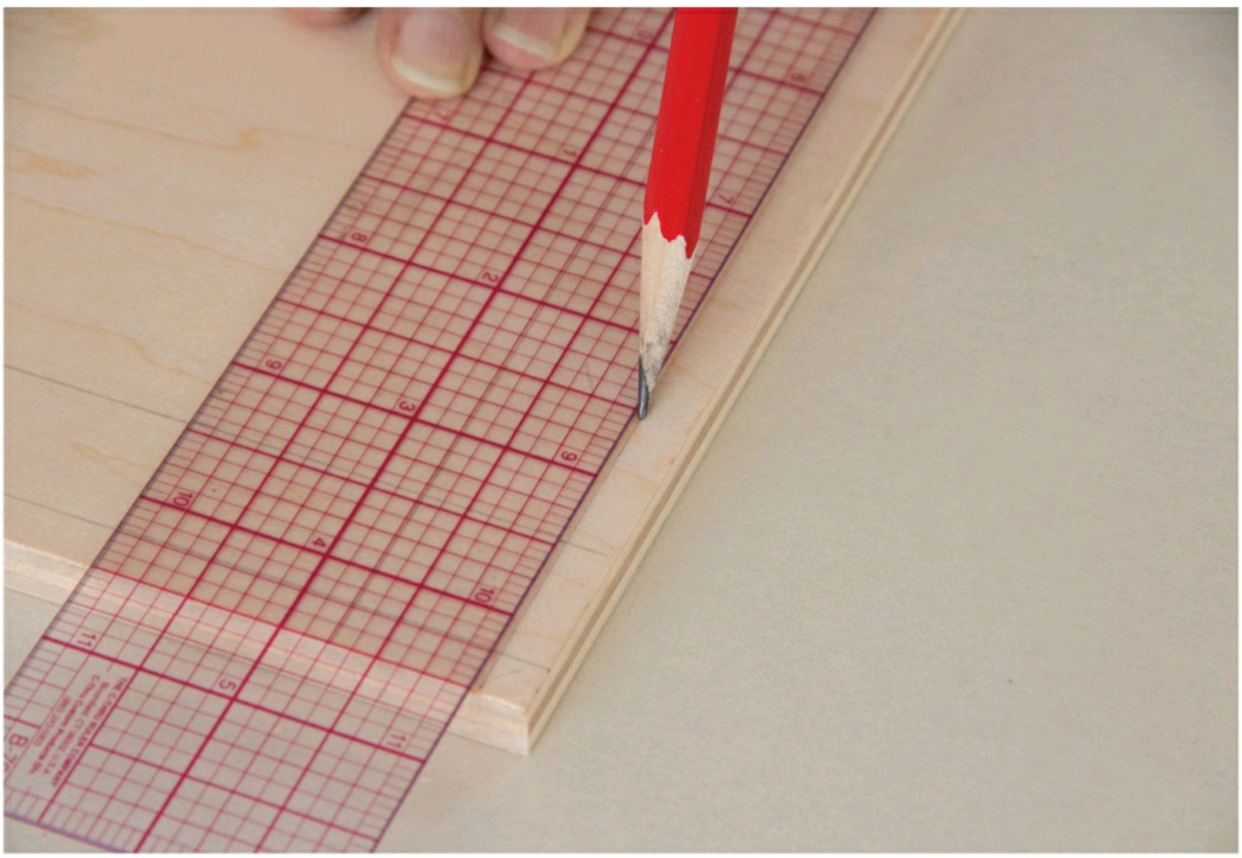
The kento registration system was invented in the late 1700s so printers could line up multiple color blocks with extreme accuracy. It consists of two stops cut in the block to locate the lower edge of the paper in relation to the image: the *kagi kento* is the 90-degree notch at the lower right corner of the block, and the *hikitsuke kento* is the straight stop at the lower left of the block. Mokuhanga blocks are printed in a horizontal orientation to facilitate paper handling, so the registration marks are generally on the long side of the block. These registration marks are located in relation to the image rather than the block. They can actually be located anywhere on the block as long as their location relative to the image remains the same on each successive color block.

Cutting notches with the kento-nomi is the most accurate way to cut the kento, but the notches can also be cut with other tools. The hangi-toh can be used with small clearing tools to approximate the shape of the kento-nomi chisel marks to make a registration notch. Professional printers often make small adjustments to the location of the kento during printing to keep hairline registration accurate as humidity or other conditions change.

STEP 1

The first step in cutting the registration marks is to measure the kento marks on the block. A convenient measurement is a quarter-inch at the edge of the block for the paper stop and an empty area of three-quarters of an inch for the paper margin. This will leave the maximum area of block for carving the image on a small block.

Following photos by Scott Dolan

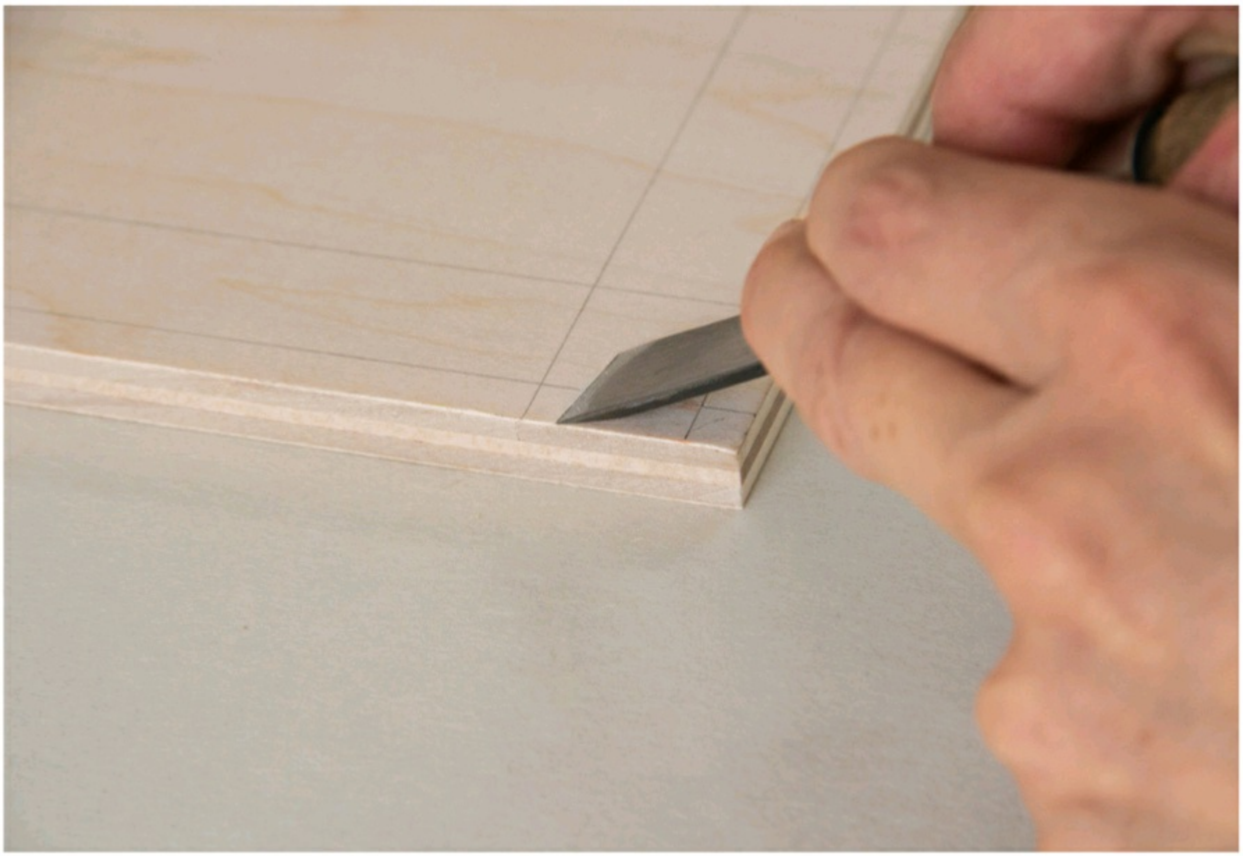


STEP 2

The kagi kento is cut in the lower right-hand corner of the block to make it easy for a right-handed printer to guide the paper there. First, two perpendicular cuts are made with the flat side of the kento-nomi toward the edge of the block, cutting straight down at a 90-degree angle.

STEP 3

The next two cuts prepare the block so waste can be removed from the ends of the first vertical cuts. The kento-nomi slices in and back at both ends of those cuts with the bevel side down to release (but not remove) waste from the ends.



STEP 4

Waste can then be removed from the ends of the cut with a swiveling motion, slicing away the portion of the wood that has been undercut. This will leave space for the corner of the kento-nomi to line up with the initial vertical cut in the next step. The kento-nomi and other chisels are always held with the bevel side down.

STEP 5

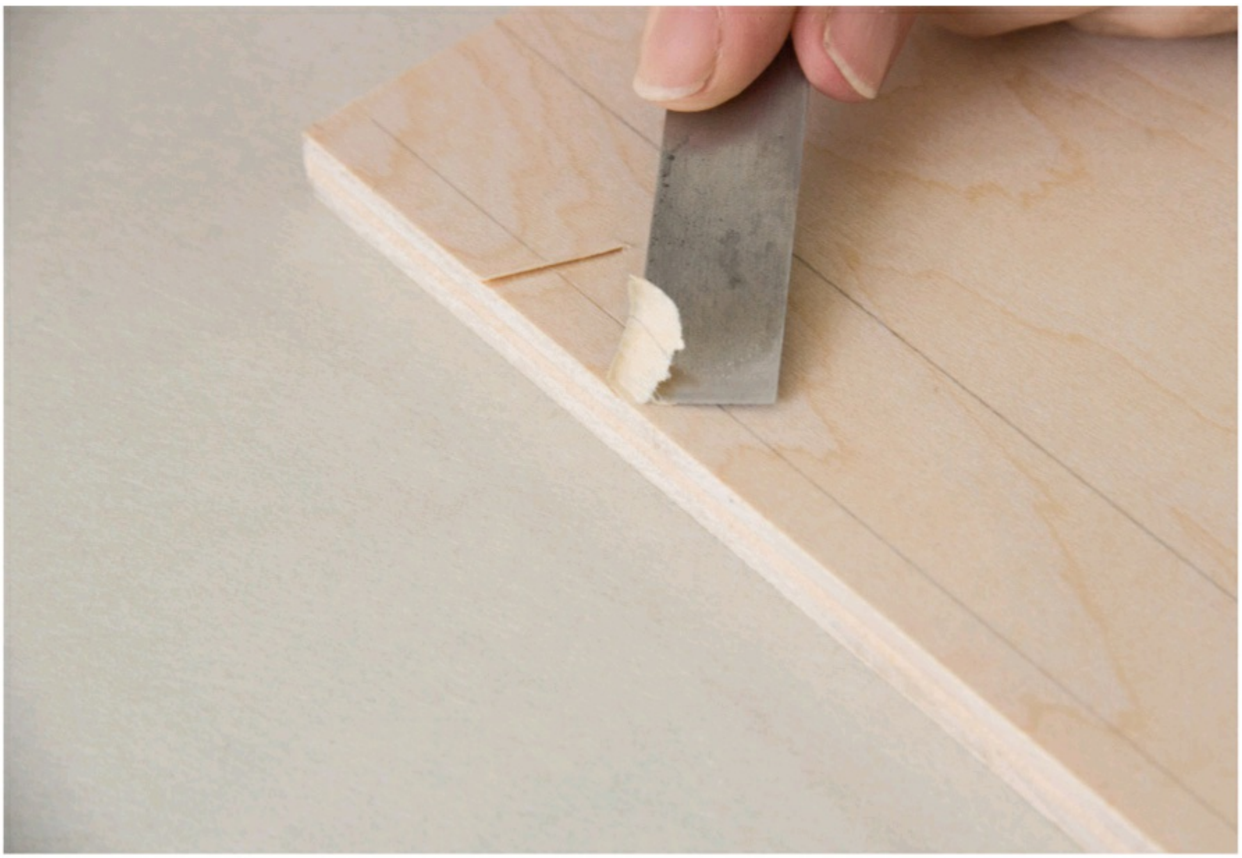
The kento-nomi then slices flat along the surface, gradually deepening the cut, removing a curl of wood and stopping short at the other perpendicular cut. The finished kagi kento should be just deeper than a sheet of paper. The shallow triangle between the cuts should be preserved as a flat landing strip to support the paper during printing.

STEP 6

The hikitsuke kento mark is cut in a similar way. Its shape is a simple 15mm line stop located so the printer can level the bottom edge of the paper into position. The first cut is straight down, then waste is cleared from the ends in the same way as for the kagi kento.

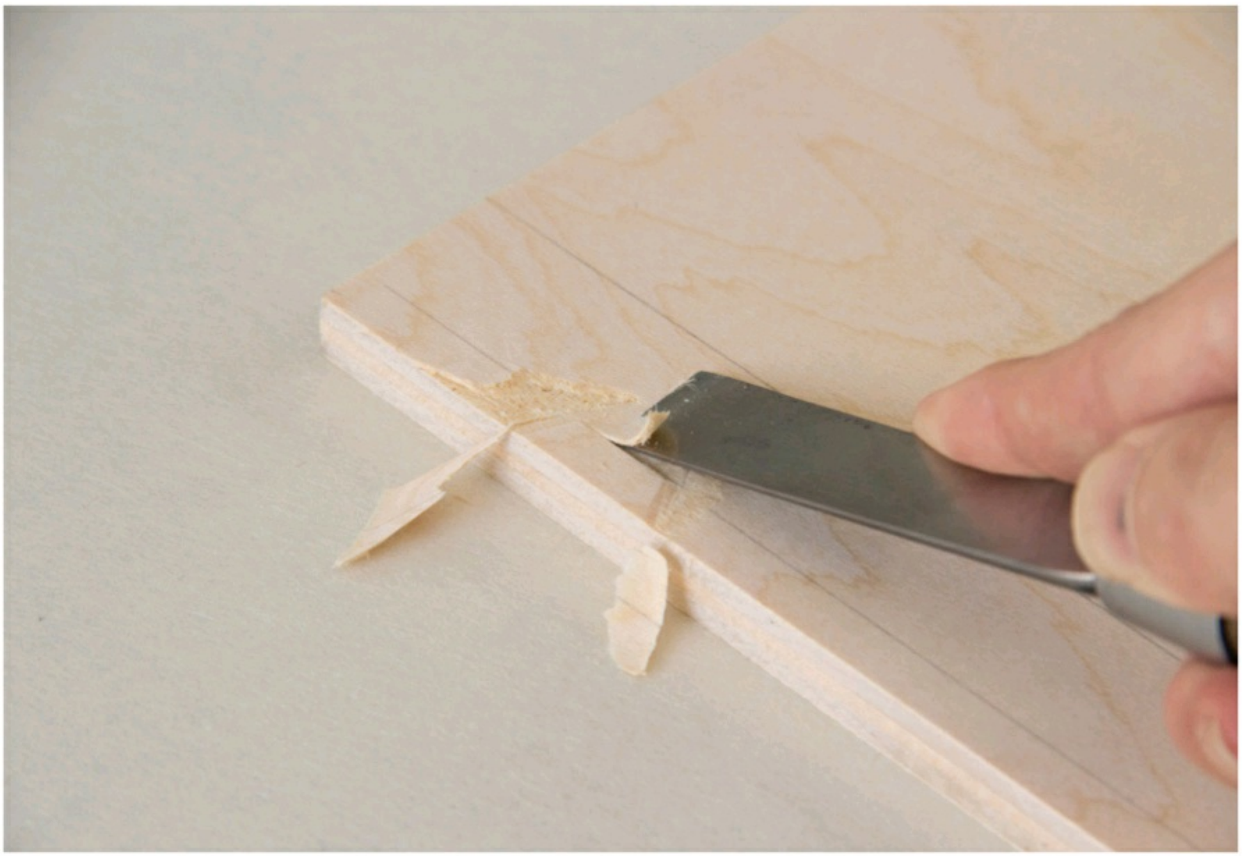
STEP 7

After slicing in and back, the waste at the end of the cut is removed with a swiveling motion so the corner of the kento-nomi can be lined up with that vertical cut.



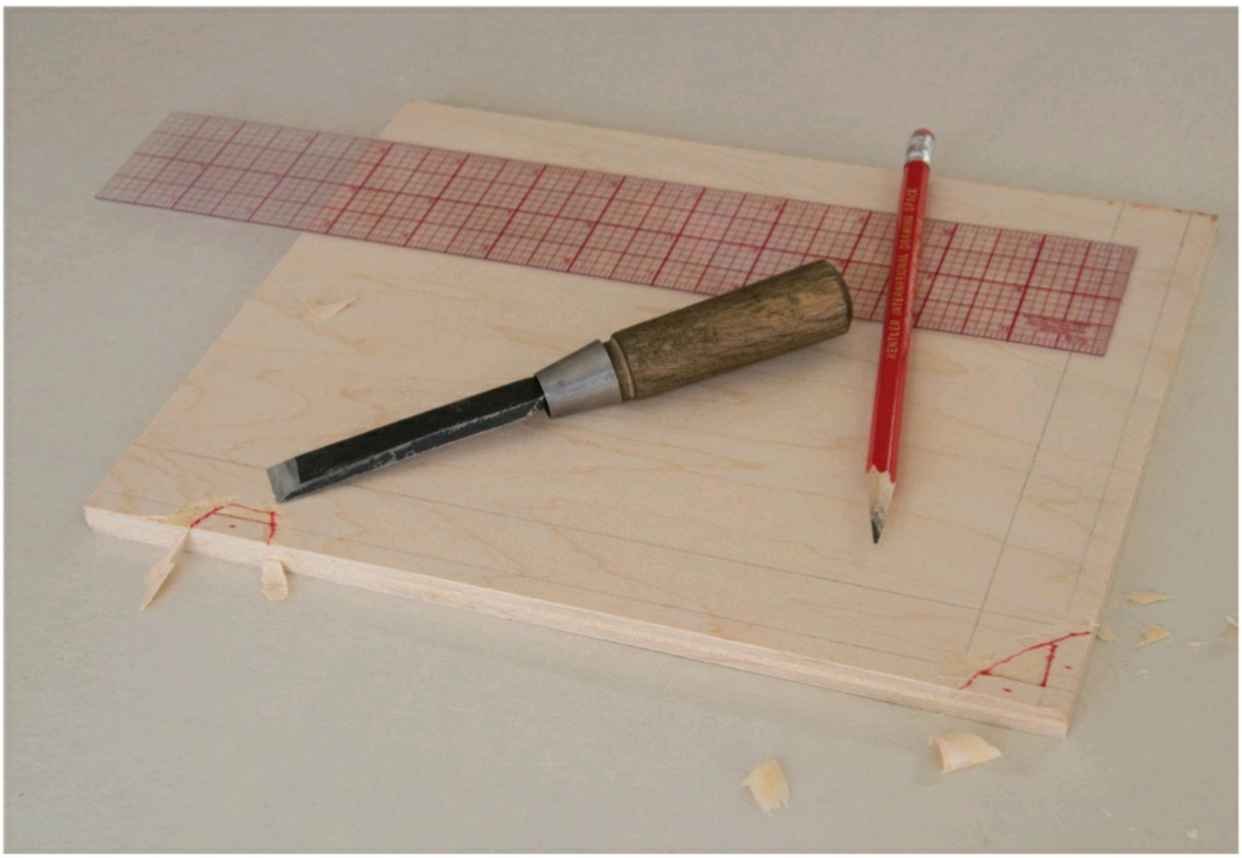
STEP 8

The corner of the kento-nomi is lined up to to slice away a flat piece of wood, creating the shallow ledge where the paper will sit during printing.



STEP 9

The completed kento notches will locate the paper in relation to the image for each print in the edition, wherever the image is located on the block. Paper is held with a “scissors grip,” carried with the index and middle fingers, so it can be held briefly against the kento notches with the thumbs during printing.



JAPANESE SHARPENING STONES

Japanese tools are sharpened with stones lubricated with water. Natural stones are increasingly difficult to find, so contemporary craftsmen often substitute fabricated ceramic stones called *toishi*. These stones are more consistent in grain than natural stones a nd are well suited to the tools, sharpening them quickly.

Ceramic stones are made in three general categories: *arato* or coarse, usually gray; *nakato* (also called *chudo*) or medium, usually red; and *shiageto* fine finishing stone, usually yellow. Stones are numbered to indicate the degree of hardness. The coarse grain of an arato stone is less than 500 grit, and is used for reshaping chipped or broken tools. The nakato medium-coarse stone is used to sharpen tools that have become quite dull and can be from around 1000 to 1200 grit. This is good for general sharpening because it leaves a slight texture on the surface, which is useful for tools like kitchen knives. Finishing stones are from 6000 to 8000 grit or higher and will polish tools to a sharp edge.

The *nagura* stone is a small stone that is rubbed against the water stones to bring up a slippery paste that acts as a lubricant and also helps to maintain their flatness. Japanese stones are soft, so it is important to avoid wearing a groove into the surface during sharpening.

Slip stones are small fine-grained stones of various shapes used to remove the burr that forms on the inside of the bevel of a tool during sharpening.

Left to right: Natural stone (with two slip stones above), fine, medium, and coarse ceramic stones. A nagura stone rests on the fine stone.

Photo: Doug Schneider

SHARPENING JAPANESE TOOLS

In Japan, artists can return tools to the toolmaker for periodic sharpening. While day-to-day maintenance is easily done on a fine stone or strop, after a year of use it is helpful to take the tool back to the shop for reshaping and professional sharpening. For artists outside Japan this is sometimes possible; for example, McClain's (see this page) can ship worn tools back to Japan for reshaping.

The object of sharpening Japanese tools is to maintain the angle of each tool's beveled edge, which has been calculated by the toolmaker for optimum cutting efficiency. In sharpening, the bevel of each tool is stroked along the smooth flat surface of the stone. A slightly different approach is required for each tool. For all tools, it is important to keep balance steady. It is helpful to keep the feet flat on the floor and hold the arms level. Posture is important because a rocking motion can result in unintentionally softening and rounding the flat bevel of a tool.

Coarser stones can be immersed in water so the pores fill with water before use, fine stones are less absorbent and the surface can be flooded with water before sharpening. If tools are sharpened with a fine stone briefly at the beginning of a day of cutting they can be maintained with a small amount of additional sharpening.

After use, stones should be rinsed with water to remove particles that could clog the pores of the stone. Professionals sometimes leave stones in water, but unless they are used every day, they can become moldy. After use, stones should be left open to the air and dried completely on both sides. They should be stored in a dry place and not exposed to extreme temperatures. Cutting tools should be dried completely and lightly oiled so they will not rust. Japanese water stones should never be oiled as it will clog the pores.

SHARPENING THE HANGI-TOH (KNIFE)

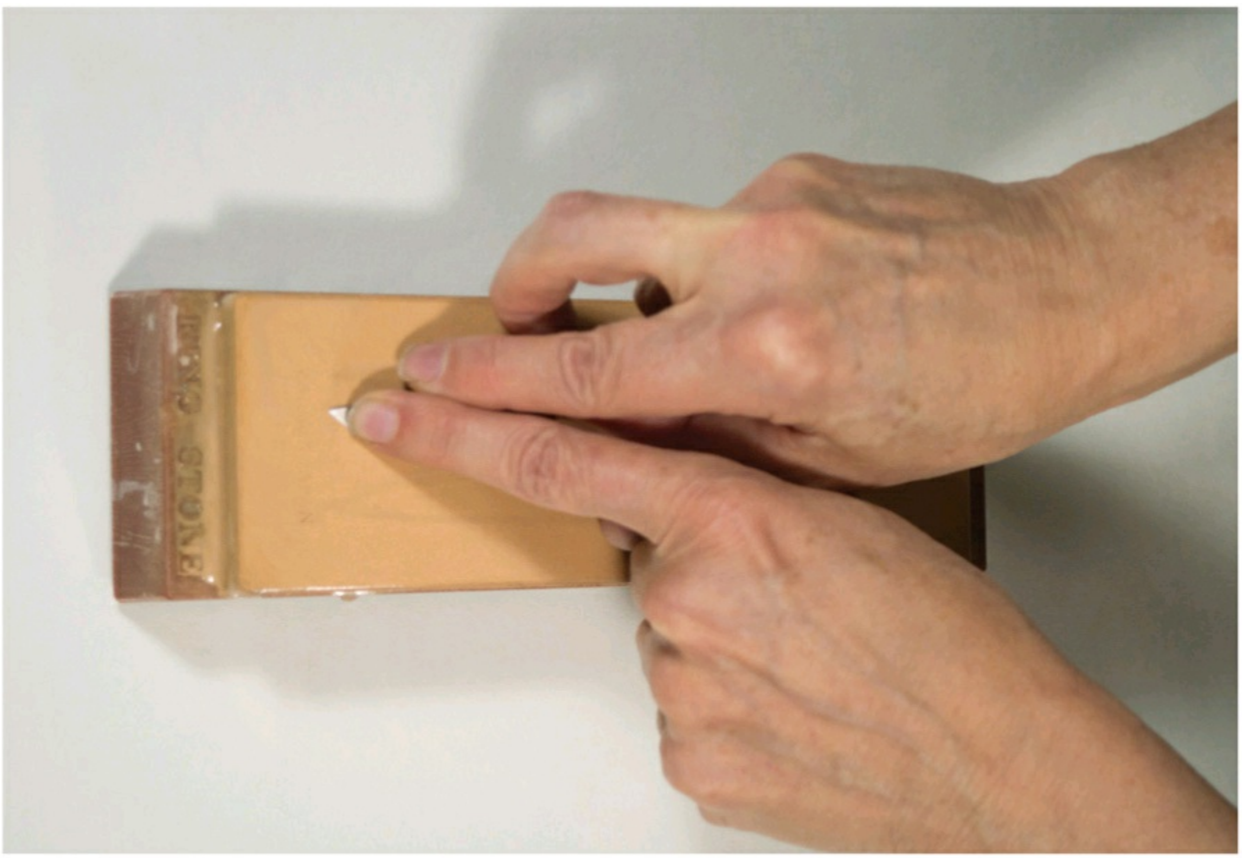
STEP 1

The first step in sharpening is to add water to the surface of the stone and rub it with the nagura stone to create a slurry. This will help the tool slide smoothly across the surface of the stone.

Photos on following pages: Matthew Smolinsky

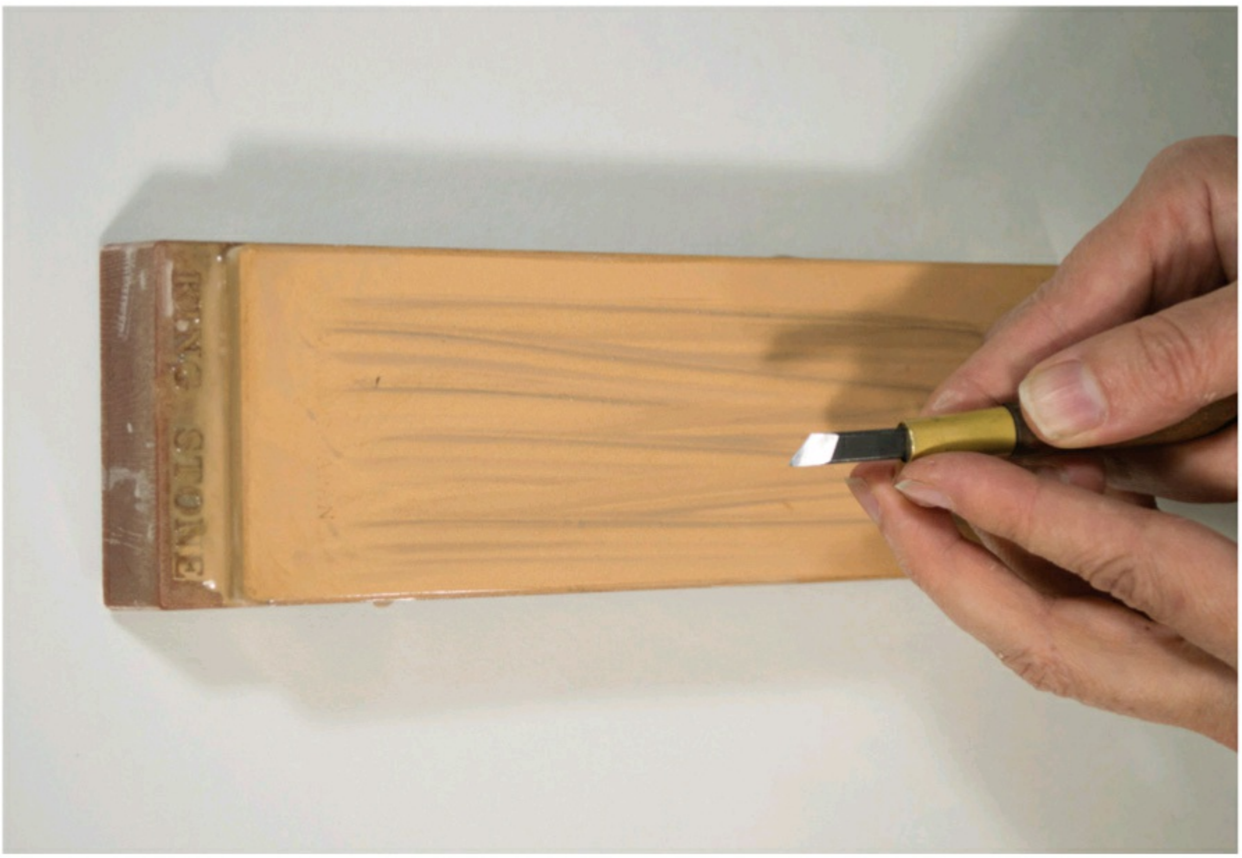
STEP 2

The flat blade of the hangi-toh is held with the bevel flat against the surface of the sharpening stone and is rubbed forward and back against the surface of the stone without rocking. Using the entire surface of the stone helps keep the stone flat and requires fewer strokes.



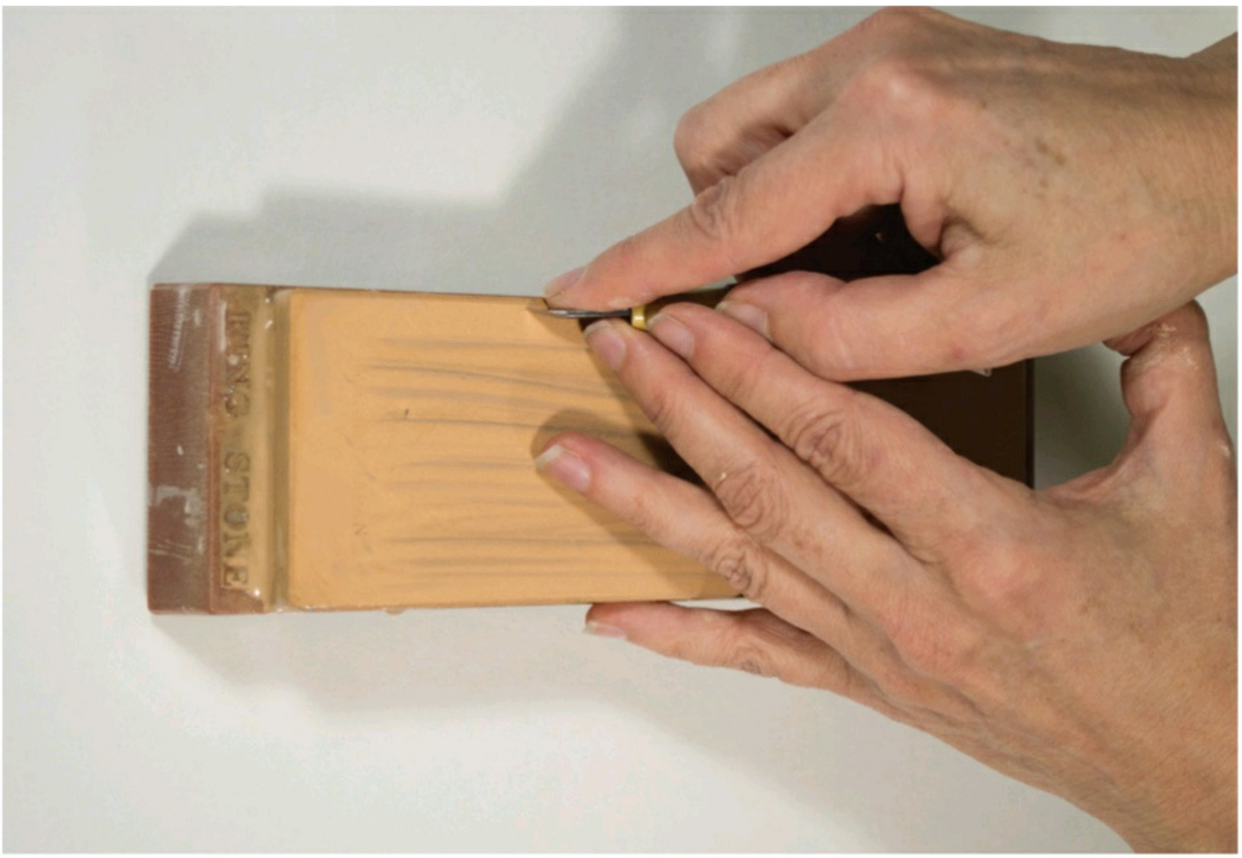
STEP 3

Checking progress to confirm that the entire blade is in contact with the stone is essential. A useful trick is to cover the blade with black magic marker so that the freshly sharpened portion will shine in contrast.



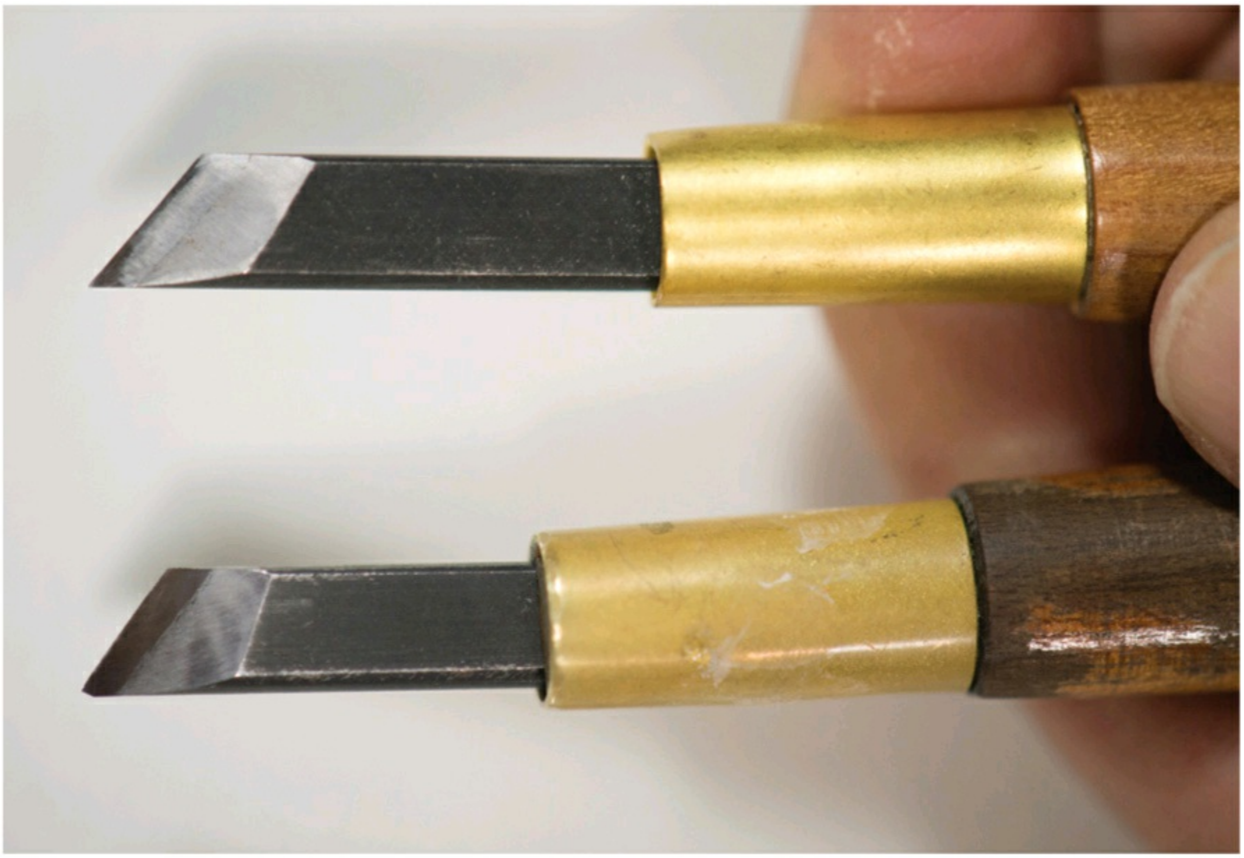
STEP 4

To finish sharpening the hangi-toh, the side of the tip of the knife can be stroked once against the stone. Beveling back the tip slightly this way will lessen the chance of accidental breakage.



STEP 5

Close-up view of two hangi-toh blades, the lower has been back-honed to make a stronger tip. Honing back the entire narrow side of the blade results in a more gradual bevel at the top.



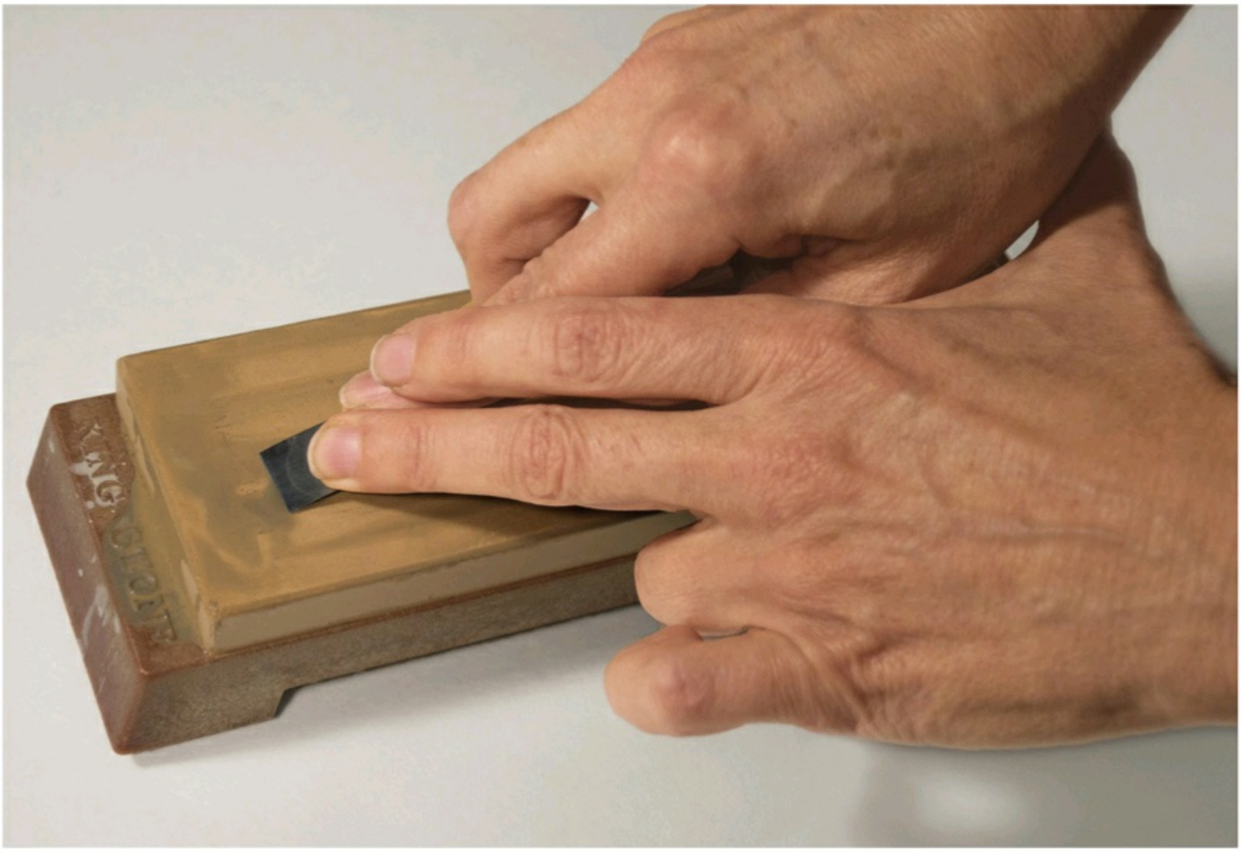
EXPERT SHARPENING

For the most refined edge, professional carver Shoichi Kitamura begins by honing back the entire narrow side of the blade on a medium stone to create a back-beveled tip. He then sharpens the primary front bevel of the tool on the same stone. He also hones the flat back of the tool to remove any small amount of burr that may have been brought up during sharpening. After performing each step on a medium stone, he does the same steps on a finer stone, holding the tool at a slightly higher angle to create a slightly more extreme bevel toward the cutting edge. He performs

this two-step/two-bevel sharpening on the side of the blade as well as on the primary bevel. These microscopic adjustments allow this skilled craftsman to carve minute detail with exquisite control.

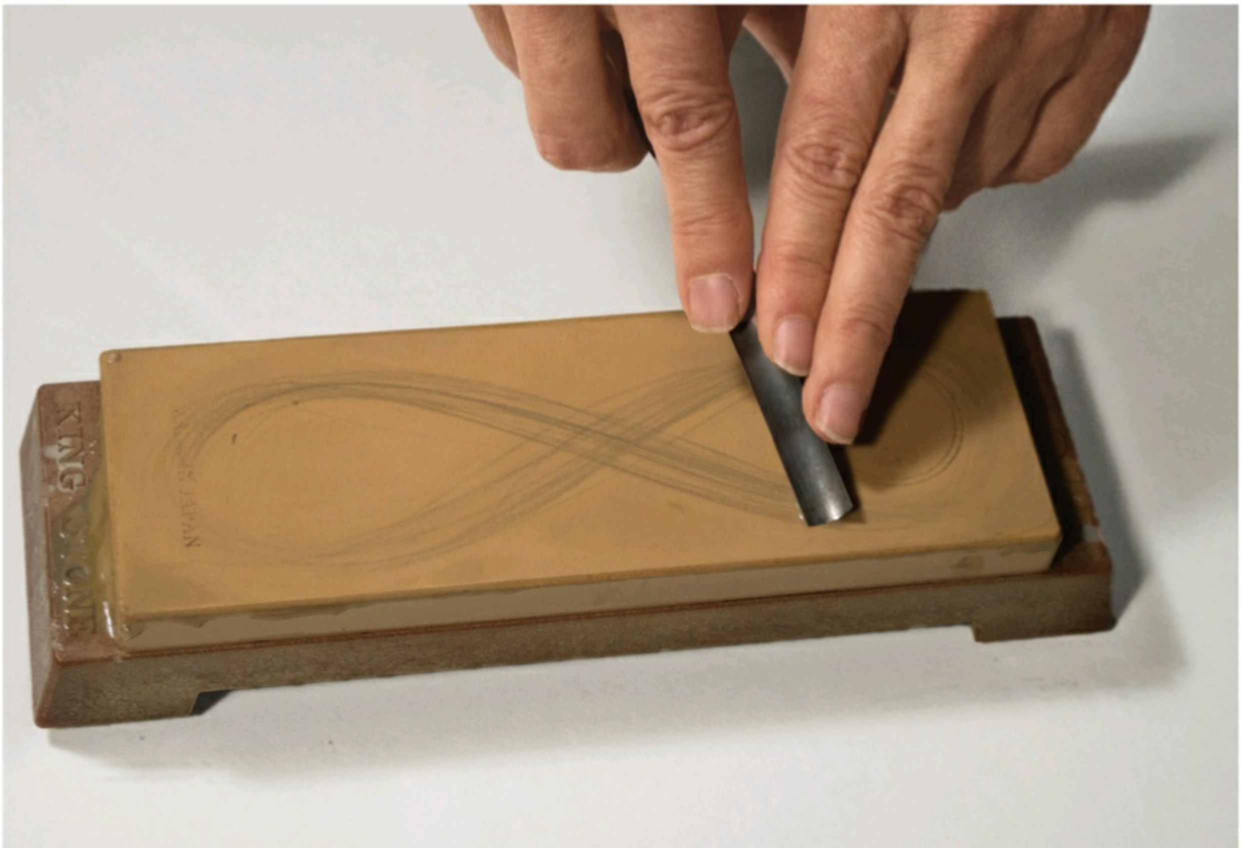
SHARPENING THE KENTO-NOMI (REGISTRATION CHISEL)

As with the hangi-toh, the bevel of the kento-nomi is held flat against the surface of the stone for sharpening.



SHARPENING THE MARU-NOMI (U-GOUGE)

The u-gouges require a rock and roll motion across the stone to sharpen. The maru-nomi is placed on the upper left and the bevel is rolled across and down to the lower right. Then the tool can be repositioned at the upper right and the bevel rolled down to the lower left, creating a figure eight. The bevel is kept even with the surface of the stone during the entire rotation, working slowly so as not to gouge the soft surface of the stone.

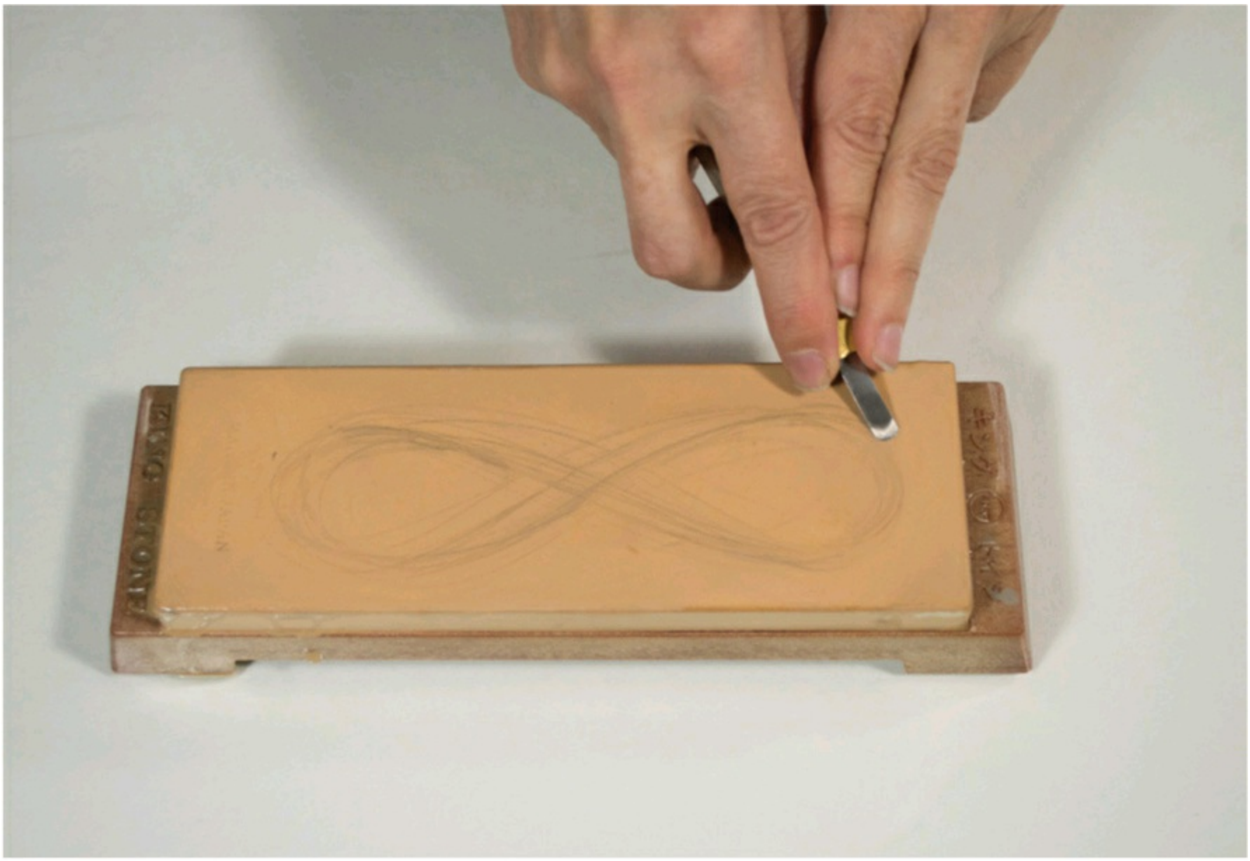


SHARPENING THE SANKAKU-TOH (V-GOUGE)

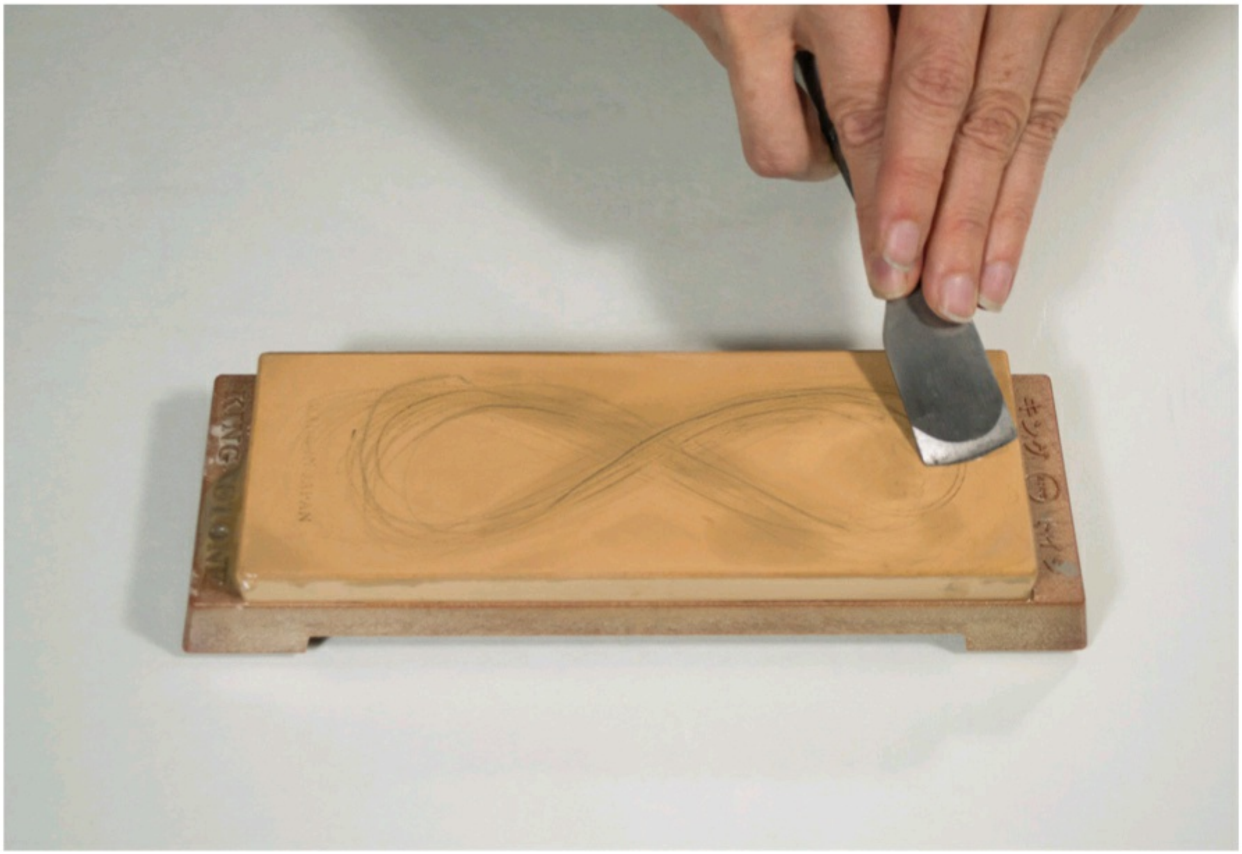
The sankaku-toh is difficult to sharpen because the two halves of the tool must be aligned to create a clean V. Sharpening this tool is like sharpening two chisels joined by a very small u-gouge. Sharpen the more difficult side first, so it is easier to line up the second side with the first. Once the two sides are sharpened, a small horn of metal is often left where the two sides of the tool meet. This is removed with further sharpening with a small V-shaped slip-stone.

SHARPENING THE SOAI-NOMI AND AISUKI (FAN-BEVELED CHISELS)

The small fan-beveled aisuki and the larger soai-nomi take the most practice to sharpen properly because the cutting edge of the bevel is wider than its base. It is sharpened in a way that is similar to the maru-nomi u-gouges except that in order to keep the full bevel in contact with the sharpening stone, the forward edge is moved more rapidly than the base of the bevel. Although this tool is somewhat difficult to sharpen, it is an effective and unique Japanese tool. It should be sharpened cautiously to avoid over-flattening it into a chisel shape.



Fan-beveled tools are also sharpened with a rolling motion, which can be done in a figure eight to use the maximum surface of the stone.



The large soai-nomi requires a complex arc motion to sharpen.

Detail of the rounded bevels of the aisuki and soai-nomi fan-beveled chisels.

SAFETY AND STORAGE

Fingers can easily be cut with sharp tools handled carelessly, but sharp tools are safer than dull ones because they behave in a predictable manner, cutting where directed. A dull tool can slip when forced and is more likely to cause accidents. To avoid injuries when block cutting, it is important to stay aware of the sharp edge of the tool, keeping both hands on the tool and both eyes on the cutting edge. Tools should always be set down before walking around the studio and always put away when cutting is complete, never left on the work table where they can accidentally be bumped.

For transporting tools, the sharp tips can be protected with a piece of plastic tubing, inserted in a cork, or slid into pockets in a canvas or leather carrying roll. Japanese printers sometimes pack individual tools in rolled-up paper left over from old prints, and then slide these into a cloth tool roll. Others have made lightweight wooden boxes with slots for each specific tool, which hold them in place during travel.

Tools should be cleaned and lightly oiled with camellia oil after use, to prevent rust from forming from humidity in the air. To keep them clean and protected in the studio, they can be stored in a ventilated wooden box or drawer with compartments so they do not rub against one another.

A leather tool roll is one way to keep tools protected.

Photo: Doug Schneider

JAPANESE MALLETS

Mallets are used with professional cutting tools to cut hard blocks, such as the cherry used for ukiyo-e blocks. A variety of mallets is available, but wooden ones of tough, durable Japanese white oak are designed specifically for this function. This tool’s heavy head and long handle are well balanced for use. The head of the mallet is secured with a wedge in the end of the handle so it won’t fly off. Professional carvers may have more than one mallet: a wooden one for clearing smaller areas or softer wood and one or two metal ones to use when more power is needed to clear harder wood. Metal mallets can more easily deform the steel blades of tools, so are made of softer metals than the tools. As with other aspects

of mokuhanga, each carver develops an individual way of working with these tools.

A Japanese oak mallet.

Photo: Doug Schneider

Roslyn Kean, *Night Fall*, 2013, 22 x 30 in (56 x 76.2 cm)

Mokuhanga and linocut with gold leaf on 100 percent kozo washi.

Roslyn Kean, after attending the Slade School of Art in London, was a Monbusho research graduate at Tokyo National University, where she studied traditional Japanese woodblock printing with Tetsuya Noda from 1985 to 1987. Her carefully made woodblock prints reflect her classical training, and she incorporates techniques such as silver leafing in her prints. She teaches in Sydney, Australia, where she is director of the Stables Print Studio.

Photo courtesy of Roslyn Kean

THE TRADITIONAL BAREN

The baren is the Japanese handheld printing disk. It evolved from Chinese precedents but is designed specifically for printing mokuhanga. Many varieties are available to artists today that were difficult to find outside Japan only a few years ago. Successful printing can be done with many types of baren. The best choice will depend on the kind of printing job and the skill of the artist as well as the cost of the tool. Experienced artists keep more than one type of baren on hand for different kinds of printing tasks. Less expensive modern versions of the baren are available online and at some art supply stores, but the *hon* baren, the carefully made true baren, must be special ordered.

The Ategawa

The ategawa backing disk of the hon baren is made from up to fifty layers of thin washi dried and shaped on a wooden form. The paper is first treated with astringent fermented juice from unripe persimmon to make it strong and waterproof, and then one sheet at a time is glued together over a wooden form, leaving a lip around the margin to hold the coil of the shin in position. The glue used is made from the starch of a fern, which is stable to prevent warping and has very little body.

The Takenokawa

This is the outer sheath of a bamboo stalk, called a culm sheath, which protects a new shoot as it sprouts from the side of the bamboo stalk. The sheaths drop off at a certain season and must be collected promptly before they rot on the ground. In Japan they were used as wrappings for many items, including food, but this tradition has generally been replaced with the use of plastic wrap. Sheaths from *madake*, Japanese timber bamboo (*Phyllostachys bambusoides*), are said to be the most desired type for wrapping because of their size, thinness, and flexibility.

The final step in making the baren is to dampen the takenokawa and wrap the baren. The sheath is cut to size and holds the shin and the ategawa tightly together.

The Shin

The inner coil of the baren, the shin, is made from strips of the outer fibers of the bamboo sheath, after the softer inside tissue has been peeled away (see pictures on

this page–this page). The strips are sliced lengthwise into thin 1mm, 1.5mm, or 2mm strips, depending on the desired strength of the finished baren. Wider strips will create a coarser, stronger shin coil. The strips are twisted together with new strips added in as it lengthens. These strings are themselves twisted together to make the 4-, 8-, or 12-strand baren. This complex twisted strand is finally coiled into a spiral, which is tacked together with thread so it remains flat as it sits in the ategawa. Printers often have several strengths of baren for different jobs, for example, a fine one to print the delicate lines of a key block and a coarser one to print broad, flat areas. A hon baren can cost upward of a thousand dollars and requires careful maintenance.

The wooden mold used to form the ategawa.

Photo: April Vollmer

The coil for the shin, made from strips of bamboo sheath.

Photo: April Vollmer

Takenokawa, the bamboo sheath.

Photo: Doug Schneider

CLASSIC HON BAREN

The traditional hon baren (“true” baren) is made by only a few specialists in Japan

today and can be ordered at prices that reflect the level of skill and the amount of time that goes into making them. The Chinese baren is quite different, rectangular rather than round. It was traditionally made of a wooden core wrapped with the coarse leaf sheath of the windmill palm *Trachycarpus fortunei*, a hardy palm cultivated in central China for its fiber. Artist and scholar Akira Kurosaki has done extensive research on early Japanese barens preserved in Buddhist monasteries: they take a wide variety of shapes and are primarily made from bamboo sheaths. The Japanese hon baren developed during the Edo period, a 4- to 5-inch (11- to 13.5-centimeter) diameter disk wrapped in a bamboo sheath, is deceptively simple. It is in fact a complex and carefully thought-out tool. It was refined by experienced printers for printing the large editions of woodblocks with the delicate key line blocks demanded during the Edo period. It is designed to be lightweight and responsive to the touch of an experienced printer. It is composed of the *ategawa* backing disk and the *shin*, a coil of cord that fits into it. Both elements are held together with a bamboo sheath or *takenokawa*, which is also called a *barenkawa* when used on a baren.

The hon ("true") baren, opened to show the shin coil, which fits into the ategawa back with a bamboo sheath.

Photo: Doug Schneider

The hon baren ready for use.

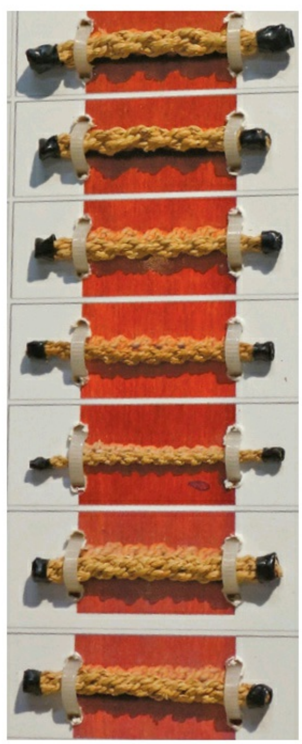
Photo: April Vollmer

KI-URUSHI BAREN

The *ki-urushi* baren has an ategawa made of lightweight lacquered wood rather than built-up layers of washi. It has the same coiled shin as the hon baren, but is a somewhat less expensive alternative. This example is a “strong” baren with the barengawa removed to show the shin, which has a coarse texture, designed to print large flat areas of color.

An open ki-urushi baren, with a lacquered wooden ategawa back.

Photo: Doug Schneider



A sales board from the Baren Studio Kikuhide displaying different sizes of cord used in making various barens.

Photo: April Vollmer

Baren Studio Kikuhide

Hidehiko Goto, an important baren maker in Tokyo, with a shop called Baren Studio Kikuhide, offers the following types of baren:

8-strand (fine): thin paper, delicate carving

8-strand (medium): average use

8-strand (heavy): wide woodblocks, thick paper

12-strand (medium): color blocks

16-strand (fine): also strong, but less likely to leave striations in the color

16-strand (medium): very strong baren, for color blocks on heavy paper

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MODERN BAREN

For contemporary artists, tools such as the nicely made white disk baren, the strong ball-bearing baren, or the flexible murasaki baren work well. These modern alternatives to the hon baren imitate its characteristics with more or less success. It is probably best to avoid the flimsy cardboard baren, but other Japanese baren types are very useful and easier to maintain than a hon baren. To evaluate the quality of the tool, it is important to examine the printing surface, which is sometimes hidden beneath the takenokawa sheath wrapper. Inexpensive barens are sometimes made by wrapping a disk of flat cardboard with takenokawa. These will not print effectively because the flat surface of the cardboard does not engage with the block effectively enough to force color into the paper. Other beginner baren types have a textured plastic surface under the takenokawa, which is fine for small prints.

DISK BAREN

An excellent intermediate baren is the disk baren, invented by Akira Kurosaki. This white plastic baren is not wrapped, but has a clear plastic printing surface of small raised dots, which function like the bumpy surface of the shin in the hon baren. The plastic surface can be replaced as it becomes flat with wear, which is easier than replacing the takenokawa. The disk baren works well for smaller prints and lightweight papers.

The disk baren, invented by Professor Akira Kurosaki.

Photos by: Doug Schneider

BALL-BEARING BAREN

The ball-bearing baren works well for heavier papers and larger printing areas. These come in varieties with differing quantities of larger and smaller ball bearings arrayed in various patterns. They weigh more than the true baren, a disadvantage when printing a large number of prints. However, they need little maintenance beyond oiling with camellia oil. The more ball bearings the tool has, the more evenly and gently this type of baren will print. Widely spaced ball bearings can print heavy paper well, but are likely to leave stripy *baren-suji* marks—lines of darker color where the delicate paper was crushed by a raised node on the surface of the baren—on the print. The type of grid also makes a difference. Ball bearings laid out on a square grid are more likely to roll over a location that has been previously covered than are ball bearings spaced in a radiating or spiraling pattern.

Above left: A stronger ball-bearing baren is made with fewer ball bearings.

Below left: The Kean ball-bearing baren, made in Australia.

Right: A fine ball-bearing baren is made with more ball bearings.

Photos by Doug Schneider

MURASAKI BAREN

The murasaki baren comes closest to the flexible strength of the hon baren. This baren is made with a synthetic purple cord, as indicated by the name *murasaki*, which means "purple" in Japanese. As with the true baren, the strength of the tool depends on the coarseness of the cord and the number of cords twisted together to make the shin. The murasaki baren is made in medium and coarse versions and costs much less than a hon barren. Like the hon baren, the murasaki baren has a takenokawa sheath that must be replaced when it develops holes or splits from printing.

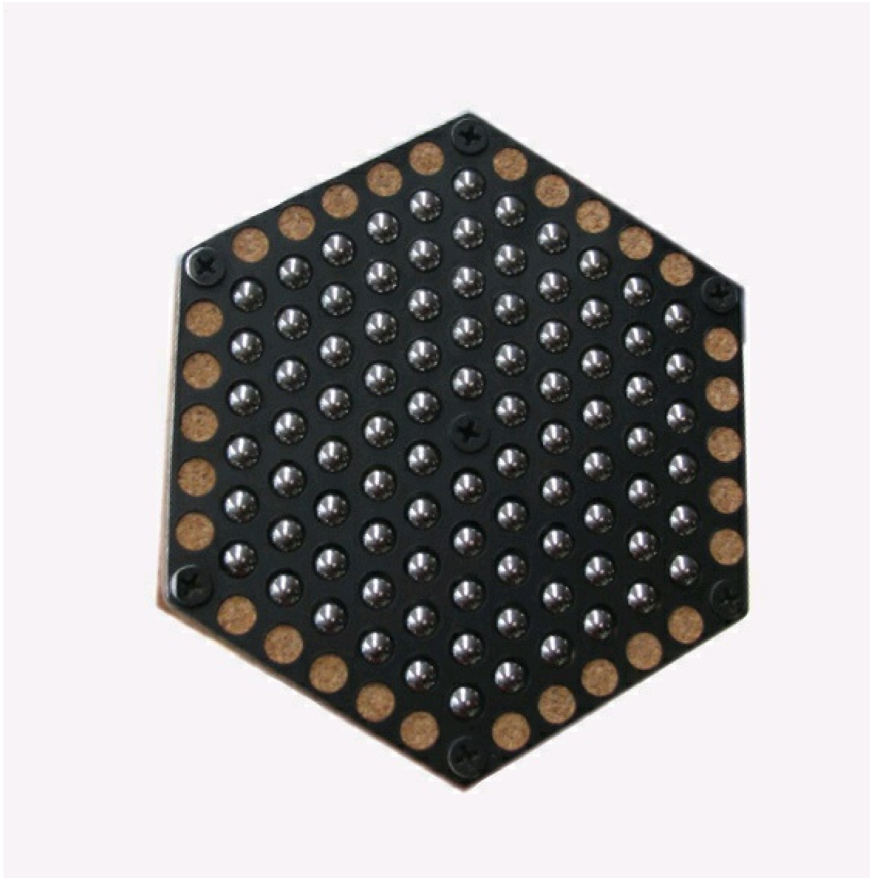
An open murasaki baren, with a shin made from purple cord.

Photos by Doug Schneider

HOMEMADE BAREN

The baren is a handmade tool produced by professionals who train to make them with great precision. A small bump on the shin will create baren suji marks or even tear the paper. However, a few printmakers outside Japan have made their own barens using coils of various kinds of cord, as well as ball-bearings set in a grid.

Martin Vinaver, an artist who initiated a mokuhanga program at La Ceiba Gráfica in Veracruz, Mexico, has made a ball bearing baren (as well as other tools) as part of his commitment to finding low cost local equivalents to the materials he used when he studied at the Yoshida studio in Tokyo. In 2014 Vinaver relocated to Stockholm, Sweden, where he is experimenting with using local Nordic birch and pine for mokuhanga. His student Marco Avilés continues teaching mokuhanga at La Ceiba Gráfica using Mexican materials.



Martin Vinaver made this baren from air conditioner parts.

Photo: April Vollmer

Andrew Stone’s shin of hemp cord and matte medium from his art blog, Lacrime di Rospo.

Photo: Andrew Stone

A substitute baren made from a braided grass coaster glued to a wood backing.

Photo: Scott Dolan

OILING THE BAREN

The baren should be oiled lightly during printing so it slides smoothly across the back of the printing paper. A special pad called a baren *wata*, translated as baren pad, made of felted wool, is designed to hold the baren during printing and also holds a small amount of oil to keep the baren conditioned. Alternatively, a cloth pad attached to a non-skid fabric can be used to hold the baren. Camellia oil, *tsubaki* in Japanese, is the preferred oil because it is stable and nontoxic. It can be purchased from shops that carry specialty Japanese tools, since it is also the recommended oil for maintaining Japanese knives and swords. Food-grade mineral oil is a less expensive option, but vegetable oils such as olive or corn oil will

harden with age and prevent the ball bearings of a ball-bearing baren from moving freely.

A ball bearing baren rests on a baren wata pad and is oiled with camellia oil.

Photo: Doug Schneider

RE-COVERING THE BAREN

Printers sometimes recommend replacing the takenokawa on a baren before it develops holes in order to protect the valuable shin inside. Some re-cover their baren after a day of printing, regardless of whether it appears damaged. In time, the takenokawa will develop holes or splits from use and have to be re-covered. It will last longer in the hands of an experienced printer if it is oiled regularly, and if the shin rotated inside the cover so that the wear is evenly distributed. But eventually every baren will need a new takenokawa. Re-covering a baren is challenging at first but becomes easier with practice. It is a necessary skill for maintaining a covered baren. As with many other Japanese printing skills, each craftsman has developed an individual approach. The bamboo sheath is a variable natural product, especially sensitive to changes in moisture. To avoid splitting, the takenokawa as well as the wrapped baren should be stored away from light and changes in humidity.

Before printing, the re-covered baren should be rubbed with camellia oil. To make the takenokawa last longer without developing holes, a thin sheet of transparent plastic designed for the purpose can be attached to the printing surface before oiling.

Materials for re-covering a baren include a rag or brush for dampening the takenokawa, a stone for softening it, scissors, and a thin, tightly twisted cotton or linen string to wrap around the handle.

Photo: Doug Schneider

STEP 1

First, the takenokawa must be dampened by brushing it with water, wrapping it in a damp cloth, or immersing it briefly in a bath of water. It is then set aside until it is softened, but not soaking wet.

Following photos by Matthew Smolinksy

STEP 2

Laid out on a large cherry block or other medium-hard surface, it is rubbed with a rounded stone or the back end of scissors to crush the fibers. This takes some force, so care must be taken not to tear the delicate sheath. The takenokawa will expand from side to side as it softens, becoming wider. If the air is dry, it may need to be re-moistened while working.

STEP 3

After the takenokawa becomes soft, it is stretched open, and the ategawa with the shin in place are put facedown in the center. The takenokawa should be slightly wider than the diameter of the baren.

STEP 4

The sides of the takenokawa can be trimmed so they curl up around the edge of the baren, and the ends cut to shape with scissors to form the handle.

STEP 5

Working in quadrants, the thicker, root end of the takenokawa is pleated with as many tucks as possible, usually three or four, first on one side and then the other.

STEP 6

Once the root end of the takenokawa is tightly pleated around the baren, the end is twisted into a handle.

STEP 7

The baren is pushed firmly into the finished portion, and the handle held against the back of the ategawa.

STEP 8

The whole baren is rotated to begin pleating the tip end. Holding the baren tightly into the completed portion, the tip is pleated one side at a time in the same way as the root end.

STEP 9

Once pleated, the tip end is also twisted and folded over against the back of the baren.

STEP 10

The two twisted ends of the takenokawa should coil in opposite directions. To complete the wrapping, the two ends are brought together and tied with string..

STEP 11

If the baren has been held tightly and there are enough pleats to hold it in position, the front of the baren will be smooth with few wrinkles to interfere with printing.

STEP 12

The final step is to cut off the ends of the takenokawa flat to finish the handle of the baren. It should be allowed to dry completely to prevent splitting, then oiled with camellia oil.

BRUSHES

Brushes of various sizes are used for many different tasks—from dampening washi to applying color to blocks—when creating mokuhanga prints. It is useful to have a variety of the highest-quality brushes you can afford on hand.

Professional brushes for mokuhanga are made with stiff hair to spread color over the block.

Photo: Doug Schneider

CLASSIC PRINTING BRUSHES: Hanga Bake and Maru Bake

Hanga bake, translated simply as "printing brushes," are made from stiff hog hair to facilitate spreading the color mixture across an uneven block. These brushes have been used since the Edo period and have an upright handle of wood or bamboo, with the bunched bristles tied together and held between the two halves of the handle. The more modern *maru bake* brushes color across larger areas more easily. It looks like a shoe brush and is held with the flat back parallel to the block. It is usually made of a flat cedar handle with black horsehair. Individual bundles of hair are folded in half and tied into the wooden back for durability. Generally, the denser the hair, the better the quality of the brush. The character of the brush varies with the type of horsehair with which it is made, part of the tail or the mane used, whether it was cut in summer or winter, and whether it is composed of stiffer black or softer brown horsehair.

The tips of the bristles have sharp cut-off ends. Before printing, these tips should be softened by singeing and shredding against a rough surface so they will not leave scratch marks in the color on the block. Some contemporary brush makers, as well as artists, use a belt sander to soften the tips of the bristles. This will soften the cut edge of the horsehair without splitting it. Splitting the ends, or flagging, will create a softer tip but is more time-consuming. Traditionally sharkskin was used to split the tips of the bristles; now metal "dragon skin" of perforated steel is often used. This process can be done periodically to keep the brush tips soft so they do not leave stripe marks in the color applied to the block. Dense, high-quality printing brushes are valuable because they will hold more color and brush it out more uniformly, meaning less effort is required to maintain consistent color and moisture during printing.

ALTERNATIVE PRINTING BRUSHES

Specialty brush makers who sold brushes from their own shops contributed to the high quality of traditional printing in Japan. There are still a few of these craftsmen in Japan today who maintain shops that are a pleasure to visit. The brushes they make are excellent, and these craftsmen take pride in them. However, for artists outside Japan, and for those on a budget, prints can be made with substitutes. Mass-produced stencil brushes will work for small areas, and stiff natural bristle brushes can be cut short for use as printing brushes. In Japan, brush makers also make sosaku brushes, which, like the sosaku cutting tools, are a less expensive version of the professional brushes. The nicely made Japanese *surikomi bake* stencil brushes are made from a combination of absorbent deer hair and hog hair in

an upright handle similar to the hanga bake handle. These are a less expensive alternative to true printing brushes and work well, though they do not last as long and can sometimes shed hair.

Alternative brushes such as stencil brushes can be used for printing.

Photo: Doug Schneider

WATER BRUSHES: MIZU BAKE

Mizu bake are water brushes usually made of white goat hair. They are used to dampen paper before printing. The dense professional mizu bake brushes will allow fast and even application of water, but substitutes are easy to find. Wide Chinese natural hair brushes, or any wide brush with absorbent natural bristles, will do the job. If inexpensive brushes are used and application is uneven, paper can be left under plastic longer so the moisture is more evenly distributed.

Professional brush makers differentiate between mizu bake for water and the slightly stiffer *dosa bake*, which are made for applying dosa sizing to the paper before printing. The even application of dosa during sizing and of water during printing are significant prerequisites for printing, making these brushes an

important element in the process.

There are many other types of brushes designed for specific uses, and artists develop preferences for particular brushes in different sizes, made from different kinds of hair. It is important to clean and dry water brushes after use. They should be hung for storage in a well-ventilated space away from sunlight.

There are many varieties of Japanese brushes (or "bake"), including the wide mizu bake which is specifically for applying water to printing paper.

Photo: Doug Schneider

CARRYING BRUSHES: Tokibo

The carrying brush is distinct from the printing brush. These brushes are designed simply to transfer color to the block so it can be brushed across the surface with a printing brush. Printers make them from the leftover strips of bamboo sheath from making and re-covering the baren. The coarse front of the takenokawa is separated from the back, shredded, and tied to a stick to make a small brush. There are as many varieties as there are artists making them. Inexpensive alternative brushes can be used, since it will not make a difference in the final print, but the lightweight

tokibo is a nice handmade tool that is relatively easy to make.

Small brushes are used to carry color or paste to the block.

Photo: Doug Schneider

April Vollmer, *Interchange*, 1998, 37 x 17 in (94 x 43.2 cm)

Photo: D. James Dee

SOFTENING THE TIPS *of* PRINTING BRUSHES

Since maru bake are made with cut pieces of horsehair folded in half and tied into the brush back with wire, the ends make a rough surface of sharp, stiff hairs. For printing, these hairs should be split or softened. Split ends in a brush are called flags and help the brush hold additional color. To flag the ends of a maru bake, the tips are burned on a hot metal surface and rubbed against a rough surface. Originally, rough sharkskin was stretched and nailed to a flat board and used to soften the tips of printing brushes. A metal “dragon skin” is easier to locate today than the traditional sharkskin. The brush should be dry, or the change in temperature may split the back.

Photos by April Vollmer and Scott Dolan

STEP 1

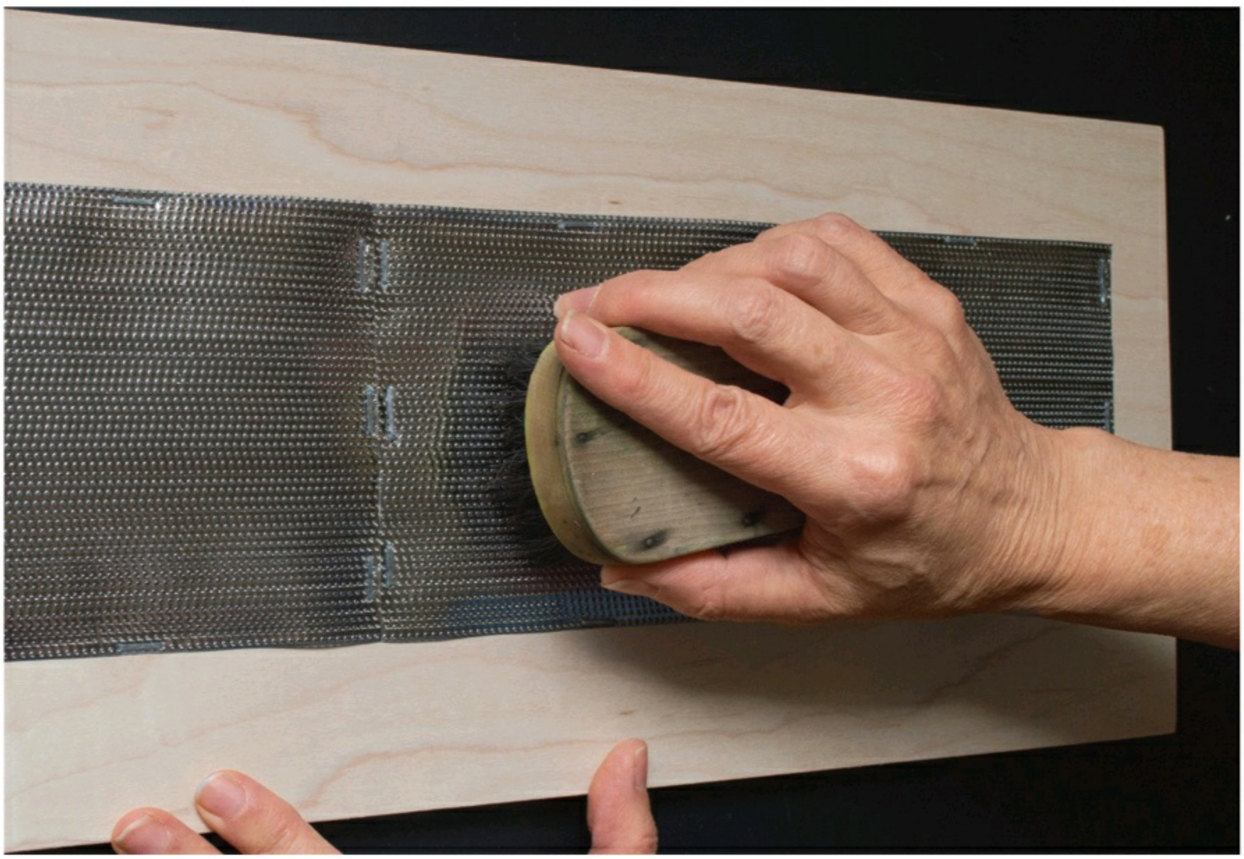
A new printing brush with coarse tips of horsehair should be softened for use.

STEP 2

Press the entire surface of hair flat against a hot metal surface, such as the back of a cast iron skillet, until the hair tips begin to melt and turn brown. The hair will smoke and stink, so good ventilation is essential!

STEP 3

Once the hair is evenly burned, the tips of the brush are dipped briefly in water and rubbed against dragon skin mounted on a board to split the tips. This takes some energy, perhaps 20 to 40 minutes of persistent effort. It is important to keep the brush even so that it retains a flat surface for brushing color out on the block.



STEP 4

A final step is to wash the brush thoroughly to remove any bits of burned hair. Brushes should be completely dried with the bristles open to the air and facing downward when wet so that water does not collect in the wooden handle. Like other Japanese tools, the maru bake is sensitive to humidity and is best stored in a well-ventilated area away from heat or sun.

BLOCKS

A few types of wood can be used for carving, some more ideal than others. Cost, availability, hardness, and warping are all factors to consider when selecting wood for a block.

BASSWOOD AND SHINA PLYWOOD

One of the most useful woods for contemporary creative woodcut is Japanese basswood, *Tilia japonica*, called *shina* in Japan. This genus includes many species that grow throughout the Northern Hemisphere and Asia. Called basswood or linden in the United States and lime in Great Britian, this type of wood is easily worked and is often used in sculpture. Shina is a favored block for mokuhanga because it has a smooth surface and even grain, and it warps very little when wet. Imported from other parts of the world, shina is processed in Japan into plywood especially for mokuhanga with thin waterproof glue that is easy to carve and print. In addition to its natural stability, shina plywood is made more resistant to warping by alternating the direction of grain in each layer. It can be carved on both sides and is available in large sizes. Shina blocks hold detail well, although they will not retain as sharp detail during extended printing as harder woods will. The number of impressions that can be printed from a block varies with the hardness of the wood, the fineness of cutting, the hardness of the baren, and the skill of the printer. Two hundred is the number often given for an edition, though a block could probably be printed many more times.


Left: Example of a shina plywood block cut for yellow printing.

Right: Shina plywood block cut for black printing.

Photos: Doug Schneider

April Vollmer, *Diaphragm*, 2012, 14 x 11 in (35.5 x 28 cm)

This print represents the vaulted ceiling of a baroque Mexican church, made from these two blocks, each printed three times with gradated color to give depth to the print.

Photo: Doug Schneider

CLASSIC SAKURA CHERRY BLOCKS

Ukiyo-e prints were made from blocks of wild mountain cherry wood (*Prunus serrulata*), called *yamazakura* in Japanese, which is no longer readily available. However, cherry planks can be found at some lumber stores, and plywood with a cherry veneer is sometimes available as well. Cherry wood is harder than shina. It cuts smoothly and cleanly, and the block has just the right water absorption for optimum printing.

In 2012, Kari Laitinen worked with a group at Aalto University in Helsinki, Finland, to research alternative woods appropriate for woodblock carving. The conclusion of the group of artists and scientists was that it was not possible to imitate exactly the characteristics of Japanese wild cherry, although they were able to improve the characteristics of birch and alder by heat-treating samples.

OTHER USEFUL WOODS

Wood names are inconsistent, so it is best to test a sample of wood before investing a great deal of time in carving. Like the various names for basswood, most woods are known by different names in different locations. Woods are often shipped great distances so that information about their place of origin is lost. In addition to the natural variation between trees, many varieties hybridize. For these reasons, wood species can be difficult to identify from cut lumber samples.

Birch plywood is harder than shina (basswood) and softer than cherry. It is a popular choice for woodcuts because it is easily available. Birch is in the *Betulaceae* family, related to alders. Other woods especially appropriate for carving are fruitwoods such as pear and apple. The poplar or yellow poplar, available in the United States and related to the magnolia, *Liriodendron tulipifera*, is often actually a tulip tree. Tulip tree and magnolia are both recommended for woodblock. Pine is quite soft with a pronounced difference between softer and harder rings, making it a good choice for showing grain in a print, but the irregularities can make the knife skip and jump during cutting.

Each species of wood has its individual characteristics, and, when carved, a plank of clear wood has a distinct feel where plywood can feel mechanical. To avoid warping, the best wood planks are center cut and dried for several years before being planed. Valuable large printing blocks can be cradled with supporting wood strips attached at the ends to help keep them stable. Because there are few large

cherry trees remaining, old cherry blocks are often cut into veneer so that maximum use can be made of the wood.

Many fine prints have been made with found wood, including old furniture, tabletops, and drawing boards. However, since Japanese woodblock is water-based, it is best to avoid veneers and plywood that may delaminate or may have a layer of hard glue that might dull cutting tools. All blocks should be dried carefully after printing so they do not warp from the moisture. They should be stored upright with both sides open to the air so they dry evenly.

Wood samples with cherry on top of the stack, then shina, basswood, and poplar.

Photo: Doug Schneider

COLOR FOR WATER-BASED WOODBLOCK

Japanese woodblock printing, mokuhanga, was designed to be done with sumi ink, watercolor, and gouache. Color is applied to the block where it is mixed with water and paste to the proper consistency for printing. The mixture is brushed over the blocks with stiff printing brushes that pull the watery color smoothly across the uneven surface of the block. The color is forced up into the fiber of the paper by the pressure of the baren during printing. The way the color bonds with the paper has similarities to watercolor painting because the color penetrates the paper and does not obscure its surface texture. Pale colors can be created by using less color and letting the white of the paper show through. This way of printing color contrasts with the tradition of woodblock that has been practiced in the West since the Renaissance. Western woodblock is done with tacky oil-based ink rolled onto the surface of the block with a brayer. Contemporary manufacturers of artists' materials make water-based inks that imitate the characteristics of roll-up oil inks, but this kind of water-based printing is distinct from Japanese woodblock printing that is applied with a stiff brush and printed with a baren.

UKIYO-E COLORS

Ukiyo-e prints from the Edo period were printed with sumi ink and color made from plants and minerals, many of them fugitive, meaning they fade with prolonged exposure to sunlight. The publishers of popular prints always wanted novelty, and new colors were incorporated as they became available, reflecting changes in popular taste. The earliest prints were black and white single sheets and books. In the early 1700s *benizuri-e* ("crimson printed pictures") were introduced. *Beni* is the Japanese name for carthamin, a red color made from safflower (*Carthamus tinctorius*). Other colors developed for use in ukiyo-e prints were red lead; vermilion from oxidized mercury; *benigara* red from burning sulfate of iron; curcumin yellow from the root of turmeric (*Curcuma longa)*; *zumi*, a mustard yellow made from boiling the bark of the Japanese flowering crabapple (*Malus sieboldii*); *ai* from the indigo plant (*Indigofera tinctoria*); *aigami,* a delicate blue made from the Asiatic dayflower (*Commelina communis*); and white *gofun* from pulverized shell. These substances were mixed to make a full range of colors for ukiyo-e prints. White clay could be added for opacity, and artists experimented with other additives including silver, gold, lapis lazuli, and mica to create special

effects. With the significant exception of carbon black, most of the vegetable-based colors were fugitive in the presence of light, and many prints from this early period have faded with exposure to sunlight.

In the early nineteenth century, European synthetic colors were introduced. They were called Holland colors because the trade came from Nagasaki, where Dutch traders had been permitted to establish a port. These newly available colors resulted in a popular demand for blue, made famous in Hokusai's print *The Great Wave Off Kanagawa* of 1830. Additional manufactured colors from the West were quickly adopted in Japan and are visible in the saturated colors of Meiji-era prints. Color chemistry evolved rapidly during the twentieth century. Today contemporary artists everywhere can choose from a wide range of lightfast pigments.

Pigment dispersions (pigment in water) with gum Arabic added as a binder can be used in addition to watercolor.

Photo: Doug Schneider

SUMI INK

Japanese sumi ink is made for calligraphy from pine soot and animal glue hardened into stick form. The sticks are ground on an inkstone and mixed with water in

preparation for brushing onto absorbent paper. This basic ink formula dates back at least to the Han dynasty (206 BC–220 AD) in China, and the technology came to Japan from there. In Japan the most renowned areas for the production of high-quality sumi ink are around Nara, the religious capital of Japan during the eighth century. Japanese red pines from the mountains of Wakayama were burned with sesame or rapeseed oil to make the soot that was mixed with *nikawa* glue from deer bones. Scented musk or camphor was added to the mixture, enhancing the special character of this carefully handmade material, which retains ties to the cultural and religious history of Japan.

Quality sumi ink is still produced in the Nara area, though in reduced quantities. For high-quality sumi ink for printing, printmakers can soak broken pieces of sumi sticks in water, grind, and strain it to make ink denser than normal calligraphy ink. Some printers find partially spoiled sumi ink to be especially desirable because its binder is weakened. Ready-made sumi ink in a bottle is convenient for most printing tasks; however, because of its high water content, less water is needed for printing.

Sumi ink comes in bottle and stick forms.

Photo: Doug Schneider

WATERCOLOR INGREDIENTS

Artist's colors are made from pigment and binder along with additives to modulate the character of the color. A distinction is usually made between dyes and pigments, where dyes are relatively soluble and fugitive and pigments are relatively insoluble and long-lasting. Liquid dyes dissolve in water and soak into fiber, with a chemical mordant added to fix color. Ground powdered pigments are insoluble and adhere to the outside of the fiber. Good watercolor contains mainly pigment rather than dye, though the distinction is not absolute; for example, phthalocyanine pigments act like dyes, penetrating the fiber, but are quite permanent. Today there are so many pigments available that it is difficult to categorize them in the same way as in the past.

Pigments are held in place with a binder. Oil paint is bound with linseed oil, acrylic paint with polymer emulsion, and egg tempera with egg. Fresco holds pigment without binder in the plaster itself. The binder for watercolor is a resoluble material such as gum arabic, made from the sap of acacia trees. The binder holds watercolor in place so it is not carried too deeply into the fiber of the paper, but held close to the surface where it can be seen clearly. This binding glue becomes clear and hard when it dries, so many watercolors include a plasticizer such as glycerin to keep them from becoming too brittle. Other additives are used by manufacturers to standardize the handling characteristics of colors. Sugar syrup can be added to retain moisture, brighteners to improve color, dispersants to prevent clumping, and fungicides to prevent the growth of mold and bacteria. Extenders are added to colors with a strong tinting strength to expand their range of color and reduce their cost. Gouache is watercolor made opaque with the addition of calcium carbonate.

The evolution of color reflects the changes brought about during the industrial revolution. After centuries of labor-intensive work to produce color, manufacturing processes were developed to make color in quantity. During the late 1800s, synthetic coal tar dyes became available from Germany, and during the early twentieth century many more colors were added. Today most artists' colors are synthetic, manufactured so that the resulting product is uniform, without impurities, and inexpensive to make. Artist's colors are a tiny part of the huge commercial market for color.

CONTEMPORARY PIGMENT DISPERSIONS

In addition to watercolor and gouache, artists can use pigment dispersions for mokuhanga. Pigment dispersions are simply pigments ground in water. They are an economical choice for mokuhanga, since watercolor is expensive and printing mokuhanga does not require the same uniform brushing characteristics as painting in watercolor. There are now several distributors of pigment for artists who wish to make their own paint. To make a basic watercolor from pigment, a small amount of binder, such as liquid gum arabic, can be added to the color before printing.

Mokuhanga is a direct way to use pigments; the tinting strength, relative transparency, and texture of each becomes evident during printing. Reliable distributors label colors clearly with their pigment names, such as cobalt, phthalocyanine, or umber, which gives information about the way a color will behave. In addition, each color is assigned a standard identification number, such as PY 97 (pigment yellow) for arilyde yellow, PY 3 for hansa yellow, or PO 49 (pigment orange) for quinacridone gold, by the American Society for Testing and Materials International (ASTM). The organization was founded in 1898 as the American Society for Testing and Materials to provide needed standards for industry and has grown into a respected international standards organization, publishing technical standards for a wide range of materials, including color.

Color choices are so broad today that each artist will develop an individual vocabulary. A useful system is to include a warm and a cool version of red, blue, and yellow primary colors; for example, a cool hansa yellow and a warm arilyde yellow—one for mixing clear greens and one for mixing clear oranges. Check to make sure the selected color is lightfast in watercolor, as some pigments are more stable with oil as a binder than in watercolor. Pigment dispersions can be mixed with watercolor, gouache, and sumi ink for printing.

HOMEMADE COLOR

Grinding pigment to make color rather than purchasing ready-made pigment dispersions is time-consuming but offers a way for artists to engage directly with materials. A few artists have experimented with making color using pre-industrial recipes: the history and significance of color can become an important element of their artwork. There is a growing interest in color made from natural materials such as indigo and cochineal, and classes are now offered by various print and papermaking facilities. Handmade color can be adapted for use in Japanese woodblock, which will show the character of unusual colorants clearly.

Asao Shimura is an authority on hand papermaking and natural dying who has collected a wide variety of natural colors and demonstrates their use in his workshops in Japan, the Philippines, and the United States. He documents some of his color research, as well as his work with kozo and alternative paper fibers, on his Facebook page.

HEALTH CONSIDERATIONS

While mokuhanga is one of the safest printmaking methods because of its lack of reliance on petroleum solvents, the pigments used can be harmful if inhaled or absorbed through the skin. Pigment prepared for artists' use can be more stable than the elements it is made from, but care should be taken not to ingest or breathe in color particles. Using pigment dispersions lessens the chance of inhaling the fine dust from powdered pigment. When working with powdered pigments, a dust mask is recommended. Pigments should be used up in printing whenever possible, trays and bottles of unused color should be wiped out with paper towels and put in the trash so less enters the water system. Heavy metal pigments such as cobalt and cadmium are brilliant and opaque, but can be carcinogenic if ingested. Mokuhanga uses very small amounts of these chemicals, but care should be taken to use them properly.

NORI (RICE PASTE)

Rice paste, or *nori*, is an essential element in printing that ensures smooth printing. Without it, color will print with a speckled texture called *goma zuri*, translated as sesame seed texture. The paste can be purchased ready-made in tubes or made from rice starch. Tubes are convenient for occasional printing, but it is not difficult to mix paste from pure rice starch, which is used for museum mounting and can be found at arts and crafts stores. For ease in printing, water is added to the thick rice paste from a tube to give it the texture of heavy cream. It is mixed in a small dish and added to the block with carrying brushes in the same way as the color. Methyl cellulose mixed from powder is a substitute that will also help color to print smoothly, keeps well, but does not absorb water as readily as rice paste.

Photo: Doug Schneider

MAKING NORI

Rice paste made from refined rice starch is cooked gently in water, but not boiled.

For the smoothest paste, the mixture can be sprayed lightly with water so a skin does not form and, when cool, strained through a fabric strainer. Stored covered in the refrigerator, it will last several days before spoiling. For a day of printing, a convenient recipe is two teaspoons of starch and a quarter cup of water mixed and warmed until it becomes creamy.

STEP 1

One part rice starch powder is added to four parts cold water.

Following photos by Matthew Smolinksy

STEP 2

Gradually the water is heated without boiling on a hot plate or in a double boiler. Stir until the mixture thickens and becomes opaque.

STEP 3

Once the mixture thickens, it is removed from the heat and moved to a cool bowl.

Keiko Hara, *Verse • Sukumu 2-3-12*, 2012, 21.5 x 16 in (54.6 x 40.6 cm)

Mokuhanga monoprint with stencil and collage.

Photo: Amahra Leaman

CHAPTER 3

WASHI, JAPANESE HANDMADE PAPER

Paper handmade in Japan using traditional methods is called washi. It evolved from Chinese and Korean precedents into a uniquely Japanese form of papermaking. The character *wa* signifies Japan and *shi*, paper. The Korean word for handmade paper is *hanji, han* for Korea and *ji* for paper. Similarly in China, paper is called *zhi*, prefaced by a character describing various regional varieties. In Japan, the majority of washi is made from the inner bark of paper mulberry shoots, called *kozo* in Japanese.

Japanese paper is often erroneously referred to as “rice paper.” Rice was the fundamental currency of old Japan and remains the staple of the Japanese food economy. Small paddies filled with water for rice plants surround many rural papermills, but traditional Japanese washi is made from the inner bark of tree shoots.

Washi’s understated strength and the warmth of its color and feel were important elements in the appeal of mokuhanga during the Edo period, and still are today. Washi is made in many weights, colors, and textures that can be used effectively by artists. One of the most significant characteristics of washi for printing is its dimensional stability. Washi made the traditional way keeps its shape even when wet, essential to accurate registration for mokuhanga. Strong pressure is exerted on the paper with the baren during printing and the print absorbs additional moisture from the block, so paper can easily become distorted. Even lightweight washi will accept several layers of color, and *kizuki hosho,* heavyweight 100 percent kozo paper designed for woodblock, can be printed with many layers of color. Hand beating the kozo fibers leaves them relatively intact so they stretch very little once made into paper. The grain of washi runs parallel to the chain lines in the paper; for the most accurate registration the grain of the paper and the grain of the wood should both run parallel to the long dimension of the print.

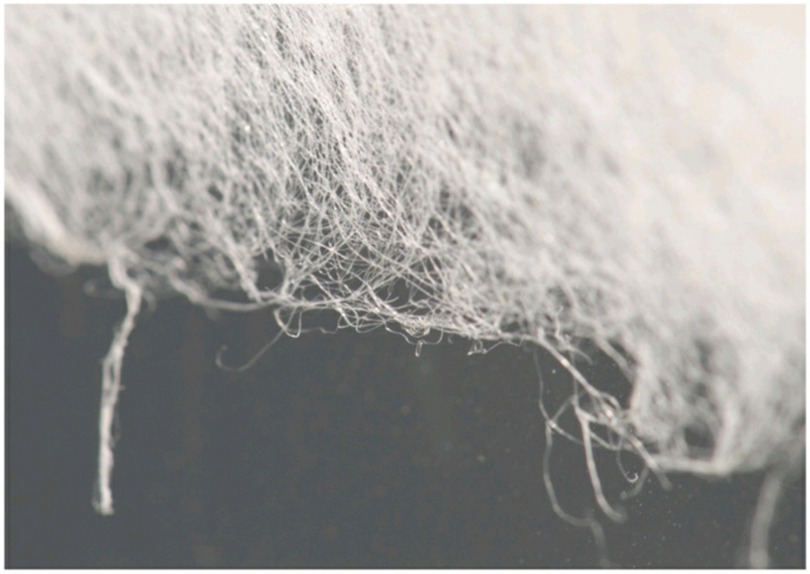
JAPANESE PAPERMAKING ORGANIZATIONS

Many papermakers in Japan organize themselves into associations to establish a local identity, aid in the distribution network, and serve an educational function. Many of these associations maintain papermaking museums displaying samples and offering demonstrations. There are fewer of these associations now than in the past, but they are important in representing papermakers from a particular area, often identifying themselves by their premodern traditional place names. For example, Tosa is the old name for Kochi Prefecture on southern Shikoku. Because of its temperate growing climate and its abundant water from clear mountain streams, Shikoku Island produces more fiber and more paper than other areas of Japan. Fiber is exported from here to papermakers all over Japan. The many papermakers represented by the Tosa Papermaking Association produce a wide variety of paper including stationery and traditional mounting paper for scrolls and folding screens as well as printmaking papers that are distributed under many names.

Also on Shikoku, in the former Awa Province in the center of the island, lies the Awagami Factory where paper has been made for many generations by the Fujimori family. The factory maintains the Hall of Awa Japanese Paper, which includes a museum of artwork made on Awagami washi and offers information in English, along with demonstrations and classes; the factory also maintains an informative website about the history and process of making washi. Awagami makes many types of paper and has responded to the need for less expensive Japanese papers by offering machine-made types that are widely distributed by retailers in the United States.

In Gifu Prefecture the Mino Washi Paper Museum promotes washi and offers various programs about papermaking in English; the Mino Paper Village offers a creative paper art residency program for foreigners. Papermakers in Mino produce especially thin conservation papers as well as paper for lanterns, umbrellas, and other crafts. In Ogawa, Saitama Prefecture, northwest of Tokyo, the Ogawa Handmade Paper Association has a facility with information about papermaking and offers demonstrations for the public and for school groups. North of Kyoto, in Fukui Prefecture, Echizen is where much of the hosho-style paper used in ukiyo-e prints was made during the Edo period. The Echizen Paper Association there represents around seventy paper producers who make various types of paper all

year. This area is still a significant source of paper for mokuhanga printmaking. Important papermaking names from that area include Yamaguchi and Iwano, both multigenerational families of papermakers. Purchasing paper made under the umbrella of these associations guarantees a certain degree of quality.



Dry kozo fiber, used for making washi, is the white inner bark of the paper mulberry tree.

Photo: Doug Schneider

Detail of the kozo fibers that make up this washi.

Photo: Matthew Smolinsky

Full size sheet of washi, showing deckle edge and laid lines from the sugeta.

Photo: Matthew Smolinsky

Because there is so much variety in washi, and because it is made in small batches in different areas of Japan, it is difficult to recommend a particular paper. Handmade washi made from kozo fiber that has been lightly sized is the most appropriate for mokuhanga because it is dimensionally stable and absorbs color well. Heavier weight paper will accept more layers of color than a lighter paper without buckling. It is advantageous to purchase from a knowledgeable distributor who knows the characteristics that are useful for mokuhanga (see Appendix 1).

LIVING NATIONAL TREASURES

A means of preserving the quality of washi is Japan’s extensive system of recognizing cultural properties. On the national level, there are three papermakers

designated as preservers of an important intangible cultural asset for the manufacture of a specific handmade paper: Iwano Ichibei IX in Echizen, Hamada Sajio in Tosa, and Tanino Takenobu in Najio (these names are family name first, as they are known in Japan). They are known colloquially as living national treasures. There are numerous designations for washi in Japan that ensure that traditional materials and tools are employed in its manufacturing.

WASHI PAPER FIBERS: KOZO, MITSUMATA, AND GAMPI

Washi is made from the inner bark of deciduous trees. The inner white bark is the phloem of vascular plants and transports nutrients. The most commonly used fiber, called kozo in Japan, is from the *Broussonetia papyrifera* (aka *Morus papyrifera*), the paper mulberry of the family Moraceae. Since the varieties of mulberry cross-fertilize, the taxonomy is confusing and disputed. It grows in many temperate climates as an invasive weed. Kozo fiber is used more often than other fibers in papermaking because of its relatively easy cultivation and processing as well as the strength and length of its fiber. Cultivated for papermaking, it does not grow into tree form; one-year shoots are harvested from parent stumps of older plants. Mitsumata (*Edgeworthia chrysantha* in the genus *Daphne*) grows more slowly and can only be harvested every three years. Its characteristic growing pattern is branching in threes; it can be identified by this tripartite structure. Gampi fiber (from *Wikstroemia* of several species) is harvested from wild plants. The difference between these three kinds of Japanese papermaking fibers is in the length, color, insect resistance, and method of processing. Kozo is the most suitable for woodblock because of its long, stable, and absorbent fiber. It was traditionally seen in Japan as the masculine fiber because it is literally stronger and bulkier. Mitsumata fibers are shorter and warmer in color and especially insect-resistant. This fiber was described as more feminine and delicate; it was often used in paper for official documents. The glossy fiber of gampi is used to make thin paper used in book conservation and chine-collé; gampi is considered by tradition to be the most noble and dignified of the fibers used in papermaking.

Wild mulberry tree at Lake Kawaguchi.

Photo: April Vollmer

Mitsumata plants are also grown for paper fiber.

Photo: April Vollmer

HISTORY AND IMPORTANCE *of* WASHI IN JAPAN

Papermaking was introduced to Japan from China and Korea along with a complex of political and religious concepts that formed the foundation from which Japanese culture evolved. These cultural constructs are embodied in the material culture that traveled across the silk routes of Asia. In addition to silk, paper and ink were key materials that arrived from abroad. These were essential means for the transmission of abstract ideas and permitted history to be recorded. Japan absorbed these new ideas, incorporating them with its existing culture to create a uniquely Japanese identity within the larger culture of Asia. In a similar way, Japanese paper, based on precedents from China and Korea, has its own distinct identity. Its use in religious ceremonies, for official documents, as an architectural element, and for fine art and calligraphy make it an essential element in Japanese culture.

The invention of paper is credited to Cai Lun, a Chinese official of the Han dynasty, in 105 CE. However, it was probably produced in small quantities well before that date. The Nihon Shoki, the 720 CE chronicle of the early history of Japan, dates the introduction of paper along with ink sticks and other innovations to 610, when Korean Buddhist monks brought these tributes to Japan. Early paper was made with different fibers and different processing methods than washi; the technique of papermaking using kozo evolved over time. Papermakers refined their techniques to suit a particular area’s indigenous plants and local conditions, and there were periodic influences from one place to another.

Papermaking flourished in Japan where the moist temperate climate was ideal for growing paper fiber. Warm enough so that new shoots of kozo could be harvested each year, the climate is still cold enough that the fiber is compact and strong. Papermaking also required abundant clear running water, so mills were built near Japan’s numerous mountain streams. Good water for paper is without pollutants or sediment and has few minerals such as iron or manganese, which would concentrate in the paper as it is processed.

The production of washi in Japan was integrated into the cycles of agricultural life during the Edo period. Kozo shoots were cut in the fall after the leaves fell, the sticks were steamed and stripped, and the bark dried so that paper could be made during the cold weather. Paper was made in the winter, when farm work required

less attention. There was a paper tax paid to the central government, so making paper was a required activity that fit into the agricultural schedule. After the tax paper was made for the government, the remaining discolored fibers with bits of bark, called *chiri*, were put into the vat to make paper for the farmer's own use. The rhythms of agricultural life no longer dictate a convenient season for making paper: it is made year round by specialist papermakers.

Shide paper streamers and rice straw ropes decorate the front of Fujiyoshida Sengen Shrine.

Papermaking was once an important industry in Japan. Special types of washi were designed for official documents, for calligraphy, and for ink painting. Large sheets were produced for use in shoji screens in homes, and washi was used for paper lanterns, children's toys, kites, and festival decorations. Paper plays an important role in indigenous Shinto festivals as well as in Buddhist ritual.

Photo: April Vollmer

PAPERMAKING VOCABULARY

Specialized terms are explained in the text, but a familiarity with a few papermaking concepts will make the text more readily understood.

Couch: Laying freshly made paper down on the post; pronounced "cooch," from the French verb *coucher*, "to put to bed"

Deckle edge: The naturally irregular edge of handmade paper

Mold: The frame used by papermakers to lift slurry from the paper vat

Neri: Mucilaginous additive to keep fibers suspended in water

Post: Stack of still wet, freshly made paper

Sugeta: The Japanese paper mold (the *geta*), a frame with a bamboo-screen strainer (the *su*)

PRODUCTION *of* WASHI FOR MOKUHANGA

The production of washi from kozo fiber specifically for mokuhanga evolved in the Edo period. Since the advent of mechanical printing and the introduction of Western paper to Japan, washi is no longer the universal substrate it was then. It retains an important place in Japanese culture, however, and is considered essential to mokuhanga printmaking.

This paper starts with careful cultivation and processing of the kozo plant. Kozo shoots with the tender bark most useful for papermaking sprout up from the parent stumps each spring and are harvested in the fall. These sticks are steamed, the bark stripped, and dried. During processing, the outer bark is scraped off, the remaining inner bark is then boiled in a soda ash solution. In an earlier period, plant ash, especially buckwheat ash, was used to soften the fibers. The cooked bark is rinsed thoroughly and cleaned of any remaining imperfections in running water, requiring hours of hand work in cold water. The cleaned bark is then beaten, either with a mechanical stamper or by hand with a wooden stick, to separate the fibers without breaking them. It is a time-consuming task, though practiced paper beaters seem to manage it with relatively little effort, hitting the mass of fiber with a stick or block of wood for many hours at a time. For mechanical separation of the fibers, a *naginata* beater with long curved blades is the Japanese equivalent of a Hollander beater, the mechanical beater commonly used in the West to process the shorter fiber used in Western hand papermaking. The naginata beater can separate the longer fibers of kozo evenly with a minimum of damage.

The loosened fiber is immersed in a vat of water with *neri*, a dispersal agent that keeps the fibers evenly suspended. The traditional source of neri is a mucilaginous liquid squeezed from hibiscus root called *tororo-aoi*. The plant is related to okra and has the same slimy consistency when crushed. Today many papermakers use a synthetic alternative.

To make paper, the papermaker stands at the paper vat and scoops up the slurry of paper fibers in a mold called a sugeta. It is composed of a rectangular frame, the geta, inset with the su, a flexible screen of fine bamboo splints woven together with silk threads. Larger molds are supported from the ceiling with flexible bamboo poles. The papermaker moves the slurry across the vat with a rocking motion to interlock the fibers and ensure an even deposit of fiber on the su. The papermaker

scoops up fresh slurry several times, each time shaking the sugeta in an east-west and then north-south direction to line up the fibers until the desired thickness is achieved, then throws the residual slurry off the far end of the sugeta.

A professional papermaker keeps fibers in suspension by keeping the slurry in motion as the water drains from the sugeta.

Photo: April Vollmer

The Japanese method of sloshing and throwing water from the sugeta is called *nagashi-zuki*, a complex technique with subtleties that are documented in detail by Timothy Barrett of the University of Iowa Center for the Book and others. This technique requires a viscous formation aid to keep the water flowing slowly through the mold, allowing a thinner paper to be made by increasing connections between fibers. Nagashi-zuki is distinct from *tame-zuki*, the term used to describe Western papermaking, where the papermaking mold is simply lifted, slightly agitated, and drained, creating a thicker, more felted paper. The grain of washi is

lined up in the direction of the chain lines of the su because of the action of the nagashi-zuki method. This should be taken into account when folding for book making.

After the water drains through the sugeta, its hinged frame is opened, and the flexible su with a thin layer of paper fiber is lifted away, swung overhead, and flipped over to set the new sheet on the post, the stack of newly formed paper. The su is rolled down onto the stack and pulled away, leaving its thin layer of wet fiber on top of the stack. Because the fibers are long and well-distributed within the sheet, the fibers do not stick to the next sheet laid on top. Couching does not require blankets between sheets as in Western papermaking. A thread or ribbon can be laid between sheets to facilitate separation after pressing. In some cases, the fore edge of the sheet is folded onto itself to create a clean, double-laminated lead edge.

Each new sheet is placed upon the others to create a post, which is left to drain with a weighted flat board on top and pressed gently with increasing weights. When enough water has been pressed from the paper so it can be handled, individual sheets are peeled off the stack and brushed singly onto a drying surface. Traditionally the sheets were dried on wooden boards out in the sun, this slow drying makes a sheet that is more dimensionally stable, but now most paper is brushed onto a heated metal surface for faster drying. Finally the paper is checked for imperfections and stacked for sale. Paper specifically designed for woodblock printing is often sized by the papermaker as an additional last step.

The su is lifted removed from the geta frame and lifted overhead, and the freshly made paper is couched onto the post of wet sheets.

Photo: April Vollmer

THE FUTURE *of* WASHI

Like mokuhanga itself, making washi is an endangered craft because it is so labor intensive. Only a few young people in Japan choose papermaking as a profession. In spite of the quality of the paper made in the traditional fashion, it is difficult to earn a living selling paper made with this demanding technique. As old papermakers have retired and good washi becomes less available, artists in Japan have begun to use more Western papers. For the mokuhanga printmaker, this means good paper is the most expensive part of the printmaking process, but without it, prints lose much of their subtlety.

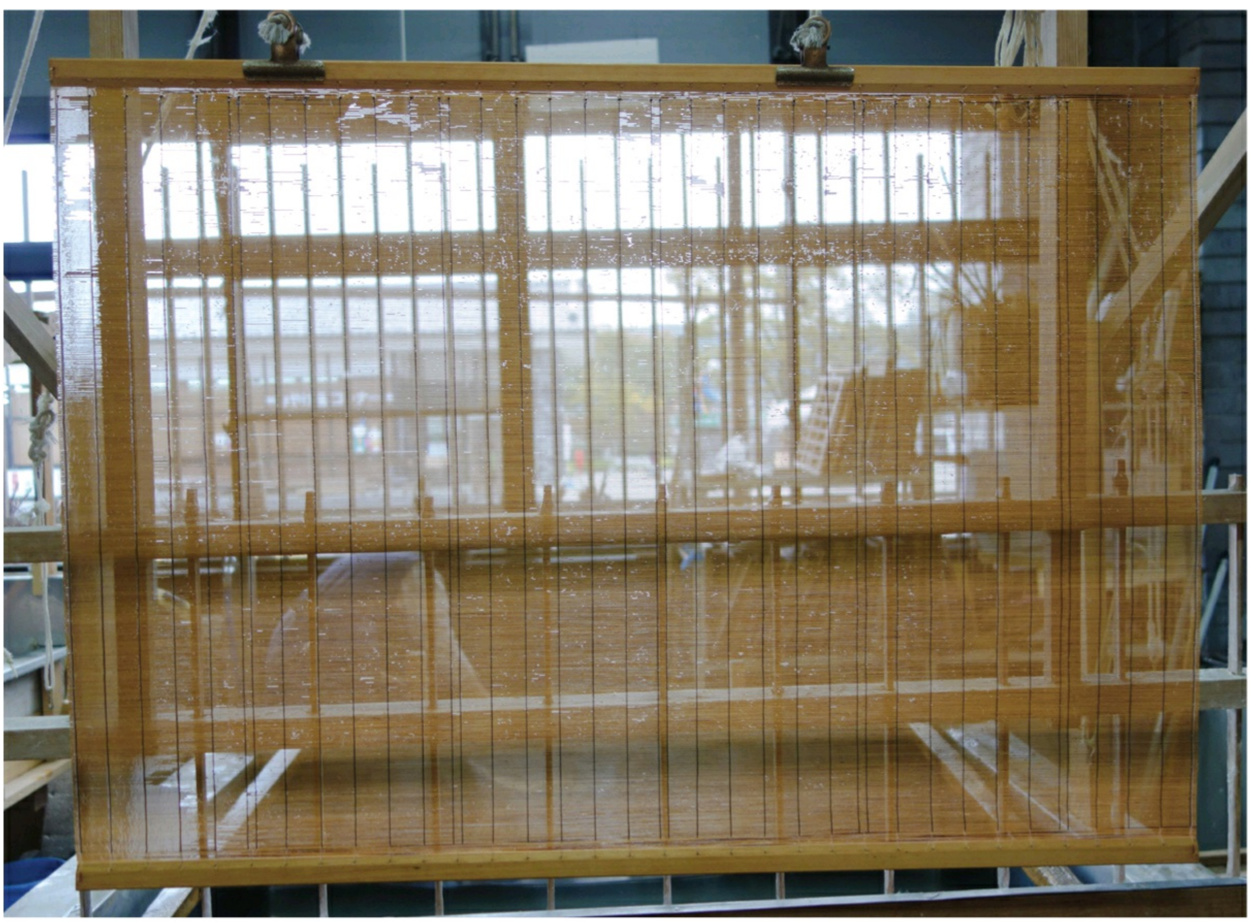
Unsurprisingly, young people from papermaking families would like to experience life outside their rural paper village, get an education, and earn a better living. Many children of papermakers leave the business to find opportunities elsewhere. Nevertheless, there is a modest but growing interest in reviving traditional crafts that is related in part to a new environmental consciousness in Japan. The future of washi is tied to new ideas about sustainability and a connection to the land that are represented by the traditional lifestyle of Japan.

MULBERRY FIBER PAPER OUTSIDE JAPAN

Another reason for the increased interest in washi within Japan is the increased interest in it outside Japan. Like mokuhanga, information about washi is now more accessible than ever before. It is available in the United States and Canada through several distributors with direct connections to papermakers. Paper distributors, art organizations, and universities offer tours of papermaking villages in Japan and maintain websites with information about washi. Many foreigners travel to Japan and learn about its many special craft traditions, including washi and mokuhanga. They bring back their experiences and are part of the growing audience of people outside Japan with an interest in Japanese arts and crafts.

PAPER EDUCATOR: TIMOTHY BARRETT

While no other country has the integrated paper infrastructure of Japan, there are individuals who make washi outside Japan. Timothy Barrett, the founding director of the University of Iowa Center for the Book, studied papermaking methods in Japan from 1975 to 1977. The significance of his research into both Japanese and Western papermaking was recognized with a MacArthur grant in 2009. In addition to his teaching, books and articles, and lectures about hand papermaking, Barrett is growing Japanese paper mulberry in Iowa. The Center for the Book sells small amounts of paper handmade with this fiber. Barrett trains students in papermaking skills, and his books and videotapes about washi have given Americans an increased appreciation for washi. Since the publication of his seminal book, written with Winifred Lutz, *Japanese Papermaking: Traditions, Tools, and Techniques*, his interests have expanded beyond washi to all handmade paper; his scholarly approach has given a new seriousness to the study of paper.



A bamboo su, removed from its frame and hung up to dry after a day of papermaking.

Photo: April Vollmer

KOREAN PAPER: AIMEE LEE

Papermaking in Korea has been given new visibility with the publication of Aimee Lee's book *Hanji Unfurled: One Journey into Korean Papermaking*. The book draws attention to the value of maintaining traditional papermaking as it is practiced by Korea's few remaining papermakers, a tradition closely linked to that of Japan. The same paper mulberry fiber is used, called *dak* in Korean. The country developed its own distinctive way of making paper from Chinese precedents, and there have been many exchanges of technical innovations between Japan and Korea over the centuries. Contemporary Korean handmade paper is now sold by a few distributors in the United States. The important Japanese mokuhanga artist Akira Kurosaki uses Korean paper in his work and has taken students to visit papermakers in Korea. Aimee Lee herself has begun making small quantities of kozo fiber paper at the Morgan Art of Papermaking Conservatory and Educational Foundation in Cleveland, where volunteers are invited to help the papermakers during Kozo Harvest Weekend. There are other independent hand papermaking concerns sprouting up around the United States, reflecting an increased interest in all types of handmade paper.

Many varieties of mulberry fiber paper are made at the Morgan Art of Papermaking Conservatory and Educational Foundation.

Photo: Aimee Lee, Morgan Conservatory

PAPER FROM INVASIVE PLANTS: PATTERSON CLARK

From an environmental point of view, sourcing fiber from locally available plants and invasive weeds seems natural and parallels the methods of early papermakers. In the United States, the artist Patterson Clark has worked for many years to make paper from invasive weeds, including wild mulberry varieties that have overrun open areas near his home in Washington, DC. He has processed small amounts of paper for his own use from alternative fibers, including both white and paper mulberry. His website, www.alienweeds.com, includes many useful links to specific information about processing alien plants along with reproductions of the woodblock prints he has made with these materials.

Patterson Clark, *Index1309b*, 2013, 11 x 11 in (28 x 28 cm)

A woodblock print made with materials from invasive weeds: pigments from *Rosa multiflora, Mahonia bealei, Lonicera maackii*, and weed soot on paper from *Morus alba*; *Acer platanus* block.

Photo courtesy of Patterson Clark

PAPER SIZES AND WEIGHTS

Ukiyo-e prints were designed in sizes to use an entire sheet of paper without waste. However, different areas of Japan used different standard paper dimensions. Kizuki hosho made in Echizen for ukiyo-e prints was generally termed *o-bosho*, or large *hosho*, around 15.5 x 20 inches (39.4 x 53 centimeters). Even within the Echizen area, individual papermakers made slightly different sizes of hosho paper, depending on the size of handmade sugeta they used. O-bosho was cut in half to make *oban*-size prints, the most common size for ukiyo-e prints. Utamaro's vertical portraits of beauties and Hiroshige's horizontal landscapes are oban size. *Chu-ban* size is quartered sheets. Larger ukiyo-e compositions were made by joining oban sheets into diptychs and triptychs; tall pillar prints were made from two oban sheets attached at the short ends. *Tate-e* is the Japanese term meaning a vertically aligned (portrait) print, while *yoko-e* is a horizontal (landscape) print. There are a multitude of Japanese names for specific dimensions of paper cut from various size sheets.

Today washi is usually made in larger sizes than during the Edo period. It is more cost-effective for papermakers to make larger papers, since the same number of steps is required to make a large sheet as a small one. Standard sheet size varies but a common size for washi used in printmaking is approximately 26 x 38 inches (66 x 96.5 centimeters). The concept of using halves, quarters, and thirds remains a useful one. It helps minimize paper waste regardless of the initial size of the sheet. Traditionally the deckle edges were cut off and not considered part of the finished paper product. While it interferes with the kento registration, the deckle can sometimes be incorporated into a print—interesting to see, since it attests to the way the paper was made.

Occasionally paper is identified in *momme*, the unit of mass in the traditional Japanese system of measurement, replaced in 1924 by the metric system. It is still used for specialized items like silk, pearls, and land. One momme is equivalent to 3.75 grams. The measurement is difficult to translate into contemporary units but can be used to gage the relative weights of papers.

BUYING WASHI

For artists outside Japan, it is difficult to know what type of washi they are purchasing from retail art stores because the names are inconsistent and often misleading. In Japan, paper names usually refer to the town or region where it was made, the paper fiber, the style of papermaking, its intended use, or some other characteristic that differentiates a particular paper.

Resellers outside Japan often rename papers, hampering efforts to understand the pedigree of a particular paper. The many steps of the distribution system for washi often result in confusing names. When small papermaking concerns specializing in a few types of paper sell to an exporter, he or she combines this paper with paper from other small suppliers to sell to an importer. From there paper goes to a distributor in another country who sells it to individual art supply shops. At each step the washi can be given a different name. At each step the price increases and it becomes more difficult to trace the paper back to its source. By the time paper reaches an artist, the information about who made the paper and where it was made has often been lost.

In Japan, artists are assured sustained availability of good paper for their artwork because they can establish long-term relationships with particular papermakers. The papermakers in turn depend on the loyalty and continued support of these repeat customers. Unless an artist outside Japan speaks Japanese or lives in the country long enough to make connections with papermakers and their local distributors, artists must rely on international distributors with little direct connection to the source of paper. In art-supply stores in the United States, many low-quality Japanese papers are called “mulberry,” which indicates little about the nature of the paper, only that it has some kozo (paper mulberry fiber) content. Although there is a growing appreciation for handmade papers today, there are still only a few resellers who have detailed information about the location of the papermaker, the fiber, and the method of production of a particular paper.

Good paper is an important element in a print and a major cost in the budget for materials. Generally the more expensive a Japanese paper is, the higher its quality, and the better it will respond to printing. Handmade paper can be identified by its four deckle edges: it usually holds up to printing better than machine-made paper. In selecting paper for mokuhanga, a high percentage of kozo fiber is a positive

indication; the description *kizuki* in the name of a paper means it is 100 percent kozo fiber. Where the fiber originated and how it was processed also make a significant difference. Any paper that incorporates fiber that is overly processed or bleached can cause problems during printing. Many Japanese papermakers include less expensive kozo fiber grown in Thailand and other parts of Southeast Asia in their paper. Because of the tropical climate, these plants grow more quickly than they do in Japan. The fiber is bulkier and weaker, giving the paper a different character from paper made with kozo grown in Japan's cooler climate. Generally Japanese fiber is more expensive and will make a paper that is stronger and more stable than paper made from Southeast Asian fiber. Recent testing at the Japanese Paper Place (Toronto) by artist Elizabeth Forrest confirms that older papers generally perform better than newly formed sheets for mokuhanga printing.

Chain art-supply stores in the United States now carry many inexpensive varieties of Japanese paper. It is possible to find useful types among them by trial and error, but the best way to anticipate how paper will behave during printing is to buy it from a reputable dealer who can identify whether a paper is handmade or machine-made, whether it is sized, its fiber content, its age, and its place of origin. Because Japanese paper is made by a small number of artisans, experienced distributors often know the individual papermaker as well. (See Appendix I.)

SIZING PAPER FOR MOKUHANGA

Paper for Japanese woodblock should be lightly sized, or treated with a substance that constricts the fibers and makes the paper less absorbent, so that the color does not bleed out into the paper and the paper will not stick to the block. Western papers are usually sized internally, with glue added during the papermaking process, but handmade Japanese paper is traditionally surface-sized for printing. Washi designed for calligraphy is left without sizing so that sumi ink will bleed into the paper slightly. Generally the papermaker sizes paper for mokuhanga; he will have appropriate brushes and space to dry the paper and will know the character of his own paper well. Whether a paper needs to be sized for printing depends on how the paper was made, its fiber composition, and its age. A simple indicator: if the tongue or a damp finger sticks to the paper, it is too absorbent and should be sized. A test print can confirm this impression.

To size paper for mokuhanga, *dosa*, liquid sizing made from *nikawa* (animal glue) and *myoban* (alum), is brushed onto the printing paper. There are a confusing number of recipes for dosa. In addition to the various measuring systems (grams, ounces, liters, quarts, tablespoons), the ingredients come in different forms (stick, powder, liquid) and the strength varies with the season. Thicker dosa is applied in the summer and thinner in the winter. Recipes generally specify twice the amount of myoban as nikawa.

The dry ingredients for dosa sizing: nikawa (glue) and myoban (alum).

Photo: Doug Schneider

A BASIC DOSA RECIPE:

2 ounces dry nikawa (glue)

1 ounce dry myoban (alum)

1 quart water

Matthew Smolinsky

STEP 1

The dry nikawa, or glue, is slowly dissolved by stirring it into a pan of water or a double boiler with a small amount of water. Sticks can be left in water overnight to soften first; beads or powder will dissolve more quickly. Dosa should be made fresh for each use.

STEP 2

Once the nikawa is completely dissolved in a cup of water, the remainder of the water is added to the solution.

STEP 3

Alum (about half the amount by weight of the nikawa) is added and stired into the nikawa solution.

STEP 4

The mixture is stirred over a gentle heat without boiling until the nikawa and myoban are completely dissolved.

STEP 5

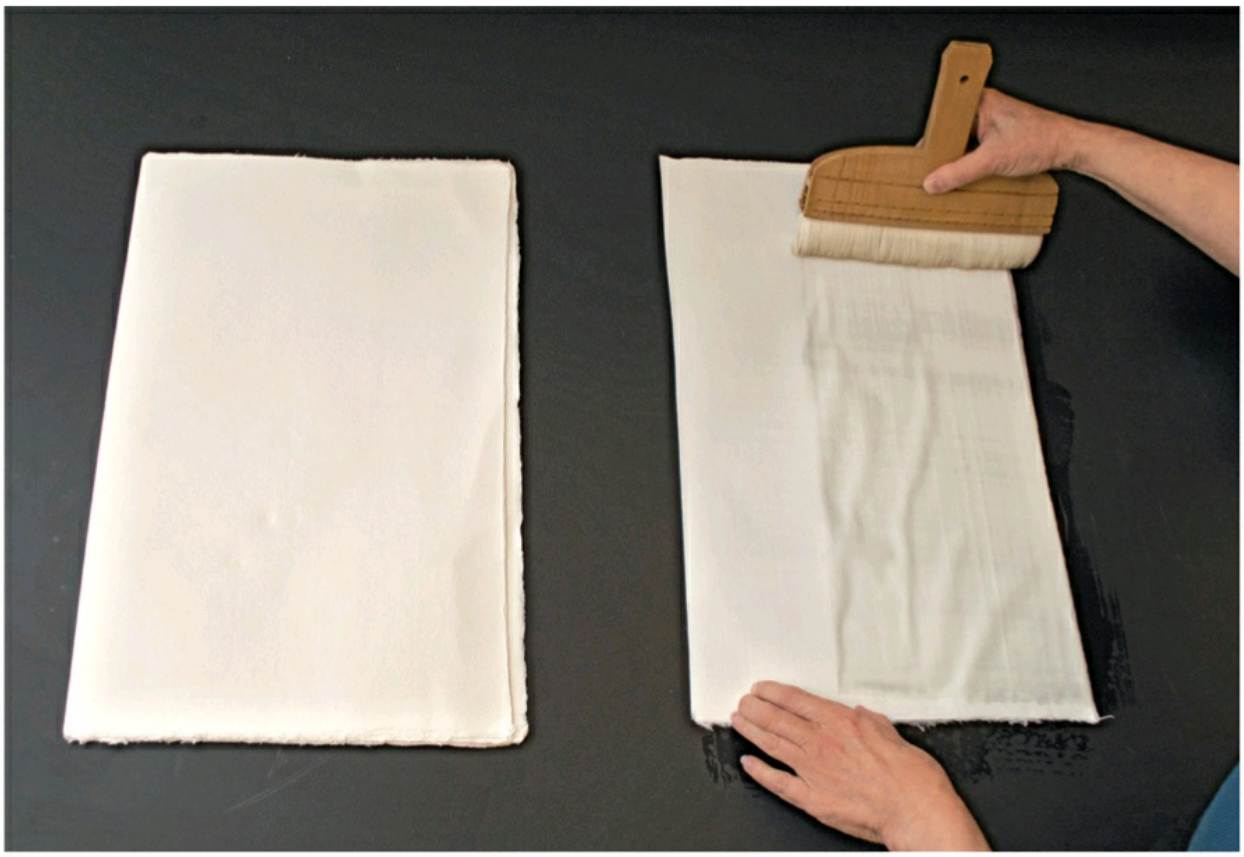
The clear yellowish liquid dosa is filtered through cheesecloth to remove bubbles and impurities. Dosa will spoil after just a few days (even when refrigerated), so should be used right away.

STEP 6

The dosa bake, or sizing brush, is made from white goat hair similar to the mizu bake water brush, but slightly stiffer. Many artists use the two brushes interchangeably.

STEP 7

The way dosa is applied is as important as the formula of ingredients. Paper is laid flat on a cloth on a nonporous surface. A glass palette is optimum because once the paper dries, it is easily released. The dosa solution is brushed evenly across the surface of the paper in the same way that water is applied before printing; the strokes should not overlap.



STEP 8

Sized sheets can be hung to dry one at a time on a clothesline or stacked for a short time so the moisture evens out, but not left so long that the sheets begin to stick together. Paper should be completely dried and left for at least a few days before printing. If the paper needs additional sizing, the reverse side can be coated too. It is preferable to apply the smallest amount that will cover the surface of the paper evenly. While artists who size paper regularly find it simple to do, it takes trial and error to develop an efficient system.

Akira Kurosaki, *Clearing Mist at Awagzu*, from the series *Eight Views of Omi*, 2009-11, 33.5 x 19.5 in (85 x 49.5 cm)

Photo courtesy of Akira Kurosaki

CHAPTER 4

CREATING A PRINT, STEP BY STEP

Mokuhanga is a refined printing technique that can be used to print expressive personal work as well as detailed reproductive prints. Its strengths are its direct engagement with materials and rich color and the simplicity of its registration system. To take full advantage of these characteristics takes practice and requires close attention to the balance of moisture, pressure, and color. With practice, printing becomes easier and the printer is able to bring out the best in a block. In the same way that a great drawing can be made by an experienced artist in a few minutes, sustained effort lies behind the fluidity of expert printing. Artists who work in mokuhanga compare it to playing the violin or to horseback riding. No one expects to learn these special skills in a day, but with regular practice these activities become rewarding and even easy.

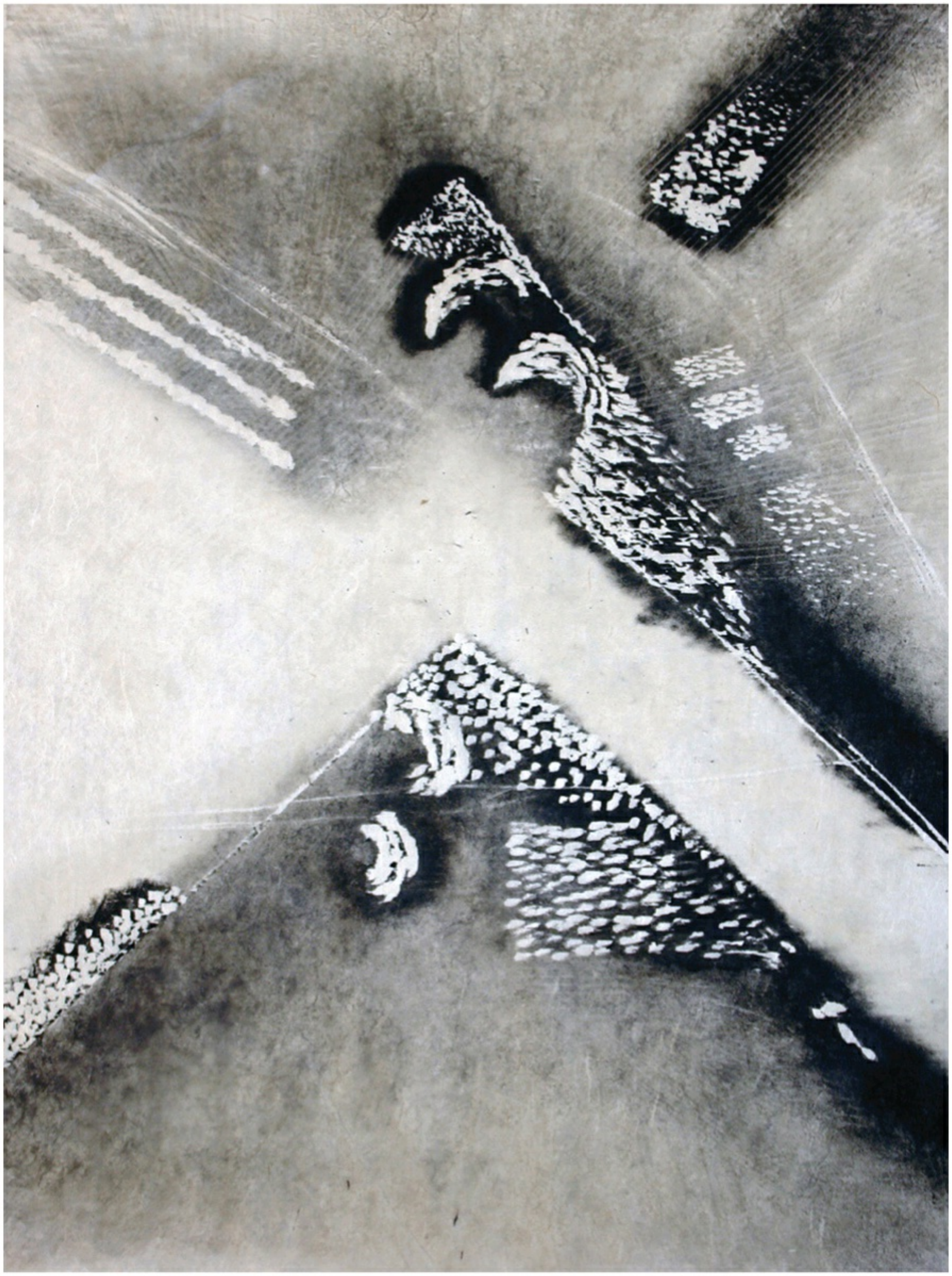
Mokuhanga remains relevant for contemporary artists because it offers a multitude of opportunities to alter and expand an initial idea to create a print that is richer and more thought-out than the initial sketch. The final print will be a combination of planning and accident, a record of the way an idea is adjusted and refined during the physical work of cutting and printing. Some prints faithfully reflect the character of the initial drawing; often the many complex steps of carving and printing create unexpected effects that take a print in a new direction.

PLANNING A PRINT

There are many ways to plan a print, from completely spontaneous to meticulously planned, and the process can shape the direction of a print from its inception. Preliminary drawings for a woodblock print can be sketched directly on the block or can be planned in another medium and transferred to the block as a guide for carving. Some artists feel most comfortable making careful preliminary drawings, but drawing on the block, or even carving into the block without a preliminary sketch, can provide a fresh way of working.

SPONTANEOUS APPROACH

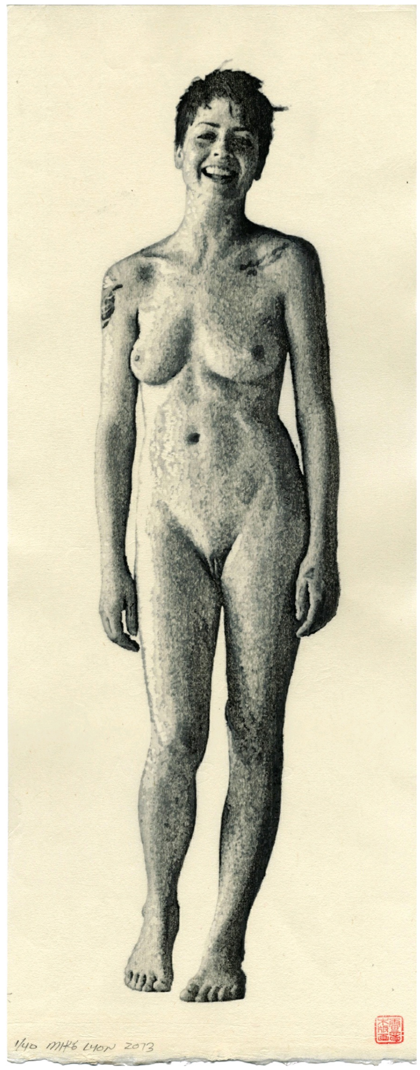
Austrian artist Michael Schneider, who studied at Tokyo Geidai and now works in Vienna, approaches his block-making in a spontaneous way, marking his blocks with stones rather than standard cutting tools during a performance so that the resulting images have an immediacy that reflects his actions in making them. His improvisational and collaborative approach to printmaking results in fresh, unexpected images that he prints with a baren. He organizes performances at museums and alternative art spaces called “klopfzeichen/tap codes,” where he kneels on the floor to work, accompanied by guitar and hammered dulcimer. To complete the performance Schneider prints the block he has made. These improvisatory performances have expanded to include additional musicians and printmakers, as well as writers, exploring the connections between disciplines.


Michael Schneider, *Klopfzeichen*, 2011, Indian ink on Japanese washi, 25.5 x 12 in (64.8 x 30.5 cm)

Michael Schneider, *Klopfzeichen*, 2011, color on Japanese washi, 25.5 x 12 in (64.8 x 30.5 cm)

The artist on the floor working on a block, accompanied by music.

Photo courtesy of Michael Schneider



Mike Lyon, *Carrie, July Bohemian Centerfold*, 2013, 21.5 x 8.5 in (54.6 x 21.6 cm), woodcut from 16 blocks.

Mike Lyon printing from one of his router-cut blocks.

Photos courtesy Mike Lyon

PHOTOGRAPHIC APPROACH WITH A CNC ROUTER

At the other end of the spectrum, artist Mike Lyon carefully plans all the details of his print in advance. In mokuhanga the preliminary image can be refined during the process of planning, bringing focus to significant aspects that will give meaning to the completed print. The final product will be the print, not the initial drawing or photo: the finished print reflects the time and thought that went into its production.

Mike Lyon's prints closely follow the shape of his initial photographic "sketch." Lyon uses a CNC (computer numeric control) router as part of his creative process, allowing him to work with great precision on a large scale. While his prints maintain extreme fidelity to his initial photograph, the resulting woodblock prints have a unique physicality that is achieved through his labor-intensive process. Standing in the presence of Lyon's large-format woodblock prints is the best way to appreciate the extent of this transformation.

Mike Lyon has documented his new approaches to mokuhanga for a broad audience on his website and blog. He is unique in his ability to integrate his training in creative art with his experience in computer programming to create large-scale mokuhanga projects printed from router-carved blocks. After studying mokuhanga

with Hiroki Morinoue at Anderson Ranch Arts Center, he improved his skills with research and careful studio practice. In addition to programming his CNC router to make large blocks, he has also integrated his skills as a craftsman, building special printing tables and drawers to keep large sheets of paper moist during hand printing with a baren. He is able to incorporate the tools of digital technology while maintaining a high level of craftsmanship, printing his own blocks with a baren.

Mike Lyon built this special damp drawer for printing large-format mokuhanga.

Mike Lyon, *Sara*, 2006, 42 x 78 in (106.7 x 198 cm) woodcut from 17 blocks.

ALTERED PHOTOGRAPHS

It is also possible to work more freely using photo-based images as a starting point. This series of botanical prints was created from photocopies of actual plants, taped together, rephotocopied, and transferred to the block with solvent for carving. They were cut with a mixture of care and spontaneity so that the initial photographic image is not readily evident. Many alterations were made to the preliminary idea during the printmaking process. The photomechanical foundation for cutting the block gives the finished prints rich detail and a sense of the structure of the plant. Cutting and pasting with photo-editing software can function the same way. Photo-based collages are a flexible way to begin a print; they reliably document detail and can be further adjusted during transferring and cutting.

April Vollmer, *A Simple Formula*, 2007, 37 x 17 in (94 x 43.2 cm)

Photo: D. James Dee

April Vollmer, *Two Times Two*, 1998, 37 x 17 in 94 x 43.2 cm)

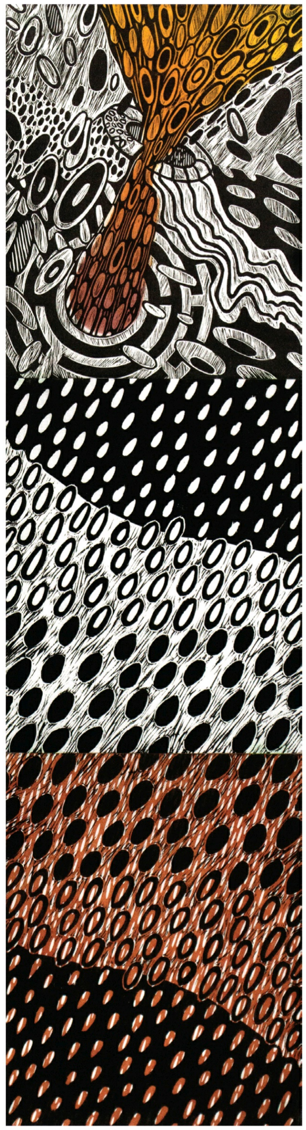
Photo: D. James Dee

FREE CARVING FROM A SKETCH

Susan Groce, already an experienced printmaker, began her print with only a loose drawing indicating the overall shape and direction of the texture in her image. After transferring these basic indications to her block with carbon paper, she carved

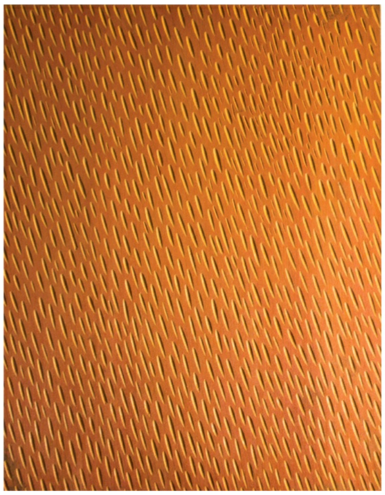
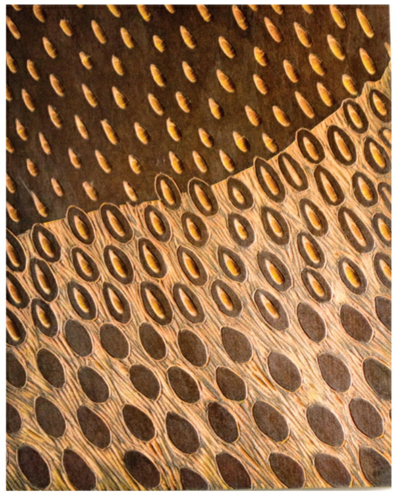
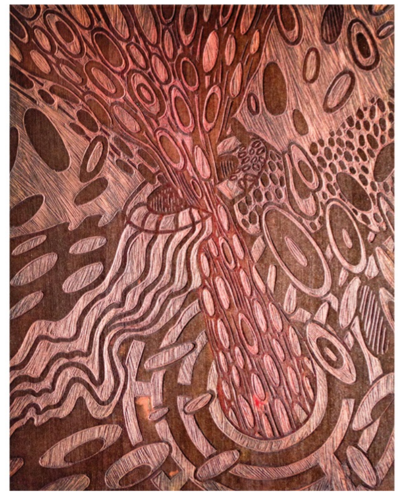
three blocks very freely with u-gouges, relying on her past experience with relief printing. Without kento registration marks, she aligned the paper with the corners of her blocks, printing a three-color bleed print, creating a unified whole with multiple layers of texture and color.

Susan Groce is recognized for her research on innovative and safer print practices, which she incorporated in her planning for the Wyeth Family Studio Art Center, the renovated print facility of the University of Maine, Orono, where she is a professor. She has a background in a wide variety of printmaking techniques and began working in mokuhanga because of her interest in using less toxic methods. Her prints have been widely exhibited, and she has been a visiting artist at many art schools in the United States, Australia, Scotland, Canada, and other locations. She uses images of the earth, including maps, reconnaissance photographs, and travel sketches to plan her large-scale mixed media work about sustainability and human impact on the environment.



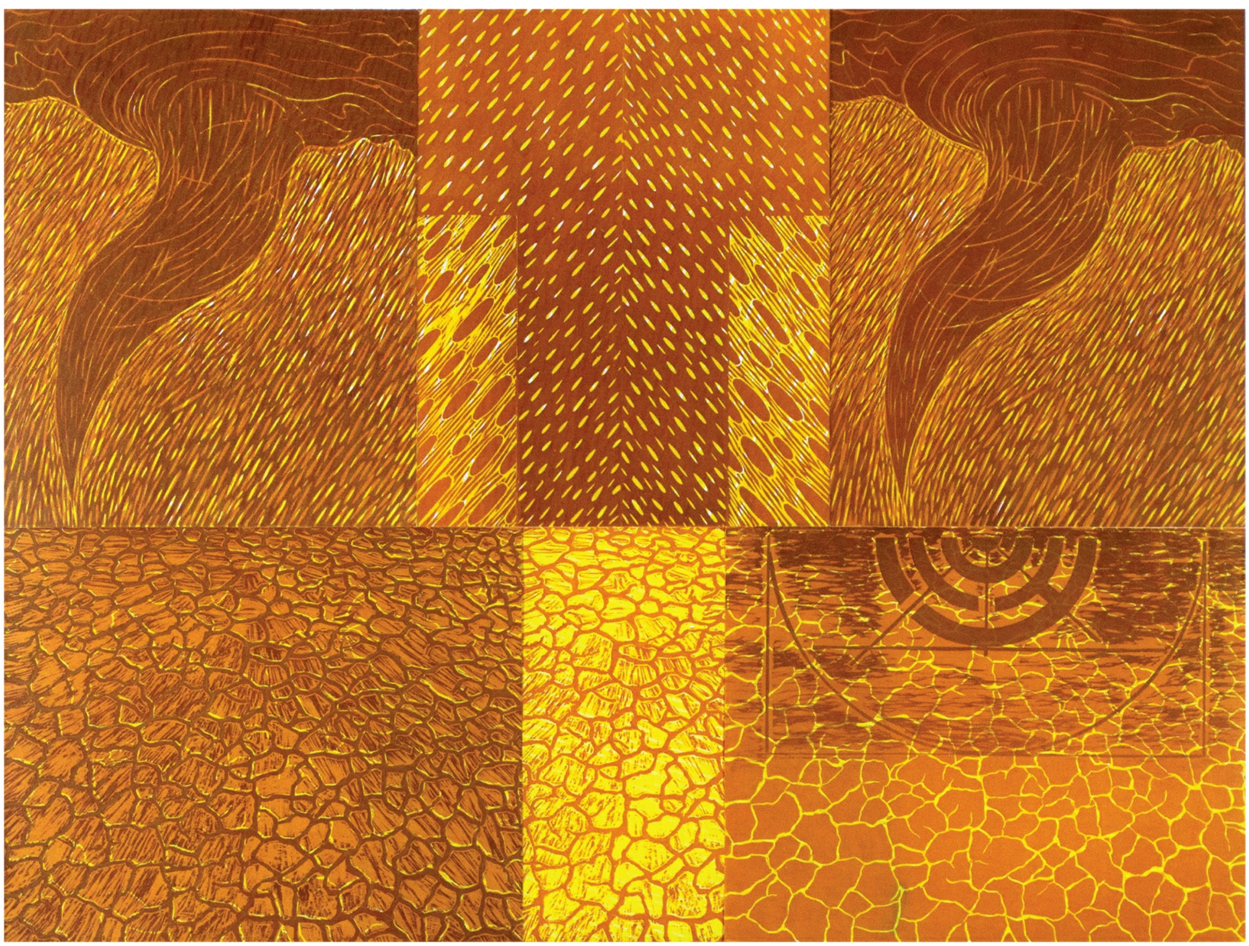
Susan Groce, *Strata*, 2012, 8 x 30 in (20.3 x 76.2 cm)

This print is pieced from smaller prints, and registered to the corner of the block, without kento registration.

Susan Groce blocks 1-3 for *Strata*

Photos: Matthew Smolinsky



Susan Groce, *Sighting*, 2012, 18 x 24 in (45.7 x 61 cm)

This is a pieced print constructed from smaller prints.

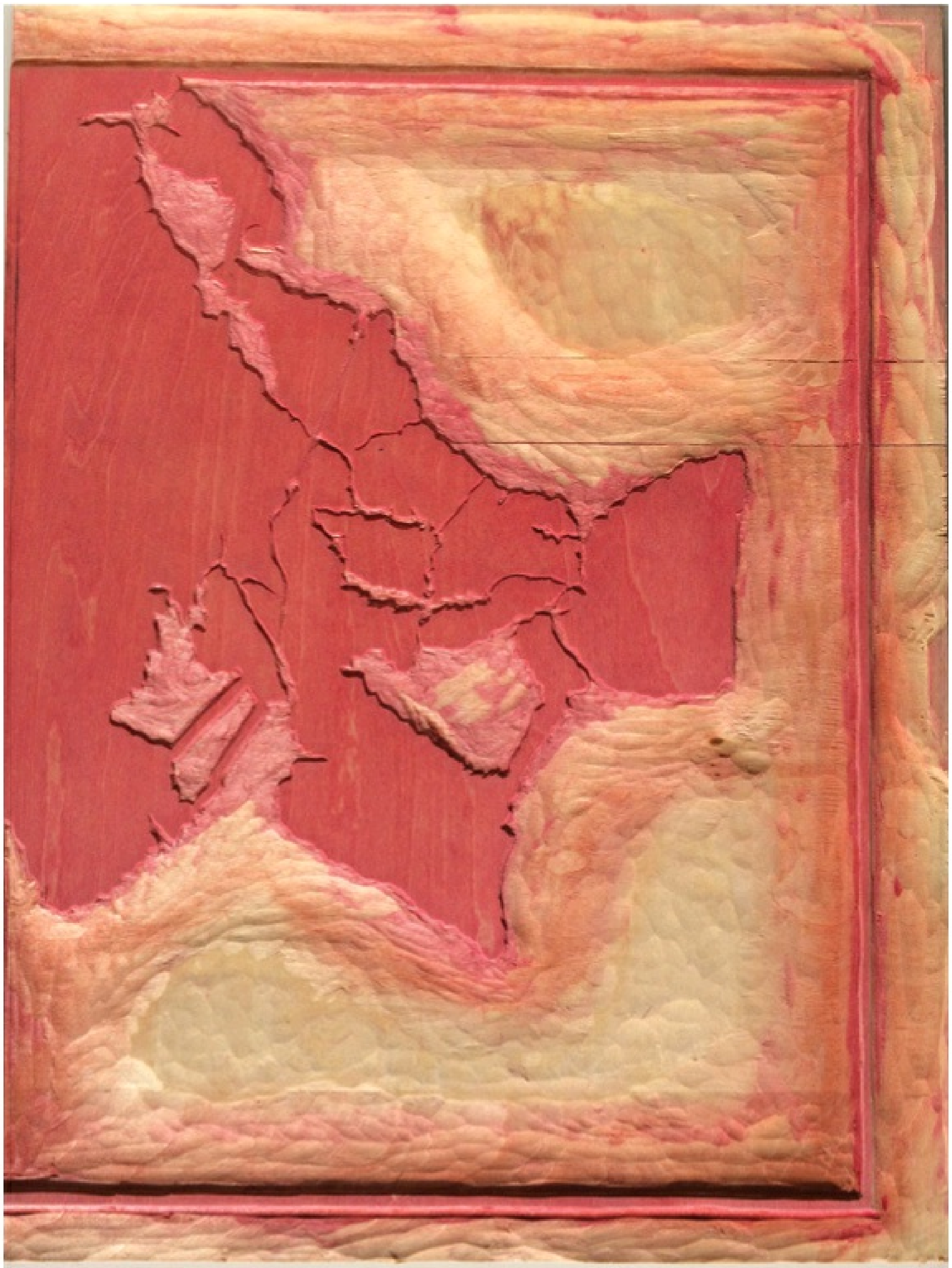
Photo: Matthew Smolinsky

PLANNING A PRINT FROM A COLOR DRAWING

Working from a drawing gives creative artists additional opportunities to structure and plan a print. Florence Neal, a Brooklyn-based artist with a background in sculpture and oil-based woodblock, has worked with images of water and rivers for many years and develops her ideas with sketches. Her initial drawing for *Red Hook Islands* incorporated old and new maps of her neighborhood in Red Hook, Brooklyn. She worked out her ideas in a drawing that she transferred to five separate color blocks. She further developed her image during carving and printing to create her five-color print.

Florence Neal sketch for *Red Hook Islands*

Red Hook Islands Block 1



Red Hook Islands Block 2

Red Hook Islands Block 3

Red Hook Islands Block 4

Red Hook Islands Block 5

Florence Neal, *Red Hook Islands*, 2013, 14 x 11 in (35.5 x 28 cm)

Referencing historic maps, this print uses layering to show change over time in Neal's Brooklyn neighborhood.

Photos: Florence Neal

PLANNING COLOR BLOCKS

Breaking down the sketch into its component colors is part of the creative process. It provides an opportunity to use color choice to refine and focus an image. The first consideration in planning is to calculate how many blocks to use given the time and resources available. Generally a print requires one block for each color, although small separate color areas can be located on the same block and printed in separate steps. A color area can be printed a second time with the same color to increase saturation or a pale color can be overprinted with a darker gradation to give it dimension with a shadow.

The professional craftsmen who made ukiyo-e prints used as many blocks as the publisher could afford for a particular project. The number of colors depended on the publisher's financial plan, how much money was available to initiate the project, and how many prints he anticipated selling. It can be difficult to count the number of blocks in an ukiyo-e print because they include many blocks that blend well into a unified whole. Without the financial backing of a publisher and a workshop of trained experts, contemporary artists do well to plan color blocks as efficiently as possible, calculating which colors are most needed to convey an idea.

In practical terms, for woodblock, color for the different blocks can be planned with available pigments in mind. Each block can be assigned a general color category to be adjusted during proofing. Three or four blocks are usually enough to convey the main characteristics of an image, although many have more and many fine prints are made with only one block. When printed, pigments usually look quite different from the way they appear in a container. The precise amount used can make a vast difference when using highly saturated pigments like the phthalocyanines. In mokuhanga, colors are generally lightened by letting the white of the paper show through a thin application of color. The character of pigments, their transparency, tinting strength, and texture are all especially apparent in mokuhanga, so that proofing is the only way to truly evaluate how a given color will look when printed.

IMAGE TRANSFER

The best way to transfer an image is the simplest that suits the situation. If the image is transferred with carbon paper the block will be the same as the drawing, but the finished print will be reversed from left to right. If the image is drawn or printed on a thin sheet of washi and pasted face down, the block will be the reverse of the drawing, but the final print will be in the same orientation. Photographic images should be high contrast, reflecting the fact that woodblock is primarily positive or negative. Tracing a drawing or photograph helps simplify an image for transfer and cutting, tracing paper can be moved around to plan the location of the image on the block.

The kento registration notches should be planned far enough from the printing area so they will not print, which usually necessitates creating margins. The kagi kento is located on the lower right corner of the block to make paper handling easy for a right-handed printer. Vertically oriented prints are printed horizontally because a sheet of paper held that way is more easily supported.

Keiko Hara prepares her blocks by painting on them directly with sumi ink.

Photo: April Vollmer

TRANSFER TECHNIQUES VOCABULARY

Familiarity with a few specific transfer technique terms is important.

Hanshita: Initial drawing on thin washi, designed to be pasted face down on the block and cut through

Kyogo: A print from the key block, including the printed registration marks, designed to be pasted to color blocks for registration

Kagi kento: The right-angled registration notch at the lower right-hand corner of the block

Hikitsuke kento: The straight-line registration notch on the lower left margin of the block

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SIZES: PAPER, WOOD, IMAGE

Locating the drawing on the block and understanding the size of the finished print in relation to the block will ensure that the colors line up on the print and that the print lines up on the paper. The preliminary sketch, the block, and the finished print will each be a slightly different size because of the nature of the kento registration system. Margins are generally cut only on the bottom and right side of a block. The paper extends beyond the top and left of the block, so the image is centered on the sheet.

TRADITIONAL TRANSFER METHOD WITH A KEY BLOCK

In the hanmoto system, the master carvers and printers were essentially “reproductive” technicians, assigned the task of accurately translating the artist’s drawing into a finished multicolored print. The key block, called the sumi-ita in Japanese, was an essential element in the traditional Japanese method for creating ukiyo-e prints. Using this system, the artist gave the carvers an initial drawing, called a hanshita, drawn in sumi ink with a fine brush on lightweight washi designed for this purpose. The carvers carefully pasted this facedown onto a fine-grained cherry block and cut through it during carving. Since the image was carved in reverse, the finished print ended up in the same orientation as the drawing. This first block would determine the location of all the color areas on successive blocks. The carvers did not reproduce the exact brushstrokes of the artist, but thinned and standardized the lines into outlines for color areas. They could include an outline on the key block simply to locate a color area even if a dark outline was not desired in the final print. For example, the outline of a pale cloud or a distant mountain might be included so that the carvers of the color blocks would be able to locate those elements on a color block. Before printing, the outline could be removed from the key block so the pale areas would show without an outline.

To make color blocks that will register with the key block, impressions from the key block (including the inked and printed registration marks) were printed from the block. These are called *kyogo* and were pasted to each of the color blocks to delineate the color areas for cutting. During the final edition printing, the usual

practice was to print the delicate lines of the key block first so the printer could confirm that the consecutive color blocks remained in registration as each color was added.

CARBON PAPER

A simple way to transfer an image for the first block is to create a drawing on tracing paper and use carbon paper to transfer it to the block. Letter size sheets are still available in office-supply stores and larger sizes and additional colors can sometimes be found in art supply stores. Carbon paper provides a direct way to transfer an image, allowing a drawing to be refined and simplified during the process. Carbon paper that is white on the reverse side provides a light background that makes it easier to see the drawing during transfer. Tracing paper is taped down in position on the block, while avoiding damaging the registration corners, and the carbon paper slides freely underneath. The pressure of a hard pencil presses through both tracing paper and carbon paper so the carbon adheres to the block. It is easy to check the progress of the transfer by lifting the corner of the taped tracing paper to see the block. For prints that employ a key block, the carbon paper transfer can be done once for the key block; once that is cut, kyogo prints can be made from it and pasted onto color blocks.

Using a single master drawing for all the color blocks is another way to ensure that all the colors will register. For a two- or three-color block, a master drawing on tracing paper can be transferred to multiple blocks and saved for reference. Registration marks can be part of the master drawing, or the drawing can be registered into precut registration notches. In either case, the information is transferred by taping the drawing to the block and drawing through it and the carbon paper with a hard pencil.

For blocks prepared with carbon paper, a light wash of color on the block will make it easier to see cut areas as carving proceeds. A pale red or orange wash will allow the low areas to appear a contrasting white as they are cut away. A wash can sometimes be applied over drawings done directly on the block, though not for blocks with pasted paper transfers.

BLOCK CUTTING

Traditional carvers sit on a pillow on the floor, working at a low table called a *hori-dai* that is tilted slightly toward them, raising the far end of the block to make it more accessible for carving. Contemporary artists may feel more comfortable sitting on a chair. The hori-dai has holes for wooden pegs that stabilize the blocks against the forward push of the carving tools, especially important when cutting harder woods using a mallet. A bench hook at the edge of the worktable is a substitute that will keep the block in place when large areas are being cut. However, the bench hook confines the block so that it can only be cut in one direction. It can also be stabilized with downward pressure from the hands and wrists, but both hands should always be on the tool to cut most accurately and to avoid cutting oneself.

For cutting softer wood, the block can be kept steady with a sticky mat such as the soft nonadhesive shelf liner sold to protect glasses on a kitchen shelf. Small folded tabs of damp cloth placed at the corners of the block will keep the block from slipping during printing, but during detail carving the block should be able to rotate freely to accommodate carving at various angles.

Raking light from the side makes it easy to see cut areas as work proceeds. Since sunlight varies over the course of the day, traditional printers sometimes suspend a round flask of water next to a bare bulb on a hook above the work table to direct softly focused light onto the block. Plenty of light and good eyesight are needed so that all the lines can be cut at the proper angle and connect under the surface.

The traditional hori-dai carving table.

Photo: April Vollmer

CUTTING VOCABULARY

Here are a few important cutting terms.

Aisuki: Short-handled fan-beveled chisel

Hangi-toh: Japanese cutting knife

Hori-dai: Cutting table

Maru-nomi: U-gouge

Shima: Literally “island,” uncut portions of the block

Soai-nomi: Long-handled fan-beveled chisel

STEP 1

The first tool used in carving is the hangi-toh, held in the fist at around a 30-degree angle and drawn toward the cutter so that the resulting raised area has a broad base. The thumb of the right hand is held on top of the tool for added stability and the index finger of the left hand is pressed against the blade to help guide it. Only the tip of the hangi-toh is used for cutting, slicing into the wood less than a quarter of an inch, just a few millimeters.

Following photos by Matthew Smolinksy

STEP 2

When cutting small areas, the wood often pops out itself if the knife cuts touch under the surface. Smaller areas can be carved more shallowly than wide ones since the wood itself will keep the paper from dipping into the low area and picking up unwanted color. All the printing areas should be cut wider at the base than at the surface of the block. Thin lines and small areas need the most support and are cut with the broadest bases.

STEP 3

After the hangi-toh defines the shapes, the maru-nomi clears wood around the printing areas. Often, a trench is cut around them first, leaving a small amount of wood at the edge of the raised printing area. This wood will protect the areas that have been outlined with the hangi-toh so that the large tools can be used more freely to clear the waste areas.

STEP 4

All the clearing tools are held with the bevel side down. Professional carvers use the largest tools first, and then progressing to a tool of half its width. Larger waste areas can be cleared first with the maru-nomi (large u-gouge), and smaller ones with the komasuki (short handled u-gouge).

STEP 5

The maru-nomi is used to clear wide areas. Wood only needs to be cleared a few inches from the printing areas since color will be applied with a printing brush only to the color areas.

STEP 6

The soai-nomi smooths the ridges left by the maru-nomi, as well as smoothing the transition to uncut parts of the block that will not be printed. Called shima, or islands, these areas will function to support the paper over the low areas of the block. They are cut with a smoothly sloping edge so that if they are inadvertently pressed with the baren, they will not emboss into the paper.

STEP 7

During the clearing of large areas, a bench hook is useful to support the block. The bench hook is a flat sheet of wood with wooden strips along the bottom that hook around the edge of the work table and along the top to support the block against the push of carving tools.

STEP 8

Finally, a smaller soai-nomi can be used to remove the wood remaining next to the hangi-toh line. If the initial cut is smooth and even, the tool will remove wood cleanly to reveal the edge of the printing areas outlined with the hangi-toh during the first step of carving.

STEP 9

Details can be cleared with the smaller aisuki, designed to accurately clear small areas. It is helpful to have a variety of sizes for different tasks.

STEP 10

Once carving is completed, any transfer paper can be moistened and peeled away. The finished block shows the kagi and hikitsuke kento cuts and the nonprinting shima island area. More than one color can be cut into a block if the color areas are far enough apart.

THE BEVEL

Cutting the raised printing areas of the block (especially delicate lines) with a bevel so they are wider at the base than at the surface makes them strong enough to withstand printing. Beveled printing areas also allow the printing brush to pull the color evenly across the surface. Undercutting a printing area will weaken the wood so it may chip and can create a cavity that may catch excess color that can be forced out during printing.

During carving the bevel of the printing area is amplified if the beveled side of the hang-toh is held against the raised printing area. However, some carvers hold the flat edge of the tool toward the raised printing area for finer control, or for harder woods, some even cut a release line to prevent compression of the wood grain. The hangi-toh is never used with a mallet, but always held in the fist; it can be used on woods that are quite hard if it is properly sharpened.

Photo: April Vollmer

CREATIVE CARVING

In the early twentieth century, the sosaku creative printers diverged from the professional ukiyo-e printers and began to carve their blocks in individual ways. They created a more immediate feeling by using various knives and chisels directly, without relying on a key block. Many contemporary artists follow the lead of these innovators, using tools freely to create a variety of effects, for example, using shallow carving with the maru-nomi or soai-nomi to create regular wave-like patterns that vary according to the size of the tool and the depth of carving.

In creative carving there is much individual variation in the character of cutting, but the optimum depth of cutting remains around a quarter of an inch (6mm) in order for the block to print well. The depth varies with the width of the space between printing areas. Where a block is cut with much detail, nonprinting areas can be shallowly carved because the wood will support the paper. Wide nonprinting areas are more deeply carved, with dish-shaped low areas between higher printing areas so the paper does not sag down into the low area of the block.

Shiko Munakata was particularly known for his free carving. His large format *Eulogy to Flower Hunting* shows his fluid use of various knives and chisels, including the sankaku-toh (v-gouge).

Seiichiro Miida, *Untitled Portrait,* 2014, 8 x 6 in (20.3 x 15.2 cm)

This contemporary Japanese Artist shows his mastery of expressive shallow carving in this nuanced portrait.

PASTED PAPER TRANSFER

Although carbon paper transfer from tracing paper is usually the simplest way to begin a print, sometimes drawings or digital images on lightweight paper can be pasted to the first block. Once that block is cut, an impression on lightweight paper can be pasted to additional blocks as the ukiyo-e carvers did with kyogo prints. Even without a true key block, the first block that contains the most information can function as a guide to define additional colors, helping focus the print as it evolves. Whether pasting down an initial drawing on lightweight paper or a print made from the first cut block, the system of pasting paper will leave a thin, transparent paper face down on the block to guide the carving knife.

If heavier paper is used for the transfer and it is difficult to see the image, the back of the paper can sometimes be gently rubbed away to reveal the image more clearly. While this is done most easily with good quality Japanese paper, inexpensive papers can be treated in a similar manner to leave a thin layer of fibers holding the image to the block. With care, even inexpensive copy paper can be peeled away if it is allowed to dry on the block completely and the back of the paper is dampened with a rag.

STEP 1

When transferring an image from a block that has already been cut, the entire block, including the kento registration marks, is inked. Use as little moisture as possible so the paper will not stretch.

Following photos by Matthew Smolinksy

STEP 2

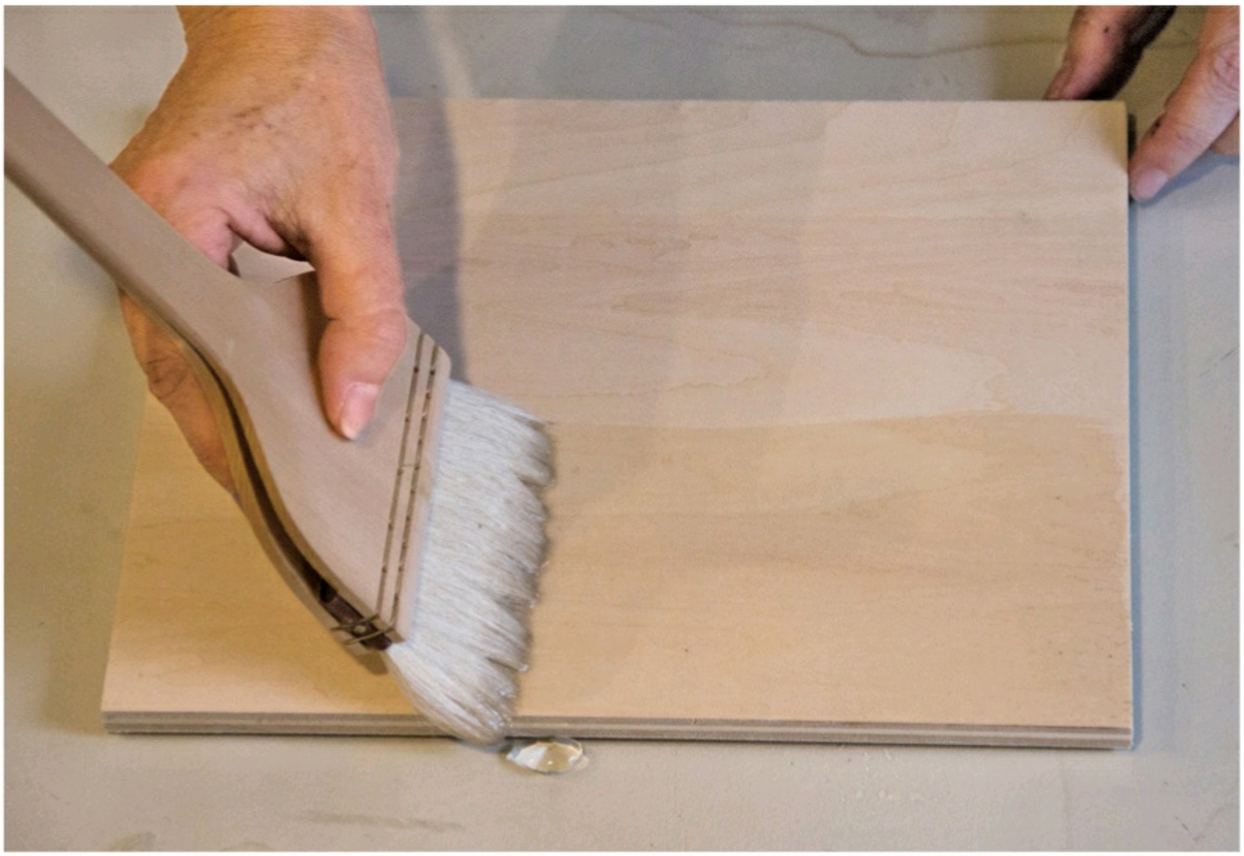
The entire block, including the registration marks is printed on lightweight washi with gentle pressure.

STEP 3

Japanese washi will stretch less than other lightweight papers. Minogami or other conservation tissue papers such as Misu or Tosa #57 (made with Japanese kozo) work especially well, although less expensive papers can be tried. The kyogo print includes the impression of the kento registration marks, so that successive blocks can be cut in register with the first.

STEP 4

The receiving block is brushed lightly with water and wiped off. A dry block will soak the moisture out of the paste, making it difficult to spread.



STEP 5

A dab of paste is applied to the dampened block. To keep the paper from absorbing too much water and stretching, use the smallest amount of paste that will cover the surface evenly is used.

STEP 6

The paste is spread evenly over the surface of the block with the palm of the hand and patted gently to raise peaks of paste to create maximum surface area to attach the washi. The block can be set aside for a moment to dry slightly.

STEP 7

The paper is laid on the damp block, pressed gently out from the center toward the margins, keeping it aligned. If the paper does not attach properly, it can be remoistened and removed and a fresh sheet pasted down.

STEP 8

When the image is firmly attached to the block and dry, a small amount of camellia oil rubbed on the paper with a rag will render the washi more transparent and help the knife slide more smoothly during cutting.

PAPER PREPARATION

It is helpful to cut paper in advance because it is time consuming and requires focus. Because paper is the most expensive part of a project, it would make sense to design an image to fit a half, third, or quarter of a standard sheet of washi. However, this is not always possible because the size of washi varies, as do the requirements for particular projects. The length and width of the sheet can be measured first to confirm which orientation will yield the maximum number of sheets for the edition. For the best registration, sheets are cut with the grain in a uniform direction. For making books with folded paper it is especially important to cut paper so the folds will run parallel to the grain of the paper.

Washi is difficult to tear because of the length of its fibers. The Japanese have a nice way of tearing it by folding it, dampening the fold with a broad mizu bake water brush, and pulling the paper apart to minimize broken fibers. However, for accuracy in registration, a heavy steel straightedge and an Olfa snap-off utility knife used on a plastic self-healing mat will cut clean corners that fit exactly into the kento notches.

STEP 1

Japanese paper is not immersed in a water bath like cotton rag etching paper, but moistened only enough to soften it so it will take up the moisture on the surface of the block. After it is cut to size it is stacked smooth front side down for dampening.

Following photos by Matthew Smolinsky

STEP 2

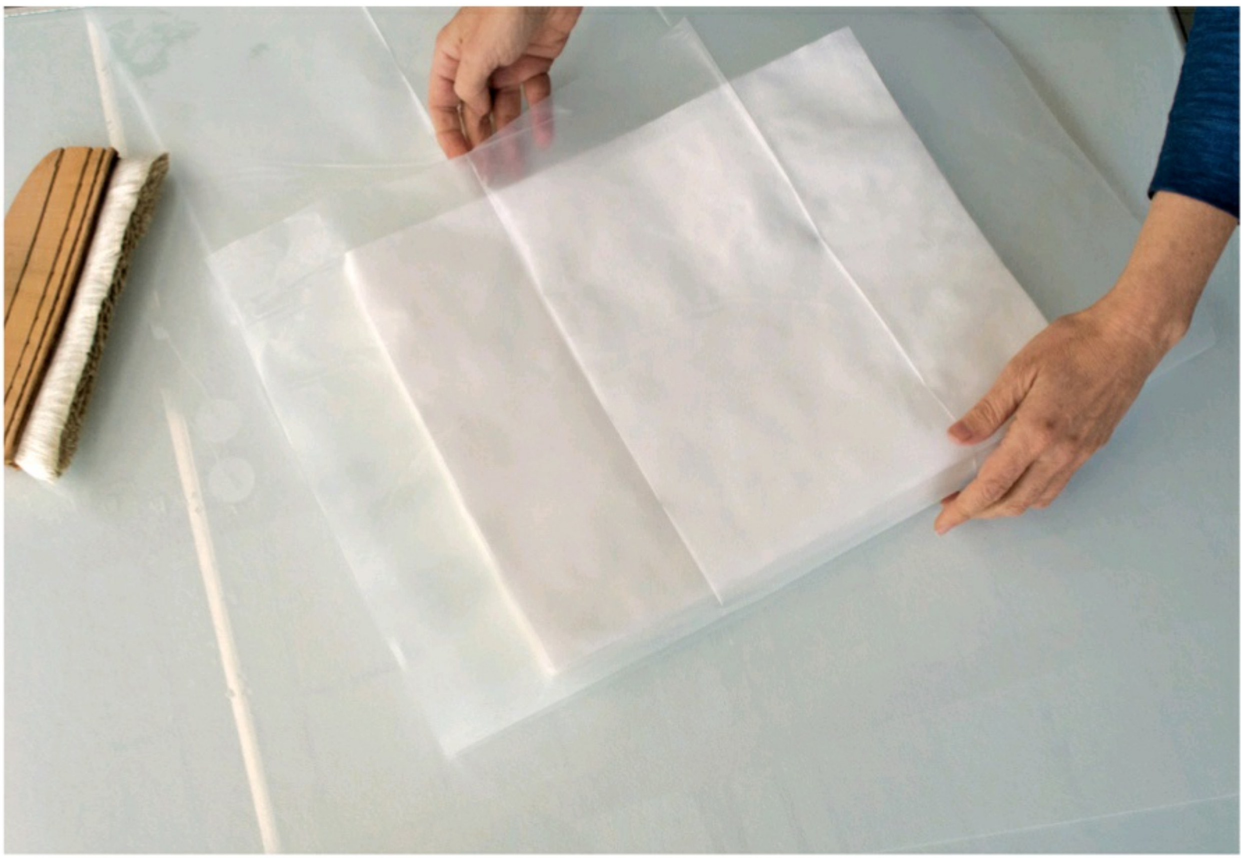
Water is brushed onto the porous open-fibered back of the sheets one at a time with a mizu bake of absorbent goat hair, which holds enough water to dampen many sheets. The brush is dipped in water, the excess is wiped off, and water is brushed evenly over the entire sheet. The brush is moved more quickly at first, then more slowly as it releases less moisture at the end of the stroke. For the most even coverage, there is no overlap in the brushstrokes.

STEP 3

One sheet at a time, paper is lifted from the dry stack, placed facedown on the table, moistened, and transferred, still facedown, to the damp stack of paper.

STEP 4

After every sheet has been brushed with water (or for lighter papers, every other sheet), the dampened paper is wrapped in plastic and left so the moisture evens out while other preparations are being made for printing.



STEP 5

Heavyweight papers may need to be left wrapped in plastic overnight to absorb moisture completely, but most papers will soften enough for printing in hour or two. Some lightweight papers print better without being dampened, and any paper will not print well if it is overly wet and its pores filled with water. Paper that is too wet can be interleaved with dry paper to remove excess moisture.

DAMPENING PAPER

The amount of water needed varies with the character and weight of the paper. Lightweight papers can be printed dry or can be dampened slightly by interleaving them with moist newsprint. Heavier papers can be moistened directly with a mizu bake. Some printers interleaf each piece of paper with a larger sheet of dampened newspaper to make sure it remains evenly damp for the duration of printing. Each situation requires adjustments: blocks, brushes, and paper invariably need extra water in the dry American Southwest, but mold from constant dampness is more of a problem in humid Japan.

DAMP PACK

A convenient way to equalize and maintain moisture during printing is to set up a damp pack of two or three damp blotters between clear plastic sheets. The plastic should be heavy enough to lie flat but flexible enough to handle easily. The stack of damp printing paper can be placed between blotters sprayed with water to keep moisture from evaporating from their margins. Rag blotters work best. For printing, the moist stack should be set next to the printing area, facedown, with the lower-right corner in line with the lower-right corner of the block, so the paper can be smoothly slid into position on the block. Japanese paper will become moldy in warm weather if it remains wrapped in plastic for more than a day. Australian printers sometimes add tea tree oil to discourage mold. During printing, the paper is constantly being exposed to fresh air, so mold is not a problem, but if there is an unavoidable break in printing, the paper should be dried and redampened when printing is resumed to avoid mildew contamination. A small stack of prints can be put in the freezer so the paper will not mold and thawed later, when printing is convenient, but printing will go most smoothly if the edition can be printed in one or two days.

PROOFING AND PREPARING TO PRINT

For the impatient, or for beginners who have trouble visualizing the printed block, dry proofing can be helpful, since water can make the block too soft for further cutting. Placing the carbon paper face up on the block and printing on light paper with a baren is an accurate way to create an image without dampening the block. It is also possible to make a rubbing with a crayon or colored pencil. Prismacolor Art Stix are useful for this because they are substantial sticks of just the waxy interior of the colored pencil. Wax designed for gravestone rubbing can also be used. In Japan there is a special tool called *tsurigane-sumi*, a black wax crayon in the shape of a temple bell, specifically designed for taking test impressions. Rubbings are also useful for locating small areas on a block to make corrections. This technique works best on thin paper and will not be reversed as printed images are.

PROOFING TRIAL PRINTS

It is helpful to pull a few trial prints on inexpensive paper so corrections can be made to the block before real proofing begins. These initial proofs may show cutting errors that were not previously apparent because the wood swells as it becomes saturated with moisture. Different color combinations can be tried, using different papers or a different sequence of printing steps. It also allows the printer to calculate the quantity of color, water, and paste needed for each block and to select the baren, various brushes, and other tools for editioning.

Once any alterations are made and materials selected, it may be useful to take notes about these details in order to reproduce the approved proof exactly. Careful artists print swatches of the colors from each block to ensure accuracy during final printing. Notes may include information about the composition of mixed colors, which brushes and barens were used, and the sequence of printing steps. However, the most important reminder will be the BAT (*bon à tirer),* the French term used by printers to indicate that a print is good to pull: this is the final approved print that will be duplicated during the editioning process.

SURI-DAI PRINTING TABLE

Japanese professional printers work seated on a pad cross-legged in front of a low stand called a *suri-dai*. Like the hori-dai carving bench, the suri-dai printing table is slanted, but in the opposite direction. It slopes away from the printer at a 12-degree angle, allowing gravity to aid in printing. For artists not accustomed to sitting on the floor, a table approximately navel height can be used. The table should be level with the printer’s center of gravity, high enough not to stress the back, and low enough for easy arm movement. The block is set close to the edge of the table and stabilized with small dampened cloth pads at the corners or set on a sticky mat of soft nonadhesive shelf liner. Posture is important in maintaining a regular rhythm of printing over time. Resilient floor covering, such as a rubber restaurant mat, can help reduce stress on the back during printing while standing.

A professional printer sitting on a cushion with tools placed carefully around him.

Photo: April Vollmer

PRINTING THE EDITION

Consistent printing for the edition depends on balancing variables: the dampness of the paper, the amount of nori, water, pigment, and the pressure of the baren.

Printing brushes should be moistened in advance so the bristles have time to swell to minimize hair loss and to become pliable for printing.

THE PRINTING SETUP

Once the printer has selected all the tools and materials during proofing, the paper, colors, water, brushes, and baren for editioning can be laid out in position. The block is set directly in front of the printer. The baren and a baren wata with camellia oil are placed directly to the right of the block with a rolled rag, printing brushes, small dishes of color with carrying brushes, and a similar dish of rice paste mixed with water—all within easy reach. The classic arrangement includes an elevated box of dampened paper in front of the printing stand with an area for completed prints to the left. For larger prints and drier climates, paper can be kept on a separate paper table under moistened blotting paper during printing. A small tub of water and a small hake water brush are placed at the front left of the block to provide water for the block or paper as needed. Water is brushed onto each block to dampen it before printing and on the paper stack as it dries, particularly the edges, where water will evaporate first. A squeeze bottle with a pointed spout can be used to add water to the block; a spray bottle can be used to keep paper damp.

STEP 1

The first step is to moisten the block with water. It will take several minutes for the block to absorb enough water for printing, so it can be left damp while the other tools are organized.

Following photos by Matthew Smolinsky

STEP 2

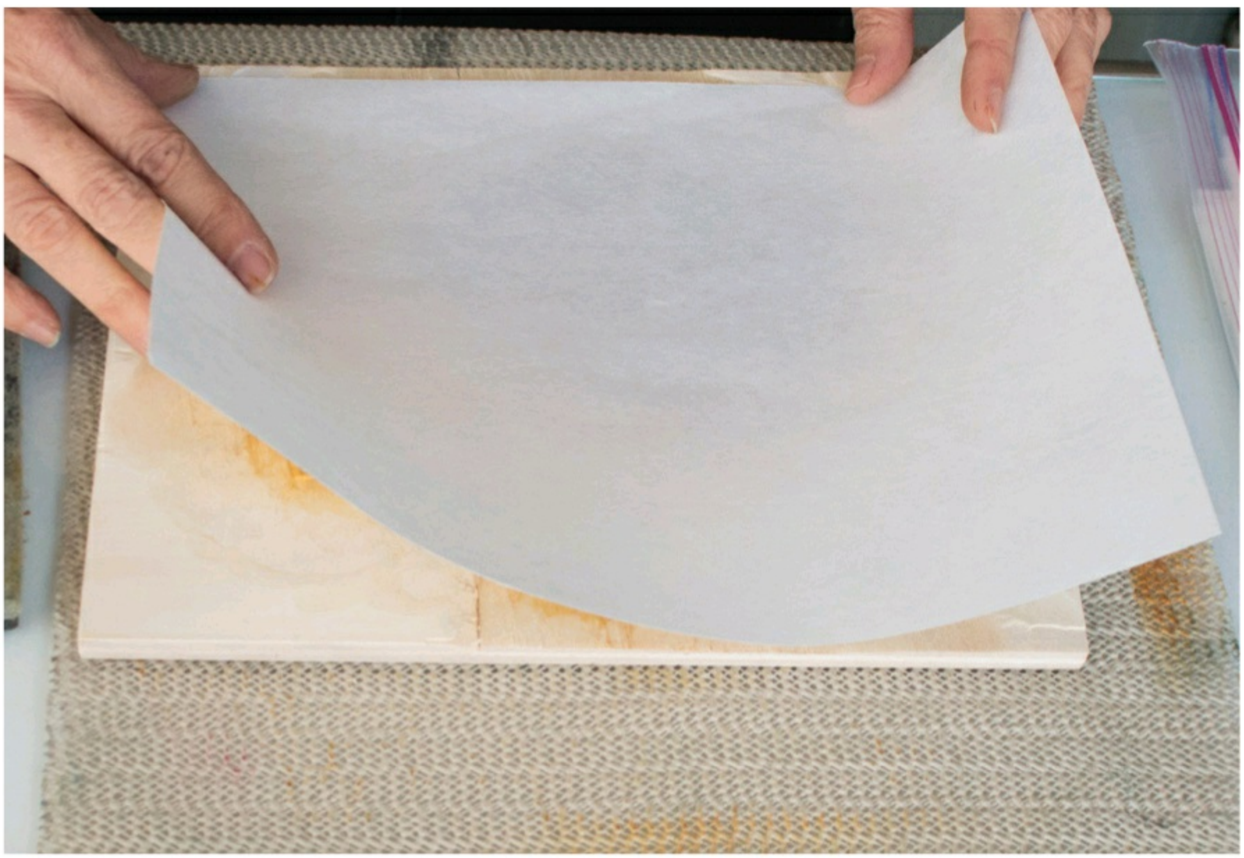
The color and paste are transferred to the block with a carrying brush and mixed together on the surface of the block. The amount of color depends on the desired tone: colors can be lightened by using less pigment and letting the white of the paper show through.

STEP 3

The mixture is brushed out evenly over the surface with a stiff printing brush so there are no dry spots and no puddles. The total amount of the color-and-paste mixture should be just enough to cover the surface of the block with no dry spots and no puddles. For printing large flat areas, the relative amount of paste in the mixture is greater; thin lines can be printed with almost no paste.

STEP 4

One color at a time is added to each sheet of the edition. The dampened paper is lifted from the stack, registered first into the kagi and then into the hikitsuke kento. Holding it with a scissors grip between the index and middle fingers, the paper is slid into position against the notches and held there briefly with the thumbs before dropping it onto the block. If the sheet is too big or too soft to guide into position, it can be supported with a dry sheet of paper.



STEP 5

The back of the paper is rubbed with the baren in a zigzag pattern to force the color up into the damp paper. A sheet of ategami paper, parchment paper, or tracing paper can be used between the baren and the printing paper if the paper is too damp.

STEP 6

The print is lifted off the block and placed face up for inspection. If the weather is dry, it can be set on dampened blotters under a sheet of plastic so it remains moist for the next printing step. It is generally safest to print light colors first during editioning, since small amounts of excess color from a dark block can easily offset from the print onto the next block.

STEP 7

Prints can be placed on top of one another immediately after printing if they have been made with the right balance of moisture and color. Since water is added to just the printed areas, prints are laid out in a staggered pattern after printing, wet on dry areas to help maintain even moisture. If a particularly large amount of color is added, it may be necessary to remove moisture by interleaving the prints with dry paper, removing them once they have absorbed the excess moisture.

MISTAKES VOCABULARY

There are many names for mistakes that crop up when the balance of nori, color, water, and pressure is not quite right. Too many errors will distract, but a modest number could be considered the mark of a handmade print.

Tamari: Are soft blobs of color around the edges of printed areas, indicating too

much paste

Ketsuochi: Are blotches where the paper has touched down on a low area of the block

Baren-sugi: Are stripe marks left if the baren is too strong or the paper is too wet

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SPECIAL TECHNIQUES

Japanese master printers developed a wide range of special techniques to make their prints unique and salable. This is an abbreviated list of a few that might be adapted by contemporary artists.

BOKASHI: GRADATION PRINTING

This technique was commonly used to create the sky gradations in ukiyo-e prints. As with most printing tasks, the smaller the area printed, the easier it is to control the color. To create the most even gradation, printing can be done several times, adding just one color at a time, making sure the paper does not become overly saturated with water.

Miwako Nishizawa, *Jamestown, from the series Twelve Views of Virginia*, 2012,

22 x 16.75 in (56 x 42.5cm)

Born in Kyoto and living in Berkeley, California, this artist uses traditional Japanese Printing inventively to portray American scenes.

She is a master of bokashi gradiation.

Photo courtesy of Miwako Nishizawa

STEP 1

After moistening the block, a small amount of color and paste is added to the printing area, keeping the empty area moist but free of color.

Following photos by Matthew Smolinsky

STEP 2

The color is brushed out with a stiff brush, teasing the color gently into the moistened part of the block. The side of the brush holding color can be identified with a piece of tape so the brush can be used in the same orientation each time.

STEP 3

This print has already been printed once. To give the image volume, a darker color is printed as a gradation shadow on the same block, using the same registration to create bokashi.

STEP 4

Printed with a baren, the gradation color printing step should line up exactly with the first printing.

STEP 5

The finished prints are laid out in a staggered pattern to equalize moisture.

STEP 6

Bokashi gradation printing can give dimension to a print by adding a darker shadow over an area that was printed previously in a flat tone. Variations on gradation printing include *o-bokashi*, a broad gradation; *ita bokashi*, a gradation cut into the block; *hake bokashi*, painted with the brush; and others.

GOMA-ZURI: Sesame Seed Printing

This effect is commonly considered an error because it occurs when printing without enough paste or without enough pressure. However, it can be used intentionally to create a textured area of color in a print, such as water waves or the scales of a fish. The size of the speckle pattern depends on the amount of paste, pressure, and moisture and the kind of paper used. More pressure and more paste will make the pattern finer; water without paste and lighter printing with a weak

baren will make the speckles larger. It takes practice to control the effect.

Bill Paden, *Saga*, (nd), 11.5 x 24.5 in (29.2 x 62.2 cm)

Printed by the artist on double weight kizuki hosho.

Photo: D. James Dee

KARA-ZURI: Embossing

This technique, literally “empty printing,” printing with an un-inked block, requires the use of a strong baren or other rubbing tool to impress the surface of the finished print against the pattern carved into the block. This is the last step in printing, since further printing would only flatten the paper. This is a refined effect that can only be seen in raking light and might be appropriate for a small print on quality washi to add a special element to a white area in an image.

Ando Hiroshige, *White Heron and Irises*, reprint (original ca. 1833), 15 x 6.75 in (38 x 17 cm)

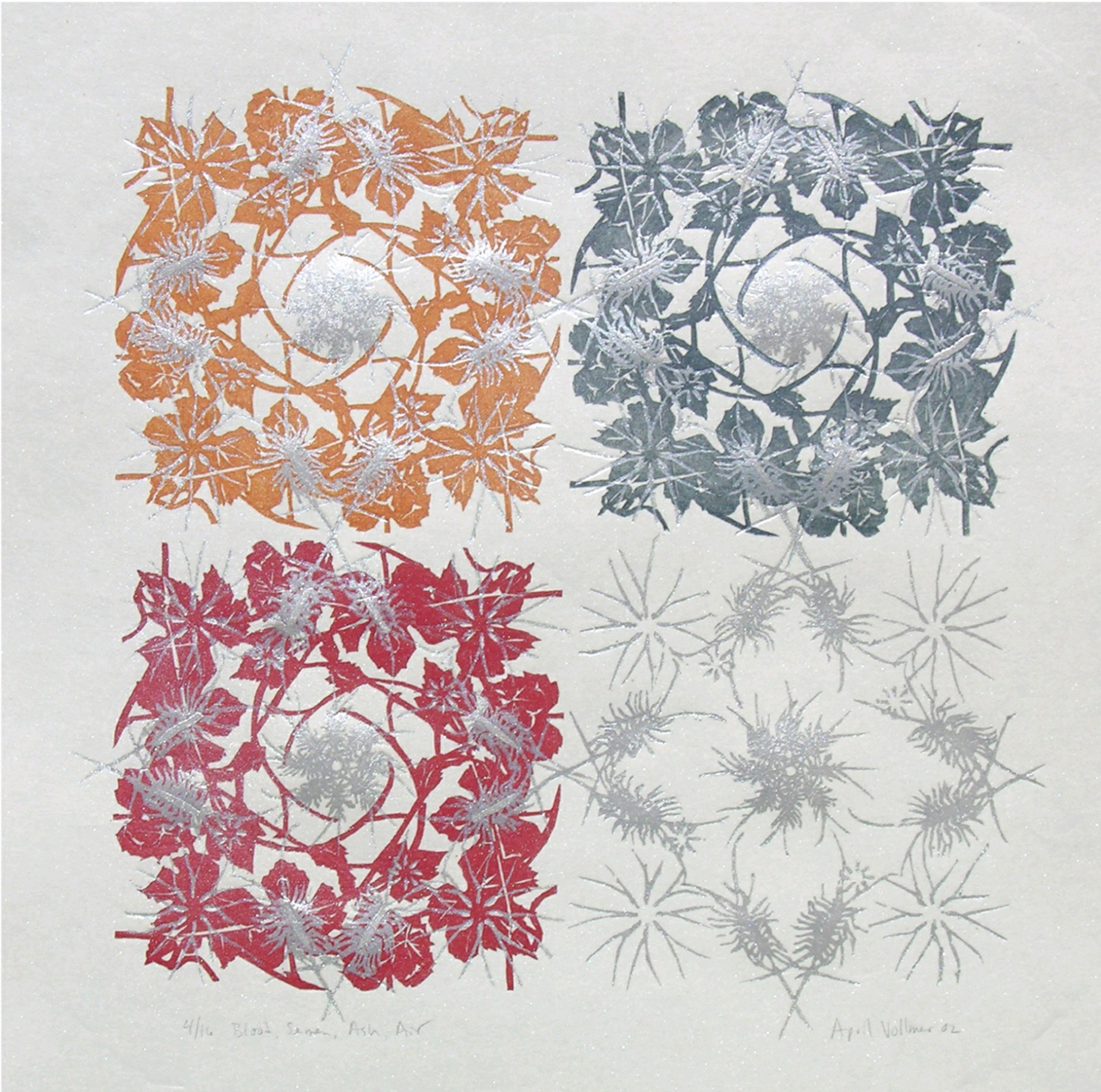
This modern reprint is an example of blind embossing (in the feathers of the bird).

Photo: Scott Dolan

KIRA-ZURI: Mica Printing

Fine flakes of mica are added to a print last so they lie flat on the surface to reflect light. Mica is either sprinkled dry onto wet areas that have been printed or stenciled with glue or mixed with a liquid binder and brushed over a stencil. This was the technique used to create the shiny dark backgrounds of Sharaku's actor prints.

It is a technique developed by professionals, but artists sometimes try this effect; if powdered mica is used, care must be taken not to inhale the fine dust when it is applied over the glue.



April Vollmer, *Blood, Semen, Ash, Air*, 2002, 16 x 16 in (40.6 x 40.6 cm)

Photo: D. James Dee

URUSHI-E: "Lacquer Picture"

This was a polishing technique used to make the sumi ink in a black area of a print shiny by placing a carved block behind the print and polishing the front with a hard polisher such as a boar's tooth. The block for polishing was cut in the reverse of the main block so that the pattern of polishing would match the pattern on the front of the print. This is not seen in many contemporary prints today, but it is certainly

still possible if a subtle shiny effect is desired.

Nishimura Shigenaga, before 1756, *Kokonoe no Sakura*, right sheet of a triptych, 12 x 6 in (30.5 x 15 cm) (twentieth-century reprint)

An example of shine added to the black area to make it look like lacquer by burnishing the sumi ink on the sash. The reprint also imitates the fading of hand-applied fugitive color.

Photo: Scott Dolan

TSUBUSHI: Uniform Printing

Tsubushi means all-over printing, a technique that requires careful control over a large area. It requires a strong baren and a relatively large amount of nori. When color is printed evenly over a large area, the technique shows off the fine surface

of handmade washi. It is the technique used to print areas of flat color, for example, a sky or wide area of smooth water.

Jacqueline Gribbin uses this technique in her *Kisaragi* (the traditional Japanese name for February) prints. She is the workshop manager for Northern Editions printmaking studio at Charles Darwin University, Australia. In addition to producing her own woodblock prints, she has worked with Aboriginal artists in remote parts of the country, teaching workshops in mokuhanga and combining Australian designs with Japanese printing techniques.

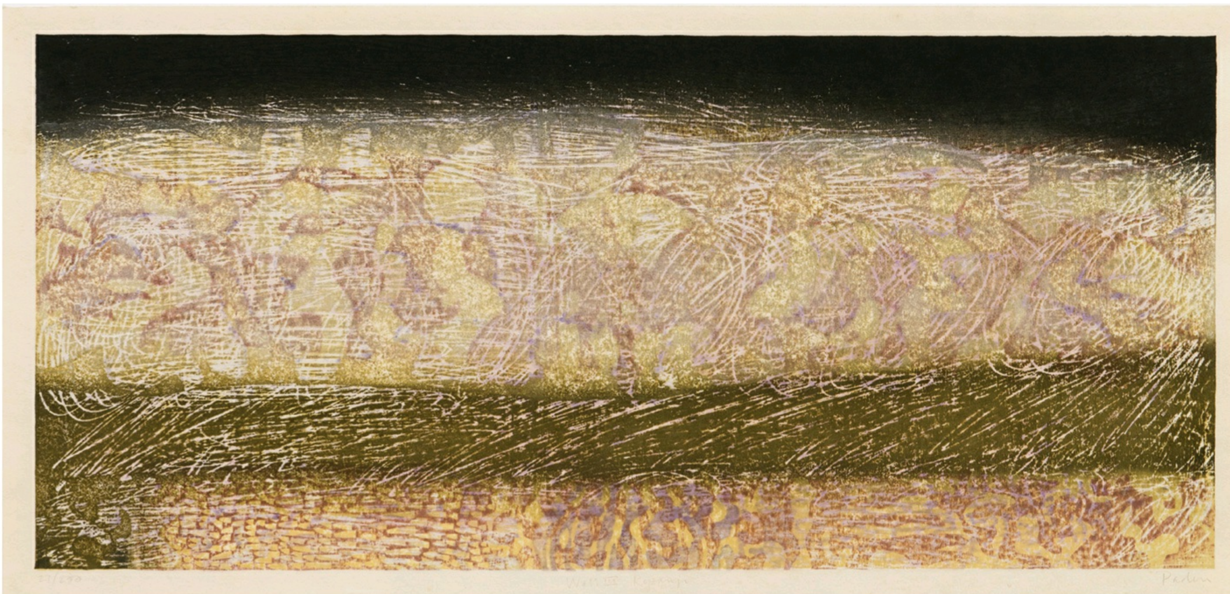
Jacqueline Gribbon, *Kisaragi 1*, 2013, 20.25 x 14.5 in (51.5 x 37 cm)

Photo courtesy of Jacqueline Gribbin

URA-ZURI: Back Printing

This technique involves printing a separate block on the reverse of a print to force the color through the paper so a trace of it will be visible on the front. The artist Bill Paden used this technique to suggest the subtle shadings in the back wall of the

famous garden at Ryoangi, where tourists carefully inspect the rocks in the Zen sand garden, failing to notice the subtle shadings on the wall behind. The back of the print is printed from a block carved in reverse so the color bleeds through the paper, matching the image on the front.



Bill Paden, *Wall III Ryoanji*, (nd), 11.5 x 24 in (29.2 x 61 cm)

Above is the front of the print, showing the surface embossed with scratches; the purple color bleeds through the paper from the printing on the reverse side.

Bill Paden, *Wall III Ryoanji*, reverse side

Below is the reverse of the print, carved and printed to match the cutting on the front.

Photos: D. James Dee

REDUCTION PRINTING

This is not a Japanese technique, but was popularized by Picasso, who used it cleverly in many of his linoleum cuts between 1958 and 1963. Mokuhanga prints can be created this way by cutting away areas of color and printing the same block multiple times. Reduction printing can also be done with multiple color blocks to create a wider range of color. At each step, portions of the block are cut away to leave color from the previous step visible, resulting in a complex multilayered print. The water-based color and the strong, absorbent fibers of washi allow many colors to be absorbed into the paper without a buildup of color on the surface.

April Vollmer, *In Another Place*, 1995, 14 x 18 in (35.5 x 45.7 cm)

A double reduction block of a sea anemone in a California tide pool, made with two blocks.

Photo: April Vollmer

THE FLOATING KENTO

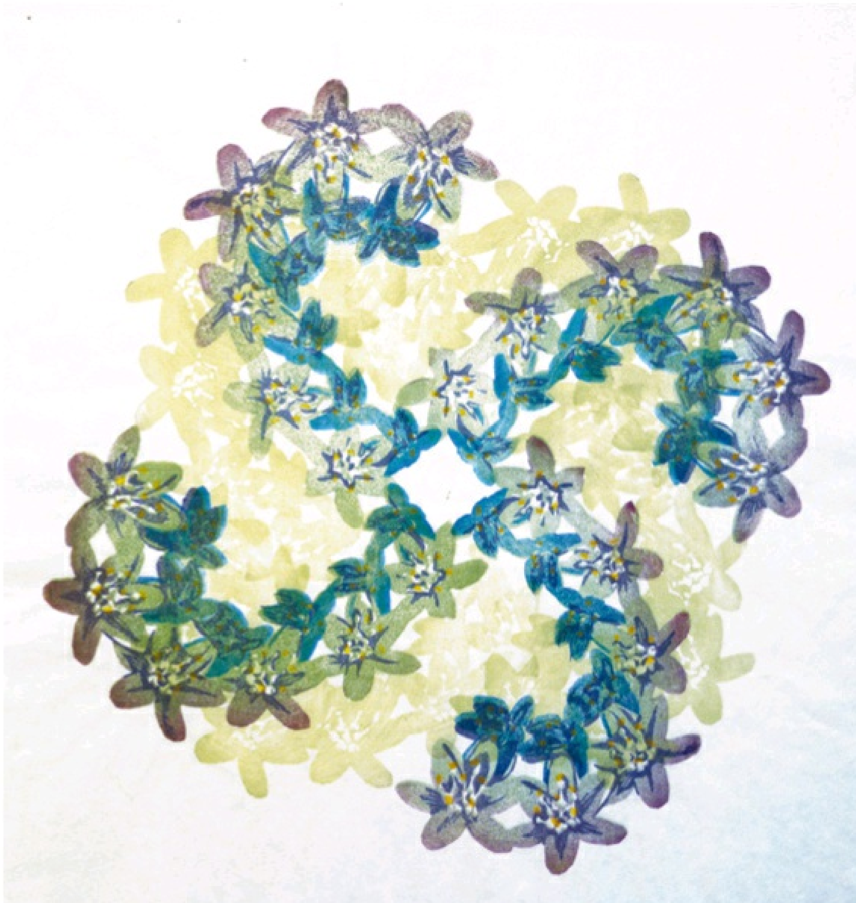
A floating kento, an L-shaped block of the same height as the printing block, can be used to register paper outside the limits of the carved block itself. It can be used to create a margin in a print from a block carved all the way to its edge, and also allows a wide range of creative printing. The floating kento is a way to keep multiple blocks in register so they can be printed multiple times on a large sheet of paper. Rather than moving the block, the paper can be placed into any of the kento registration marks on the floating kento. Rotating patterns can be created this way by registering the paper into the floating kento and printing from the same block four times.

Blocks can be printed multiple times on a sheet of paper without a registration jig by lining up the block on the printing table and moving it from one part of the print to another for successive printing steps.

April Vollmer, *Plan of a Flower*, 2009, 10 x 7 in (25.4 x 17.8 cm)

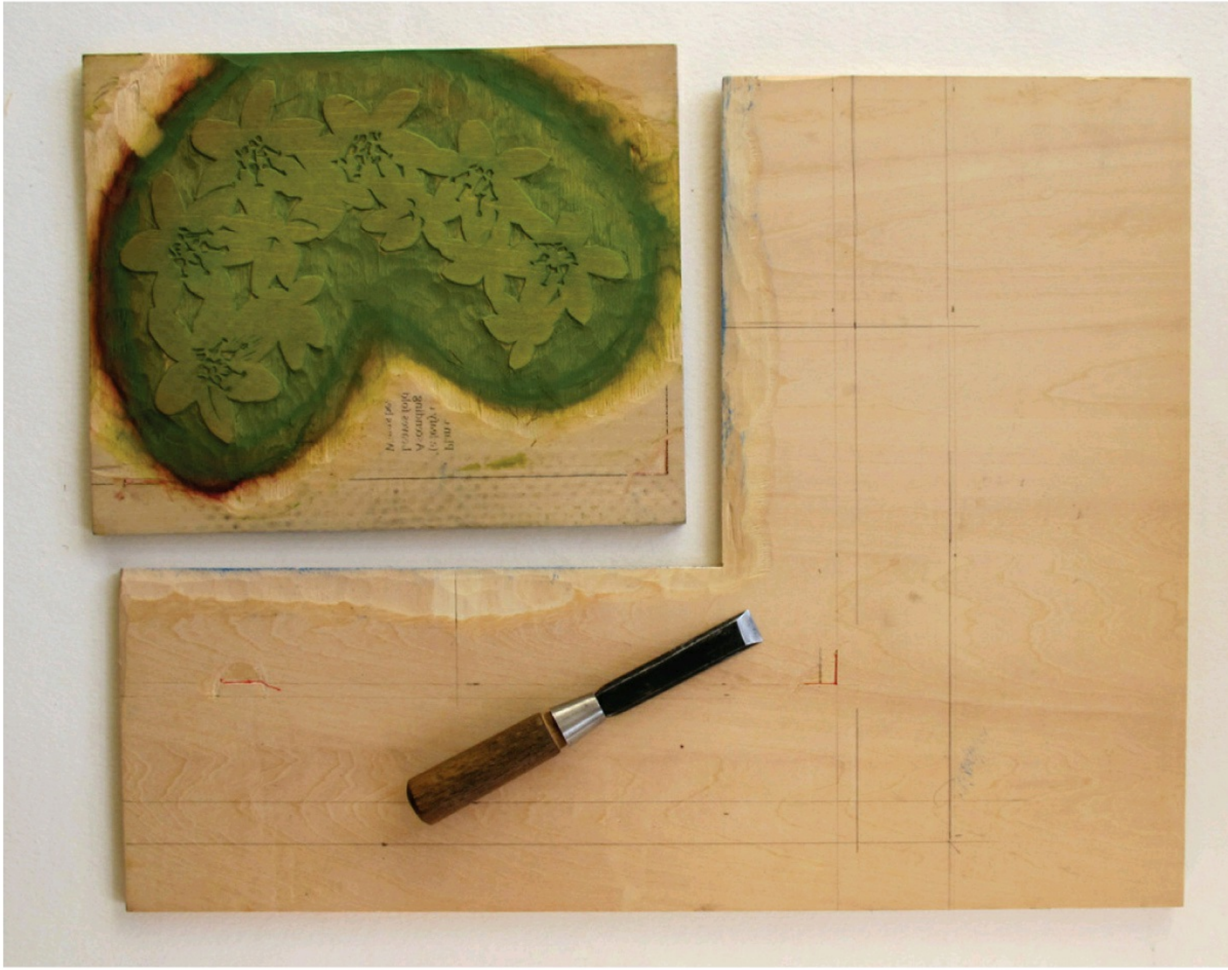
A straightforward print from the block that was later printed multiple times to create patterns.

Photo: April Vollmer



April Vollmer, *Rotating Flowers*, 2009, 17 x 17 in (43.2 x 43.2 cm)

Photo: April Vollmer



A floating registration L-shaped jig for printing a block that does not have marks cut into the block itself.

Photo: April Vollmer

Blackout was printed by registering a small block by eye against a BAT proof on a tabletop instead of using a floating kento.

Photo: Scott Dolan

April Vollmer, *Blackout*, 2013, 32 x 26 in (81.3 x 66 cm)

Photo: Matthew Smolinsky

DRYING PRINTS

Once printing is complete, water is removed gradually from the prints so they remain flat. Some printers place prints between flat cardboard sheets to dry. This can also be accomplished by interleaving the finished prints with dry paper, leaving them flat with a weight on top, removing the paper after a few minutes and then interleaving fresh dry sheets. The second set of dry interleaving paper can be left longer, and the third time the interleaving paper will take even longer to absorb additional moisture from the prints. Each time the paper is swapped out, the prints can be left for a longer period, and this process can be repeated more times, depending on the moisture content of the prints. To assure complete flatness, prints that are nearly dry can be finished by placing them under a weight by themselves, or between smooth cardboard sheets, until they are completely dry.

CURATING AND NUMBERING PRINTS

The final step in editioning is to clean, number, and sign the prints, checking for printing errors and smudges. For convenience, each print in the edition is numbered sequentially, following common practice developed in the West for tracking editions.

Ukiyo-e prints were not numbered, so it is difficult to determine how many prints were created. Art historians judge how close in date an ukiyo-e print is to the original date of publication based on the colors, paper, and amount of wear on the blocks. Making dating more difficult was the fact that it was common practice to re-carve a block once the fine lines of the key block began to wear down. Re-cutting the blocks could be a legitimate practice by the original publisher or it could represent a pirated version where another printing house made new blocks from a print published elsewhere. To avoid confusion, contemporary mokuhanga reproductions of ukiyo-e prints on washi are often made a slightly different size from the original in addition to having the publisher of the reprint identified in the margin.

Today artists sign and number prints on the lower part of the print in pencil so it is embossed into the paper and difficult to alter. The system of numbering the edition is written as a fraction, with the number of the print over the total edition number. The artist's name, the date, and the number of the print within the edition are usually included on the face of a print. If it is a bleed print or an unusual format, it can be signed on the back or elsewhere.

This designation has been adopted worldwide and is convenient for dealers and collectors as well as for artists to track work. Abbreviations for information about prints are A.P. for Artist's Proof; E.V. or Ed. V. for a variable edition; P.P. for Printer's Proof; T.P. for test proof; H.C. for *hors de commerce*, prints that are not for sale; and B.A.T. or bon à tirer, French for "good to pull," indicating the version of the print that has been approved for editioning. The International Fine Print Dealers Association is a nonprofit organization of experts that publishes print standards on their website, www.ifpda.org.

SUPPLYING ADDITIONAL INFORMATION

In Japan the sosaku printmakers of the early twentieth century took pride in printing themselves. This was an essential part of their identity as modern creative printmakers. In the West, the artist and educator Gabor Peterdi (1915–2001) suggested that artists use the Latin abbreviation fecit (also fec. or f.) meaning "made this" before their signatures on self printed work because those prints should have special value. This designation is not part of contemporary usage but was used historically to indicate the engraver of a print by a separate craftsman. However, the identity of the printer can be included with further information in a Certificate of Authenticity. This document can include any additional details about the publication, the technique, or the materials that contribute to a fuller appreciation of the print.

Akira Kurosaki, *Sunset Glow Over Seta*, from the series *Eight Views of Omi*, 2009–11, 33.5 x 19.5 in (81 x 49.5 cm)

Photo courtesy Akira Kurosaki

CHAPTER 5

NEW DIRECTIONS IN MOKUHANGA

Mokuhanga has moved in new directions in the hands of contemporary artists since the introduction of mechanized printing freed it from its reproductive role. During the Edo period, the technique was used in specialized workshops to produce books and prints under the direction of a publisher. As with etching and lithography in the West, the reproductive function of mokuhanga was replaced by less labor-intensive photomechanical processes in the late nineteenth century.

In Japan a small number of craftspeople were able to maintain traditional hanmoto printshops by reproducing ukiyo-e prints or working with artists to create deluxe editions. Akira Kurosaki in Kyoto is one contemporary artist with an international reputation who continues to work with master carvers and printers to produce prints of astonishing virtuosity. However, with the exception of a few artists who have been fortunate enough to establish relationships with Japanese printers, artists in the West have followed the lead of the Japanese sosaku creative printmakers of the early twentieth century who cut and printed their own blocks. Since the technique has become accessible to more people through classes offered by artists trained in Japan, Western artists unfamiliar with the hanmoto workshop tradition have freely experimented with new approaches, combining mokuhanga with digital technologies and incorporating it into artists’ books, installation, and performance.

U.S. COLLABORATIONS WITH JAPANESE MASTER PRINTERS

Because the hanmoto print publishers were connected intimately with the culture of Japan, and worked within a network of suppliers and customers inside Japan, there were few who could conceive of working with artists outside that system. This makes the few times that Western artists have been able to establish fertile relationships with traditional Japanese printers all the more remarkable.

CROWN POINT PRESS

In the 1980s, Kathan Brown's decision to publish prints in Kyoto resulted in a series of editions by American artists that called attention to mokuhanga as an option for contemporary fine art printing. She became interested in working in Japan because of the subtle gradations of color possible with mokuhanga, which were similar to the delicate aquatints in the etchings she published in her San Francisco workshop. Her assistant, Hidekatsu Takada, worked as facilitator and translator for the project, locating the accomplished mokuhanga master printer Tadashi Toda in Japan to work with artists from the United States. In addition to printing, Toda oversaw the work of the professional carvers he hired and worked directly with the artists when they visited Japan to finalize the prints. Between 1984 and 1991, Crown Point Press published the prints of twenty-three artists who sent watercolor sketches to Japan to be rendered into woodcut in advance of their visits. Once in Japan the artists worked alongside Toda to refine and approve the proofs for final editioning. Eric Fischl, April Gornick, Al Held, Robert Kushner, Sylvia Plimack Mangold, Robert Moskowitz, Judy Pfaff, David Salle, Pat Steir, and William Wiley all participated in the program.

NEIL WELLIVER: A Long-Term Collaboration

After that unique project ended, mokuhanga prints made by artists with the help of professional Japanese printers became less visible in contemporary printmaking. A notable exception is the work of Neil Welliver (1929–2005), who continued to produce significant mokuhanga prints until his death. He taught at Cooper Union, Yale, and the University of Pennsylvania and was known for his bold large-scale paintings of backwoods Maine, painted on site. In 1978, he began a collaboration with Japanese master printer Shigemetsu Tsukaguchi in Philadelphia that resulted

in an extended series of complex prints of these rugged landscapes.

Neil Welliver, *Stump*, 2000, 35 x 34 in (89 x 86.4 cm)

Woodcut on nishinouchi, printed by Shigemitsu Tsukaguchi.

©Neil Welliver, courtesy of Alexandre Gallery, New York

RAMONA SAKIESTEWA: A Cross-Cultural Project

While Ramona Saskiestewa's collaboration with Japanese master carver Shoichi Kitamura was a single episode in her impressive career, spanning work in

architecture, weaving, and a wide range of design projects, her small katsina doll woodblock of 2007 is striking in its originality. She contacted Kitamura by email and sent him a small watercolor of a Hopi katsina. These dolls represent supernatural beings who bring good fortune, often in the form of rain. In Japan the doll was reproduced in mokuhanga, accurately copying Saskiestewa's delicate color washes. She hand-wrote quotations from art magazines in the margins of the completed edition. Saskiestewa has conflated cultures and traditions by collaborating with Japanese craftsmen to translate her contemporary version of a Hopi katsina doll into a mokuhanga print.

Ramona Sakiestewa, *Shalako Mana: Critical Comments*, 2007, 13.75 x 11 in (35 x 28 cm)

Woodblock print with handwritten text.

Photo courtesy of Ramona Saskiestewa

EDUCATIONAL INNOVATORS IN JAPAN

A few exceptional educators in Japan have been important in promoting mokuhanga to foreign students, who have in turn shared their understanding of mokuhanga with younger artists in their home countries.

TETSUYA NODA

One of the most influential artists using mokuhanga in Japan is Tetsuya Noda. He taught at Tokyo University of the Arts (Tokyo Geidai) since 1978 and headed the woodblock department from 1991 until his retirement in 2007. Cultural exchange and the promotion of Japanese art forms were part of the university's mission, so Noda was in a unique position to reach artists from around the world. He ran an innovative program in which master printers from the Adachi Institute of Woodcut Prints, who specialize in the reproduction of traditional ukiyo-e prints, visited to work with students each year. Noda also traveled, exhibited, and taught workshops in the West. In 1998 he taught a class in Japanese woodblock at the LeRoy Neiman Center for Print Studies at Columbia University. At the time, this was a special opportunity for local printmakers because few artists in New York City knew the technique. He also taught in London where he received an honorary degree from the London Metropolitan University in 2006. In Tokyo, Professor Noda's students included artists from Argentina, Australia, Bangladesh, Croatia, Turkey, the United States, and elsewhere. His 2004 retrospective at the San Francisco Museum of Asian Art incorporated ideas from his study of Western art with a sensitivity to materials rooted in ukiyo-e traditions. His prints, which make subtle references to the larger world, illustrate scenes from his everyday life, family, garden, and travels. He cuts his own blocks, printing in mokuhanga on handmade washi with great skill, overprinting these scenes with flat photo-based silkscreen. This blending of old and new technologies, combining soft watercolor and crisp silkscreen, reflects the combination of profound personal expression and uninflected reportage in his prints.

Tetsuya Noda, *465 Diary; July 31, '08*, 2008, 21 x 32.5 in (53.3 x 82.6 cm)

Photo courtesy Tetsuya Noda and Andrew Bae Gallery, Chicago

A block in Tetsuya Noda’s studio.

Photo: April Vollmer

Tetsuya Noda, *436 Diary; September 28, '03*, 2003, 25 x 16.5 in (63.5 x 42 cm)

Photo courtesy Tetsuya Noda and Andrew Bae Gallery, Chicago

AKIRA KUROSAKI

Akira Kurosaki has been influential on mokuhanga outside Japan through his work and his teaching at Kyoto Seika University, located in culturally conservative Kyoto, where many Japanese craft traditions survive. Born in Manchuria during World War II, he grew up in Kobe and was a visiting professor in the United States and England during the 1970s. A scholar and writer as well as an artist, he has received many major awards. While his outlook is international, his contribution to printmaking has much to do with his revival of the hanmoto system. An accomplished printer himself, he nevertheless sought to reconnect artists with traditional artisans. When many other Japanese artists began to cut and print their own blocks, Kurosaki relied on master printers and carvers such as Keizo Sato and Shoichi Kitamura for his own ambitious body of abstract prints. These artisans have themselves taught mokuhanga techniques around the globe, while continuing to work as master craftsmen in Kyoto. Kurosaki created an important woodblock program at his university, which included papermaking, a commitment reflected in his own use of carefully selected handmade papers.

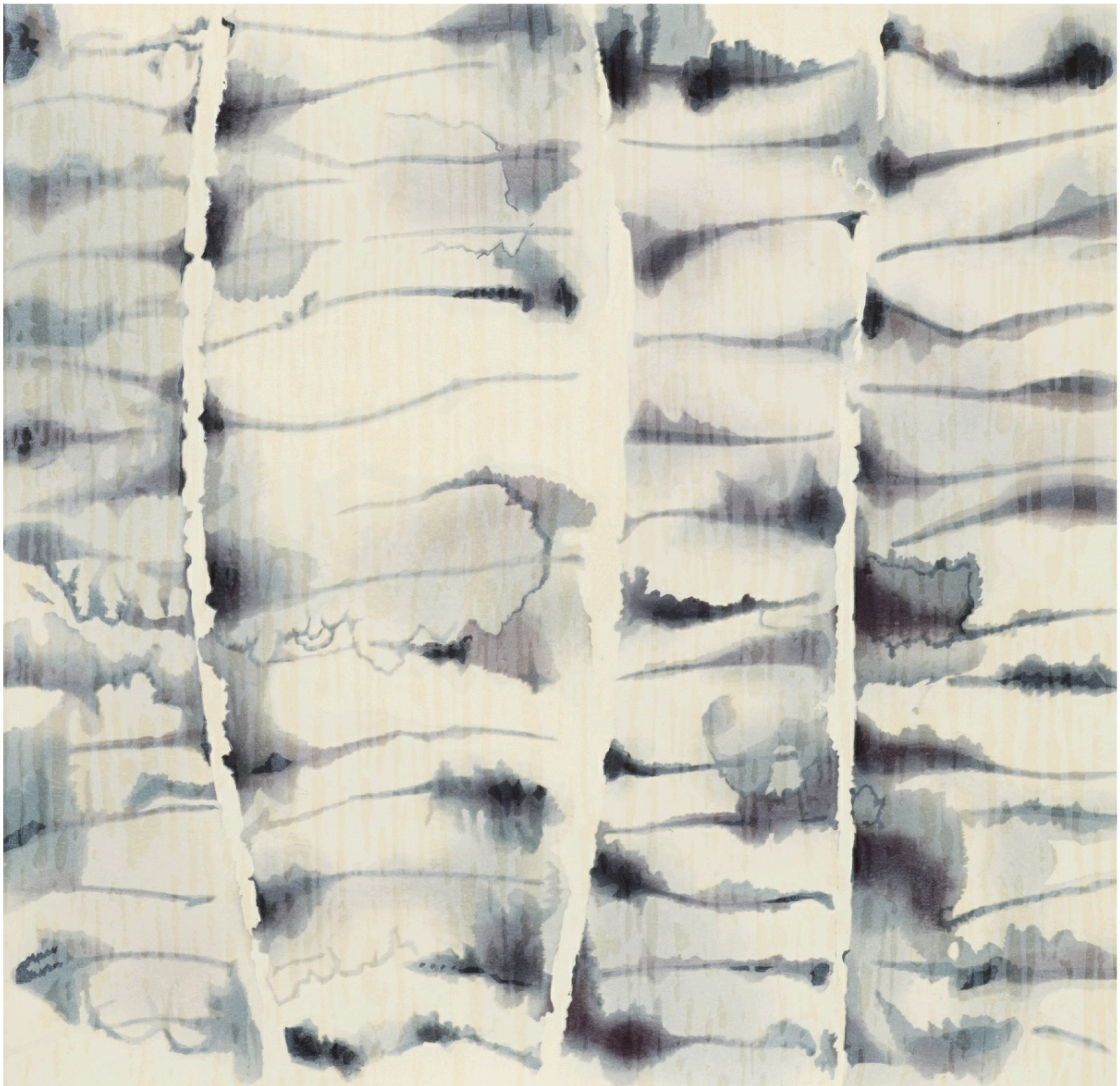
Kurosaki offered classes in mokuhanga to Western artists in Kyoto at a time when few such opportunities were available. Artists who studied with him include Elizabeth Forrest from Canada, Wuon-Gean Ho from the UK, Karen Kunc from the United States, and Tuula Moilanen from Finland; all share their enthusiasm for mokuhanga through exhibitions and teaching.

Akira Kurosaki, *Clearing Mist at Awazu*, from the series *Eight Views of Omi*, 2009–11, 33.5 x 19.5 in (85 x 49.5 cm)

Photo courtesy of Akira Kurosaki

REBECCA SALTER

Rebecca Salter, an abstract artist from London, studied mokuhanga with Kurosaki when she lived Japan, from 1979 to 1985. Her 2001 book, *Japanese Woodblock Printing*, made the basics of mokuhanga that she learned from Kurosaki widely available to an English-speaking audience. Her own work is subtle and understated, connecting Western minimalism with the aesthetic traditions of Japan. A major survey of her painting and work on paper was exhibited in 2011 at the Yale Center for British Art, accompanied by a monograph published by Yale University Press. She was elected to the London Royal Academy in 2014. Like Kurosaki, she knows mokuhanga technique well, but has also worked with master printers in Kyoto to produce her abstract prints.



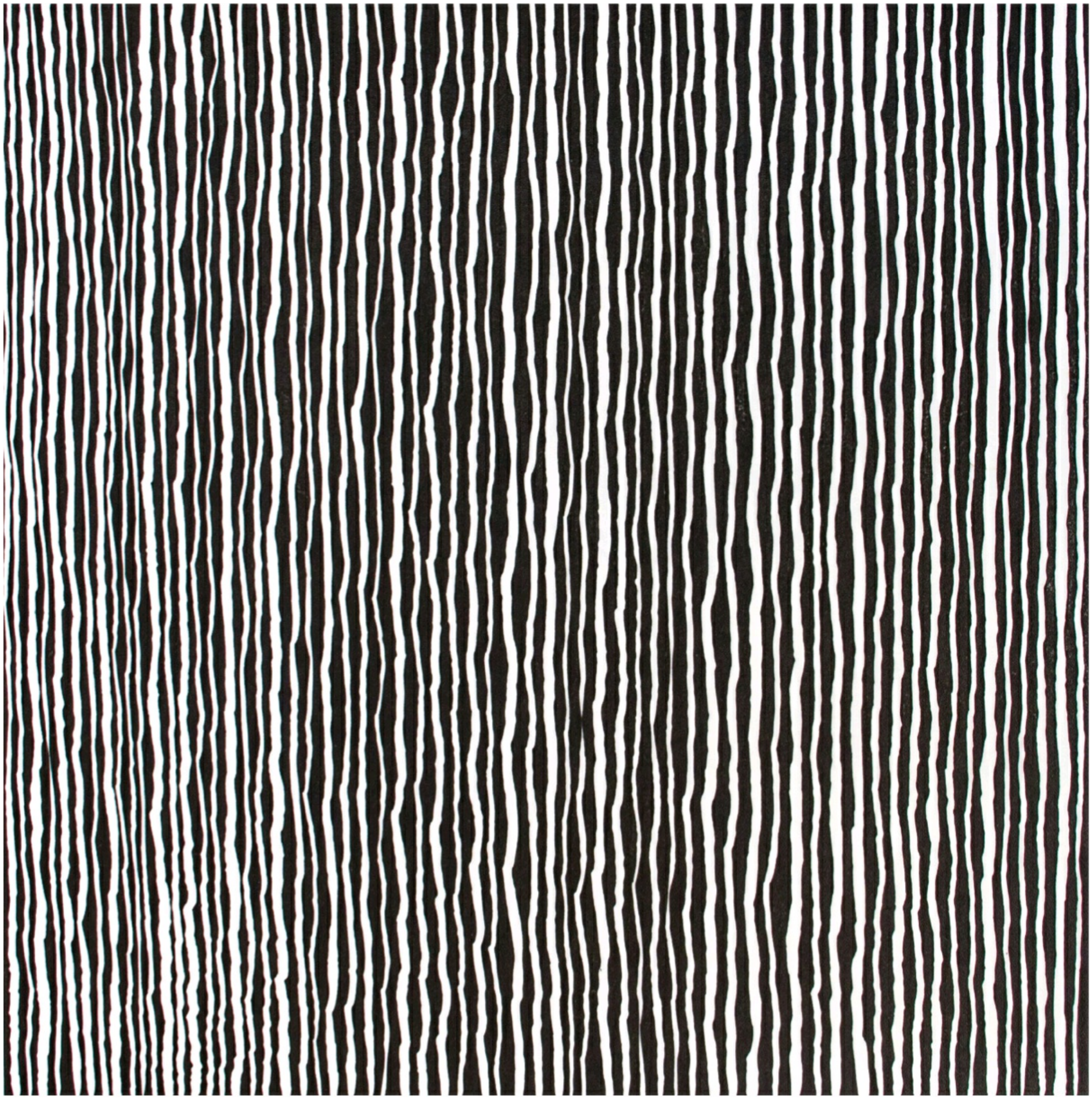
Rebecca Salter, *Quadra 3*, 2010, 12 x 12 in, (30.5 x 30.5 cm)

Woodblock on torinoko paper, printed by the Sato Woodblock Workshop, Kyoto.

Photo courtesy of Rebecca Salter

THE YOSHIDA ACADEMY

The Yoshida Hanga Academy in Tokyo, closer to a traditional studio than the university centers where Noda and Kurosaki taught, was also significant for the development of modern mokuhanga. It was founded in 1925 by Hiroshi Yoshida (1876–1950) as a modern version of a hanmoto workshop, where artists could learn from master carvers and printers. Hiroshi Yoshida was a skilled printer himself but worked with master printers to make his shin-hanga prints. He maintained close ties with the United States, where he had many exhibitions of his masterful prints documenting his extensive travels around the world. His academy was one of the few places in Tokyo where foreigners could learn mokuhanga, a tradition continued after his death by his son Toshi Yoshida and later by others. The Yoshida family included many talented artists and teachers. Ayomi Yoshida is known for her minimalist abstraction and installation work using mokuhanga. Foreign artists who worked at the academy include Suezan Aikins from Canada, Ralph Kiggell from the UK (based in Thailand), and Micah Schwaberow from the United States.

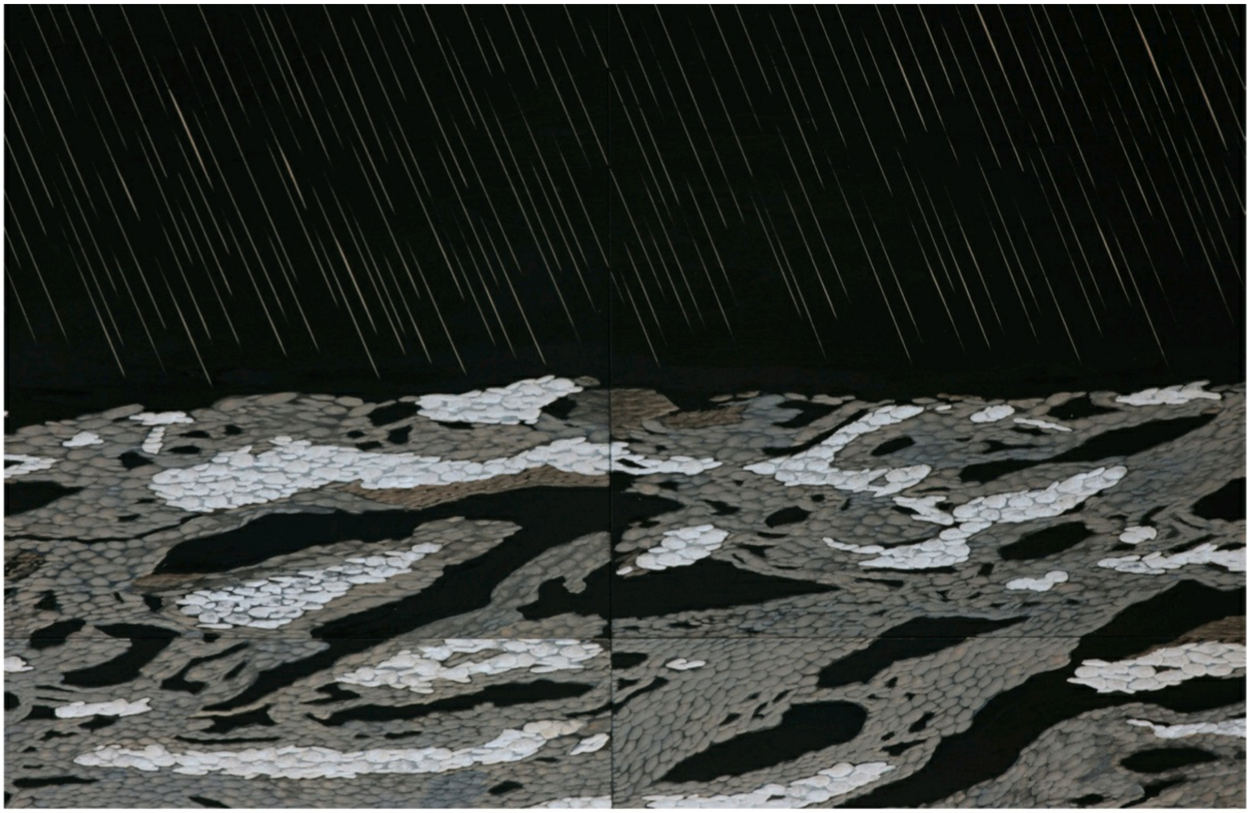


Ayomi Yoshida, *Black Marks*, 1997, 20 x 20 in (50.8 x 50.8 cm)

Photos courtesy of Ayomi Yoshida

Ayomi Yoshida, *Reverberations*, 2010, installation

Mixed media with woodblock, installation at the Minneapolis College of Art and Design.

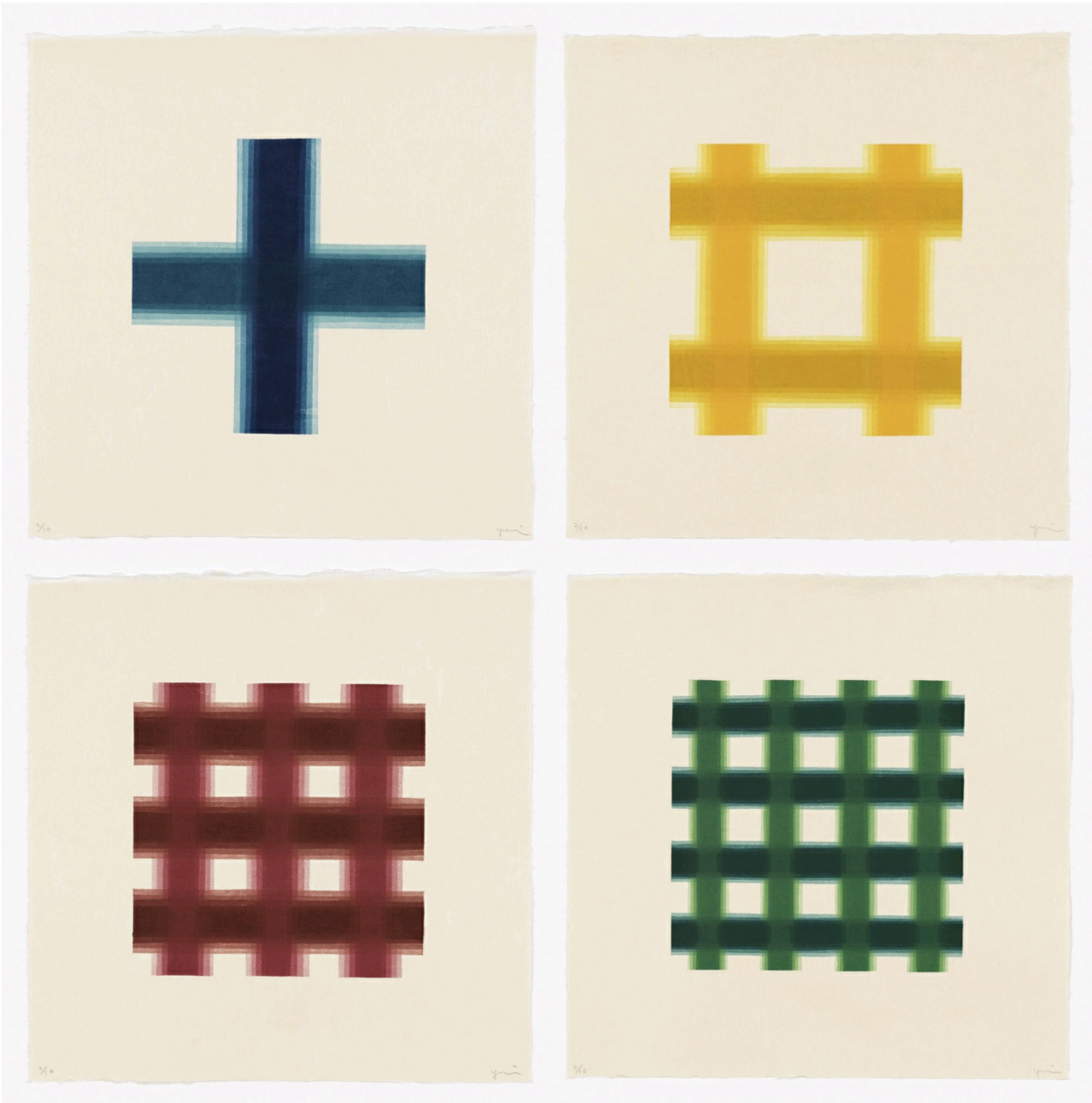


Ayomi Yoshida, *Reverberations*, installation (detail)

MOKUHANGA ARTIST-EDUCATORS INFLUENTIAL IN THE UNITED STATES

Mokuhanga is now practiced and taught in the United States by several important artists who learned the technique with master printers in Japan, making the technique more widely available to English-speaking audiences.

Yasuyuki Shibata, who now teaches at Cooper Union in New York City, studied with Akira Kurosaki in Japan, then moved to the United States to work for Tyler Graphics Ltd., where he combined woodblock with other techniques and novel materials, making complex prints with Helen Frankenthaler, Chuck Close, and others. When Tyler moved to Shanghai in 2000, becoming the Singapore Tyler Print Institute, Shibata joined Pace Editions in New York City, where he specialized in mokuhanga. The blocks he cut there for the Chuck Close baby portrait *Emma* (2002) were exhibited as part of *Chuck Close: Process and Collaboration*, the exhibition of Close's prints that traveled the United States between 2003 and 2008, giving many in the United States their first opportunity to see the details of mokuhanga production. Shibata completed a notable edition of Yoshitomo Nara mokuhanga prints in 2010. Nara's contemporary anime-inspired images with roots in ukiyo-e are a perfect match for Shibata's technical skill. In addition to his master printing, Shibata has taught printmaking at Cooper Union since 1998. An ambitious creative artist as well as an educator and master printer, Yasu Shibata has consistently produced his own artwork in mokuhanga. The minimalist imagery of his series of reduction woodblocks shows his perfect control of printing multiple layers of color on handmade washi.

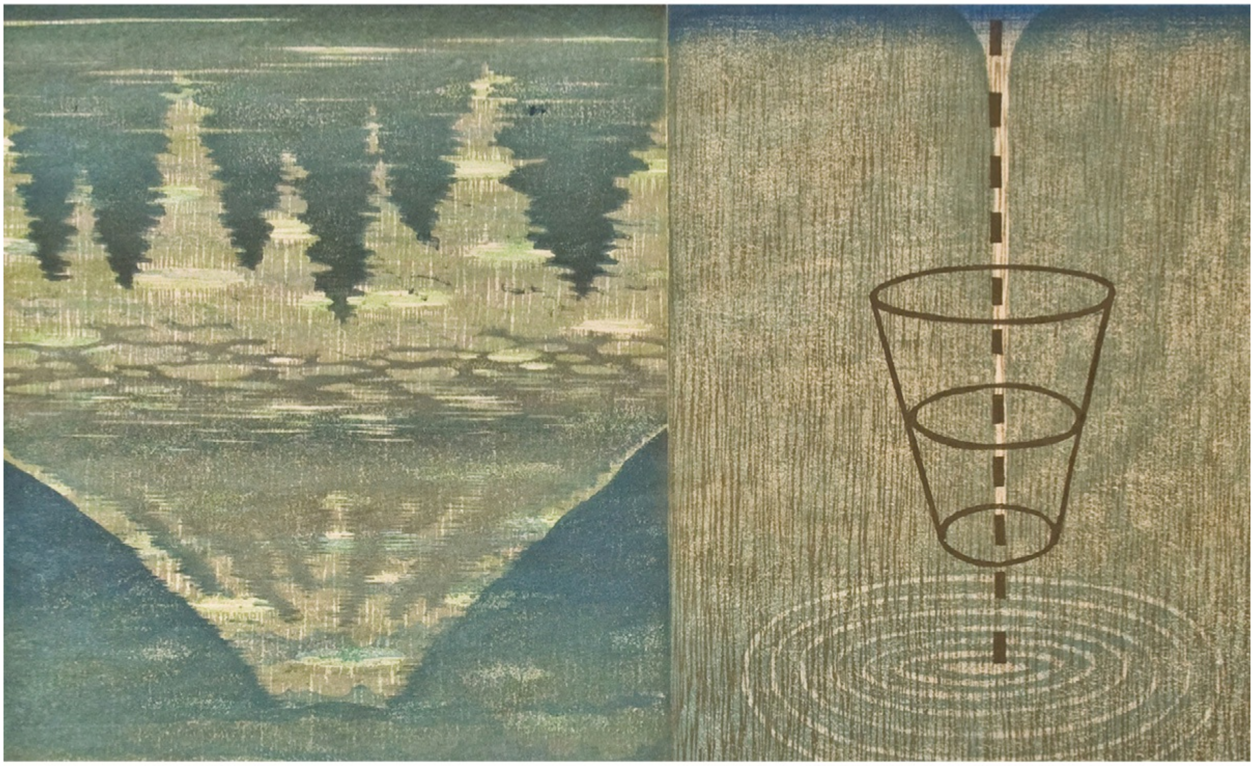


Yasu Shibata, *Crosshatch*, 2012, 12 x 12” in (30.5 x 30.5 cm) each, Set of four Japanese woodcuts on kizuki paper.

Photo courtesy of Yasu Shibata

Hiroki Morinoue has become an important voice for mokuhanga in the United States through his teaching and exhibitions. Born in Hawaii, he is one of the founders of the Donkey Mill Art Center there, where he continues to teach a variety of classes, including mokuhanga. He studied mokuhanga in Japan after receiving his BFA from the California College of Arts and Crafts in Oakland, California. He has used mokuhanga to create a personal language based on the rhythms of nature. In addition to prints, he makes paintings, sculpture, photography, and ceramics. Much of his current work has to do with the flow and pattern of water. He teaches regularly at the Anderson Ranch Arts Center and has also given classes at the Holter Museum of Art and many other locations.

Hiroki Morinoue, *Deleaf*, from the series *Our Daily Use*, 2012, 13 x 18 in (33 x 45.7 cm)



Hiroki Morinoue, *Half Full*, from the series *Our Daily Use*, 2012, 13 x 18 in (33 x 45.7 cm)

Photos courtesy of Hiroki Morinoue

Keiji Shinohara has taught since 1995 at Wesleyan University in Connecticut, one of the few university programs in the United States that has included mokuhanga in its art program. He has also given mokuhanga workshops at various locations across the country and offers private lessons. His work reflects his classical training as a master printer at Uesugi Studio in Kyoto, Japan. He has demonstrated mokuhanga at the Museum of Fine Arts Boston, the Freer and Sackler Galleries at the Smithsonian in Washington, DC, and many other locations, as well as maintaining an active exhibition schedule. In his own work, he specializes in landscapes and seasonal series, often using musical names to suggest an emotional response to his scenes of nature. His evocative images of places he has visited in the United States and Japan are reminiscent of the travel prints of the shin-hanga artists, but he cuts and prints his own blocks. He made mokuhanga available in the United States during a period when it was not well known.

Keiji Shinohara, *Winter* (*Faye*), from the series *Four Views of Weekapaug, Rhode Island*, 2012, 18 x 15 in (45.7 x 38 cm)

Photo courtesy of Keiji Shinohara

Keiji Shinohara, *Summer* (*Natu*), from the series *Four Views of Weekapaug, Rhode Island*, 2012, 18 x 15 in (45.7 x 38 cm)

Photo courtesy of Keiji Shinohara

Takuji Hamanaka trained in traditional printing at the Adachi Institute of Woodcut Prints in Tokyo. He now lives in New York City and teaches mokuhanga at the Manhattan Graphics Center, the Center for Book Arts, and other locations, as well as privately in his Brooklyn studio. In his creative work, he has developed a sophisticated method of making prints that is far removed from the classical technique he learned in Japan. He retains the precision of traditional printing, but has developed a system of collaging, cutting, and pasting printed elements to create a unified whole. In this series, he pastes glossy, translucent gampi paper onto the surface of a printed background to create contradictory spaces with layered geometric patterns.

Takuji Hamanaka, *Basket*, 2012, 30.5 x 23 in (77.5 x 58.4 cm)

Woodblock collage with gampi paper.

Photo courtesy of Takuji Hamanaka

Keiko Hara grew up in Japan and moved to the United States in 1971. She has made a name for herself as an abstract artist who moves fluidly between printmaking and painting. Much of her work is mixed media on paper. She is the recipient of numerous awards and residencies and taught at Whitman College in Walla Walla, Washington, from 1985 until her retirement in 2006. She has organized several exhibitions of contemporary woodblock, notably in 2014 *Abstract Mokuhanga* at the Sheehan Gallery at Whitman College. In 2014 she created an installation of mokuhanga with stencil, handwork, and sound called *Topophilia Ma and Ki*. The installation includes mokuhanga prints suspended in a spiral within a gallery space, with reflective elements on the nine-foot ceilings, surrounding viewers with sound and light. The installation is documented with a video on the website of Perimeter Gallery in Chicago.

Keiko Hara, *Sukumu 1-3-12*, 2012, 32 x 16 in (81.3 x 40.6 cm)

Woodblock, stencil print, and collage.

Photo: Amahra Leaman

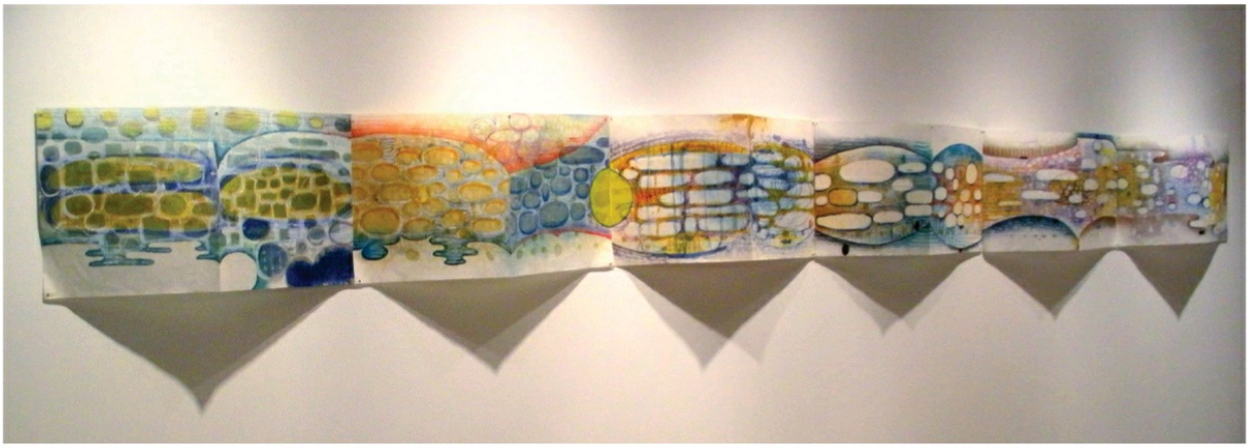
Keiko Hara, *Topophilia-Ma and Ki*, 2014, woodblock print installation with sound

The artist describes this installation as being about the beauty and sadness of passing moments.

Photo courtesy of Keiko Hara

Karen Kunc is an important artist, educator, and director of a new printmaking residency program, Constellation Studios in Lincoln, Nebraska. She is the Cather Professor of Art at the University of Nebraska–Lincoln, where she has taught since 1983. An artist of international stature who has consistently focused on woodblock, she has brought widespread attention to its potential. Her work has been widely exhibited, and she has participated in a multitude of residencies and taught workshops around the world; this travel inspires much of her work. In 2004 she organized the Mid-America Print Council Conference in Lincoln. She combines oil-based woodblock printing with mokuhanga, creating richly surfaced woodblock prints using stencils over a variety of cut patterns, overprinting many layers. Her work has influenced a generation of younger printmakers and given visibility to woodblock as a serious medium for creative expression.

Karen Kunc, *Aqua Alta* (detail)



Karen Kunc, *Aqua Alta*, 2011, 19.25 x 38 in (49 x 96.5 cm) folio of prints: woodcut, mokuhanga, watercolor, acrylic, ink, wax on Japanese papers; limp cover long-stitch binding of indigo Cave flax paper with sanded title and ornament.

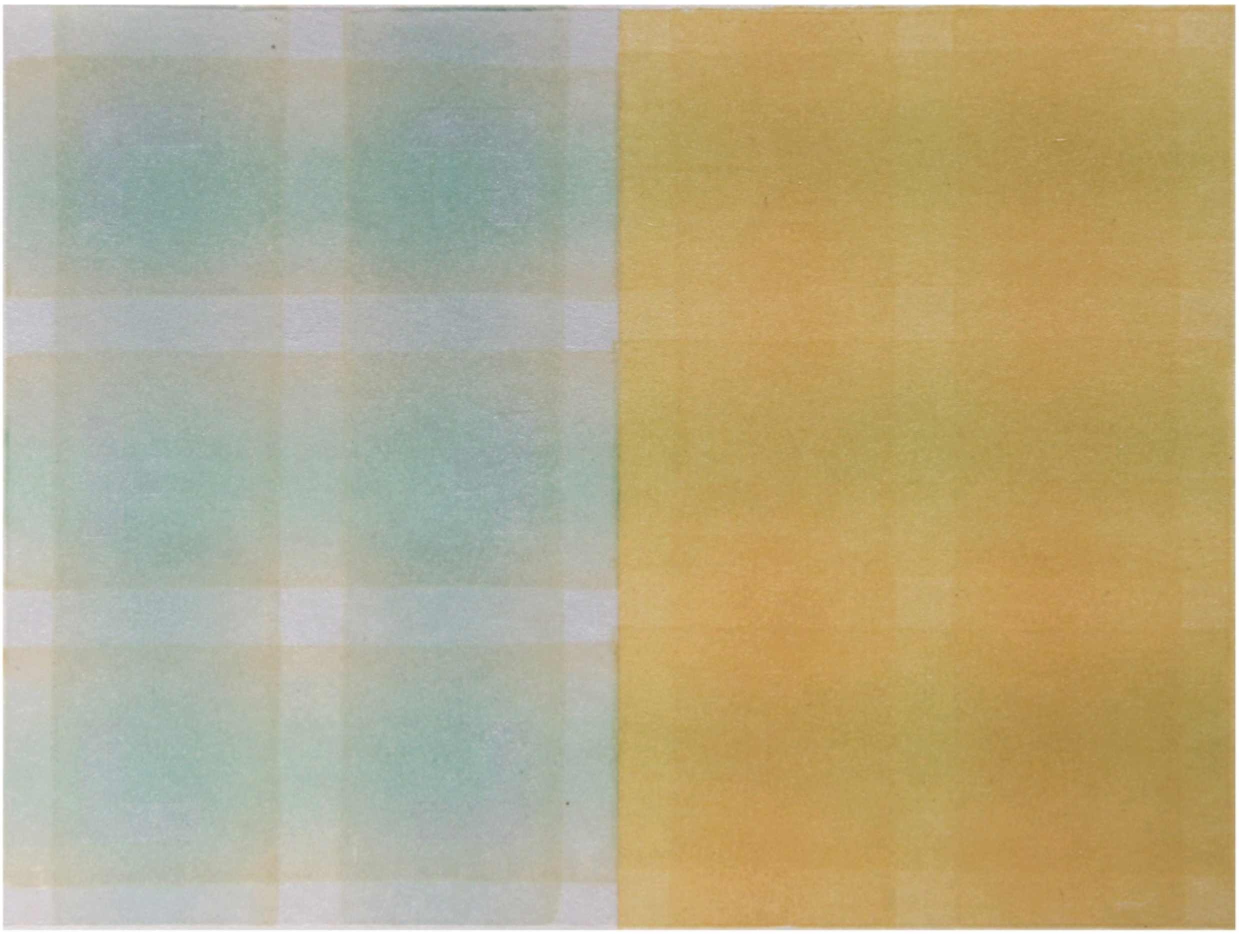
Photos courtesy of Karen Kunc

Tuula Moilanen is a Finnish artist who has made mokuhanga accessible to artists in the United States through her contributions to the book *The Art and Craft of Woodblock Printmaking,* written with Kari Laitinen and Antti Tanttu. It includes clear, detailed descriptions of traditional methods Moilanen learned in Japan. Moilanen trained with Akira Kurosaki at Kyoto Seika University and taught there herself. She has worked with Kari Laitinen to develop a mokuhanga training program, unusual outside Japan, in Finland. Moilanen's prints are as precise and careful as her book is. Her imagery draws on folk tales, myth, and Japanese art, conveying her endless curiosity and wry sense of humor.

Tuula Moilanen, *Red Moon, Inspired by Tsukioka Yoshitoshi*, 2012, 10.25 x 13.5 in (26 x 34.3 cm)

Photo courtesy of Tuula Moilanen

Kari Laitinen, co-author of *The Art and Craft of Woodblock Printmaking* is head of printmaking at Aalto University, in Helsinki, Finland. He has worked closely with Moilanen yet approaches woodblock in a completely different way. Working abstractly, he overprints water-based and oil-based colors to create subtle layered surfaces that shimmer in color and appear to shift in depth. His careful research into wood types has brought scientific analysis to the materials of mokuhanga.



Kari Laitinen, *Whisper III*, 2012, 11 x 14 in (28 x 35.6 cm)

Mokuhanga finished with oil print and mica powder from the portfolio *20 Artists/20 Views*.

Photo: Scott Dolan

CREATIVE MOKUHANGA OUTSIDE JAPAN

Many artists using mokuhanga have contributed to the growing awareness of the creative possibilities of mokuhanga outside Japan. Internationally recognized printmakers Ralph Kiggell (UK/Thailand), Roslyn Kean (Australia), and Paul Furneaux (UK) all studied in Japan and now work in other parts of the world, where they promote the technique through exhibitions, demonstrations, and teaching. In the United States, artists Annie Bisset, Mike Lyon, and Ursula Schneider learned from printmakers who trained in Japan; each developed a personal approach through independent studio practice. Yoonmi Nam, Katie Baldwin, and Daniel Heyman studied in Japan at the short-term mokuhanga training program of Nagasawa Art Park and now include mokuhanga in their university curricula.

As mokuhanga has become better known as an adaptable water-based way of working, many artists now learn from second-generation teachers who studied with professionals trained in Japan; more study from books or online tutorials. Although there are active communities of mokuhanga printmakers in Australia, Finland, the Netherlands, and other parts of the world, this alphabetical overview includes a preponderance of artists active in the United States whose work I am familiar with. I include artists from the international community to indicate the wide reach of mokuhanga and to acknowledge their accomplishments and their influence on the broad development of mokuhanga. These American and international artists have either focused on mokuhanga as their primary medium or have used it in original ways, and many are also important teachers.

Suezan Aikins, a Canadian artist with a studio in Nova Scotia, trained in traditional mokuhanga in Tokyo with Toshi Yoshida and other master printers at the Yoshida Academy in the 1980s. She works with her husband, Sam Rogers, preparing her image and blocks and then relying on him to complete the edition printing. She specializes in evocative scenes of nature that often show the grain of her wood blocks as part of the design and has created special techniques such as incorporating etching and adding gold leaf to heighten the precious feeling of her prints.

Suezan Aikins, *Iris Moon* (ND), 12 x 29 in (30.5 x 73.7 cm)

10 blocks, 38 color layers, ed. 200, printed with Sam Rogers.

Courtesy of Suezan Aikins,

Photo: Howard Goodman

Suezan Aikins, *Autumnmoon* (ND), 11 x 23 in (28 x 58.4 cm)

9 blocks, 24 color layers, ed. 200, printed with Sam Rogers.

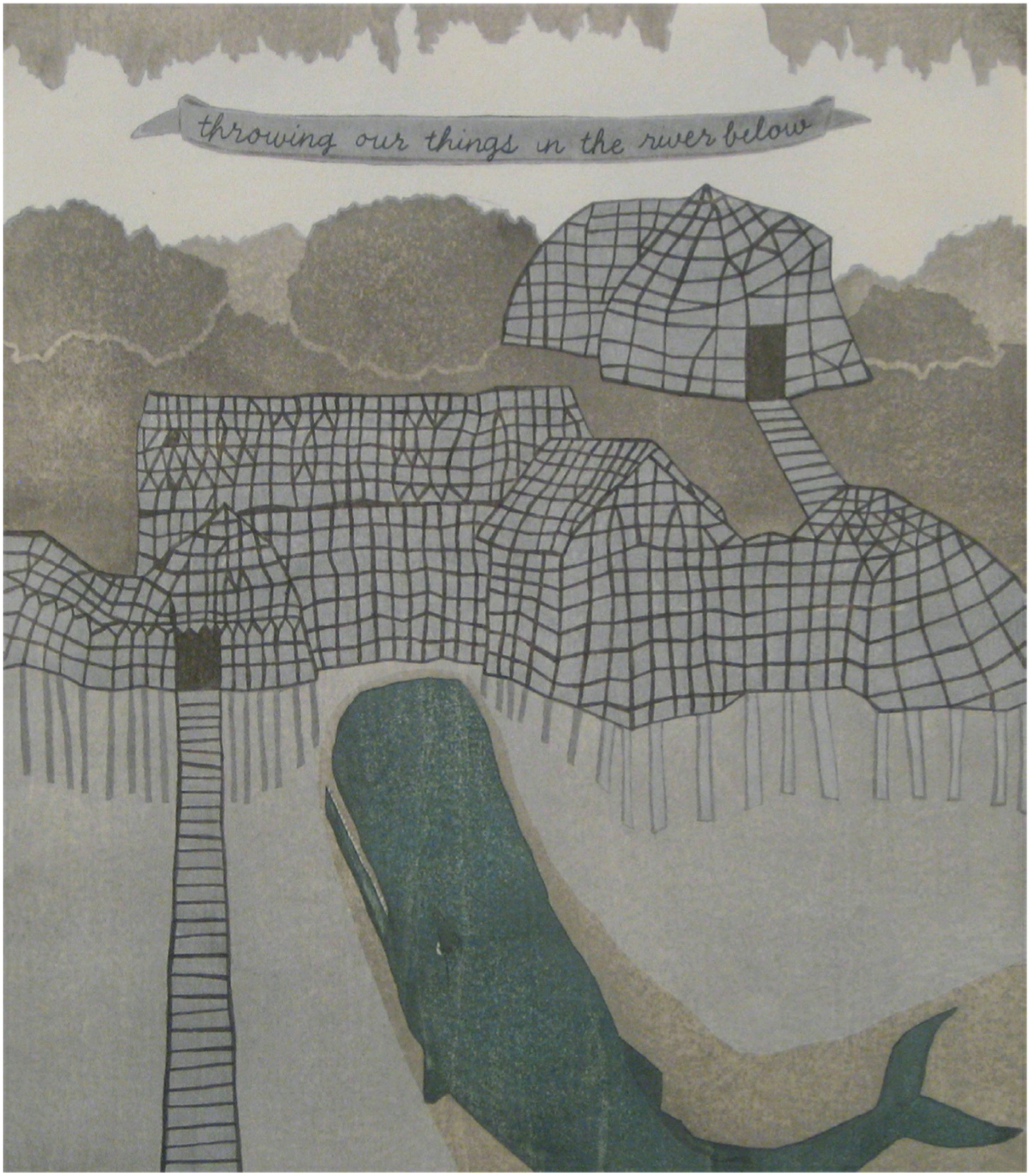
Courtesy of Suezan Aikins,

photo: Erik Gould

Katie Baldwin teaches book arts and printmaking at the University of Alabama, Huntsville. With an MFA from the University of the Arts in Philadelphia, she learned mokuhanga at the Nagasawa Art Park program in 2004. Much of her work focuses on book arts and letterpress, often incorporating mokuhanga. Her mokuhanga prints include poetic words that give them a quirky, personal feeling. Her delightful online instructional manual, *Carving Woodblocks*, illustrated with her own drawings, includes her idiosyncratic dictionary of mokuhanga terms.

Katie Baldwin, *Finding Different Places to Call Home*, 2010, 14 x 11 in (35.5 x 28 cm)

Mokuhanga and letterpress.



Katie Baldwin, *Throwing Our Things in the River Below*, 2009, 14 x 11 (35.5 x 28 cm)

Mokuhanga and letterpress.

Photos courtesy of Katie Baldwin

Annie Bisset teaches mokuhanga at Zea Mays Printmaking in Florence, Massachusetts, and maintains an informative mokuhanga blog (woodblockdreams.blogspot.com) that includes reviews of books and exhibitions about mokuhanga as well as step-by-step discussions of her own printmaking process. She uses the traditional Japanese method to address contemporary American social and political issues, expressing her ideas with a humorous twist.

Annie Bisset, *Smoke*, 2011, 35 x 21 in (89 x 53.3 cm)

Annie Bisset, *Locusts in Babylon*, 2007, 13.5 x 10.5 in (34.3 x 26.6 cm)

Courtesy of Annie Bisset,

Photos: Stephen Petegorsky

David Curcio has given his mokuhanga prints an especially physical presence by sewing them together, creating radial patterns by multiplying and rotating individual prints. He freely combines additional techniques such as hand coloring, etching, and drypoint with mokuhanga. He has printed for other artists, but prefers to focus on incorporating unusual techniques such as embroidery in his autobiographical work.

David Curcio, *Ice Age*, 2007, 20.5 x 20.25 in (52 x 52 cm)

Woodcut, drypoint, acrylic, and stitching.

David Curcio, *Happy House*, 2007, 20.75 x 21 in (52.7 x 53.3 cm)

Etching, woodcut, pencil, and waterolor with stitching.

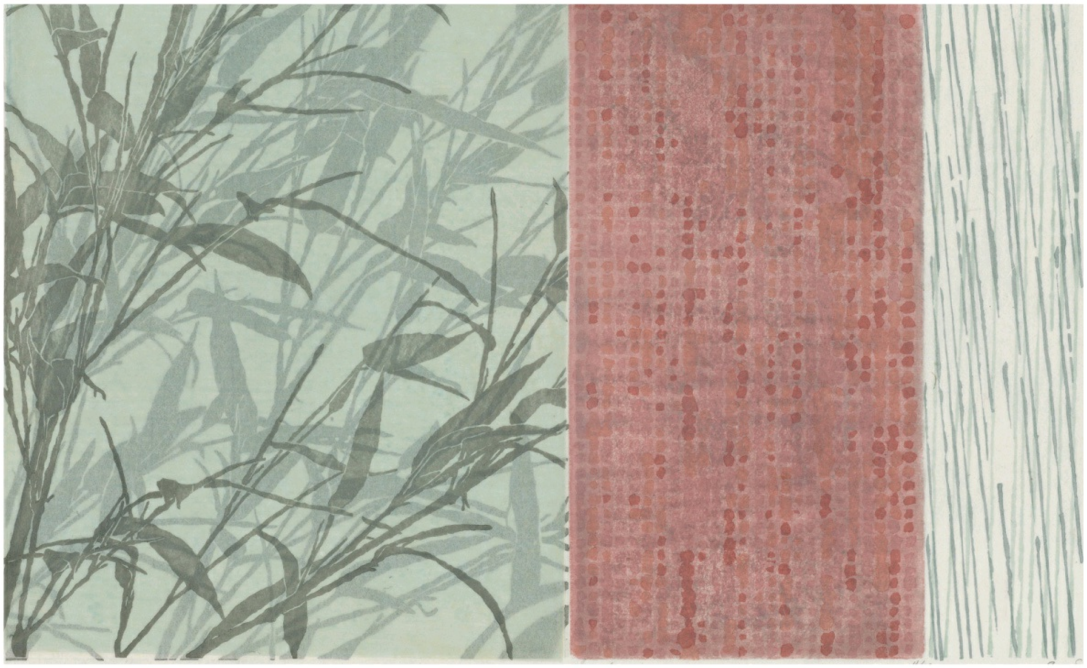
Courtesy of David Curcio,

Photos: James Fitzgerald

Brian Curling, an American artist living in Germany, studied printmaking in Nebraska with Karen Kunc and has participated in the MI-LAB program in Japan. He prints on transparent layers of washi, mounting them together so that his images are seen through layers of overlapping translucent sheets.

Brian Curling, *Liminal State*, 2013, 30 x 52 in (76.2 x 132 cm)

Woodcut with layered paper.



Brian Curling, *Sanctuaries*, 2013, 13 x 19 in (33 x 48.3 cm)

Woodcut with layered paper.

Photos courtesy of Brian Curling

Stella Ebner teaches at the State University of New York, Purchase, and graduated from the Rhode Island School of Design, where she studied mokuhanga with Daniel Heyman. She has enjoyed residencies at Kala Art Institute, the Lower East Side Printshop, and the Elizabeth Foundation. She uses a variety of print techniques, including silkscreen on washi. Her free carving connects her to the creative printmakers of Japan, but her subject matter is contemporary American life.

Stella Ebner, *Hunters*, 2012, 25 x 36 in (63.5 x 91.4 cm)

Photo courtesy of Stella Ebner

Stella Ebner, *The Apartment (Law & Order)*, 2007, 11 x 14 in (28 x 35.5 cm)

Photo courtesy of Stella Ebner

Kevin Frances, a Boston-based artist, is a 2013 graduate of the Rhode Island School of Design. He has developed a sophisticated approach to mokuhanga, printing mundane scenes of the spaces in his everyday life viewed from unusual perspectives, showing eccentric images of empty apartments and studios, on full-size sheets of washi.

Kevin Frances, *Evan*, from the series *Other People's Studios*, 2011, 17.5 x 23 in (44.5 x 58.4 cm)

Photo: Kevin Frances

Kevin Frances, *Clothes Piles*, from the series *Home*, 2010, 19 x 24 in (48.3 x 61 cm)

Courtesy of Kevin Frances, photo: Jesse Vasquez

Paul Furneaux studied drawing and painting at Edinburgh College of Art before moving to Japan to study woodblock at Tama Art University, Tokyo, where he received an MFA in 2000. Now based in Scotland, he teaches at Edinburgh Printmakers and exhibits internationally. His layered abstractions incorporate multiple techniques but remain rooted in his strong affinity for the flexible character of mokuhanga. He has tried many experimental approaches, including creating sculptural prints by mounting washi on shaped forms.

Paul Furneaux, *Rain Pathway*, from the series *Dublin Fragments*, 2010, 9 x 6 (22.5 x 15.5 cm)

Mokuhanga with etching and chine collé.

Photo courtesy of Paul Furneaux

Julian Gatto, an Argentinian artist who studied with Yasu Shibata at Cooper Union in New York City, works in installation and watercolor in Argentina, Japan, and the US. He has adapted mokuhanga in his work to create magical visions based on subjects close to his home.

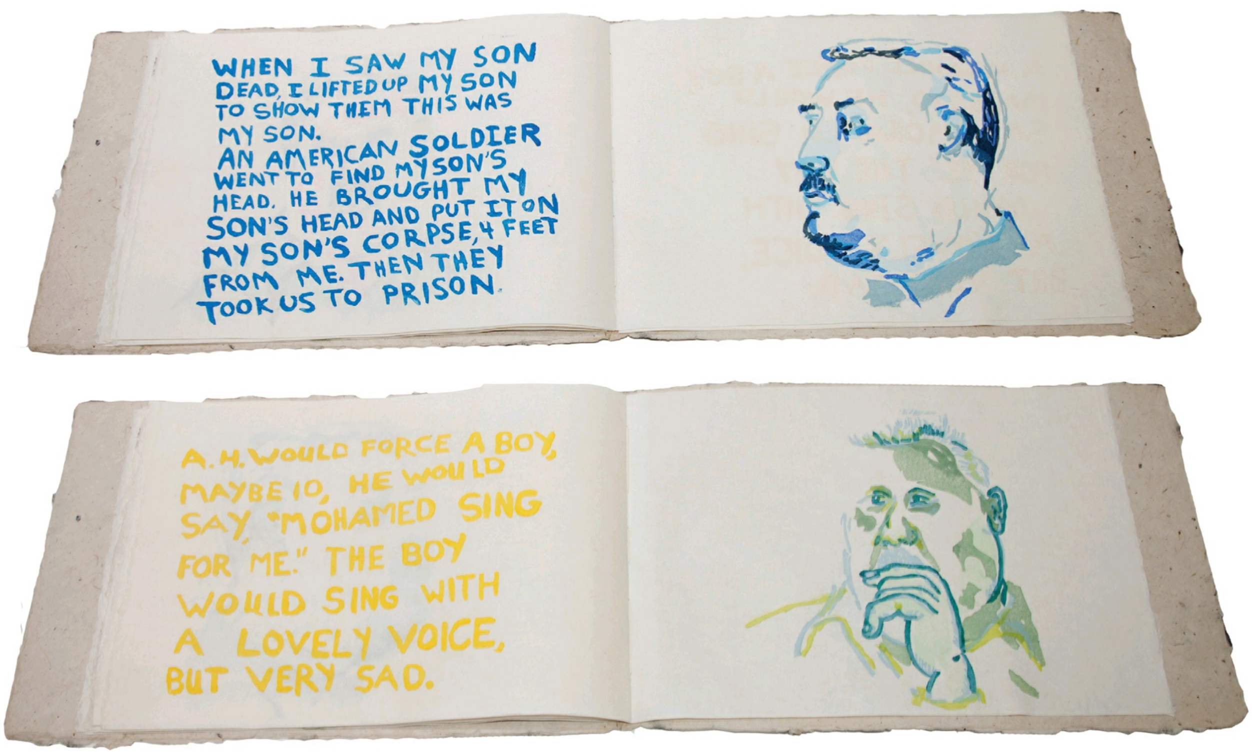
Julian Gatto, *Fuego* (*Fire*), 2013, 16 x 11.4 in (40.6 x 29 cm)

Photo courtesy of Julian Gatto

Julian Gatto, *Mochila* (*Backpack*), 2007, 16.5 x 12.5 in (42 x 31.7 cm)

Photo courtesy of Julian Gatto

Daniel Heyman expanded his art making to include mokuhanga after studying at the Nagasawa Art Park in 2002. His work has always revolved around political issues, and in 2006 he traveled to Amman, Jordan, to sketch portraits during testimony concerning torture and abuse at Abu Ghraib Prison. The watercolors he made then provided the foundation for his mokuhanga book *Sing with a Lovely Voice*. He combines mokuhanga with many other techniques in his ambitious body of work, which is notable for including nontraditional supports such as wood veneer and plaster for his monumental prints. Teaching art at Rhode Island School of Design, Princeton University, the Pennsylvania Academy of Fine Arts, and elsewhere, he has influenced many younger artists.



Daniel Heyman, *Sing with a Lovely Voice*, 2006–7

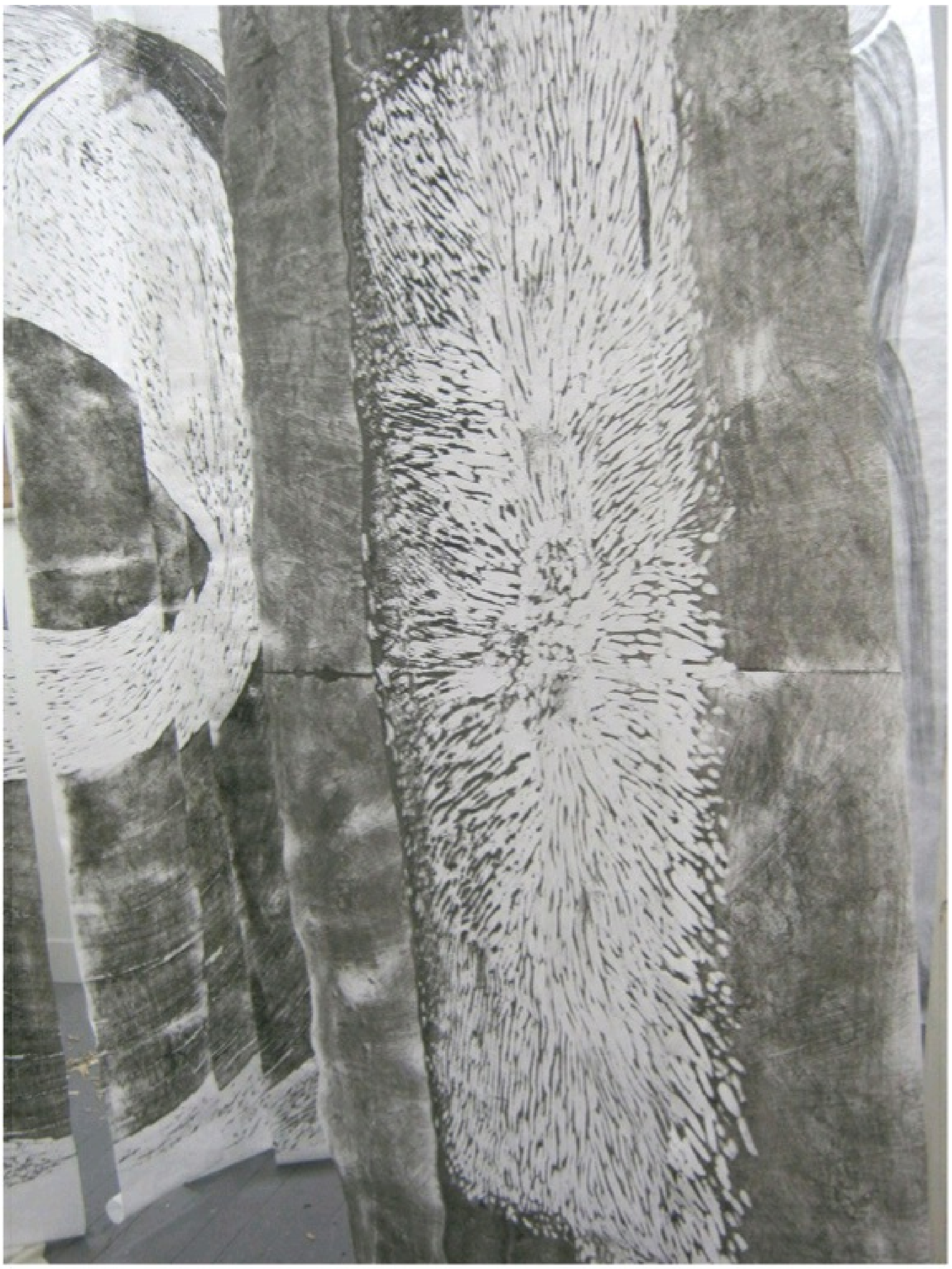
The book contains 4 two-page spreads with a portrait facing text, and a title page printed on two sides, printed by Daniel Heyman at Third Floor Press, ed. 12.

Above: "when I saw my son," blue page detail.

Below: "sing for me," yellow page detail.

Photos courtesy of Cade Tompkins Projects

Irena Kečkeš traveled from Croatia to study at Tokyo Geidai with Tetsuya Noda, has continued to pursue her woodblock work in New Zealand, where she has a PhD from Elam School of Fine Arts, University of Auckland. Her large-format prints and print installations reflect her energetic spirit.



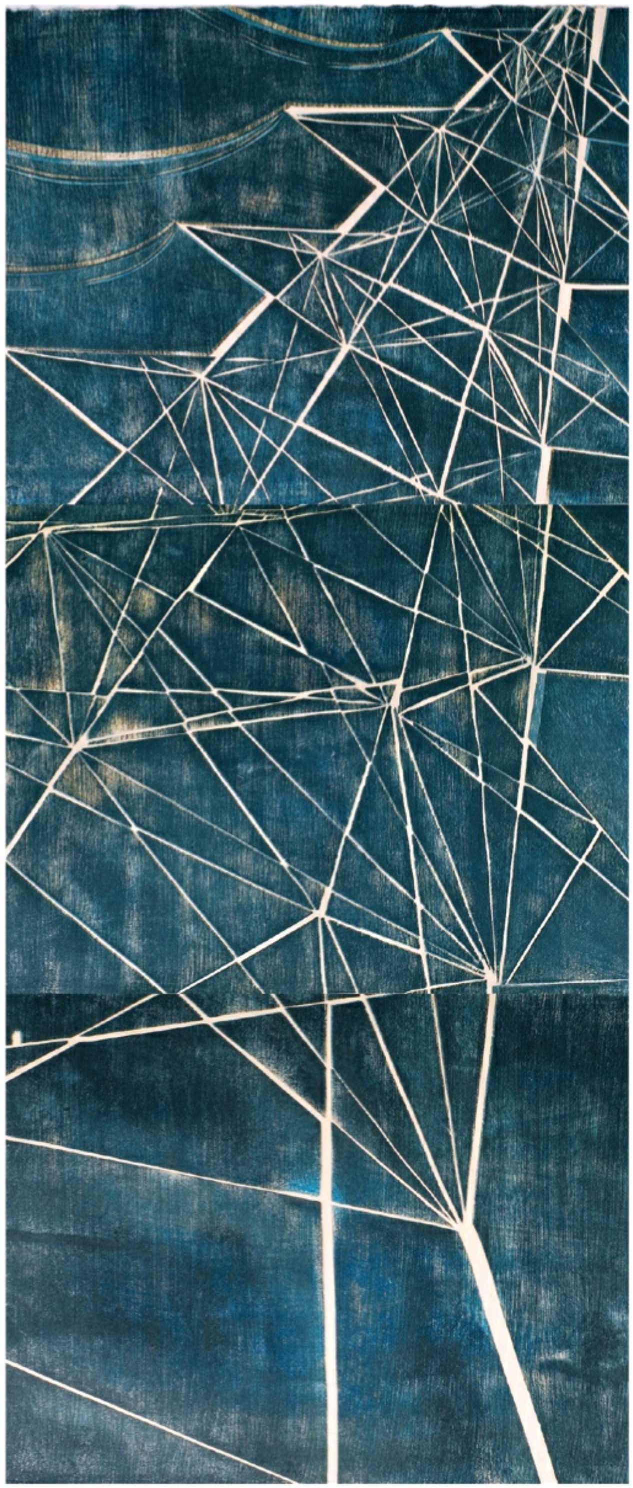
Irena Kečkeš, *Unlimited Resonance of Repetition*, 2012, Japanese woodcut print installation, approximate dimensions of print: 56.7 x 138 in (144 x 350 cm)

Photo courtesy of Irena Kečkeš (One view of installation)

Irena Kečkeš, *Unlimited Resonance of Repetition*, 2012, Japanese woodcut print installation, approximate dimensions of print: 56.7 x 138 in (144 x 350 cm)

Photo courtesy of Irena Kečkeš (Another view of installation)

Ralph Kiggell, born in Great Britain and living in Thailand, studied in Japan at the Yoshida Hanga Academy, with Akira Kurosaki at Kyoto Seika, and at Tama University as well as in China. His impressive large format-prints have been widely exhibited. Many are made by combining multiple sheets to make a single image, as was done by the ukiyo-e printers to create large-format prints during the Edo period. His protean imagination has led him to work in many formats with subjects as various as diatoms, Japanese schoolgirls, seashells, and Mandelbrot sets, demonstrating his interest in the interconnections between natural forms. He has participated in community projects and collaborated with doctors and patients at hospitals, and has a special interest in the history of medical and diagnostic imaging. His prints convey a feeling of indeterminate space and scale that makes them clearly identifiable.



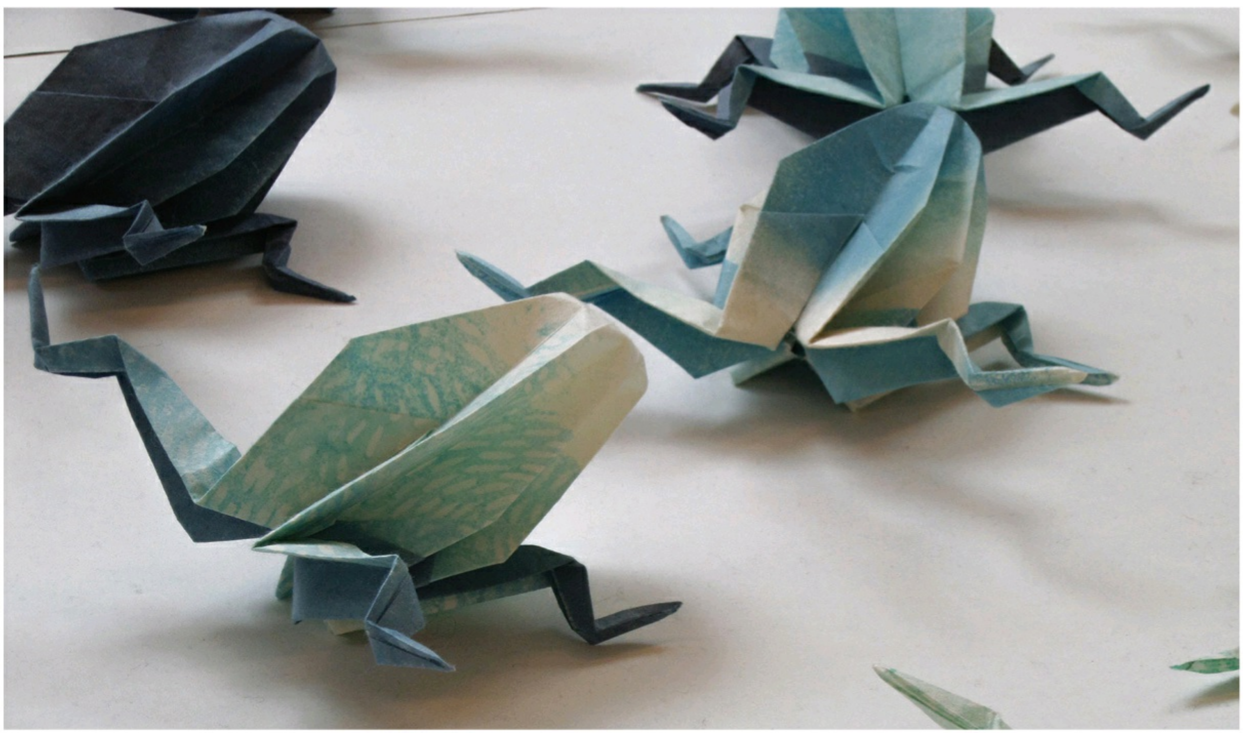
Ralph Kiggell, *Metal Pagoda (Pylon)*, 2008, 71 x 35.5 in (108.3 x 90.2 cm)

Photo courtesy of Ralph Kiggell

Ralph Kiggell, *Generator Chimney*, 2010, 23.6 x 23.6 (60 x 60 cm)

Photo courtesy of Ralph Kiggell

Karen Helga Maurstig, a Norwegian artist, learned mokuhanga at Japanese residency programs and has incorporated the technique in her work. In addition to making individual prints that emphasize the wood grain, she has used mokuhanga with wood textures to create books. In this example she has printed over the wood grain texture with antique wood type, cutting holes in the pages of the book to reveal the page below. She has also made playful origami frogs from her woodblock prints. Her 2014 traveling residency project *20 Coastal Stations*, which includes travel and exhibitions with other artists at studios along the coasts of Sweden and Norway, promotes collaboration between Scandinavian and Japanese printmakers.



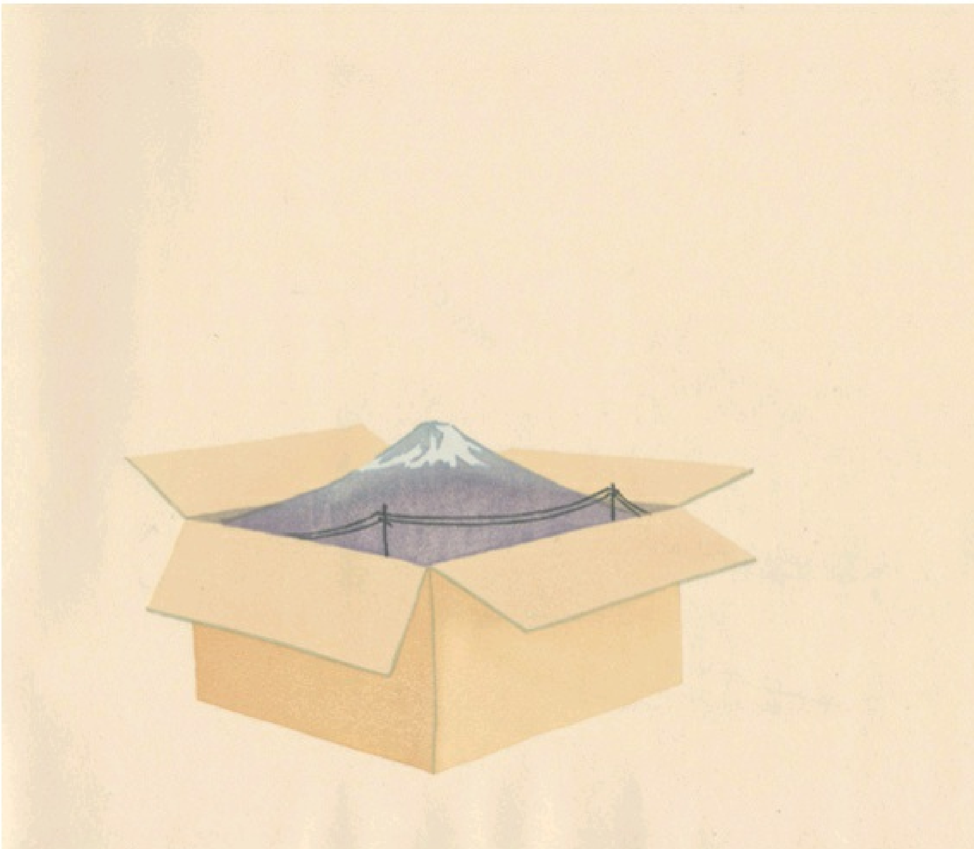
Karen Helga Maurstig, *Travel in Circles*, 2012, 3 x 5 in (7.6 x 12.7 cm) each frog. Folded mokuhanga prints.

Photo courtesy of Karen Helga Maurstig

Karen Helga *Maurstig*, *"24.01.2010,"* 2012, 13.8 x 4.7 in (35 x 12 cm) Handmade book with woodcut and letterpress.

Photo courtesy of Karen Helga Maurstig

Yoonmi Nam, an associate professor at the University of Kansas, grew up in Korea and received her MFA from the Rhode Island School of Design. Her work depicts collapsing buildings, piles of debris, and unbalanced elements on the verge of falling over. This feeling of impermanence extends to her drawings of flowers and her woodblock prints of impossible bouquets in improbable containers such as her print *More Beer … For Instance*, based on flowers and plastic containers she found during her stay at the MI-LAB printmaking residency in 2012. Nam also works in lithography and other techniques, but her sensibility is well suited to the delicacy and control she can achieve in mokuhanga.



Yoonmi Nam, *Packing Fuji*, 2012, 12 x 13.75 in (30.5 x 35 cm)

Photo courtesy of Yoonmi Nam

Yoonmi Nam, *An Accumulation*, 2012, 14 x 11 in (35.5 x 28 cm)

Photo courtesy of Yoonmi Nam

Eva Pietzcker founded druckstelle workshop in Berlin in 2001 to provide printmaking classes in German and English. Her studio focuses on less-toxic alternatives for printmaking and includes intaglio and water-based silkscreen as well as mokuhanga. She travels extensively, enjoying residencies in locations of natural beauty. Her imagery is drawn mainly from these wild landscapes. By focusing on the light in these scenes of nature, she creates prints with a strong element of abstraction.

Eva Pietzcker, *Beach*, 2011, 9.4 x 26.4 in (24 x 67 cm) Japanese woodblock.

Photo courtesy of Eva Pietzcker

Eva Pietzcker, *River*, 2011, 9.4 x 26.4 in (24 x 67 cm) Japanese woodblock.

Photo courtesy of Eva Pietzcker

Serena Perrone works primarily in other print techniques, such as etching, but she is responsible for many inventive woodblock prints. She worked with David Curccio to create this mokuhanga print that combines etching and chine collé with mokuhanga.

Serena Perrone, *Settlements*, 2010, 15.5 x 18.5 in (39.4 x 47 cm)

Seven-color Japanese woodblock with etching and chine collé printed by Serena Perrone and David Curcio at Ningyo Editions, Boston.

Photo courtesy of Cade Tompkins Projects

Ursula Schneider, a Swiss artist who moved to the United States in 1968, has an MFA from the San Francisco Art Institute and learned mokuhanga from artist Bill Paden. She is an inventive painter and developed a unique system of suspended nylon and urethane panels for her abstractions based on lights reflected in the Hudson River. Drawing from observation in the landscape is the foundation of her practice, though her finished work appears more mystical than realistic. She taught at Sarah Lawrence College in New York State, where she was inspired by Ansei Uchima to make woodcuts. She has taken Bill Paden's systematic approach, printing on double-weight kizuki hosho paper, in her own direction, printing unusual wide-format landscapes and eccentric details of nature. See another example of her work, *Chaning River* above the table of contents.

Ursula Schneider, *Beetle*, 2012, 25 x 25 in (63.5 x 63.5 cm) Hanga woodcut on handmade paper.

Photo courtesy of Ursula Schneider

Melissa Schulenberg, an associate professor of printmaking at St. Lawrence University in Canton, New York, has worked extensively in Western woodblock and began to use mokuhanga after participating in the MI-LAB residency in 2013. The same year, she co-curated an exhibition of Japanese woodblock prints at St. Lawrence called *Riding the Great Wave* that included the portfolio *20 Artists/20 Views*, which she organized with contributions from mokuhanga artists who attended the First International Mokuhanga Conference held in Japan in 2011.

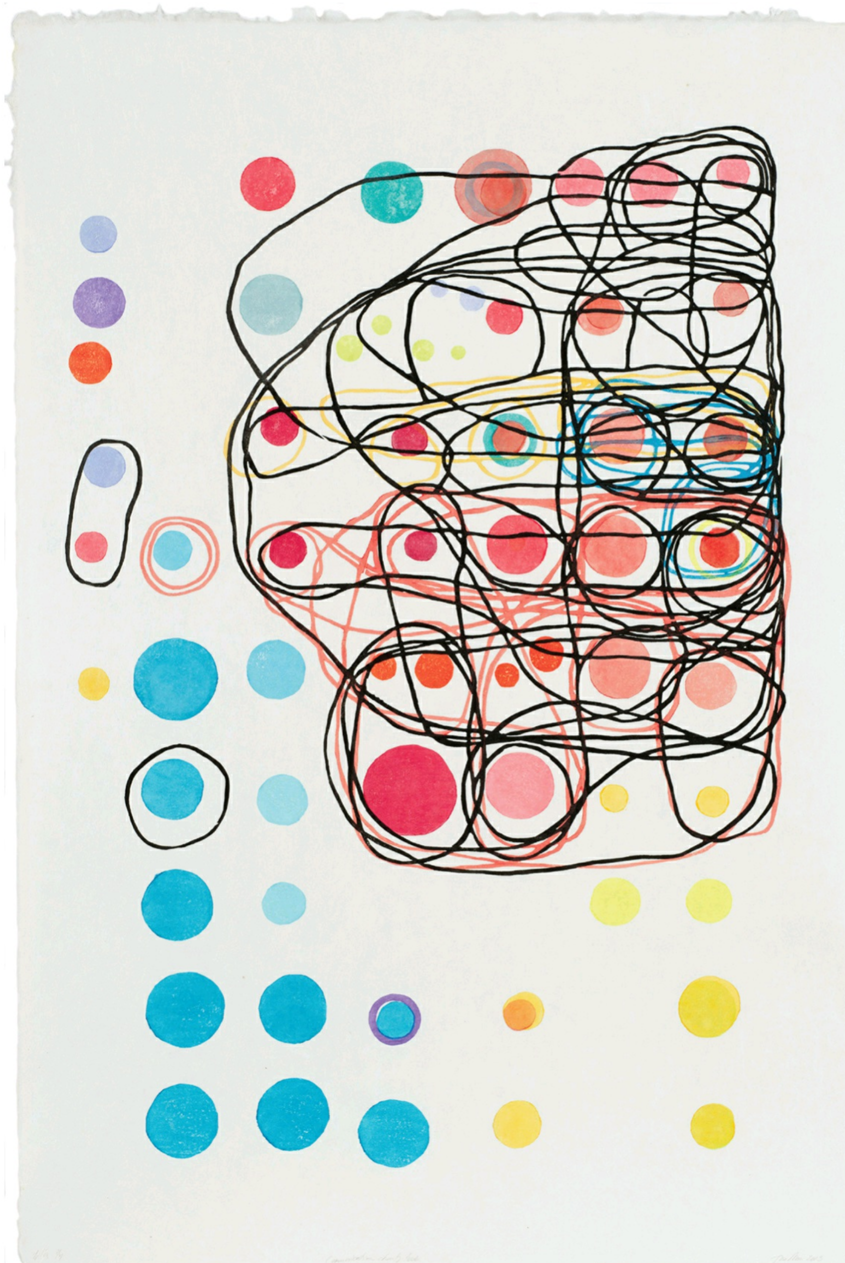
Melissa Schulenberg, *Fuji Pedestal*, 2011, 12.5 x 15.5 in (32 x 39.5 cm)

Photo courtesy of Melissa Schulenberg

Melissa Schulenberg, *Donut*, 2011, 12.5 x 15.5 in (32 x 39.5 cm)

Photo courtesy of Melissa Schulenberg

Annu Vertanen is one of an accomplished group of Finnish printmakers whose work was shown at the International Print Center New York in 2011 in an exhibition called *Silent Watch, Contemporary Prints from Finland*. Vertanen moves back and forth between oil-based and water-based woodblock, and she exhibits internationally. Her installation work is mainly oil-based, drifting scrims of color that create shifting, indeterminate spaces. Other prints are abstract, but with playful titles that suggest they are about a specific time or place or feeling without a verbal equivalent.



Annu Vertanen, *Communication Charts: Love*, 2013, 36.25 x 24 in (92 x 61 cm)

Photo courtesy of Annu Vertanen, © Laatukuvat

Takuji Hamanaka, *Warping*, 2012, 28 x 22 in (71 x 56 cm)

Woodblock collage with gampi paper.

Photo courtesy of Takuji Hamanaka

APPENDIX 1

SUPPLIERS AND SUPPLIES

TRADITIONAL JAPANESE SUPPLIERS

The highly developed technologies that contributed to the quality of mokuhanga printing are an integral part of Japanese culture. As Japanese woodblock evolved, experts in small workshops produced supplies for every type of activity. These craftspeople produced tools and materials for traditional fine arts and crafts and specially designed carving tools, brushes, and other supplies for mokuhanga. Printers themselves made the baren, tokibo brushes, and some studio equipment. Brushes, blocks, cutting tools, pigments, sharpening stones, paper, and other supplies were made by specialists in their own workshops, each with a network of their own suppliers. This combined effort permitted the technical refinement of ukiyo-e prints, which were printed by specialists working within this larger complex.

Today, visits to the few remaining specialty shops in Tokyo and other cities provide an opportunity to understand the way interconnected small workshops would have functioned to provide the best materials for ukiyo-e printmakers. A few old-style brush and tool shops still offer supplies directly from the people who make them. Brush makers know intimately the differences between the hog, horse, deer, goat, and bear hair they fashion into brushes for a wide variety of functions. Toolmakers make tools to order and maintain long-term relationships with their clients by reshaping and sharpening chipped or dull tools.

SUPPLIES IN THE UNITED STATES

In the United States, increased access to quality Japanese supplies and paper is an important part of the growth of mokuhanga printmaking. Good materials are a significant consideration in achieving the most controlled results because of the refined nature of the technique. While it is possible to make some of the tools as the original printmakers did, it requires more skill and time than most artists possess. Until recently, it was difficult to buy quality supplies outside Japan or locate information about how to maintain Japanese tools. Today supplies are available through specialty importers as well as through Western websites.

Distributors of Japanese art and craft materials have often made a personal investment in the promotion of these culturally significant supplies. Aiko Nakane created a unique resource for artists in Chicago at Aiko's Art Materials, which closed in 2004. Japan Woodworker, now a part of Woodcraft Supplies, LLC, was created to make quality Japanese tools available and functioned as a location for woodworkers to share information and browse tools. The store has closed, but the Japan Woodworker catalog (japanwoodworker.com) still offers a nice selection of Japanese woodworking tools. Today Hida Tool & Hardware Company (hidatool.com) in Berkeley, California, takes pride in promoting the metalworking traditions of Japan by importing kitchen, garden, and woodworking tools, including a selection of printmaking tools not widely distributed in the States.

McClain's Printmaking Supplies

McClain's Printmaking Supplies is the most significant resource for artists with an interest in mokuhanga. Their informative catalog and broad offerings of tools specifically for mokuhanga have been important in the spread of Japanese woodblock in the United States since the 1980s. The original mail-order shop was named Robert McClain Japanese Prints and Supplies after its founder, the artist and art historian Robert McClain. With his wife, Yoko Matsuoka McClain (1924–2011), a professor of Japanese language and literature at the University of Oregon, he brought prints and printmaking supplies for fellow artists back from trips to Japan. In the late 1970s, he began promoting Japanese woodblock by selling prints and supplies. After his death in 1991, Yoko McClain sold the business to artist Elaine Chandler, who, in turn, sold it to her student Alexandra Prentiss in 2001.

Prentiss expanded the already informative catalog, created the extensive www.imcclains.com website, and began to offer materials for other printmaking processes as well. The printed catalog remains an indispensable resource for information on Japanese cutting tools, types of baren, and papers for mokuhanga, with detailed listings of names, sizes, and prices. It includes books and DVDs about Japanese woodblock technique. The website also offers how- to information, class offerings, illustrations of artists' work, and a listing of opportunities. Now with a staff of five, McClain's mail-order shop is located outside Portland, Oregon. Representatives attend national conferences to promote the materials in their catalog and are available to answer questions by telephone or email.

Begun as a labor of love by a couple dedicated to improving Japanese-American relations through an exchange of printmaking information, McClain's has blossomed into a substantial business, well known among printmakers, with an international clientele. Prentiss has preserved the sense of connection to her materials and her audience that maintains the vision of McClain's founders.

McClain's Printmaking Supplies

800-832-4264 or 503-641-3555

International orders: 00-1-503-641-3555

mail@imcclains.com

www.imcclains.com

PAPER DISTRIBUTORS IN THE UNITED STATES AND CANADA

Paper distribution is an important element in the production of mokuhanga prints, and paper is the most expensive material used in the process. The following individuals are dedicated distributors who have introduced fine Japanese papers in the West. Through their work, they help maintain papermaking traditions in Japan by giving craftspeople access to a wider audience. In addition to selling paper directly, they each distribute paper to additional outlets. These distributors appreciate the character of washi and have worked to educate artists about the benefits of using washi. The Japanese Paper Place and Hiromi Paper have particularly informative websites with detailed information about the history and manufacture of the washi they carry. These websites, with links to local paper retailers, are a good place to begin exploring the variety of washi available.

Hiromi Paper International

Hiromi Katayama recognized a growing interest in handmade paper in the United States when she was invited to teach a papermaking class at the University of California in Santa Barbara in the 1980s. She began importing Japanese papers in 1988, and today Hiromi Paper International is a nationally recognized distributor of Japanese paper with an inventory from papermills throughout Japan. In addition to her store in Santa Monica, Katayama supplies Japanese paper to art stores across the United States. Katayama has made it part of her mission to educate artists about the possibilities of working with washi. Her store specializes in paper for artists and can supply custom-made papers for special projects. The store offers classes and workshops on various art and craft techniques related to washi. Hiromi Paper International travels to many conferences, giving artists an opportunity to examine a variety of papers firsthand. Katayama has maintained close ties to the community of papermakers in Japan and has organized many trips to visit papermills there. Hiromi Paper carries many printmaking papers and a wide variety of decorative papers along with book and papermaking supplies. The yearly catalog is a concise introduction to the materials and processes of making washi and includes additional information about the professionals whose paper Katayama distributes. Hiromi Paper's website includes archives from Katayama's newsletter, *World of Washi*, of technical information, news about exhibitions, travel, classes, and special projects.

Hiromi Paper International, Inc.
2525 Michigan Avenue, #G-9
Santa Monica, CA 90404
310-998-0098
info@hiromipaper.com
store.hiromipaper.com

The Japanese Paper Place

Founded by Nancy Jacobi in 1982, the Japanese Paper Place is a paper wholesale and retail business in Toronto, Canada, that carries a wide variety of Japanese paper and specializes in the highest quality handmade washi. Jacobi speaks with passion about Japanese paper as an expression of Japanese culture, an environmentally renewable resource, an important material for artists outside Japan, and filled with creative potential. Her staff of ten is well informed and extremely helpful. The Japanese Paper Place invites Japanese papermakers to Toronto to demonstrate papermaking and in 2008 organized the World Washi Summit, a monthlong celebration involving hundreds of artists, galleries, and institutions. The Japanese Paper Place has promoted a better understanding of washi through its programming, sponsoring exhibitions, and offering lectures, demonstrations, and classes related to washi, including mokuhanga. In 2010 it hosted an exhibition of contemporary woodblock prints called *Mokuhanga and Beyond*, organized by artist Elizabeth Forrest in association with Open Studio's print event Printopolis.

Staff members at the Japanese Paper Place are meticulous in caring for paper and articulate in describing the respective properties of the huge variety of papers they carry, many made by papermakers with whom Jacobi has personal connections. Fine Paper Manager Sigrid Blohm is generous with her extensive knowledge about the wide range of papers in the warehouse, offering suggestions for papers appropriate for particular projects and providing paper samples on request. Artist user guides are available online, and artists can schedule paper consultations to discuss particular projects with the staff. Jacobi travels often to visit papermaking villages in Japan, keeping in close contact with her suppliers and tracking the fiber content and other characteristics of the papers she imports. She has organized trips to take visitors to meet the papermakers whose paper she carries. The Japanese Paper Place is primarily a wholesaler, selling in bulk to artists as well as to art-supply and paper stores. The staff is eager to make the best quality washi available

to artists and can suggest local retailers for artists who wish to buy smaller quantities of paper.

The Japanese Paper Place
887 Queen Street West
Toronto, Ontario M6J 1G5 Canada
416-703-0089
washi@japanesepaperplace.com
www.japanesepaperplace.com

Japanese Paper Place exhibition: *Mokuhanga and Beyond*, 2010 installation photo showing work by Mike Lyon, Elizabeth Forrest, and Daniel Heyman.
Photo: April Vollmer

Paper Connection International

Lauren Pearlman Sugita founded Paper Connection International in 1995 with the desire to provide a reliable supply of washi for artists. She imports a wide variety of Japanese papers from the Kochi Prefecture Handmade Paper Co-op Union. With a shop located in Providence, Rhode Island, Pearlman Sugita splits her time between there and Tokyo. She travels to promote her paper at conferences around the country. While her primary commitment is to Japanese paper, she has expanded her offerings to include papers from India, Nepal, China, and Korea. She also carries older stock from the now-closed shop, Aiko's Art Materials in Chicago. Pearlman Sugita and her staff at Paper Connection International provide knowledge and technical assistance on a wide range of papers and a multitude of uses.

Elizabeth Forrest, *Inappropriate Stones for a Rock Wall*, 2014, 20 x 24 in (50.8 x 61 cm) Mokuhanga on Uchiyama washi.

Toronto-based artist and educator Elizabeth Forrest studied with Akira Kurosaki in Kyoto during the time she lived in Japan from 1988 to 1998. She now teaches mokuhanga at the Japanese Paper Place and other locations. In addition to exhibiting her award winning prints, she has given many demonstrations herself and has organized significant mokuhanga exhibitions.

Photo courtesy of Elizabeth Forrest

Paper Connection International, LLC

166 Doyle Ave.

Providence, RI 02906-1645

877-434-1234 and 401-454-1436

paperwoman@paperconnection.com

paperconnection.com

Other Suppliers of Mokuhanga-Related Material

Other small businesses in the United States that have fewer direct connections to Japan also provide important materials for mokuhanga. Graphic Chemical & Ink Co., a family-run business specializing in printmaking supplies, participates in conferences and carries many less-expensive Japanese tools and papers. Art Guerra, the founder of Guerra Paint and Pigment in New York City, produces and sells pigments and artists' materials for making paints.

Kremer Pigment is a German pigment specialist with an outlet in New York City. Talas, a family-run business that specializes in library supplies, sells materials for hand bookbinding and conservation. In addition to a variety of washi for conservation, it carries many types of Japanese brushes, rice starch, animal hide glue, gold leaf, and mica useful to printmakers. New York Central Art Supply is noted for its extensive paper department; it is another small business with a commitment to providing reliable supplies to artists.

Addresses and websites for these and other shops that carry materials related to Japanese woodblock are listed at the end of this chapter.

SUPPLY LIST FOR MOKUHANGA

Useful tools and supplies depend on personal preference, budget, and level of experience. This outline offers suggestions for tools useful to those begin mokuhanga printing, with the most essential supplies listed first within each tool list.

Cutting Tools

1. Hangi-toh (Japanese knife)

For defining printing areas with accuracy, the most useful tool is the 6mm hangi-toh knife; the 4.5mm is also useful but more delicate. Sizes smaller than 4.5mm do not seem more advantageous for cutting small areas. The handle of the hangi-toh is often cut down so the thumb rests more easily on the end.

2. Maru-nomi (long-handled u-gouge)

A 15mm long-handled maru-nomi is essential for clearing large areas. The professional version has an oak handle with a ring at the end for use with a mallet. An excellent value is the maru-nomi with a plain magnolia handle and a hand-forged steel blade; a machine-forged version is even less expensive, but not as long lasting. These tools are sometimes called sosaku tools and are less costly to make than the professional tools designed to cut hard cherry blocks.

3. Kento-nomi (registration chisel)

The professional kento-nomi is a nicely balanced 15mm chisel designed to simplify cutting the kento registration notches. An inexpensive alternative is the long-handled 15mm chisel, called a *hira-toh*, whose handle can be cut to the length of the kento-nomi.

4. Aisuki (short-handled fan-beveled chisel)

This tool is designed for shallow carving, clearing, and smoothing small areas. The 4.5mm or 6mm aisuki is useful in a variety of situations.

5. Soai-nomi (long-handled fan-beveled chisel)

The soai-nomi has an arced tip (sometimes referred to as bullnose) and a long handle with a metal ring protecting the end. These large tools are relatively expensive, but all sizes are extremely useful for clearing and smoothing large

areas.

6. Komasuki (small u-gouge)

These professional two-part u-gouges are for clearing small areas and have extensible blades. Western u-gouges will function in a similar manner, but are held in a different way. Many sizes are available.

7. Sankaku-toh (v-gouge)

This tool was introduced to Japan from the West. It does not replace the hangi-toh for accuracy in cutting detail, but is used for texture and rapid cutting of sharply defined gouge marks.

Alternative Cutting Tools and Tool Sets

Many kinds of small tool sets are available; generally, Japanese sets will include a larger proportion of tools that are useful for mokuhanga.

The five-tool Power Grip set of laminated Japanese tools includes five sharp, long-lasting tools packaged in a neat plastic box that folds out and back to display the tools for use.

Power Grip five-tool set, a budget Japanese tool set. The names and prices of this set can vary. The tools have short blades that stay sharp for many years of cutting

Photo: Doug Schneider

The Printing Baren

Having a variety of printing tools is useful: a strong baren will print large areas and heavyweight paper effectively, whereas a lighter baren is more appropriate for thin lines and delicate paper. These are listed in order by relative price:

1. **Disk Baren**

   The white disk baren is widely available; replacement transparent shins cost about half the price of the tool. When the plastic bumps on the surface of the shin flatten, it can be removed and replaced. This option makes the disk baren easy to maintain.

2. **Murasaki Baren**

   The murasaki baren, with a purple twine cord inside, comes in several strengths. It is similar in feeling to a hon (true) baren and also must be re-covered regularly with a new takenokawa.

3. **The Ball-Bearing Baren**

   The ball bearing baren is easily maintained by oiling with camellia oil. This tool is especially useful for heavy paper. The strongest types have the fewest balls; a tool with many bearings will print more evenly.

4. **Hon Baren**

   The hon baren, or true baren, comes in a variety of strengths. All cost the better part of a thousand dollars and must be special ordered. They should be regularly re-covered when they develop holes or splits in the cover to protect the interior shin coil.

Printing Brushes

For efficiency, color is applied to large areas with a large brush and small areas with a small brush. It is difficult to clean brushes completely: brushes used for black should be kept separate so the color does not muddy lighter colors. It is useful to have a variety of brushes on hand; good brushes will hold moisture longer, apply color more evenly, and are less likely to leave hairs on the block.

Printing brushes are listed from least to most expensive:

1. Substitute Printing Brushes

Western stencil brushes, natural hair shoe brushes, and natural bristle utility brushes cut short can make inexpensive substitutes or additional printing brushes.

2. Surikomi bake (Japanese stencil brush)

Made of mixed deer and hog hair, these brushes are less expensive than true hanga bake; 60mm is the largest size.

3. Hanga bake (printing brush)

Made of stiff hair, these long-handled brushes are more expensive than surikomi bake but longer lasting; they are also limited in size, designed for making smaller size prints.

4. Maru bake (round-cornered brush)

These big, flat brushes are designed for applying color to large areas, appropriate for use on large blocks. They are longlasting because the horsehairs they are made of are folded in half and wired into the flat handle. The tips of the bristles must be softened by burning and flagging before use.

Water Brushes

The mizu bake (water brush) is a wide brush used to apply a thin layer of water to washi to dampen it for printing. The dosa bake (dosa brush) is a similar but slightly stiffer brush for applying sizing. Wide natural hair brushes can be substituted, though the more expensive Japanese handmade brushes generally hold more water and apply moisture more evenly. Smaller hake brushes are useful for a variety of tasks.

Wood

Shina plywood from Japan is lightweight and can be smoothly carved. Made from a type of basswood that has little grain, it does not warp very much when wet. Its plies are glued with a thin layer of waterproof glue that is easily carved through; it is economical because both sides can be used. Other woods, both plank and plywood, can be purchased at local lumber shops, at varying prices.

Other Supplies

1. Ategami paper (back paper)

A sheet from a roll of this smooth water-resistant paper helps the baren slide across the back of the printing paper during printing. Baking parchment paper is an alternative; tracing paper, though not water-resistant, will help in printing damp paper, removing some of the excess moisture.

Ategami paper for protecting washi during printing.

Photo: Doug Schneider

2. Baren wata (baren pad)

These are felted wool pads which the oiled baren rests during printing; a folded cloth resting on a sticky pad can be substituted.

3. Bench hook

This is a stop that holds the block steady during intensive carving. It is made from a flat piece of wood with strips of wood attached to the top and bottom ends. One end hooks down against the carving table and the other hooks up to support the block as the gouge cuts and forces it away

from the carver. Bench hooks should be lightweight without nails or screws that might scratch a block.

4. Camellia oil

Oil from the tea plant (*Camellia sinensis*) helps the baren slide smoothly during printing; mineral oil can be substituted.

5. **Magnifying glass**

   A low-resolution lens is helpful to view details of blocks and prints.

6. **Nori (rice paste)**

   This translucent paste comes ready-made in a tube or can easily be made fresh from rice starch; methylcellulose is a substitute.

7. **Takenokawa (baren sheaths)**

   These are bamboo sheaths used to re-cover the baren when the surface develops holes through use.

8. **Tool roll**

   A canvas or leather tool roll will protect the delicate edge of cutting tools. A bamboo roll can also be used, or tools can be wrapped in paper or their ends inserted into plastic tubing.

LIST *of* ADDITIONAL SUPPLIERS FOR MOKUHANGA

Daniel Smith

PO Box 84268
4150 First Avenue South
Seattle, WA 98124-5568
www.danielsmith.com

Graphic Chemical and Ink Co.

728 North Yale Avenue
Villa Park, IL 60181
800-465-7382 or 630-832-6004
www.graphicchemical.com

Guerra Paint and Pigment

510 East 13th Street
New York, NY 10009
212-529-0628
www.guerrapaint.com

Hida Tool & Hardware Co.

1333 San Pablo Avenue
Berkeley, CA 94702
800-443-5512 or 510-524-3700
www.hidatool.com

Japan Woodworker

(since 2012 part of Woodcraft Supply, LLC)
406 Airport Industrial Park
Parkersburg, WV 26104-9778
800-537-7820
www.japanwoodworker.com

Kremer Pigments Inc.

247 West 29th Street
New York, NY 10001
212-219-2394
www.kremerpigments.com

Lee Valley Tools, Ltd.
PO Box 1780
Ogdensburg, NY 13669-6780
800-871-8158 and 613-596-0350
www.leevalley.com

New York Central Art Supply
62 Third Avenue @ 11th Street
New York, NY 10003
800-950-6111 or 212-477-0400
www.nycentralart.com

Renaissance Graphic Arts
69 Steamwhistle Drive
Ivyland, PA 18974
888-833-3398 and 215-357-5705
www.printmaking-materials.com

Talas
330 Morgan Ave
Brooklyn, NY 11211
212-219-0770
www.talasonline.com

The Stables Print Studio
The Kean Ball-Bearing Baren can be purchased from artist Roselyn Kean.
27 Crosslands Road
Galston, New South Wales 2159, Australia
rozkean@bigpond.com

JAPANESE WEBSITES

Smaller paper associations often have programs of interest, but the largest and most accessible distributor for English speakers is Ozu Washi in Tokyo, a shop that has been selling washi since 1653 and maintains a museum about the history of washi as well as offering classes and seminars.

www.ozuwashi.net/english

Woodlike Matsumara is a materials distributor who began his business supplying wood to artists and now carries a variety of mokuhanga supplies.

www.woodlike.co.jp/zen3/

Hidehike Goto is an artist (Tolman Collection, Tokyo) as well as a master baren maker, whose book on the baren (in Japanese) is listed in the bibliography. He has demonstrated his skill at many conferences and makes barens by special order.

baren50@mh.scn-net.ne.jp

www.scn-net.ne.jp/~kikuhide/

Holbein Artist Materials offers quality Japanese-made supplies, and is noted for its watercolors.

www.holbeinhk.com

Henrik Hey, *The Dive*, 2014, 17 x 12.6 in (43 x 32 cm)

The Netherlands has a special connection to Japan dating back to seventeenth century that continued with the participation of many Dutch artists in the Nagasawa Art Park program.

Photo courtesy of Henrik Hey

APPENDIX 2

RESOURCES AND OPPORTUNITIES: CLASSES, RESIDENCIES, CONFERENCES

THE PRINTMAKING COMMUNITY

Printmaking lends itself to community involvement because collaboration is a natural part of the process of making prints. In traditional mokuhanga, prints were the product of a closely coordinated group that included the publisher, artist, carver, and printer working in separate shops. Today, print workshops provide a location where artists who print their own work can share space, equipment, materials, and technical information. Since it doesn’t require a flatbed press, mokuhanga can be done in a home studio, but participation in a workshop program allows artists to take advantage of a supportive network, participate in educational and residency programs, and promote their work through exhibitions.

Even without sharing studio space, making connections within the community of printmakers is a way to meet fellow artists, master printers, educators, craftspeople, suppliers, gallerists, and art historians. The enthusiasm of fellow artists is a significant part of what makes the process of making prints enjoyable, and shared technical information is essential to learning traditional methods as well as exploring new ideas. These connections can lead to exhibitions, residencies, travel, and other opportunities. This chapter includes resources for technical information, workshops that offer mokuhanga classes, printmakers’ conferences, and suggestions for artist residencies that include printmaking.

ONLINE RESOURCES

The resurgence of interest in this nineteenth-century technique has been largely made possible by the tools of the twenty-first century. Information on the technique, demonstration videos, printshops that offer classes, websites for supplies, and information about conferences and residencies related to Japanese woodblock are all readily available on the internet.

David Bull and Baren Forum

In 1997, David Bull, a Canadian living in Japan, began the Baren Forum discussion group, along with his own website about Japanese woodblock. The forum emphasized sharing technical information about process, materials, and tools and provided a way for artists to connect with others interested in this specialized corner of the print world. Lasting friendships and collaborations were made during the heyday of the Baren Forum, with more than five hundred members who contributed and volunteered. Print exchanges 1 to 30 are archived at the Spencer Museum of Art at the University of Kansas and later ones at the Museum of Art at the University of Kentucky in Lexington. With the growth of individual websites, blogs, and social network sites, the forum no longer fulfilled the same need, and in 2012, print exchange discussions moved to Yahoo. The Friends of Baren Forum Facebook page is now the site for the forum's social network.

While the forum has become less active, David Bull's personal website has continued to grow and remains a valuable resource with a useful encyclopedia of mokuhanga information, copies of out-of-print books, and interviews with Japanese master craftsmen. He is currently hand-carving woodblocks from illustrator Jed Henry's digitally made images for the popular print series *Ukiyo-e Heroes*.

David Bull's website: www.woodblock.com

Baren Woodblock Print Exchange #27: *Mythical Beasts*, 2006, 10 x 10 in (25.5 x 25.5 cm)

Coordinated by artist Bea Gold.

Photo: Scott Dolan

General Printmaking Resources

www.printeresting.org

"The thinking person's favorite resource for interesting print miscellany"

www.printalliance.org

A nonprofit consortium of printmakers' councils

inkteraction.ning.com

A networking site for printmakers worldwide

www.printmakinglinks.com

Links to printmaking resources

Miscellaneous Mokuhanga-Related Sites

The Adachi Institute of Woodcut Prints

https://www.adachi-hanga.com/en_ukiyo-e/index.htm

Art Gallery of New South Wales, Ukiyo-e woodblock with Keizaburo Matsuzaki

www.youtube.com/watch?v=t8uF3PZ3KGQ

Atelier Takahashi Tokyo, Japanese Traditional Wood-Block Print

www.takahashi-kobo.com

Katie Baldwin and Yoonmi Nam

teachingmokuhanga.weebly.com

Annie Bisset's artist blog

woodblockdreams.blogspot.com

Brodbeck mokuhanga film

www.marybrodbeck.com/becoming-made/

Mary Brodbeck, *Perched*, 2011, 21 x 14” (53 x 35.5cm)

This Michigan artist studied in Tokyo with Yoshisuke Funasaka in 1998 on the prestigious Bunka-cho fellowship. Her 2014 short film about her work includes interviews with artists and master printers.

Photo courtesy of Mary Brodbeck

The Fitzwilliam Museum, translations of poems in Utamaro prints
www.fitzmuseum.cam.ac.uk/gallery/utamaro/

Elizabeth Forrest, mokuhanga information

www.elizabethforrest.ca/mokuhanga

International Print Center gallery, New York
www.ipcny.org

Japanese Woodblock Print Search by John Resig
ukiyo-e.org

Keiko Hara installation at Perimeter Gallery
perimetergallery.com/artwork/3439051_Topophilia_Ma_and_Ki_installation

Kyoto International Woodprint Association (Richard Steiner)
www.kiwa.net

Tony Johansen, East Sydney Academy Of Art
www.paintmaking.com

Lyon Collection of Japanese Woodblock Prints
woodblockprints.org/lyon_collection

Northern Editions aboriginal printmaking, Australia
www.northerneditions.com.au/video3

Ronin Gallery, New York
www.roningallery.com/education

Asao Shimura, book maker, papermaker
www.facebook.com/asao.shimura.7

The Singapore Tyler Print Institute
www.stpi.com.sg

The Tolman Gallery, Tokyo
www.tolmantokyo.com

Martin Vinaver, artist, toolmaker
www.vinaver.com

Wesleyan University/Keiji Shinohara
learningobjects_devel.wesleyan.edu/blockprinting

PRINT AND PAPERMAKING MAGAZINES

Art in Print
www.artinprint.org

Hand Papermaking Magazine
www.handpapermaking.org

Contemporary Impressions
www.printalliance.org

Printmaking Today
www.printmakingtoday.co.uk

CLASSES

Independent print associations are important places for the dissemination of information about Japanese woodblock for artists. Most of the organizations listed below offer workshops, though some, like Boston Printmakers and the California Society of Printmakers, are membership groups with a variety of print programs. A few printshops offer regular mokuhanga classes, including the Lower East Side Printshop and the Manhattan Graphics Center in New York City, and at Zea Mays Printmaking in Massachusetts.

ARPRIM, Centre d'essai en art imprimé, Montreal, Canada
www.arprim.org

Atelier Circulaire, Montreal, Canada
www.atelier-circulaire.qc.ca

Atelier de l'Ile, Val-David, Canada
www.atelier.qc.ca

Book and Paper Intensive, at Ox-Bow, Saugatuk, Michigan
www.paperbookintensive.org

Boston Printmakers, Boston, Massachusetts
www.bostonprintmakers.org

California Society of Printmakers, San Francisco, California
www.caprintmakers.org

Center for Book Arts, New York, New York
www.centerforbookarts.org

Center for Contemporary Printmaking, South Norwalk, Connecticut
www.contemprints.org

Donkey Mill Art Center, Holualoa, Hawaii
www.donkeymillartcenter.org

Druckstelle Printmaking Studio, Berlin, Germany
www.druckstelle.info/en/

Frogman's Print Workshop, Vermillion, South Dakota

www.frogmans.net

Highpoint Center for Printmaking, Minneapolis, Minnesota
highpointprintmaking.org

Honolulu Printmakers, Honolulu, Hawaii
www.honoluluprintmakers.com

Hook Pottery Paper, LaPort, Indiana
www.hookpotterypaper.com

Josephine Press, Santa Monica, California
www.josephinepress.org

Kala Art Institute, Berkeley, California
www.kala.org

Los Angeles Printmaking Society, Los Angeles, California
www.laprintmakers.com

Lower East Side Printshop, New York, New York
www.printshop.org

Manhattan Graphics Center, New York, New York
www.manhattangraphicscenter.org

MakingArtSafely, Santa Fe, New Mexico
www.makingartsafely.com

Malaspina Printmakers, Vancouver, British Columbia, Canada
www.malaspinaprintmakers.com

Matt Brown Woodblock Prints, Lyme, New Hampshire
www.ooloopress.com

Matt Brown, *Evening on Lake* Winnipesaukee, 2014 16.5 x 7 inches (42 x 17.8 cm)

Photo courtesy of Matt Brown

The Mill Paper and Book Arts Center, Rhinelander, Wisconsin
www.themillbookarts.org

Monterey Peninsula College Printmakers, Monterey, California
www.mpcprintmakers.org

New Grounds Print Workshop, Albuquerque, New Mexico
www.newgroundsprintshop.com

Open Studio Toronto, Toronto, Canada
www.openstudio.on.ca

Peregrine Press, Portland, Maine
www.peregrinepress.com

Penland School of Crafts, Bakersville, North Carolina
www.penland.org

Pittsburgh Print Group, Pittsburgh, Pennsylvania
www.pittsburghprintgroup.com

Print Arts Northwest, Portland, Oregon
www.printartsnw.org

Printmakers of Cape Cod, Teaticket, Massachusetts
www.printmakersofcapecod.org

Printmaking Center of New Jersey, Branchburg, New Jersey
www.printnj.org

Richard Steiner's Kyoto International Mokuhanga School, Kyoto, Japan
www.mokuhanga-school.net

Robert Blackburn Printmaking Workshop, New York, New York
www.efanyc.org/rbpmw

Seattle Print Arts, Seattle, Washington
www.seattleprintarts.org

Zea Mays Printmaking, Florence, Massachusetts
www.zeamaysprintmaking.com

RESIDENCIES

Residencies offer artists an opportunity to work undisturbed. Some, like the MacDowell Colony in New Hampshire and the Virginia Center for Creative Arts, are established centers with long histories that serve a large number of artists, providing living and work space and meals, where artists can retreat for weeks or months to focus on making new work. Other residencies are temporary or short-term; some provide housing but not meals; some provide workspace only; some are focused on specific types of work.
Financial arrangements vary: some residencies are fully funded; some are paid for by the artist. Few residencies specifically offer training in mokuhanga, but many have printmaking studios and all offer valuable time to pursue creative artwork. One of the advantages of mokuhanga is that it can be practiced at a residency without a dedicated printmaking workshop since neither press nor solvents are required.

Japanese Mokuhanga Residency

The residency programs of Keiko Kadota have changed the course of mokuhanga outside Japan. In 1997 she founded the Nagasawa Art Park Artist-in-Residence program to offer training in creative mokuhanga. This program was initiated with the encouragement of Tadashi Toda, the master printer who worked with Crown Point Press artists in the 1980s. When Crown Point Press ceased production in Japan, Toda continued to promote Japanese-international collaboration by teaching at the residency. After his death in 2004, the program continued with other eminent master craftsmen, including carvers Shunzo Matsuda and Shoichi Kitamura and printers Shinkichi Numabe and Toru Ueba. Located on rural Awaji Island in Hyogo Prefecture, the program offered resident artists an immersion in Japanese life. They worked at a local community center with a traditional tatami mat floor and shoji screens, sitting at low tables. The room was lit through shoji paper screens, with the raking light optimal for viewing prints on washi. Participants worked on their own between classes with visiting master printers and carvers.

In the twelve years between 1997 and 2009, eighty-three artists participated in the program, including Katie Baldwin, Daniel Heyman, Karen Kunc, and Yoonmi Nam (United States), Henrik Hey and Nel Pak (Netherlands), Dariuz Kaca (Poland),

Elspeth Lamb (UK), Eva Pietzcker (Germany), and Michael Reed (New Zealand). Many of the artists who participated in the residency teach, so their training influenced many additional artists.

In 2009 government funding for the Nagasawa Art Park Program was discontinued, but a new artist-in-residence program, Mokuhanga Innovation Laboratory, known as MI-LAB opened in November 2011. Located in Yamanashi Prefecture at the foot of Mount Fuji, it is located a few hours drive west of Tokyo. MI-LAB offers a range of training programs, as well as instruction in related techniques such as paper mounting. These residencies are notable for their educational focus and broad international reach. Along with an appreciation for creative modern art, Director Keiko Kadota promotes a respect for Japanese craft traditions, with an emphasis on an understanding of washi. A unique characteristic of the residency is that foreign artists learn about the cultural significance of mokuhanga within Japanese culture.

A frequent contributor to the educational programs at MI-LAB, master carver Shoichi Kitamura runs his own small residency program in Kyoto. He can be reached to arrange classes or demonstrations through his email: show.1-k@nifty.com

General Residency Information

AIR-J, online database of artist-in-residence programs in Japan

www.en.air-j.info

Alliance of Artist Communities, an association of artist communities and residencies

www.artistcommunities.org

DutchCulture/TransArtists, an artist in residence guide

www.transartists.org

Res Artists, the worldwide network of artist residencies

www.resartis.org

Residencies with Printmaking Facilities

Anderson Ranch Arts Center, Snowmass Village, Colorado

www.andersonranch.org

Art Studio Itsukaichi, Japan

www.city.akiruno.tokyo.jp/link/artstudio

The Banff Centre, Banff, Canada
www.banffcentre.ca

Bluseed Studios, Saranac Lake, New York
www.bluseedstudios.org

Center for Contemporary Printmaking, Norwalk, Connecticut
www.contemprints.org

Constellation Studios, Lincoln, Nebraska
www.constellation-studios.net

Karen Kunc, building mural on exterior of Constellation Studios building, Lincoln, Nebraska.

Photo courtesy of Karen Kunc

Frans Masereel Centrum, Kasterlee, Belgium
www.fransmasereelcentrum.be/en

Kala Art Institute, Berkeley, California
www.kala.org

La Cieba Gráfica, Veracruz-Llave, Mexico

www.laceibagrafica.org

MI-LAB, Yamanashi Prefecture, Japan
www.endeavor.or.jp/mi-lab

Venice Printmaking Studio, Venice, Italy
www.veniceprintmaking.it

Vermont Studio Center, Johnson, Vermont
www.vermontstudiocenter.org/residencies

Women's Studio Workshop, Rosendale, New York
www.wsworkshop.org

Zea Mays Printmaking, Florence, Massachusetts
www.zeamaysprintmaking.com

Seventeen artist-in-residence programs participated in the AIR roundtable and exhibition at the second International Mokuhanga Conference sattelite space. Keiko Hara represented Whitman College Mokuhanga Center with an installation of her prints.

Photo: April Vollmer

MI-LAB residency studio, Yamanashi, Japan, 2013.

Photo: April Vollmer

PRINTMAKING CONFERENCES

The international conference dedicated to promoting Japanese woodblock is the International Mokuhanga Conference, the IMC, held every three years. The First International Mokuhanga Conference in Kyoto and Awaji drew more than one hundred artists and educators from twenty two countries. Akira Kurosaki and Tetsuya Noda served as honorary board members and their work was exhibited during the conference. The 2014 conference in Tokyo drew over 150 participants, with Seiichiro Miida, current head of woodblock printmaking at Tokyo University of the Arts, overseeing the academic portion, which included demonstrations, five keynote speakers, and several excellent exhibitions. Keiko Kadota organized a satellite space at the 3331 Arts Chiyoda alternative art space with a trade fair of paper and tools, and an Artist-in-Residence showcase with open forum discussions.

The Southern Graphics Council International conference, held every March, was founded in South Carolina in 1972, and has grown to be the largest annual meeting of printmakers in the U.S., held in a different city each year. The Mid-America Print Council sponsors smaller biennial conferences in the central states. At these conferences, printmakers see work at exhibitions organized by the local host institution and view invited exchange portfolios. Information about residencies, exhibition opportunities, materials and other printmaking news is available. Keynote speakers include well-known artists and museum professionals as well as print publishers, and artists show their current work at open portfolio sessions. A significant part of each conference is the materials fair, where suppliers bring samples, answer questions and take orders.
Impact International Multi-disciplinary Printmaking Conference, held every two years, was first organized in Bristol, U.K., in 1999. Since then, Impact has taken place in Finland, South Africa, Germany, Poland, Estonia, Australia, Scotland, and China. Impact promotes international connections between printmakers, providing a new location every other year where they can meet and share information.

Printmaking Conferences

Impact

www.uwe.ac.uk/sca/research/cfpr/dissemination/conferences/impact

International Mokuhanga Conference
www.mokuhanga.jp

Mid-America Print Council
www.midamericaprintcouncil.org

Southern Graphics Council International
sgcinternational.org

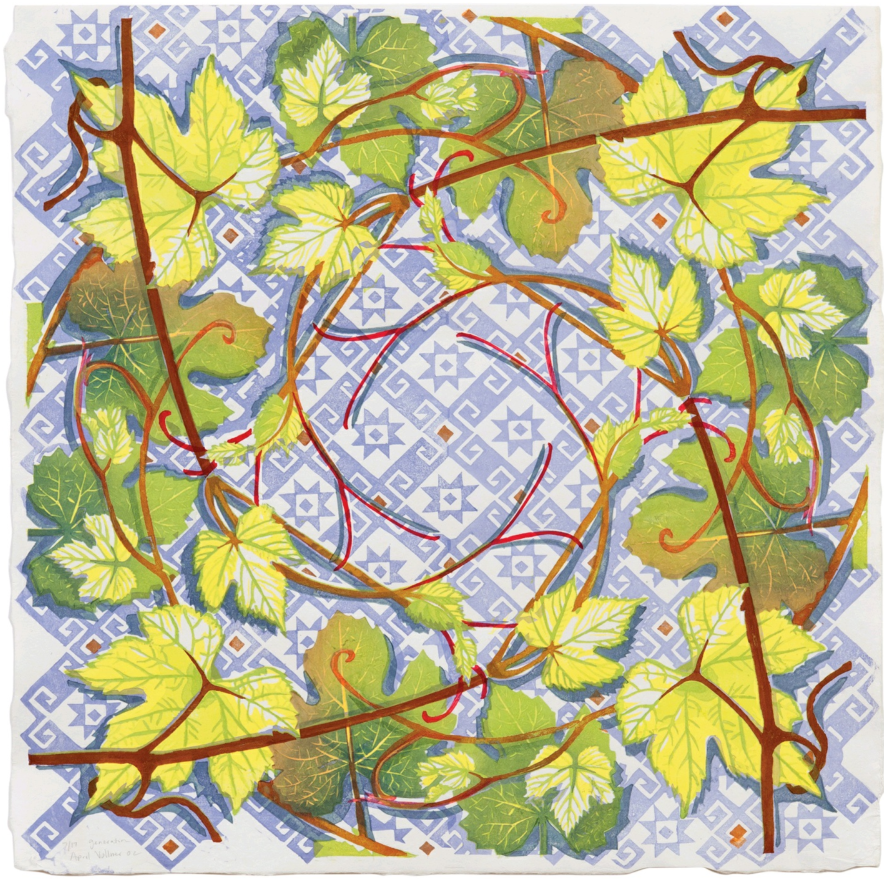
Related Conferences
College Art Association
www.collegeart.org

College Book Art Association
www.collegebookart.org

Dard Hunter Papermaking Conference
www.friendsofdardhunter.org

Surimono International, Woodblock and Poetry, 2009, 10 x 7 in (25.4 x 17.8 cm), exchange portfolio by the Nagasawa group, organized by Dutch artist Nel Pak.

Photo: Scott Dolan



April Vollmer, *Generation*, 2012, 27 x 27 in (68.5 x 68.5 cm)

Photo: D. James Dee

ACKNOWLEDGMENTS

Many generous people have shared their expertise with me to give me an understanding of mokuhanga and its place in Japanese culture.

I am hugely indebted to Keiko Kadota, who first brought me to Japan in 2004 to participate in a portion of the Nagasawa Art Park Program. In 2010 she invited me to Japan again to work on *Japanese Woodblock Print Workshop* as the first Mokuhanga Innovation Laboratory researcher/writer. The month-long program was supported by the Japanese Agency for Cultural Affairs. I am also grateful to her for her work organizing the International Mokuhanga Conferences in 2011 and 2014, which have allowed me to maintain contact with the international community of artists practicing mokuhanga.

During each of my visits to Japan, I also benefitted from the generosity of Professor Tetsuya Noda. We met in 1998 when he gave a mokuhanga class at Columbia University's LeRoy Neiman Center for Print Studies. In 2004 I visited him at Geidai University to meet professional printers and to see his studio. In 2013, after Noda's retirement, I was grateful to be invited to demonstrations at Tokyo Geidai again by the new head of woodblock printmaking, Seiichiro Miida, also an accomplished artist.

During my writing residency at MI-LAB in 2013, I visited the Saitama Traditional Crafts Center and Ogawa Washi Museum in Ogawa and the nearby Kubo Shotaro Washi Factory. I thank Mr. Kubo for showing me his traditional papermaking studio and taking time from his busy day to answer many questions. I further refined my understanding of washi production during a one-day papermaking workshop at Ogawa town's pleasant Washi Taiken-Gakushu Center (Papermaking Training Center) managed by the Ogawa Washi Kyodokumiai (Washi-Makers Association), following the 2014 International Mokuhanga Conference. I thank the Association for organizing the special workshop, and expert papermaker Hisako Uchimura and her associates for their assistance.

Also in Japan, I thank Richard Steiner who was kind enough to buy a hon baren for me the first time I met him in Kyoto in 2004. David Bull, Sarah Brayer, and others opened their studios to me. Accomplished artist Choichi Nishikawa rescued me from a typhoon and took me out for chicken feet and beer with his Tokyo printmaker friends. He has waited patiently on more than one occasion while I

learned about washi and introduced me to many fine Japanese printmakers. Artist Yoshie Uchida showed me the temples at Nikko and re-covered my baren on a visit to New York, as did Hiroshi Maruyama on another occasion.

Much of the photography for this book was accomplished during a one-week residency in January 2014 at the Wyeth Family Studio Art Center at the University of Maine, Orono, organized by artist Susan Groce, director of the printmaking department. Her hospitality and interest in nontoxic printmaking made my work in Orono a pleasure. She gave me studio space to photograph many of the step-by-step procedures with patient photographer Matthew Smolinsky. In New York, photographer Doug Schneider braved a snowstorm to shoot in my fifth-floor walkup studio. Go Sugimoto made a special trip to Japan Society to photograph the important Munakata print there. I thank Sarah Smith, Dylan Kelly, and Jessica Raimi for many preliminary photographs taken during my struggle to understand what would be needed for the book. Later in the project, Scott Dolan cheerfully filled in missing photographs and helped me understand some of the organizational features of Lightroom.

I thank Andrew Stephens of the Chazen Museum of Art at the University of Wisconsin–Madison, who kindly took the time to show me prints in that collection when I visited Madison and has generously shared his expertise by correspondence since. I am grateful to the museum for providing several of the illustrations of ukiyo-e prints from their excellent collection for this book. I also thank Mike Lyon for permission to use images from his personal collection of ukiyo-e prints.

I thank my friend the historian Katherine Tsiang from the University of Chicago, who has given me valuable insights into Asian culture over many years. Traveling with her to India in 2008 gave me a glimpse of the complex cultural mix that traveled across the silk routes in ancient times, laying the foundation for mokuhanga.

The manuscript was vastly improved by Jessica Raimi’s editorial review. She clarified many ideas and provided much encouragement. John Yamaguchi brought me many books on Japanese art and culture and took me to hear an illuminating lecture by scholar Julia Meech at Columbia University. Mark Feldman reviewed portions of the book and made helpful suggestions. The manuscript also benefitted from specialist readers: scholar Claire Cuccio reviewed the historical section and helped me put mokuhanga in context with her deep understanding of Japanese culture; artist Roslyn Kean provided input on printing issues. Artist Robynn Smith

reviewed the residency information and Carol Wax the print documentation information. I am especially grateful to Mina Takahashi, the editor of Hand Papermaking, who helped me immensely with technical descriptions in the chapter on washi. Errors remain my own.

I am especially indebted to the many talented artists who have contributed photographs of their artwork to this book. I have focused on developments outside Japan, including just a few Japanese artists with international influence such as Tetsuya Noda, Akira Kurosaki, and Ayomi Yoshida. Many of the other artists whose work illustrates this book trained with these giants; I appreciate the generosity of all in sharing photographs of their work. The inclusion of their original prints has allowed me to illustrate the wide creative possibilities of mokuhanga with exceptional examples.

Thanks to: Suezan Aikins, Katie Baldwin, Annie Bisset, Matt Brown, Patterson Clark, David Curcio, Brian Curling, Stella Ebner, Kevin Frances, Paul Furneaux, Julian Gatto, Jacqueline Gribbin, Susan Groce, Takuji Hamanaka, Keiko Hara, Henrik Hey, Daniel Heyman, Roslyn Kean, Irena Kecˇkeš, Ralph Kiggell, Karen Kunc, Kari Laitinen, Mike Lyon, Karen Helga Maurstig, Seiichiro Miida, Tuula Moilanen, Hiroki Morinoue, Yoonmi Nam, Florence Neal, Miwako Nishizawa, Bill Paden, Serena Perrone, Eva Pietzcker, Ramona Sakiestewa, Rebecca Salter, Michael Schneider, Ursula Schneider, Melissa Schulenberg, Yasu Shibata, Keiji Shinohara, Tomiyuki Suketa, Annu Vertanen, and Neil Welliver.

I thank artist Jackie Battenfield for her encouragement and her introduction to my initial editor Leila Porteous, whose belief in the project first made me think it was possible to write this book. Copyeditor Laura Starrett and proofreader Elizabeth Beller organized a multitude of technical details with grace. Finally and most significantly, I thank my editor Kaitlin Ketchum and the dedicated team at Watson-Guptill and Ten Speed Press, including publicist Natalie Mulford, and the amazing designer Nami Kurita, who made the book a reality with patience and professionalism. These talented people helped me transform my class notes designed for specialist printmakers into an accessible book relevant to a much wider audience.

Even with the support of these accomplished people, and many others besides, I am sure errors remain. This book was conceived as a how-to workshop but addresses many wider concerns: the long and complex evolution of culture, the relationship of art and craft, and the place of the handmade in the digital age. My enthusiasms

are broad, and writing this book has allowed me to explore many areas of interest where I am not an expert. I thank the many generous specialists who have helped me in this research. I hope that in addition to providing artists with a useful foundation for making mokuhanga prints, this book will stimulate others to look beyond cultural boundaries toward a more inclusive global perspective.

Tomiyuki Suketa, *April (Fourth Month)*, 2013, 9.75 x 7 in (24.8 x 17.8 cm)

This refined etching with chine collé is an imaginary portrait of April Vollmer as a baren made by this Japanese artist after a visit to New

York.

Photo: Scott Dolan

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APRIL VOLLMER is a New York artist who studied mokuhanga after receiving her Master of Fine Arts in printmaking at Hunter College. Her work has been shown widely and she teaches regularly at the Lower East Side Printshop. She has participated in many residencies, including the Nagasawa Art Park in Japan; and was on the board of the first and second International Mokuhanga Conferences.

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