Canadian
Bookbinders
and
Book Artists
Guild

NEWSLETTER

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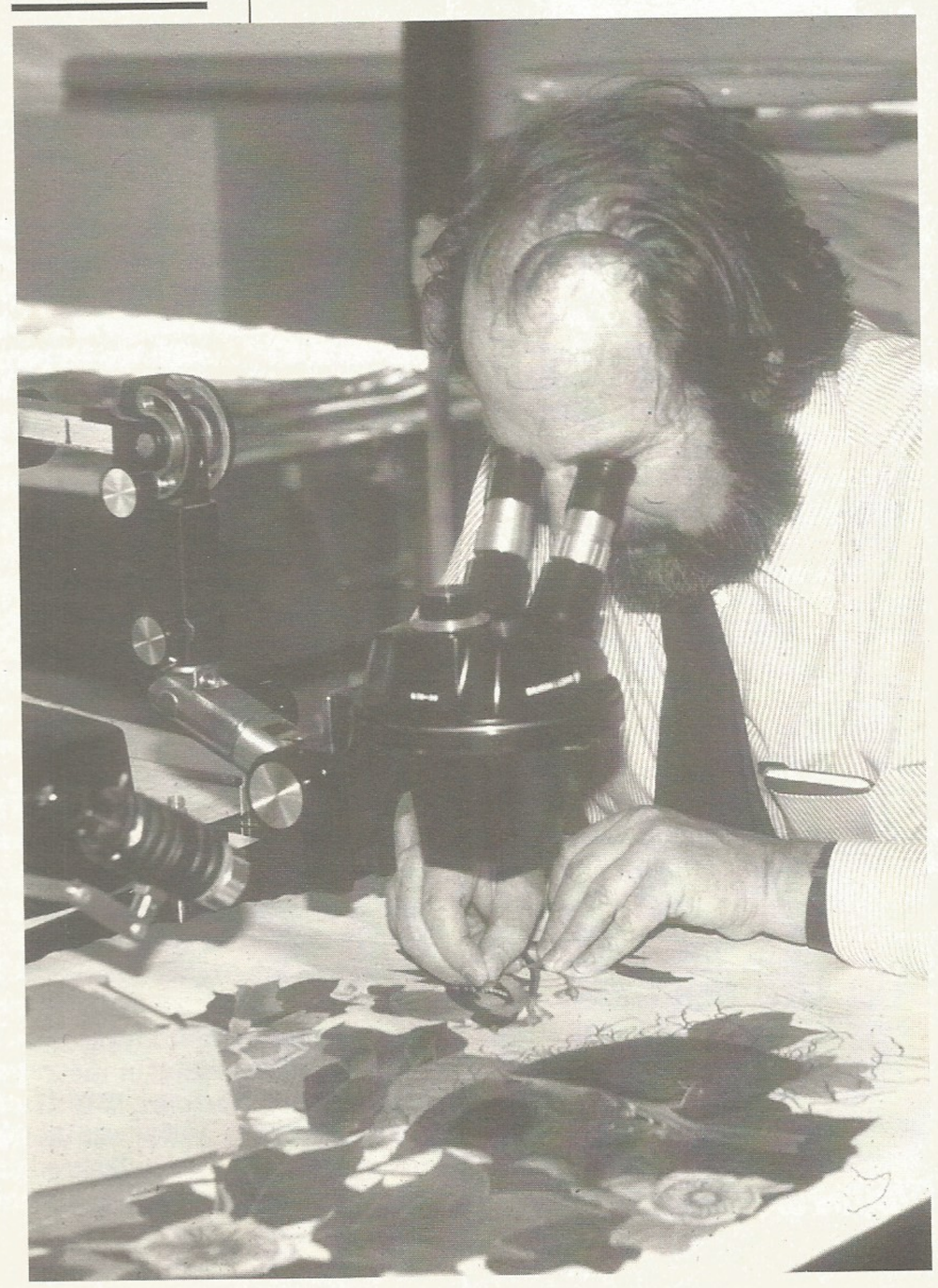


Contents

on the cover

Charles Brandt at the microscope removing pigment from Audubon's 'Birds of America'

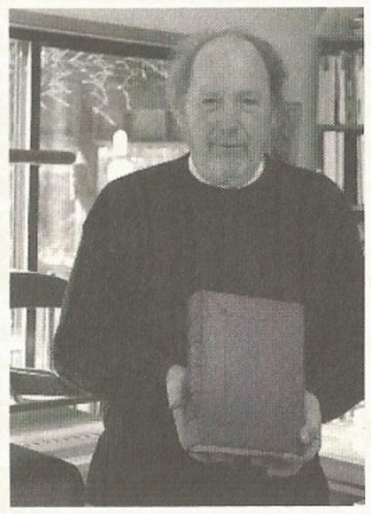
High Tech Hermit Priest

by Larry Peterson

Father Charles Brandt, bookbinder, paper restorer and hermit priest, takes us upstairs in his hermitage and boots up his 2002 iMac flat screen computer in readiness to e-mail a freshly-taken digital photograph to Toronto.

Charles was born in Kansas City, Missouri, February 19, 1923 and raised on a small farm on the city outskirts. His passion for fishing and the outdoors was nurtured on and around the nearby Osage River. As an Eagle Scout, he passed a merit badge for bookbinding and another passion was born. In high school he sang tenor, lettered in tennis and because of academic performance and debating skills won a scholarship in oration to William Jewel College in Liberty, Missouri.

After a short time studying Wildlife Conservation at the University of Missouri, WW II intervened and Charles was drafted in 1941. He won his navigator wings and practiced as a radar navigator on B-29s. Before he could be ordered overseas in the Japanese campaign, the war ended, and he was able to enroll at Cornell University in Ithaca, N.Y. in the fall of 1945 to study ornithology. He earned his B.Sc. from Cornell, but then his career took another turn. He entered Episcopal Seminary Nashotah House in Wisconsin and earned his Bachelor of Divinity, becoming ordained as a deacon in Colorado. He then travelled to England to research and practice the contemplative life and returned to the U.S. and lived as an Anglican hermit in Connecticut.



The next ten years or so, Charles spent in Michigan, Oklahoma and Dubuque, Iowa. Two life-shaping events happened during this time. First, he converted to Roman Catholicism and set out to model his life after the writings of Cardinal John Henry Newman, especially *Apologia Pro Vita Sua*, and began researching the roots of the monastic life. Second, he spent eight years in charge of all bookbinding at the Abbey in Dubuque.

Following up on his studies of the monastic life, he moved, as part of an international group of eight hermits, to the banks of the Tsolum River near Courtenay on Vancouver Island, British Columbia in March of 1965. He was ordained to the priesthood November 21, 1966 in Courtenay. With the necessity of supporting himself, he worked as a Department of Fisheries and Oceans technician on the Tsolum and began bookbinding and paper conservation as a profession.

In 1969, he bought twenty-eight acres overlooking the Oyster River twenty kilometers north of Courtenay, but chose to travel for a time to follow the professional side of his life. From 1973 to 1980, he spent time in the England Document Center, on the European continent, in Moncton, N.B., and in Ottawa. In 1980, he became chief conservator of the Archives in Winnipeg and produced two of his lifetime achievements in restoration. He restored the Nuremberg Chronicle of 1495

including lithographs and engravings (see CBBAG 1995). And, he restored Volume I of Audubon's Ornithology which included over one hundred hand coloured lithographs (see The Beaver Summer 1983).*

Charles decided in 1984 to return to his Oyster River hermitage and expand it to a state of the art facility for bookbinding, document restoration, and restoration of fine art on paper.

From 1984 to the present, Charles has practiced his religious life at his hermitage, assisted and led environmental projects and done contract work on bookbinding and paper restoration. In addition to Cardinal Newman, Charles' other great hero is renowned naturalist Aldo Leopold. It seems only fitting then that Charles' current passion is focussing his video camera and computer on the natural world in an attempt to capture and share his feelings of wonder and awe.

Larry Peterson has his B.Ed.(Sec.) in English and Phys-Ed from UBC and is recently retired from teaching. He is currently pursuing conservation and restoration of salmon streams.

[* See page 6 for the reprinted article on the restoration of the Audubon's Ornithology with new photos. eD.]

The new CBBAG bindery

CBBAG Newsletter Back Issues!

Available from the Editor at a cost of $5.00 per copy.
Volume 13 No.1 Spring 1995 features the article on
The Nuremberg Chronicle of 1495 by Charles Brandt.
Address all correspondence to the 'Newsletter Group'.

CBBAG HAS MOVED

CBBAG is pleased to inform our membership that we have obtained new space at an Artscape building at
60 Atlantic Ave., Suite 112, Toronto, ON M6K 1X9.

Phone, fax, e-mail address and website remain the same:
Ph. (416) 581-1071
Fax. (416) 581-1053
e-mail mailto: cbbag@web.net
website: www.cbbag.ca
Bulletin Board on the Web:
http://www.web.net/~cbbag/BulletinBoard.html

We have been able to acquire 25% more room at the same rent, which was a major consideration in making the decision. The space is a better shape for our purposes so that we have more floor space, important when you are teaching workshops to a large group. It is in a lively, downtown area with restaurants nearby and public transportation easily accessible. Wish us good luck with our new space!

Audubon's 'Birds of America'

by Charles A. E. Brandt

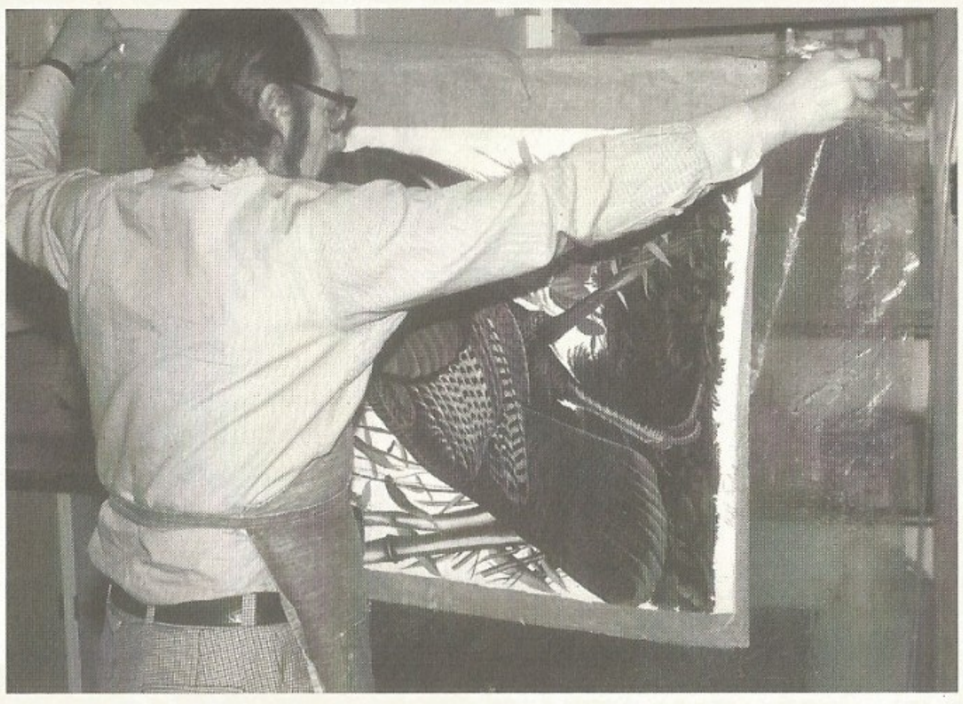
On 2 April 1852, the Library Committee of the Legislative Library at Fredericton, New Brunswick, authorized the purchase of the four volumes of Audubon's *Birds of America* from Little, Brown & Co. of Boston, Massachusetts, at a cost of $800. It is one of the five sets of Audubon's ornithology in Canada, and is one of the most handsomely bound of all the existing Audubon folios in the world. The purchase of these rare and impressive volumes was a wise investment. The value of such a set of four volumes was recently set at $ 1.5 million in a Sotheby auction to be held in New York.

Approximately 200 sets, consisting of 435 prints each, of the Audubon works were printed; 134 sets are known to exist. Some sets are broken up and sold as single prints and ten are known to have been destroyed by fire and war. According to Waldemar H. Fries, a specialist in Audubon prints, there are probably 70,000 from the original edition still in existence.

John James Audubon (1785-1851) published the double elephant folio edition of *Birds of America* between the years 1827 and 1838. He had previously travelled through North America studying, drawing and painting the birds in their natural environment in life-size and life-like poses. In 1826 he went to Scotland and England to arrange for the publication of his drawings. William Home Lizars, a prominent engraver in Edinburgh, executed the first ten copper-plate engravings, printed them and directed his water-colourists in their hand-colouring. The remaining 425 plates were executed, printed and coloured by R. Havell and Son, London.

In 1978-79 I treated, for conservation purposes, the 109 prints of Volume I of the four volumes owned by the New Brunswick Legislative Library. The work continued over a period of four months and was done at the Atlantic Conservation Centre at Moncton. I was assisted there by a colleague, Robert M. McCarroll.

One of the main conservation problems facing library and archival collections today is acid paper. The period of good durable paper was from the twelfth to the nineteenth century. (I have examined paper from the thirteenth century in Germany, and found it to be in almost perfect condition.) In the late seventeenth century, alum (which breaks down to form acid) was introduced into the making of



paper to harden the sizing. Over time acidity in paper decreases the strength of the fibre, so that it becomes weak and brittle and is finally reduced to a powder.

The Audubon plates were printed on J. Whatman handmade wove paper. This is a heavy paper, about 10 mils, and each sheet is watermarked with either 'J. Whatman' or 'T. J. Whatman Turkey Mill', plus the date, which ranges from 1825 to 1838. The major conservation problems stemmed from the chemical nature of the wove Whatman paper. Spot testing indicated a high content of alum, which would have contributed to the high acidity of the paper.

Another important physical feature of the book leaves is that the grain of the paper runs horizontally instead of vertically. As a consequence of this wrong-grain direction, the leaves do not open properly; that is, they fail to arch as each leaf is turned from right to left, and instead tend to break along the binding gutter as pressure is applied. Also, the method of whip-stitching individual prints into sections of four leaves prevents their opening flat to the inside gutter. This type of sewing, plus the wrong-grain direction, had resulted in the breakage of many of the leaves as they were forced open, especially at the front and back of the book. An additional problem was that the volume had been lined along the edges of the reverse side of each leaf with linen tape. In some instances the image had transferred to the back of the preceding leaf; this was especially noticeable in the large dark-coloured images. It was not clear whether this transfer was due to acid migration or to actual pigment-colour transfer. The colours

of the image area, however, had retained their freshness and brilliance.

Although there was some slight fading of the front board, the leather was in exceptionally good condition. The gold tooling was exquisitely done by J. Wright, a prominent London binder of the 1850's, and remained in an excellent state of preservation with little flaking and with exceptional brilliance.

My task was primarily to remove the acid from the prints with the utmost care and to store them in such a way as to prevent further deterioration.

After the photographic documentation of the binding and of each individual print was completed, the book-block was removed from its binding. The backbone of the bookblock was heavily lined with cartridge paper. This I gradually removed by applying coats of wheat-starch paste which slowly softened the paper and old adhesive. Eventually the hardened animal glue of the backbone was gently removed with a bone folder. The removal of the glue and cartridge paper revealed the sewing of the bookblock; groups of four leaves had been whip-stitched to form a signature. Each signature was then sewn around sunken cords. The first group of about five signatures and the last group had been over sewn to strengthen these areas of the bookblock. There were no slips to lace into the boards. The binding was, in fact, a case-binding. The lack of slips, the whip-stitching which prevented any leaf from opening to the gutter, the heavily lined-up backbone, plus the over sewing constituted weaknesses in the binding structure and had led to a weakening of the physical properties of the book.

The sewing threads were cut with a sharp scalpel and then using a bamboo spatula, each leaf was gently raised and removed one by one from the bookblock. This for the most part was done without any breakage or tearing except those leaves which were already broken along the gutter (owing to the wrong-grain direction), and for the exceptional leaf where the original animal glue had crept up between the signatures when the backbone was glued up.

Historically, the years 1827 to 1838 when the drawings were first hand-coloured in England, was an interesting period in the development and the use of certain pigments. Therefore, it was felt that an analysis would contribute to the history and development of the pigments especially if the analysis could eventually cover the entire period of eleven years. Thirty-eight samples were taken of the pigments used in the colouring of the images; these particles were

removed by a sharp scalpel under a microscope, then placed into small glass vials and sent to the Canadian Conservation Institute in Ottawa for analysis.

All of the image colours were tested for their solubility in water. A drop of distilled water was placed on a specific colour, allowed to stand for about thirty minutes and then a small square of blotter was pressed against the moistened area. The blotter surface was then examined to determine whether or not there had been a colour transfer. Forty-three of the 109 prints had one or more colours which were soluble in water. Some colours were highly soluble, others only faintly. In addition, some of the prints had been glazed with a varnish-like substance. These glazed areas were also tested; the water had no effect on them and did not dull them in any way.

Because several of the image colours were soluble in water, it was decided to fix them with a 10 per cent solution of methyl cellulose in water. This was evenly applied to the front surface of the image area with a soft-bristled oriental brush and allowed to dry overnight. When dry, the fixed surface had a slight sheen.

As a preliminary to washing, the linen tape was mechanically removed by peeling it off dry. Each Audubon print was then supported on a sheet of 'Reemay', a polyester material; sprayed off with distilled water and then placed in a large sink for washing. The prints were washed in groups of five in constantly changing lukewarm water for forty-five minutes. The washing not only removed additional dirt but also made possible the removal of residual linen-tape adhesive. The remaining animal glue on the back edge of each plate

was softened and could be removed by the use of a bamboo spatula and soft brush. After washing the prints were removed from the sink, still on their Reemay supports and placed image side up on a terry cloth. The excess moisture of the image was blotted dry with sheets of chromatography paper, and air-dried.

The prints were then deacidified by immersing them in an alkaline solution of magnesium bicarbonate for forty minutes. The prints were deacidified in groups of five, each group in a fresh solution of 25 litres of magnesium bicarbonate solution. These were removed and dried in the same manner as the washed prints. It is to be noted that on drying there was no apparent trace of methyl cellulose on the paper surface, and the glazes were left unaffected.

Prints where there was a possible problem of bleeding of specific colours were deacidified with a non-aqueous deacidification solution, applied to both the front and back of the prints. Before the prints were completely dry, they were placed between blotters and placed in a large press and pressed lightly overnight. The final alkalinity, measured with a flat-headed surface electrode, was with in the accepted range. Since the fixative was applied only to the front surface of the image area it is thought that washing occurred from the reverse side and that as well the deacidification solution easily entered the paper from the back side. During the washing and deacidification there was obviously some softening of colours, although no bleeding of colours was detected. During the blotting, with one exception, there was no transfer of colours to blotting paper.

All mending was done with Japanese oriental paper using wheat-starch paste as an adhesive. The paper was torn into long strips by the use of a water brush to ensure long fibres; a strip was applied to the reverse of the fore-edge of each print. The mending of small tears was done with a tacking iron, which was applied with a low heat to the mend through a sheet of Reemay. Because of the weakness and many tears and losses of the Turkey print it was backed overall with oriental paper.

After consultation with the librarian of the New Brunswick Legislative Library it was decided not to incorporate the 109 prints back into the binding, as the Whatman paper would not withstand turning of the pages without consequent breaking. Instead each print was inserted into a seven mil Mylar envelope; these were then stored in two large Solander boxes

which were lined with acid-free paper.

The final procedure was the treatment of the binding. First the paper lining of the boards was removed. The corners of the bindings, which showed considerable wear, were lifted and the heavy millboard corners injected with an approved conservation buffered white glue to strengthen the boards. The worn corners were strengthened with new leather which was applied with wheat-starch paste. The spine was reinforced by lifting the leather along the spine and head cap areas and then pasting in a strip of leather which was the same length as the spine but about an inch wider.

Finally, the spine was lined with acid-free board and new paper applied to the inside of the boards. The leather was treated with a solution of potassium lactate, allowed to dry for 24 hours, and then a lanolin and leather dressing of neat's-foot oil was applied. When this had dried the binding was buffed with soft terry cloth. A special storage box was constructed in which the binding would be stored flat, face up.

The conservation of the prints was now complete; with proper storage, environmental controls and handling, their life span would be considerably lengthened.

The Reverend Charles Brandt was Chief Conservator, Artistic and Historic Works on Paper, Provincial Archives of Manitoba, Winnipeg.

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Photographs are by the author.