BULLETIN of the Hunt Institute for Botanical Documentation

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EXHIBITION

"Botanical Watercolors by Marilena Pistoia," on display from 6 November 1989 until 23 February 1990, included 52 artworks by one of Milan's leading illustrators. The exhibition comprised selected artworks done by Miss Pistoia for three publications: F. Bianchini and F. Corbetta, *I frutti della terra (The complete book of fruits and vegetables)*; F. Bianchini and F. Corbetta, *Le piante della salute (Health plants of the world; atlas of medicinal plants)*; and Laura Peroni, *Il linguaggio dei fiori (The language of flowers)*, all published in Italy by Arnoldo Mondadori between 1973 and 1984 and subsequently in America by Crown and by Newsweek under the English titles shown. The artist has donated 223 original paintings for these books to the Hunt Institute.

Twenty-three of these watercolors will circulate as a travel show, with the first engagement at the Multnomah County Library in Portland, Oregon from 25 June to 31 July.

Pistoia's splendid painting of onions, commissioned by the Hunt Institute, is currently in the traveling exhibition "Flora Portrayed: Classics of Botanical Art from the Hunt Institute Collection." Five of her artworks of grasses from *I frutti della terra* were included in "Fields of Grass," a Smithsonian Traveling Exhibition service show, guest-curated by the Hunt Institute's Curator of Art. Her "Bignonia or Trumpet Vine *(Campsis radicans)*" was reproduced in the Institute's descriptive booklet designed for its capital campaign.

Pistoia received diplomas from the Artistic High School, Monza, in 1951; the Academy of Fine Arts, Milan, in 1955; and the Anatomical Design School, Bologna, in 1957.

Stories of the exhibition were carried in the *Newsletter* of the Guild of Natural Science Illustrators, *Antiques and the arts weekly*, *Carnegie Mellon magazine* and CMU's *Focus*. Art critic Bill Homisak, writing in the *Tribune-Review* (Greensburg, Pennsylvania), referred to Pistoia's "gorgeous color and good design" and "meticulous draftsmanship." It is a pity, therefore, that the artist

Watercolor of "Leek (*Allium ampeloprasum*) and Grape Hyacinth (*Muscari atlanticum* or *Leopoldia comosa*)" by Marilena Pistoia. ©1983 Arnoldo Mondadori Editore, Milan.

— "one of the leading illustrators of our time" according to the Institute's Curator of Art -- wrote us last year that she has no plans to return to botanical painting — "I felt it was time to move on to something else." She currently teaches at the Academy of Fine Arts in Bologna.

IN MEMORIAM

On 2 May 1989, we heard with great regret that our colleague Don Wendel had passed away, a victim of lymphoma. This marked the end of a long illness, and occurred not long after he had been able to come to the Institute for the last time.

Donald Emerson Wendel was born on 9 April 1949. He received his Bachelor and Master of Fine Arts degrees from Miami University, Ohio, in 1971 and 1978, specializing in printmaking. In the early 1970s he spent three years teaching ceramic courses at the College of the Dayton Art Institute, Ohio. From 1976 to 1978 he was Teaching Fellow in Print Media at Miami University, Ohio, and from 1979 to 1981 served as Instructor for the "Introduction to Printmaking" courses at Indiana University East at Richmond, Indiana. Towards the end of the decade he designed, coordinated and installed several important exhibitions at Miami University Art Museum. Don joined the Hunt Institute in February 1982 as Assistant Curator of Art and Research Scholar.

His experience in exhibition preparation was soon put to the test when he assisted with mounting the Institute's exhibition "Talking in Flowers: Japanese Botanical Art," a show that included much precious and delicate material calling for high standards of handling and display. Don was painstaking and meticulous at this work, creating displays that were always skillfully mounted and crisply and harmoniously labelled. He was attentive to the standards demanded by modern conservation research and was never prepared to sacrifice that concern in the midst of the pressures and frustrations that exhibition mounting creates.

Don was most closely involved with four major exhibitions at the Institute, the 5th and 6th International Exhibitions of Botanical Art & Illustration, "Flora portrayed: Classics of Botanical Art from the Hunt Institute Collection," and "Printmaking in the Service of Botany." Apart from preparing and mounting these, he assisted with compiling the catalogues of the first three and was joint organizer and co-author with Gavin Bridson of the printmaking catalogue.

His background as a practitioner and teacher of printmaking made Don especially well qualified to collaborate in planning, coordinating, preparing and mounting "Printmaking in the Service of Botany." He surveyed the collection carefully in order to select materials that best exemplified the features demanded by the rationale of the exhibition, and he and Bridson could be seen for hours peering through microscopes and hand lenses at print after print as they narrowed the choice to the final selection of exhibits. Don co-authored the catalogue and enthusiastically shared in devising the visual presentation. For each item, the catalogue presented a photograph of the whole print, a detail of the print in life-size, and a much-enlarged portion of that detail, thus leading the reader into an analytical understanding of its make-up. Its preparation took much time and thought, and Don's close involvement was rewarded when the American Association of Museums gave the catalogue its "Award of Distinction in Recognition of the Highest Standards of Excellence" in the 1987 Museum Publications Competition.

Don had a thoughtful and inquiring interest in all ramifications of his job. He was new to the world of botanical art when he joined the Institute and, although familiar with the plant as a well-established theme in art, he had to make some cultural leaps from his background as a creative printmaker to accept some of the peculiar demands of scientific illustration. He was extremely shy about his own printmaking, but in this, as in all his other work, he displayed great attention to craftsmanship. The themes of his etchings ranged from abstract to representational, but, despite working in a world of floral images, he only once turned to the plant as subject, which probably accounts for a reluctance to mention his own prints.

He was always interested in considering and discussing newly acquired works of art and brought a refreshingly individual point of view to his criticism of plant imagery. His interest in medium as well as image was again displayed when he selected materials for the travelling show "Wood Engravings from the Hunt Institute Collection." In this exhibit of monochrome prints he displayed his sensitivity to the subtleties of "color" that exist in black-and-

white art, an important aspect of graphic art that has been somewhat overwhelmed by the present-day public's seemingly insatiable demand for endless color.

Don was ever helpful to other members of the staff, and his quiet sense of humor saw him through various of life's tedious events. His long illness and subsequent death were difficult for us all to understand and accept. Don leaves behind his wife, Sue Ellen, and their two sons, Jonathan and Benjamin.

AUTOMATED INTERACTIVE IDENTIFICATION OF POISONOUS PLANTS AND SELECTED FUNGI

The Institute has received a two-year, $40,000 grant from the Vira I. Heinz Endowment to develop and implement an interactive computer system for identifying poisonous plants and fungi. The database will cover all poisonous native and exotic plants and selected fungi from North America north of Mexico, as well as nonpoisonous plants and fungi frequently implicated in poisonings. T. D. Jacobsen, Assistant Director, is the principal investigator for this project.

For years, hospital emergency rooms, pediatricians and poison-control centers have relied on professionally trained taxonomists and "seasoned" amateurs to aid in the identification of plants, plant parts or fungi that are implicated in poisonings. There have been numerous texts published on the subject of poisonous plants with varying degrees of accuracy and reliability; one of the most recent was published under the auspices of the American Medical Association. No book can substitute for an expert, but in the absence of a taxonomist or qualified amateur, the books are often the emergency room physician's or poison-control center's only source of information. Health professionals normally do not have the time to "key out" the plant in question, and even if the time were available, botanical terminology is as incomprehensible to them as medical terminology is to the taxonomist.

Botanists at the Institute and the Carnegie Museum of Natural History are called by various emergency rooms to aid in the identification of plants/fungi implicated in poisonings. Fortunately, one or more of them has always been available to aid in the identification. There are times, however, when all the plant taxonomists in the Pittsburgh area are out of town or otherwise unavailable. This fact greatly concerned Dr. Jacobsen, a parent of young children, so he began to compile a list of the most common poisonous plants to keep for emergency purposes. The logical place to store such a list was the personal computer. With the advent of the personal computer and programs written in various languages for interactive identification of plants, it has become easy to identify plants to genus. Unfortunately, these programs and their accompanying matrices are written by taxonomists for taxonomists, and are once again useless to the health professional.

Dr. Jacobsen has begun constructing a database to be used in interactive identification of poisonous plants. Unlike the databases built by his colleagues which contain both poisonous and nonpoisonous plants, this one is strictly concerned with native and exotic poisonous plants and selected fungi and those nonpoisonous plants often implicated in poisonings. In addition, the terminology is being constructed for use by the nonbotanist.

The program is designed to ask the user a series of questions, the answers to which are stored in a buffer. At any time during the question-and-answer period, the user may ask the program for an identification. As the number of questions answered increases, so does the delimitation. It is quite likely that even after answering all the questions more than one species will appear as the correct identification. This will be due to incomplete material (i.e. absence of some diagnostic part), but the delimitation will at least give the health professional an idea of the group of plants involved. Genera within the same family often contain identical or closely related toxic compounds. After an identification has been made, the user will be directed to another section of the program where information about the plants/fungi is stored. This section will include toxic compounds, citations, bibliographic details and an identification number corresponding to a

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drawing of the plant/fungus located in an accompanying printed directory. Dr. Jacobsen is using the resources available in the Institute's art collection to develop this graphic confirmation directory. The directory, poisonous-plants database and accompanying programs will constitute a stand-alone system to run in on-site microcomputers and will serve as the primary delivery mode. In the future, as the Institute art collection is photographed and processed for inclusion on a videodisc, the poisonous-plants database will be linked to the disc by a relational program for graphic display of the taxa suspected in a poisoning. Access to the linked database/videodisc will be available via a telephone hookup.

Ultimately, the poisonous-plant database as well as the videodisc will be linked to the much larger Flora of North America database currently under development by the Hunt Institute, the Missouri Botanical Garden, and other institutions. The linkage will increase the accessibility and use of the poisonous-plants database. The payoff of increased use by plant taxonomists and others will be refinement and increased scope.

Lithograph of *Digitalis purpurea*, by J. N. Mayrhofer (German, 1764-1832)

The development of a matrix (core of the database) will be accomplished using MEKA, a general purpose multiple-entry key algorithm, and MEKAEDIT, its editor. This program was developed at the Herbarium, University of California, Berkeley, by Dr. Thomas Duncan and Dr. Christopher A. Meacham. It requires the inclusion of all taxa in one file, the characters in a second file, and the taxa and the characters linked in a third file.

The Pittsburgh Poison Control Center has volunteered to serve as the primary test site. Testing will also be carried out by several colleagues throughout North America. During the beta testing, constant feedback and checking of the matrix will be conducted. Voucher material will be collected when possible and checked anatomically and morphologically to confirm the identification made by the computer. It is our intent that once the testing is completed and we are assured that the system is functioning properly, additional regional poison-control centers be provided the package with the suggestion that it be used in conjunction with their standard procedures until personnel are familiar with the system and terminology.

The Institute intends to provide this material (matrix, directory and accompanying directions etc.) *without charge,* on a continuing basis, to poison-control centers, hospitals and health professionals as requested.

DELECTUS HUNTIANI 12

Having admired the steel engravings in George Engelmann's "Cactaceae of the Boundary" in the *Report on the United States and Mexican Boundary Survey,* I have chosen two about which I wish to share a little information.

According to Benson in *The cacti of the United States and Canada, Cereus procumbens* is a synonym of *Echinocereus pentalophus* (DC) Rümpler. The type specimen, according to the herbarium label in the Missouri Botanical Garden, was "collected at Burita near the mouth of the Rio Grande below Matamoras by the Missouri Volunteers 1846, and cultivated at St. Louis fl[owering] May, 1848." There it apparently was drawn by Roetter and later sent to Washington for engraving by W. H. Dougal as Plate 59 in the *Report* (see Figure 1).

In the *Report* (pages 77-78) Engelmann, a St. Louis physician,

Figure 1. "*Cereus procumbens*," plate 59 from *Report on the United States and Mexican Boundary Survey*, an engraving by William H. Dougal from original drawing by P. Roetter.

wrote in 1858 that "Mr. Paulus Roetter, of St. Louis, made the drawings for the plates under the close superintendence of the author. The steel engravings were done partly by Mr. W. H. Dougal, of Georgetown, D. C., a few by Messrs. [A.] Maillard & [R.] Connor, of St. Louis, and the balance by European artists, viz: Mr. Weber, of Berlin, Prussia, and Mr. Davesne, Mr. Rebuffet, Mr. Martin Schmelz, and the brothers Picart, all of Paris, France. The high order of excellence of the engravings, especially those of the Picarts and of Schmelz cannot fail to strike those who examine the plates." In my opinion Engelmann certainly was correct.

We have only recently acquired some biographical data about Dougal, whose name appears on the following plates in the *Report*: 10, 13, 15, 17-27, 29-31, 34-35, 39-41, 46-50, 54-62 and 66-67. His name also has been noted on many of the engravings in the 1850s publications of the United States Exploring Expedition during the years 1838-1842, under the command of Charles Wilkes, U.S.N.

Dougal was listed in Georgetown and Washington, D.C. city directories as an engraver from 1858 until 1895. He was erroneously listed in the volume published in 1898, although his wife Virginia was listed in the preceding year as widow. In 1864 he was associated with John J. Barnard & Company, in 1870 with Burroughs & Dougal and in 1891 with the Bureau of Engraving and Printing. Only in the *Official register* for 1891 did we find him listed as an employee of the Bureau of Engraving and Printing.

Off for California; the letters, log and sketches of William H. Dougal, gold rush artist was published in 1949 by the San Mateo County Historical Society, upon receiving material donated to them by the son William M. Here I learned that William H. Dougal was of Scottish ancestry, was born in 1822 and died in 1895. A search of the vital record indexes of the Department of Human Services, Government of the District of Columbia, failed to reveal any evidence of a death record for William H. Dougal between the years 1890 and 1903. His childhood home was New Haven, Connecticut. (The *Official register* for 1891, published in 1892, confirmed Connecticut as Dougal's birthplace.) The book accounts for a visit in 1850 to California by way of Rio de Janeiro, Brazil and Valparaiso, Chile. It reports that Dougal also made engravings for Cadwalader Ringgold's "Series of Charts with Sailing Directions, State of California." Cadwalader was commander of the *Porpoise*, one of two ships to make the entire voyage of the U. S. Exploring Expedition.

The frontispiece (see Figure 2) of George Engelmann's "Cactaceae of the Boundary" in the *Report on the United States and Mexican Boundary Survey*, published in 1859, is titled "View Along the Gila. (*Cereus giganteus*)." It depicts a family of Indians beneath specimens of saguaro or giant cacti, *Carnegiea gigantea* (Engelmann) Britton et Rose (after Andrew Carnegie), sometimes known as *Cereus giganteus* Engelmann. We read that this landscape "represents a region near the Colorado river, with several *Cacti*, especially *Cereus giganteus*, one of them decayed, showing the form of the ligneous skeleton." The scene was, according to Engelmann on page 43, "taken from an accurate sketch made on the spot by Mr. Mœllhausen." The name of Paulus Roetter, who apparently worked from Mœllhausen's (or Möllhausen's) sketch, is at bottom left and the name of James D[avid] Smillie is at bottom right. Benson, who reproduced the print in *The cacti of the United States and Canada*, wrote that "Recent visits suggest that the scene was sketched by J. M. Stanly ["Stanley" intended but Mœllhausen accurate?] near the site of the present Coolidge Dam, where the saguaro was discovered by Emory in 1846 (the artist, Paulus Roetter, evidently worked from Stanly's sketch)." Smillie (1833-1909), incidentally, was a landscape painter (particularly of mountain scenes), engraver, etcher and lithographer who was prominent in the New York art scene.

It is interesting to compare this beautiful artwork with one apparently made from it about seven or eight years later. The copy appeared as Plate 17, "Cactus Vegetation of New Mexico (after Möllhausen) a. *Cereus giganteus*," in Part 1 of John Lindley and Thomas Moore (editors), *The treasury of botany* (1866), illustrated with steel engravings "reduced by Adlard from well-known originals." "H. Adlard" is at bottom right but Roetter's name is not cited on the new engraving (its image size is 12.5 x 8.3 centimeters compared to Smillie's of 21.9 x 14.3 centimeters), which is striking in resemblance to its model.

Mœllhausen and Roetter were also credited (pages 57-58) in the *Reports of explorations and surveys* (1856) for that publication's

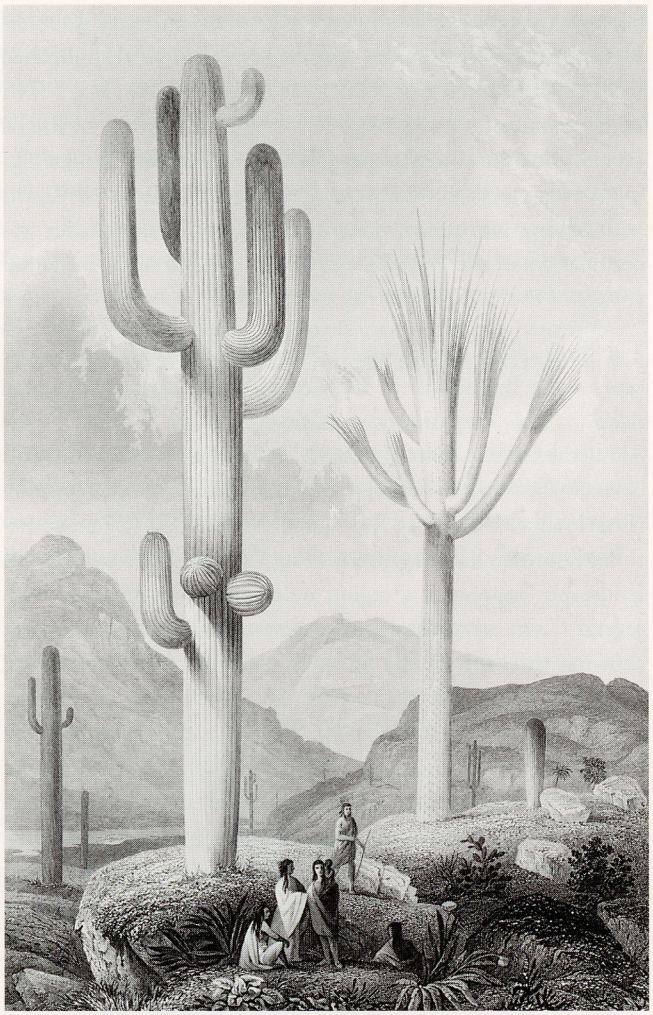

Figure 2. "View Along the Gila," frontispiece from *Report on the United States and Mexican Boundary Survey*, an engraving by James D. Smillie from original drawing by P. Roetter, after sketch by H. B. Mœllhausen.

fine lithographs of cacti: "They were drawn with the greatest accuracy, partly from living and in part from dried specimens, by Mr. Paulus Roetter of St. Louis, under the personal superintendence of Dr. Engelmann. The drawings made on the spot by Mr. H. B. Möllhausen, the artist of the expedition, greatly aided the work and were made use of, and even partly copied, especially in the plates exhibiting the Cylindric Opuntiae."

One hundred and thirty years later, these engravings continue to serve as beautiful examples of scientific illustration. The Institute welcomes additional information on any of the artists or engravers cited here.

—James J. White

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ARCHIVES PERSONNEL

Anita Karg was appointed Archivist on 1 August 1988 after having served as Assistant Archivist at the Institute since 1972. She replaced Dr. Michael T. Stieber, who left the Hunt Institute to become Library Administrator and Reference Librarian at the Morton Arboretum in Lisle, Illinois. Mrs. Karg continues to work on the compilation of the departmental publications *Guide to the botanical records and papers in the Archives of the Hunt Institute* and the *Catalogue of the portraits of naturalists, mostly botanists in the collections of the Hunt Institute, The Linnean Society of London and the Conservatoire et Jardin Botaniques de la Ville de Genève.* Part 4 of the *Guide* and Part 3 of the *Catalogue* are expected to appear this year. Mrs. Karg especially enjoys writing abstracts of the many autograph letters and manuscripts maintained in the Archives. The current emphasis of this collection,

begun by Mrs. Rachel McMasters Miller Hunt, is on the acquisition of examples of the handwriting of the world's present and past plant scientists.

Mrs. Karg is assisted by Sharon M. Yeschke, who joined the staff as Archival Assistant on 31 July 1989. Ms. Yeschke received a B.A. in English with a minor in history from Chatham College of Pittsburgh. Prior to joining the Institute staff, she worked in the Director's office of the Learning Research and Development Center of the University of Pittsburgh, where she edited copy and proofread manuscripts for publication. She has also worked as an intern in the Allegheny Conference on Community Development's Education Fund, as a technical services supervisor in Chatham College's library, and as a freelance writer for the newsweekly *In Pittsburgh.* In the Institute, Ms. Yeschke's duties include supervision of the Archives' work-study students, accessioning and curating photographs, documenting and storing the biographical information and assisting the Archivist in compiling finding aids for the collections.

The Archives staff will soon begin computer input of a biographical register of botany that will make available to scholars one of the Institute's most valuable resources—its main biographical file, a comprehensive compilation of basic data on plant scientists past and present, including citations of over 200,000 published biographical accounts. The biographical citations will then be gathered into six computer-generated volumes. The register will be alphabetical, but will include indexes by botanical specialty, geographical area, time period, and gender.

Sharon M. Yeschke and Anita L. Karg

Our thanks go out to the many colleagues and friends who continue to enrich our collections by contributing volumes, photographs, reprints, inventories and diskettes containing address lists of botanists and lists of herbaria. Because of these gifts, the Archives of the Hunt Institute has become an increasingly valuable resource for information about the lives and work of plant scientists.

PRESERVATION OF PORTRAIT COLLECTION

The Archives received a welcome announcement from the Pennsylvania Historical and Museum Commission in 1988 when the Institute was awarded $14,500 to make back-up negatives of the portraits in the Hunt Institute collection. The collection of portraits of naturalists, mostly botanists, housed at the Institute is the largest under one roof in the world, comprising approximately 21,000 images dating from the sixteenth century to the present. About 90% of the collection consists of twentieth-century photographs, nearly half of which represent American scientists; the remaining 10% includes some eighteenth-century but primarily nineteenth-century engravings, lithographs, woodcuts and drawings. Although many of these images are available in other American or foreign institutions, people often apply to the Hunt Institute for photographs because of the quality of the collection and service. Having a professional photographer on the staff enables the Institute to provide excellent service in a timely fashion and at low cost. Editors of popular and scientific periodicals as well as curators and exhibitors at museums and botanic gardens, biographers and historians of science, and authors of biological textbooks depend on the Hunt Institute's collections and services.

So great has the demand grown in recent years for reproductions of portraits that the conservation quality of a great many of the portraits in the collection has been endangered. This project aims to copy the 21,000 images in 4" x 5" black-and-white negatives. They will be stored in polyester interleaves in acid-free boxes under the care of Frank Reynolds, our photographer. This procedure will preserve the original prints from deterioration and wear caused by frequent handling, and provide a duplicate set of images as a backup against loss of the originals. The chance of permanent loss of the images in the event of a disaster affecting the present storage room will be eliminated by keeping the negatives in a place within the Institute but separate from the portrait repository.

HUNT INSTITUTE ASSOCIATES

We invite those individuals who share the Institute's interests, whether professionally or avocationally, to participate in our program as Hunt Institute Associates. The benefits of Associate membership include:

- Subscription to issues of *Huntia* OR exhibition catalogues published during the year. Patrons receive both subscriptions.
- Subscription to the *Bulletin.*
- Discount (20%) on all Institute (sole imprint) publications, and on some works published under joint imprint.
- Discount (20-40%) on Institute cards, reproductions, and other sale items.
- Eligibility for staff volunteer program in curation and research.
- Page-charge waiver (five pages per year) on articles accepted for publicåation in *Huntia.*
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