HANDMADE
PAPER
AND
PRINTS

Organized by Buffalo Prints and Paper

Circulated by The Gallery Association of New York State

HANDMADE PAPER AND PRINTS

Papermaking at Buffalo State College came about by accident and grew of necessity.

For many years, the printmaking area of the Department of Fine Arts had been involved with the production of editions and portfolios of prints by area artists and the students of the B.F.A. degree program in printmaking. To expand upon the existing capabilities of the program, Frank C. Eckmair, went to New York City for a workshop on bookbinding. As a result of this interest, he found himself in the middle of Wisconsin making paper by hand. Four months later after considerable research, numerous contacts with the commercial papermaking industry, and additional conferences on handmade paper, the first rough sheets were made at Buffalo Prints and Paper, a name later adopted by the three printmaking faculty of the college.

The original intent was to produce paper on which to print. Imported mold-made papers are expensive, and the uses to which they can be put are limited by the interests of the craftsmen who design them. The papermaking facility at Buffalo allows a printmaker to supervise his product from the earliest stages. Today Buffalo Prints and Paper operates a papermill with four paper beaters, over two hundred papermaker's felts, eight vats, two wet presses, and a drying system which produces perfectly air-dry sheets of paper within twelve to eighteen hours. This experimental facility has expanded its range recently to include paper casting, pulp "painting," three-dimensional paper fabrication, and the

design and formulation of specialty papers. Since the addition of this handmade facility, portfolios and books continue to be produced at Buffalo State but with a dimension heretofore impossible.

Most helpful in this expansion were those who for years have continuously supported the development of this medium without acclaim: Dard Hunter, Douglas Howell, Laurence Barker, William Morris, and Walter Hamady. Special recognition is due Joe Brown of the Rochester Institute of Technology, for his knowledge of the testing of paper; Robert Hauser of Busyhaus, Inc., for his knowledge of the preservation of paper; and Joe Wilfer of the Upper U.S. Papermill, for his enthusiasm and knowledge of the making and drying of handmade papers. From within the commercial paper industry came contributions by the following which are gratefully acknowledged: Albany Felt, Atlanta Wire, Hayck Felt, International Paper, Lockport Felt, Mead Paper, Parsons Paper, Rising Paper, the Syracuse Pulp and Paper Foundation, and the Institute of Paper of Appleton, Wisconsin.

ABOUT PAPER...

It has been 150 years since the demise of the handmade paper mills in this country. The vastly increased demand for paper and the requirements of its commercial and private users left the small handmade paper mill, producing 750 sheets per day under the best of circumstances, with an increasingly expensive specialty item and very little market.

Today each person in this country uses more than 400 pounds of paper per year. This increase in the use of paper was made possible by several factors — the major ones being the development of the technology for refining wood pulp fibers and the invention of the Fourdrinier machine, a mechanical means for producing paper at a high rate of speed. Coupled with these improvements in the process of making paper were the inventions of lithography and the development of the iron press, both of which contributed significantly to the increase in demand for paper by creating a virtual explosion in the communications media. The new uses of paper for packaging further taxed the resources of the industry.

Handmade techniques can produce neither appropriate quantities nor qualities of papers for most of these new uses. The small mills had depended on cotton, always in relatively short supply, and an essential manual process. The new mills, drawing on readily available sources of wood for their raw material, use high speed machines to produce 14 foot rolls of paper at 1500 feet per minute. Today, there are only two small commercial mills in this country producing an expensive specialty paper, if their productions are too limited and expensive for most commercial uses, they are likewise too large for very specialized use. The smallest possible order is one and a half tons of a given item.

In the past twenty years, however, the small handmade paper mill has been revived by artists and craftsmen interested in producing limited amounts of highly individualized papers for very particular uses. In fact, paper itself, as an artistic production and not simply a medium for other arts, is becoming the focus of some attention. The revival of interest in the small mills has encouraged more than just the specialist to understand the basics of what is essentially a very simple process.

Paper is the physical binding of cellulous fibers in matted layers. The first step uses 98 per cent water and 2 per cent fibers. The process moves to its final stages with decreasing percentages of water until the sheet is theoretically dry. It is a simple process that may be accomplished in minutes, but it is complicated in an extraordinary variety of ways by the specifications of the sheet desired as an end result. Choices must be made with respect to the fibers used as well as the need for preparation by washing, bleaching, and cooking. Traditionally the pulp for handmade papers came from linen, hemp, and cotton, while in today's highly mechanized process, wood and a number of synthetic materials without any cellulose are being used.

After soaking in water, the pulp is further prepared by mascaration: it may be beaten with a wooden hammer,

whipped up with a kitchen blender, or mechanically dispersed using a Hollander beater. The resulting solution is called ***stuff***. The time, speed, and pressure and the kind of beating apparatus will further determine the quality and type of paper being made.

Some percentage of stuff and water are placed in vats where a screen and frame (mold and deckle) are used to dip out a layer of dispersed fibers. The type of agitation and the kind of shake given the mold in rearranging the fibers while they float will have a direct effect on the resulting sheet. Once all of the water has drained through this screen mold, the sheet may be said to be formed. Of course, the construction, weight, and shape of the mold and the wire cloth used will also affect the sheet. Paper, the binding of fiber, is then, technically made in the beater and formed on the mold.

In the making of sheets or laminates, the layer of stuff is transferred from the wire mold to layers of felt which are stacked into piles called posts. (The irregular, untrimmed edge or deckle edge of handmade paper at this stage is often produced artifically on machine-made papers to imitate the look of high quality paper.) While on the posts, the water in the stuff is pressed out using extreme pressure. Both the type of wire and the kind of felt used will affect the transfer or couching of the layer of fibers to the surface of the felt.

The final step of drying and curing the sheets has the most possibilities for variation and is the most time-consuming to both the handmade and the commercial mill. Generally the sheets are dried under pressure using forced hot air, or they are left to dry naturally over a long period of time and then stacked in groups of sheets called spurs and allowed to cure for weeks or months. Once this is accomplished, sizing (a gelatinous substance for filling the pores in a sheet) or calendering (a kind of finish) may be added, which then requires additional pressing, drying, and aging.

The process is simple in its concepts and demands little knowledge and few skills to execute. In effect, it is the demand to be made on the final product that complicates the process at every stage. Paper is, then, not only an artist's medium but a substance that emerges from a process into which the artist can, at many points, interfere.

LIST OF ARTISTS

Ann Bielejac. UNTITLED, 1978.
Pulp laminates.

Robert Brock. SERIES, 1977.
Relief cast paper.

Mary Cannon. MARTIN'S LONG UNDERWEAR.
Hand formed shell with fabric.

Lisa Carr. UNTITLED, 1978.
Handmade paper with lace inlay.

Robert Collignon. CAST ASS, 1978.
Cast paper.

Hanlyn Davies. UNTITLED, 1979.
Mixed media .

Nancy Smith Detra. NIGHTIE, 1979.
Mixed media.

Frank Eckmair. FROM NICKEL CITY.
Handmade paper.

Paul Fapeano. UNTITLED, 1979
Relief on denim paper.

Anthony Gorny. A.F.L.E.A.W.O.T.A.W.T.M., 1977.
Litho on laminated, watermarked paper.

Bonnie Hoffman. BIRD'S BONE AND BRASS, 1978.
Cast paper with bone and brass wire.

—— UNTITLED, 1977.
Cast paper.

Bill Huggins. UNTITLED, 1979.
Cast paper with sand and acrylic.

Jose Jimenez. UNTITLED.
Dyed pulp, multi-stenciled laminate.

Kristine L. Kelley. UNTITLED, 1979.
Dyed cast paper.

Rene Leogrande. UNTITLED, 1977-78.
Laminate with straw and fabric inlay.

Paul Martin. UNTITLED, 1978.
Lithograph.

Sarah Montague. UNTITLED, 1979.
Handmade paper with excelsior and string.

—— PAPER PC. NO. 5, 1979.
Handmade paper with excelsior and string.

Stephen Pergolizzi. WHISPERS, 1979.
Handmade paper, rag, cotton, linters, and cattails.

Barbara Rowe. GREY BIRTHDAY FLAG, 1979.
Stenciled and laminated handmade paper.

William B. Schade. STELLS STARLING.
Drypoint and litho, handmade paper made at Sturgent Mills.

Mark Schaming. JUTE SCREWZ, 1979.
Cast jute fibers.

—— SHIELD.
Laminated handmade paper with jute and cotton linters and tufts of fur.

Kathie Simonds. REVOLUTION OF HEAVENLY BODIES, 1977.
Relief etching.

—— SALTINES, 1978.
Color intaglio.

—— SALTINES, 1977.
Cast paper with objects.

Larry Slezak. UNTITLED, 1977.
Mixed Drawing.

Peter Sowiski. PASTURE PATCH, 1977.
Intaglio 1/12.

—— COW CATCHER, 1977.
Relief on hand formed jute sheets.

Velma Stevens. UNTITLED.
Dyed fabric inlay.

Jean Tyson. UNTITLED.
Woven textile and handmade rag (cotton) paper.

Daniel Wasinger. UNTITLED, 1979.
Hair and cotton denim.

Alan Waxenberg. TRIPTYCH, 1977.
Lithograph.

Phil Young. WOUNDED CANYON SERIES V, 1979.
Handmade paper, colored pulp, and acrylic "skin" rocks.

BIBLIOGRAPHY

Albany International Corporation. **Paper Machine Felts and Fabrics.**
Binghamton: Vail-Ballou Press, Inc. 1976.

Ainsworth, John J. **Paper: The Fifth Wonder.**
Kaukanna: Thomas Publishing Company, 1967.

Allen, Lewis M. **Printing with the Hand Press.**
New York: Van Nostrand Reinhold 1969.

DeLalande, Joseph. **The Art of Papermaking.**
(First English Translation from 1761 Ed.)
Shannon, Ireland: The Ashling Press, 1976.

Dolloff, Francis W. **How to Care for Works of Art on Paper.**
Boston: Museum of Fine Arts, 1971.

Graphic Arts Technical Foundation. **What The Printer Should Know About Paper.**
Pittsburg: Graphic Arts Technical Foundation, 1970.

Green, J.B. **Papermaking by Hand in 1967.**
Maidstone, England: By the Author, Hayle Mille, 1967.

Heller, Jules. **Papermaking.**
New York: Watson-Guptill, 1978.

Higham, Robert R.A. **A Handbook of Papermaking.** 2nd. ed.
London: Oxford University Press, 1968.

Hunter, Dard. **Papermaking: The History and Technique of an Ancient Craft.** 2nd. ed.
New York: Alfred A. Knopf, Inc., 1947; reprint ed.,
New York: Dover Publications, Inc., 1978.

Joint Textbook Committee of the Paper Industry of the U.S. and Canada. **The Manufacture of Pulp and Paper.**
5 Vols. New York: McGraw-Hill Book Co., 1938.

—— **Vol. 3: Preparation and Treatment of Wood Pulp,** by H. N. Lee et. al.

—— **Vol. 4: Rags, Waste Papers, Beating, Loading, Sizing, Coloring, Mill Equipment,** by E. C. Tucker et. al.

—— **Vol. 5: Paper Machines, Paper Coating, Finishing, Testing, Papermaking Details,** by George D. Bearch et. al.

Mason, Hohn. **Papermaking as an Artistic Craft.**
Leichester, England: Twelve by Eight Press, 1963.

Morris, Henry. **Omnibus: Instructions for Amateur Papermakers.**
North Hills, Pa.: Bird & Bull Press, 1967.

Papermaking: Art and Craft.
Washington, D.C.: Library of Congress, 1968.

Place, Jennifer, Marlene Schiller, and Ellen Zeifer. ***"The Revolution in Paper",*** **American Artist,**
August 1977, pp. 33-57.

Sacilotto, Dell, and Donald Saff. **Printmaking: History and Process.**
New York: Holt, Reinhart, and Winston, 1978.

Smith, David C. **History of Papermaking in the United States (1961-1969).**
New York: Lockwood Publishing Company, 1970.

Studley, Vance. **The Art and Craft of Handmade Paper.**
New York: Van Nostrand Reinhold Company, 1977.

Stuff Preparation for Paper and Paperboard Making.
Francis Bolam, ed. Oxford: Peramon Press, 1965.

Sutermeister, Edwin. **The Story of Papermaking.**
New York: R.R.Bowker Company 1954.

Tamarind Lithography Workshop. **The Beauty and Longevity of an Original Print Depends Greatly on the Paper That Supports It.**
Los Angeles: 1966. (pamphlet)

Technical Association of the Pulp and Paper Industry. **Pigmented Coating Processes.**
New York: Technical Association of the Pulp and Paper Industry, 1964.

The World Print Council. **Paper—Art and Technology.**
San Francisco: World Print Council, 1979.

Wheelwright, Wm. B. **Practical Paper Technology.**
Cambridge: M.J. Wheelwright, 1951.

Wilkinson, Norman B. **Papermaking in America.**
Greenville: Hagley Museum, 1975.

Handmade Paper and Prints was organized by Buffalo Prints & Paper at the State University College at Buffalo and is circulated by the Gallery Association of New York State whose programs are made possible by its members, the New York State Council on the Arts, the National Endowments of the Arts and Humanities, and the New York Council for the Humanities.

TAROT Designing & Printing, Gilbertsville, N.Y. 13776