







Flora Portrayed

CLASSICS OF BOTANICAL ART FROM THE HUNT INSTITUTE COLLECTION

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Hunt Institute for Botanical Documentation Carnegie-Mellon University, Pittsburgh in memory of Alfred M. Hunt 1919-1984

© 1985 HUNT INSTITUTE FOR BOTANICAL DOCUMENTATION All Rights Reserved ISBN 0-913196-43-6 Among collectors it is not unusual to find means coupled with motivation. What is exceptional is to find them perfectly matched, in full measure, in one individual with capacity to learn and passion sustained over decades. Rachel McMasters Miller Hunt (1882-1963) was such an exception.

Whereas many collectors come by meandering chance to their fields of interest, Rachel Hunt progressed most naturally and directly to hers. Raised in a country home, she learned to love flowers in the gardens and surrounding fields. When she was six years old she was given Mrs. William Starr Dana's How to know the wildflowers and learned the species by name. With this "bible" in hand, she began to develop an interest in books, and when, at age 15, she made her first bibliophilic purchase — Leonard Meager's The English gardener, or a sure guide to young planters and gardeners (1670) — her direction was set. It is not uncommon for collectors to discard or exchange their early acquisitions as perspectives and tastes change. But though Rachel Hunt expanded the time frame of her interest and widened the range of its subjects — to encompass herbals and medical botany, taxonomic monographs, floras, garden manuals, travel works and, especially, botanical illustration — both that early gift and her initial purchase are still in her library.

Over a span of more than 60 years Mrs. Hunt brought together, item by item, a notable assemblage of astutely (and lovingly) chosen books, artworks and related original materials dating from the Renaissance to the 19th century and representing the development of modern botany and other plant-related studies. This was generally considered to be the finest private collection of its kind when Mr. and Mrs. Hunt gave it to the Carnegie Institute of Technology (now Carnegie-Mellon University) in 1961 as the foundation for a research institute. Since then, it has been further enriched through continuing acquisitions, including an extensive representation of 20th-century artworks.

The chief focus of the Institute's art collection is botanical illustration broadly defined, falling in the area where science and art interact and often overlap. The material ranges from strictly scientific studies to decorative floral subjects. Most of the works are individual plant portraits, nearly all of them related in some way to publication — plates from botanical and horticultural books (many of which were issued serially in unbound parts), or watercolors and drawings which served as originals for such illustrations. The works are all on paper, except for a few on vellum, and are executed in watercolor, ink, pencil or one of the various print processes. These features clearly differentiate this class of artworks from that of floral still-life painting in oils, which has been a prominent genre in Europe since the 17th century. The difference extends to antecedents, and a brief account of the backgrounds of "botanical illustration" and "flower painting" is appropriate.

Before launching into the subject of flowers and man's pictures of them, however, a humbling reminder is in order. We are told that flowers first appeared on the planet (with the sole function of promoting pollination) some millions of years before man came along and invented botany, floral symbolism, bridal bouquets, decorative wallpaper and telegraphic dispatch of long-stemmed roses (delivered by the winged god Mercury). Regarding botanical illustration there is a (very) rough parallel between the cozy, and still intact, flower/insect relationship and that referred to by the commonplace "art in the service of science" — a felicitious arrangement in which both derive benefit. Those alluring floral displays set out for insects have also captivated man, who has made floral subjects a respected genre in his art. And even when flowers are drawn to serve scientific functions, the artist may be so carried away as to blur the boundary between illustration, whose aim is to convey information, and art, which concentrates on aesthetic satisfaction.

The earliest plant study was, no doubt, utilitarian — to determine which plants might be eaten, which could cure. When such investigation developed sufficiently that it seemed desirable to record the results, images of the plants must have been required also. We know that the ancient Greeks and Romans carried out extensive botanical studies and produced herbal manuscripts, but the only such illustrated work that has come down to us is a fifth-century (A.D.) copy of a first-century compendium, the famous Materia medica by Dioscorides. Its illustrations, though sadly debased through successive copying, have retained enough of the classical naturalism to make the plants easily recognizable.

Classical antiquity, since it was dependent upon hand-copying of texts, lacked the means for wide dissemination of knowledge by printed replication. For that and other reasons it was unable to sustain progress in what we now call the natural sciences, and when classical civilization collapsed the investigative impulse itself faltered. Men of the earlier Middle Ages were preoccupied with survival in an era of turmoil, and with eternal salvation. It was not until the first stirrings of the approaching Renaissance that a new scientific interest was kindled through study of ancient texts passed down in monasteries or rediscovered through contacts with Arabic culture. This revival is scarcely apparent, however, in late medieval herbal manuscripts and in the earliest printed herbals, which relied heavily on ancient authority. Mixing descriptions from classical texts with subsequent folk lore, superstition and fantasy (plus an occasional direct observation), these herbals compiled man's plant-derived remedies for his ailments. They were of especially dubious utility in northern Europe, since the Mediterranean plants described in classical texts were mostly absent there. The plant figures in these herbals are debased, much-recopied versions of remote classical models. Though effective as book-design elements they



PIONIA.

Figure 1. Woodcut of "Pionia" from $\it Tractatus$ de $\it virtutibus$ herbarum ["Herbarius latinus"], [Venice, 1520].

have little or no value as botanical illustration (see Figure 1). Even as late as the early years of the 16th century — during the lifetimes of Leonardo da Vinci and Albrecht Dürer (both of whom made exquisite plant studies) — such crudely illustrated herbals were still being published. These works were, of course, well outside the mainstream of Renaissance art.

The publication of Otto Brunfels' *Herbarum vivae eicones* (Images of living plants) in Strasbourg (1530) marked a dramatic change. Not only does the text describe native German plants, but Brunfels also engaged the services of an established artist-illustrator, Hans Weiditz (1500-1536), who drew from living plants. These vigorous and accurate images (see Figure II) mark the true beginning of botanical illustration in Europe, at the moment when the publishers of herbals caught up with Renaissance art.

Of course, flowers had figured much earlier in European art, when, in the late Middle Ages, man began again to take note of the physical world and, with St. Francis, to celebrate its beauty as a reflection of the Creator. Flowers invaded the margins of illuminated manuscripts, spread in profusion over tapestries and even on the columns of Gothic cathedrals; the lily, symbolizing purity, is a standard feature in virtually all Renaissance Annunciation scenes. By the end of the 16th century, flowers were beginning to figure centrally in easel paintings, gradually to emerge as the subjects of distinct genre that Dutch and Flemish painters of the 17th and 18th centuries would exploit brilliantly and that has pursued its own course ever since.

Few contemporary botanical artist-illustrators would claim that they are better draughtsmen than Leonardo da Vinci or Albrecht Dürer. As indicated above, the Renaissance period of European art was well advanced when true botanical illustration finally was born — by then da Vinci and Dürer had died, Michelangelo was at mid-career. Thus, the advent of botanical illustration cannot be ascribed to suddenly increased skill in basic draughtsmanship. Rather, it must be accounted for by looking to general trends in Western history and culture and, with them, technical improvements in art media and print-making processes.

European culture in the three centuries after 1530 saw unparalled expansion, through the exertions of conquistador empire-builders, explorers, commercial traders and missionaries. There were spectacular advances in science and technology, glorious achievements in art, literature and music—all despite a succession of ruinous wars, small by 20th-century standards, but of remarkable savagery, as graphically recorded in Callot's etchings and Goya's "Desastres de la Guerra."

What most affected botany and botanical illustration was the ever-increasing influx of strange plants from all quarters of the globe: from Turkey, through Vienna; from Latin America, through Madrid; from North America,

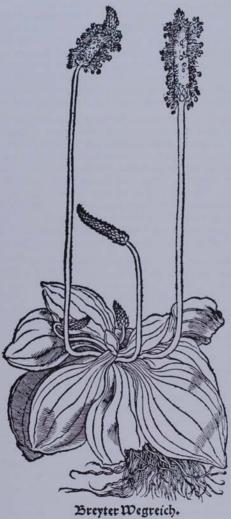


Figure II. Woodcut of "Plantago major" from Brunfels, Herbarum vivae eicones, Strasbourg, 1530.

ica and the Levant, through Paris; and eventually from everywhere through the Royal Botanic Gardens at Kew. The process was far too complex for easy summary, but supposing that around 1500 a European gardener had gone to sleep for some three centuries, he would have awakened to a bewildering array of unfamiliar plants and flowers — tulips, hyacinths, amaryllis, camellias, dahlias, magnolias, cacti, many species of rose, lily and peony, plus a few thousand less common plants. New to his taste would have been tea, coffee, chocolate, potatoes, maize, pineapples and bananas, and he would have been amazed at the smoking and sniffing of tobacco.

Traders and travellers brought many plants into Europe, but most of the new introductions came through the efforts of plant hunters commissioned by botanical institutions and wealthy garden owners. It was a common practice to have scientists and illustrators assigned to exploring expeditions. Sir Joseph Banks, who accompanied Captain James Cook on his first voyage to Tahiti, New Zealand and Australia (1768-1771), later took over the directorship of Kew Garden (later to become the Royal Botanic Gardens) and, over many years, used much of his considerable fortune to dispatch botanists and illustrators to record and bring back exotic plants and seeds. Carl Linnaeus encouraged his disciples to explore and collect in the far-flung regions not represented in his herbarium.

Early plant hunters — for whom the terms "intrepid," "indefatigable" and "unsung" are truly applicable — faced all the hardships and hazards of early travel: storm, shipwreck, disease, deprivation, tedium, attack by pirates on water, by bandits and wild beasts on land. Many of them died far from home. Not atypical were the experiences of David Nelson, a quiet gardener at Kew, who was sent by Banks on Captain Cook's third voyage, one which, apart from Cook's murder by Hawaiian natives, was bedeviled by a succession of other mishaps. The next assignment was with Captain William Bligh on the *Bounty* — specifically commissioned to act as a floating conservatory, transporting breadfruit plants from Tahiti to the West Indies to provide cheap, homegrown food for the thousands of slaves on the islands. Nelson was one of the 19 men set adrift in a 23-foot open boat and, after a journey over 3,500 miles of open sea, he died of a fever on the island of Timor.

Botanical gardens were set up in Italy in the 1540s and then in centers of learning all over Western Europe. The multitude of plants not described by Pliny or Dioscorides forced scholars to broaden their horizons and challenged their thinking. As the grip of classical authority gradually loosened, a science of descriptive botany began to appear, aided by new magnifying lenses and stimulated by rapidly increasing dissemination of information through a young and lively printing industry. By the latter half of the 18th century, after previous efforts in classification had failed to gain wide acceptance, Linnaeus achieved a monumental synthesis and his

new, very utilitarian system was nearly universally adopted. Botany had emerged as a modern science, though one yet in its infancy.

Developments in post-Renaissance botany and gardening are reflected extensively in contemporary publications and illustrations. Herbals remained popular throughout the 16th century and beyond, but, as Europeans increasingly took pleasure in newly-introduced ornamental and exotic flowers, they laid out splendid pleasure gardens, not for purposes of research or instruction but simply as settings for the cultivation and display of new beauties. Botanical gardens such as that at Leiden (Number 1) now shared the scene with elaborate layouts designed for wealthy patrons (e.g., Number 2). As the merely useful gave way to the merely pleasurable, proud garden owners had their favorite blooms recorded by painters (e.g., Numbers 3 and 4), the results often bound in albums or reproduced in printed folios (e.g., Numbers 5 and 6). The published florilegia, mostly with little or no text, were sometimes issued without coloring to give buyers the pleasure of tinting the plates themselves during the winter months, and some were intended as source books for designers. Decorative floral prints. issued singly or in suites, were also becoming popular, having put the "Dutch" still-life within reach of the non-rich (e.g., Number 12).

The later 17th century saw a blooming of books with serious botanical content: plant surveys such as Dionys Dodart's *Memoires pour servir à l'histoire des plantes* (Paris, 1676); Joseph Pitton de Tournefort's Élémens de botanique (Paris, 1694); floras of European, Asian and American regions; and various treatises on horticulture, medical botany and other special subjects.

During the period from 1700 to around 1840, when botanical illustration is considered to have reached and then passed its zenith, the numbers and diversity of publications grew steadily, with a proliferation of scientific treatises that demanded increasingly close analytical draughtsmanship. The work of the Bauer brothers is preeminent in this aspect of illustration (e.g., Numbers 36 to 38). But the outstanding feature of the period is the great quantity of sumptuous color-plate folios published in England, France, Germany and the Low Countries — books in which artists, engravers and printers, enjoying enlightened patronage and popular success, brought the art of flower illustration to its highest level. Such works very well represented in Mrs. Hunt's library, are now mostly restricted to the shelves of institutional and private collections, little seen by the general public.

The unflagging passion for gardening manifested itself not only in the profusion of elaborate estate layouts, in varying styles, spread over the European landscape, but also, toward the end of the 18th century, in the spectacular success of horticultural periodicals. In their low-cost octavo format, Curtis's botanical magazine (founded in 1787 and still going strong) and its many imitators promoted a wide and eager market.

The brilliant era of botanical illustration ended somewhere around 1840, the year of P.-J. Redouté's death. There followed a half-century-long hiatus in which few significant illustration projects were produced.

Before dealing with the greatly transformed world of 20th-century illustration, a brief review of traditional print processes may be desirable. For herbals, which were among the earliest of printed books in Europe, the sole medium of illustration was woodcut. In that process the image is drawn in ink (in reverse) on a smooth block of fruitwood. The blockcutter, using a knife and gouges, then cuts away the entire surface except for the drawn lines, which thus are all that remains at surface level to receive the ink that will be transferred to paper in the printing. A "type-high" block could be printed along with the text, with considerable saving in time and cost, and such "relief" printing produced simple outlines very suitable for coloring by hand. Woodcut illustration prevailed through the most of the 16th century and, though greatly refined block-cutting skills produced remarkable results, there was some inevitable sacrifice of subtlety.

By the end of the century, woodcut was being supplanted by metal-plate engraving and etching, often combined. These "intaglio" processes made possible much greater delicacy and richness of form. In engraving, grooved lines are incised in the plate (usually copper) using a hand-pushed burin. In etching, a needle is used to scratch lines through a protective coat of varnish (ground) covering the plate; after that, in the etching bath, acid "bites" into the surface of the plate only along the lines, where the metal has been exposed. In both techniques, the plate with its recessed image is then inked and its surface wiped clean; ink remains in the incised lines and is transferred to paper in a high-pressure press. The intaglio technique allows great subtlety and variety in rendering form and shading, using close-spaced hatched lines. Even greater gains in realism were achieved through the rendition of continuous tonal gradation in later refinements of intaglio. For flower illustration, stipple engraving, which substitutes small closely-spaced dots for lines, is the most noteworthy. When printing in color was adopted around 1800, the resulting plate, with finishing washes of color applied by hand, had much the character of the original watercolor painting it reproduced.

Lithography dominated the field of illustration after about 1830. In lithography the image is drawn with greasy crayon or ink on a smooth, porous limestone. The stone is wetted and the greasy drawing repels the water; then the printing ink is applied, and it adheres only to the greasy drawing, not to the wet stone. Printing in a press faithfully reproduces on paper the character of the artist's drawing. Elimination of the intermediate step of engraving or etching makes the process more direct, easier, faster and more economical than those metal-plate techniques. It made reproduction in very large editions feasible, even before the photomechanical

processes of our century completely transformed the field of illustration, allowing us to mass-reproduce any kind of artwork in virtually unlimited quantities.

Today the printer's skill is still crucially important, as evidenced by the range of color-quality to be seen in any of our bookstores, from atrocious to near-perfect. But even in the best photomechanical reproduction, we miss the fresh appeal of a hand-colored engraving, etching or lithograph.

The traditional print processes were developed for the same purpose that today's photomechanical techniques serve: to replicate artworks as faithfully as possible. But we now see those old illustrations in an additional light; woodcuts, engravings, etchings and lithographs are (as photomechanical reproductions are not) "original prints," so regarded by collectors and so priced by printsellers. Some early-19th-century floral color plates are priced higher now than their watercolor originals were only 30 years ago, and this is not solely a function of rarity. The old prints have come to be admired for qualities intrinsic to their media. A degree of simplification — in an outline or a graded tonal area — imparts an element of abstraction, a decorative quality not necessarily inherent in the original painting. Today's dealers and interior decorators have not failed to recognize and exploit this charm of old flower prints.

Book publishing, like any commercial enterprise, has always been subject to market economics. Illustrations make a work more appealing, but they also increase the production cost significantly, adding expenses for artists, engravers (often more highly paid than the artists) and special printing. Owing to marketing considerations, as well as the inherently slow production processes of the time, nearly all the color-plate folios of the 18th and 19th centuries were issued serially, in fascicles of a few plates each. This made each part individually more affordable, but even so, these were very expensive works and most were sold by subscription to people of means (the lists headed, whenever possible, by members of the nobility).

When we see the shelves of a library filled with rare and valuable folios, it is all too easy to forget the struggles entailed in their production, and the failures due to misjudgements and vicissitudes. Audubon's Birds of America (1827-1838), probably the most famous and now most valuable of all illustrated natural-history works, was only a limited success in the author's lifetime, and that only by dint of his own prodigious promotional efforts. Redouté, best known of all botanical illustrators, outlived the market for his superb plates. Most of Linneaus' landmark scientific treatises were published without illustrations for want of funds. Publication of Nicolas Robert's superb plates was sidetracked by Louis XIV's wars and squabbles among savants of the Academie, and did not occur until 104 years after the artist's death. Sir Joseph Banks had copperplates made of the illustrations from Captain Cook's first voyage, but was then diverted by other matters

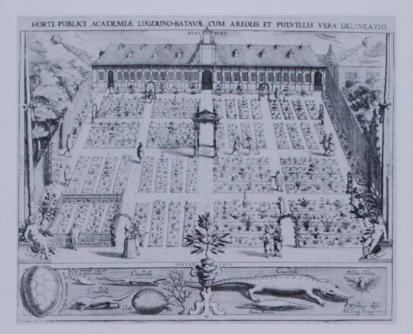
and the plates were stored away unprinted for some 200 years. Generally, fortune and the fickle market have smiled on the prudent — e.g., William Curtis, who, after his Flora Londinensis plates found too few buyers, tried again in the smaller format of his Botanical magazine and caught the broad market of English gardeners — and have punished rash ambition — e.g., Robert Thornton, who squandered his fortune on the grandiose New illustrations of the sexual system of Carolus von Linnaeus (of which The temple of Flora is a part — Numbers 53 to 56). In our own time publishers have access to sophisticated market analyses and promotional techniques, but still they manage to keep the "remainder" tables well stocked.

Mrs. Hunt's collection of botanical artworks consisted almost entirely of items dating from before 1900. Since the Institute's founding, many thousands of 20th-century watercolors, drawings and prints have been added, representing the ever widening range of manners and media in our era of vastly expanded art markets and mass-production publishing. Whatever may have been expected of photography, it is clear that it has not made the artist-illustrator obsolete; for analytical depiction in particular, illustration has the distinct advantage — confirmed by the large botanical institutions which continue to employ staff illustrators. Free-lance illustra-

tors have an apparently unabating market in today's enormous production of horticultural books and magazines, and in popular posters and calendars which present individual plant portraits much in the manner of 17th-century florilegia (e.g., Numbers 73 and 78). Flower subjects remain favorites in the "art print" trade, and even color-plate folios still appear occasionally — sumptuous vehicles for rhododendrons by Carlos Riefel, tulips by Roderick McEwen, roses by Lotte Günthart and Anne Marie Trechslin. Meanwhile our increasingly numerous museums and galleries are displaying art in unprecedented volume and variety — including exhibitions devoted entirely to botanical subjects.

The small selection of contemporary works included here provides only a hint of the scope and variety offered by today's botanical artists and illustrators. A more nearly adequate sampling has been furnished in the Institute's series of international exhibitions staged every five years. The works of the nearly 500 20th-century artists represented in these shows since 1964 prove that in the world of art the infinite variety of plant forms and colors still holds special fascination and offers undiminished challenge and delight.

J.V.B.



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Titles rendered within quotation marks are as taken from the works themselves or their publication contexts. Imputed titles and supplementary information are given within brackets.

Dimensions cited (in centimeters) are for sheet size, followed by those for plate mark (if any).

JAN CORNELISZ WOUDT Dutch, 1570-1615

l "Horti Publici Academiae Lugduno-Batavae Cum Areolis et Pulvillis Vera Delineatio" [Botanical Gardens at Leiden], 1610 Engraving, with etching. 35.4 × 42.8 cm., 32.6 × 40 cm. (page 16)

Would depicted the Botanical Garden at Leiden soon after its founding in 1587 under the directorship of Charles de L'Écluse, one of the most important botanists of the period. Evolving from monastic gardens, where herbalists grew plants for medicinal purposes, botanical gardens like this one and those founded in Italy in the 1540s were museums of living plants, including numerous new and exotic ones brought to Europe by travelers. Although ornamentals were cultivated, the chief purpose of these gardens was to serve as centers of research. In this print showing the garden layout, many of the plants are identifiable. At right of center, an artist is at work drawing a plant. In its lower panel the print displays animal specimens in the garden's "cabinet" of natural-history curiosities.

JACQUES FOUQUIÈRES French, ca. 1580-1659

2 "Scenographia Hortus Palatinus a Frederico V. Electore Palatino Heidelbergae Exstructus. 1620" [View of Gardens and Castle at Heidelberg], 1620 Etching. 47.1 × 58.2 cm., 34 × 49.8 cm. (page 16)

Fouquières made the painting from which this spectacular etched view of Heidelberg castle and gardens was made. Salomon de Caus (1576-1626) designed the vast layout on an uncongenial mountain-side site high above the town and the Necktar river. An extravagant conception, whose typically Renaissance fea-

tures include terraces, stairs, embroidered parterres, decorative knots, a maze with obelisk, pergolas, topiaries, fountains and grottoes with waterworks, the grand design was soon abandoned and never finished, a victim of the Bohemian wars. Caus, who had studied Italian gardens, was a French architect-engineer, hydraulics specialist and author of a book on fountains, grottoes, fire engines, water toys and water jokes. His machine for raising water in fountains by steam pressure was a forerunner of the steam engine. Isaac de Caus, the nephew of Salomon, designed the first great formal garden in England, setting the trend for Italian and French influences there.

JOHANN THEODORE DE BRY (attributed to) German, 1561-1623

- 3 "Ornithogalum hispanicum, Hyacinthus neaopolitanus, Flos cuculi plenus" [Star-of-Bethlehem, *Ornithogalum* sp., and Ragged-Robin, *Lychnis flos-cuculi* L.] Watercolor. 32 × 20 cm. (page 20)
- 4 [Tulips, Tulipa gesnerana L.] Watercolor, 32 × 20.1 cm. (page 18)

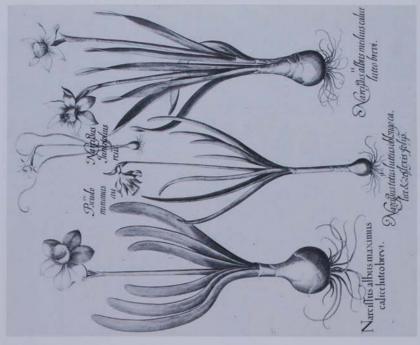
These are from a group of flower paintings probably intended for publication as a *florilegium*, a type of picture book of admired garden flowers that became popular in the 17th century. De Bry, who published several *florilegia* with engraved plates, was a member of a prominent family of engravers and publishers. He was the grandfather of Maria Sybilla Merian (see Number 14).

In de Bry's day the tulip was a new import from Turkey, where it was so popular that annual tulip festivals were staged by the Sultan. (A contemporary Turkish manuscript lists 1,323 varieties.) The 17th century witnessed a "tulip-











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mania" in which prices rose to ridiculous levels and the tulip became the object of wild speculation. When the bottom suddenly fell out of the market in 1637, people who had mortgaged homes and estates to buy bulbs and make quick fortunes were ruined.

BASIL BESLER

German, 1561-1629

5 "I. Narcissus albus maximus calice luteo brevi. II. Narcissus albus medius calice luteo brevi. III. Narcissus totus luteus oblongo calice & reflexis foliis. IV. Pseudo Narcissus minimus Juncifolius aureus." [Daffodils, Narcissus spp.

Hand-colored engraving. From Besler's *Hortus Eystettensis* (Eichstätt?, 1613 or subsequent edition). 54.6 × 42.7 cm., 48.2×40.3 cm.

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6 "I. Lilio Narcissus Hemero calli disfacie. II. Gnaphalium Montanum suave rubens. III. Gnaphalium Montanum variegatum." [Sea-Daffodil, Pancratium sp., and Cudweed, Gnaphalium sp.] Hand-colored engraving. From Hortus Eystettensis. 52.8×42 cm., 49.8×39.7 cm.

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Besler, a Nuremberg apothecary, was put in charge of the gardens of a flower-loving Prince Bishop of Eichstätt, who supported publication of the massive two-volume Hortus Eystettensis. Besler made the drawings for its 374 plates that depict more than 1,000 flowers. The gardens themselves fell into neglect after Bishop Konrad's death in 1612, but these superbengraved plates are still highly prized by collectors and decorators.

NICOLAS ROBERT

French, 1614-1685

- 7 [Barbados-Lily, Hippeastrum vittatum (L'Hér.) Herb.] Watercolor on vellum, 43.9 × 32.9 cm. (page 24)
- 8 [Coral-Tree, Erythrina corallodendrum L.] Watercolor on vellum. 44.8 × 32.9 cm.
- 9 "Castanea Equina. Maronier D'Inde" [Common Horse-Chestnut, Aesculus hippocastanum L.) Engraving (modern restrike). From Dionys Dodart's Recueil des plantes . . . (Paris, 1788). 63.8 × 47.5 cm., 41.8 × 31.2 cm. (page 24)
- 10 "Populago Tabern. icon. 750. Soucy d'eau" [Marsh-Marigold, Caltha palustris L.] Engraving (modern restrike). From Recueil des plantes ... 56.5×37.8 cm., 41×30.2 cm. (page 28)
- 11 "Melo vulgaris. Melon" [Melon, Cucumis melo L.] Engraving (modern restrike). From Recueil des plantes 38 × 56.6 cm., 29.8 × 40.6 cm. (page 32)

Robert's early reputation was established by painted floral illustrations for a celebrated album, the exquisite Guirlande de Julie, presented to the beautiful daughter of the famous Marquise de Rambouillet by her fiancé. The album consisted of madrigals by Corneille and other leading poets, transcribed by the eminent calligrapher Nicolas Jarry. Robert also published some of the 17th century's most beautiful florilegia.

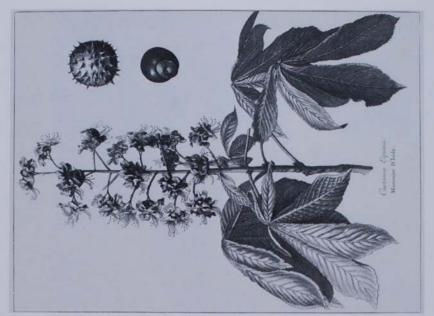
A more significant phase of Robert's career began when Gaston d'Orléans, brother of Louis XIII, employed him to make paintings on vellum, recording the plants and animals of Gaston's gardens and collection at Blois. There the artist developed skills as a scientific illustrator. After Louis XIV inherited these paintings, Robert continued the work. This series of superb paintings, executed in finely hatched brushstrokes in the tradition of medieval manuscript illumination, forms the nucleus of the remarkable collection of "vélins" produced over the years up to 1905 by Robert (727 paintings) and successive official artists (Gerrit van Spaendonck and Pierre-Joseph Redouté among them), a rare treasure of some 6,500 paintings now in the library of the Muséum National d'Histoire Naturelle in Paris

In the 1670s the newly formed Académie Royale chose Robert as chief illustrator for an ambitious History of plants; he did most of the drawings and many of the engravings. (Abraham Bosse, engraver of the famous Parables, which vividly depict life in the France of Molière's century, was a collaborator.) Drawn with accuracy and sensitivity from living plants, and expertly engraved and etched, these plates are unsurpassed by any botanical illustrations published before the 19th century. Though publication was delayed by wars and other vicissitudes until 1788, the three-volume Recueil des plantes gravée par ordre du roi Louis XIV that finally resulted is a landmark of botanical illustration. Robert's botanical knowledge together with his clarity and accuracy of draughtsmanship, his sensitivity as a designer and his facility as an engraver have secured his position among the great masters in the history of botanical art.



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JEAN BAPTISTE MONNOYER French, 1634-1699

12 [Bouquet in urn] Engraving, 71.6×53.2 cm., 49.5×38 cm. (page 28)

Floral still-life painting had its most vigorous development in the 17th-century Dutch school. The Bosschaerts, van Heem, the van Huysums and Rachel Ruysch were only a few of its many masters. Fine floral compositions were also in demand in France, where some of the early florilegia furnished designs for tapestries, carpet weavings and embroideries. Monnoyer, who had studied Dutch techniques at Antwerp, was chosen by the powerful arbiter of art Charles LeBrun to design Gobelin tapestries and to decorate several of the royal palaces. Versailles had some 60 paintings by Monnoyer who, with his school, set the style of decorative painting for adornment of the great houses, royal and private, of France and England. A less exalted market was served by Monnover's superbly decorative floral engravings.

NICOLAS DE LARMESSIN III French, 1640-1725

13 "Habit de Jardinier" [The vegetable gardener] Hand-colored engraving, with etching. From Larmessin's Costumes grolesques (1695), 31.5 × 21.2 cm., 28.2 × 18.8 cm. (page 36)

Larmessin came from a large French family of artists and engravers. The Vegetable Gardener is one of a large series of popular prints showing human figures, each wearing and carrying the materials and tools of his or her trade. Another print, The Flower Gardener, shows a woman carrying a bouquet and sprays of flowers and wearing a flower-bedecked costume with vases on the sleeves. Others show a painter, a musician, a cabinet-maker and various craftsmen. A taste for bizarre and fantastic subjects characterized the age. A century earlier, the Milanese painter Guiseppe Archimboldo (ca. 1527-1593) had painted his famous suite of human heads made up entirely of flowers and other plant forms.

MARIA SIBYLLA MERIAN German, 1647-1717

14 "Banane" [Banana, Musa paradisiaca L.] Hand-colored engraving by P. Sluyter. From Merian's Metamorphosis insectorum Surinamensis ... (Amsterdam, 1705), 48.3 × 32.8 cm., 38.9 × 28.8 cm. (page 23)

Merian was born into a dynasty of European engravers, as the daughter of the well-known Swiss engraver Matthäus Merian the Elder and granddaughter of J. T. de Bry. She was a woman of markedly independent temperament, whose career as an author and illustrator of entomological works was extraordinary for the period. In 1679 she published the first volume of Histoire des insectes de l'Europe ... (Amsterdam) illustrated with her own hand-colored engravings of insects and plants. In 1685 she was converted to Labadism, an exclusive religious sect. Leaving her artist-husband and resuming her maiden name, she joined the sect's community at the castle of Bosch in Holland with her two daughters. There she admired a fine collection of tropical insects from Surinam and determined to go herself.

In 1698 Merian and her daughter Dorothea undertook the perilous voyage to South America. Mother and daughter worked nearly two years in Surinam, collecting and painting in sects and the plants on which they fed. Merian's failing health forced her to return, but, with the help of both her daughters, she was able to publish the magnificent Metamorphosis insectorum Surinamensis ... for which Jan Sluyter and Joseph Mulder did most of the engravings. The plates are hand-finished in vivid colors and, though the delicately drawn insects are the chief interest of the work, the host plants are vigorously portrayed and add much to the total effect.





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(b. 25)



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LEONARD KNYFF

15 "Wimple in the County of Cambridge ..."
Etching, with engraving, by Jan Kip. From Kip's *Britannia illustrata* ... (London, 1707). 42.4 × 53.9 cm., 35 × 48.7 cm. (page 32)

A Dutch-born artist working in England, Knyff made bird's-eye-view drawings of great estates which were engraved by his fellow countryman Jan Kip. The suite of plates, published in *Britannia illustrata* ... in 1707 and in several later editions, is a valuable archaeological source book for the great homes and gardens that were being rebuilt all over England around 1700. This view of Wimple shows the influence of French formalism in design, with just minor deviations from strict symmetricality, which were common in English gardens of the period.

HERMAN HENSTENBURGH Dutch, 1667-1726

16 [Floral wreath] Gouache on vellum, 35.1 × 29.5 cm. (page 26)

Henstenburgh, a very talented amateur, left only a few botanical paintings, among them a brilliant study of Parrot Tulips. By profession he was a pastry cook.

JAN VAN HUYSUM Dutch, 1682-1749

17 "A Flower Piece," 1722 Hand-colored mezzotint by Richard Earlom, 1778. 62.3 × 47.5 cm., 55.1 × 42 cm. (page 27)

18 "A Fruit Piece," 1723 Hand-colored mezzotint by Richard Earlom, 1781. 62 × 47 cm., 55.1 × 42 cm. (page 36)

The Dutch school of floral still-life painting, which emerged modestly as a distinct genre in the late 16th century and flourished throughout the 17th in a climate of widening prosperity, reached full expression in the elaborate compositions of such artists as van Huysum and Rachel Ruysch (1664-1750) during the first half of the 18th century. Floral still-lifes appealed to well-to-do patrons indulging a taste for sumptuous display. The less-well-off could settle for graphic transcriptions on paper. The mezzotint process was widely used to imitate oil

paintings, particularly for portraits. These two Earlom prints are rare examples of the application of mezzotint to flower and fruit subjects.

PIETER CASTEELS Flemish, 1684-1749

19 "November" Hand-colored engraving by Henry Fletcher. From Robert Furber's The twelve months of flowers (London, 1730). 58.3 × 46.3 cm., 41.8 × 31.4 cm. (page 18)

20 "October"
Hand-colored engraving by Henry Fletcher, From Robert Furber's *The twelve months of fruits* (London, 1732), 58.4 × 46 cm., 43.8 × 35.5 cm. (page 31)

These prints are from two suites that were actually early deluxe seed catalogues. The Flemish-born Casteels worked in London and was commissioned by the florist and seedsman Robert Furber to paint, in the Dutch manner, arrangements of flowers that bloom during each month of the year. On each print a key to the numbered flowers made it easy for customers to order seeds. Both print suites were successful and there were later editions in a smaller format. The Furber prints are still widely reproduced and have been featured prominently at Colonial Williamsburg.

BARBARA REGINA DIETZSCHE German, 1706-1783

21 [Onions, Allium eepa L.] Gouache on dark brown ground. 28.6 × 20.5 cm. (page 30)

Dietzsche was one of a group of artists and engravers working at Nuremberg, which became an important center of botanical art under the patronage of the eminent physician Christoph Jacob Trew, a botanist and collector with a keen interest in bibliography. Trew published several important color-plate books, but perhaps his greatest claim to fame was his early recognition of Ehret's talent. He had a lifelong and fruitful friendship with Ehret, who was the dominant figure in botanical art during the mid-18th century.



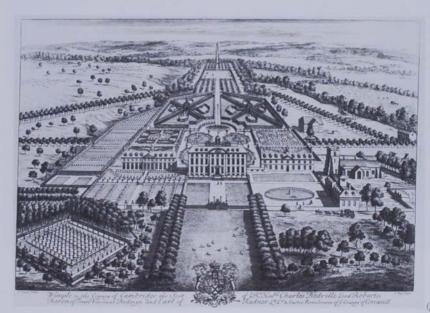


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- 22 [Bouquet of Tulip, Tulipa sp., Checkered-Lily, Fritillaria sp., Gentian, Gentiana sp., and Stock, Matthiola sp.], 1749 Gouache on dark brown ground. 34.2 × 26.2 cm. (page 30)
- 23 "Bignonia; Americana ..." [Trumpet-Creeper, Campsis radicans (L.) Seem. ex Bur.] Gouache on vellum. 53.9 × 37.2 cm. (page 35)
- 24 "Ketmia; Indica ..." [Pentapetes phoenicea L.] Gouache, 54 × 37.5 cm. (page 34)
- 25 "Iris Susiana, flore maximo, ex albo nigricante. C.B.; Iris bulbosa, angustifolia coerulea. C.B." (Mourning Iris, Iris susiana L., and English Iris, Iris xiphioides J. F. Ehrh.], 1745 Gouache on vellum. 52.9 × 37.1 cm. (page 38)
- 26 "Bignonia Urucu ..." [Common Catalpa, *Catalpa big-nonioides* Walt.], 1740 Gouache on vellum. 53.5 × 37 cm. (page 39)
- 27 "Cereus minimus scandens polygonus spinosissimus flore purpureo. Miller" [Rat-tail Cactus, Aporocactus flagelliformis (L.) Lem.]
 Hand-colored engraving by Ehret. From his Plantae et papiliones rariores ... (London, 1748-1759). 52.7 × 36.3 cm., 42 × 27.3 cm. (page 43)

Of the many botanical artists and engravers who brought their skills from the Continent to England before the end of the 18th century, Ehret is surely the most eminent. The son of a gardener in Erfurt, he combined his early training in gardening with a leisure-time hobby of drawing plants. Matching native intelligence and talent with a pleasing temperament and an uncanny faculty for homing in on the most advantageous contacts, he managed, in the course of his traveling about Europe, to gain considerable botanical knowledge and to establish a reputation. Using letters of commendation to good effect, he touched all the bases with the most influential scientists and patrons of his day. He was gardener for the Margrave of Baden; he made hundreds of drawings for Johann Weinmann, whose Phytanthoza iconographia (Regensburg, 1737-1745) was a valuable florilegium of the period; he impressed the Nuremberg physician and patron C. J. Trew, who commissioned and published his drawings and remained a lifelong friend; he visited Lausanne, Geneva, Lyons and Montpellier, botanizing and learning along the way; he met Bernard de Jussieu in Paris and, in Holland, the great Linnaeus, for whose new system of

plant classification he engraved a "tabella"; he sold drawings to the wealthy Dutch banker and garden-lover George Clifford and illustrated Linnaeus' account of the rare plants in Clifford's garden (*Hortus Cliffortianus*, Amsterdam, 1737). Urged on by de Jussieu, Ehret made a preliminary trip to England, meeting Sir Hans Sloane, founder of the British Museum, and Philip Miller, reputedly the greatest gardener of the age and author of the monumental *The gardener's dictionary* ... (London, 1731 and subsequent editions.). Later on he married Miller's sister-in-law.

In 1736 Ehret settled in England for good, and there his career (like that of his older contemporary Handel) flowered luxuriantly. Characteristically, he enjoyed exalted patronage—the royal physician Dr. Mead, Sir Hans Sloane, who commissioned drawings for *Transactions of the Royal Society*, and the charming Duchess of Portland, for whom he did many paintings. Exercising his gift for getting on with people, he became a popular figure in English society, visiting the great homes and gardens, trying to satisfy the clamorous demand for instructions in flower painting.

His autobiography lists the names of countesses and duchesses among his pupils. He was made a Fellow of the Royal Society (the only foreigner on the English list). Meanwhile he tramped about the country to study and depict new plants and found time to illustrate several travel books and florilegia, turning out an astonishing flood of magnificent plant paintings, many of them on vellum. The bouquet (an unusual subject for Ehret) and the four paintings of individual plants shown here demonstrate Ehret's impressive qualities as a botanical artist: vigorous draughtsmanship, unfailing instinct for design, and confident handling of plant structure. In these works, science and aesthetics are served equally.

Ehret's engraved works are generally less impressive. The earlier artist Robert and later masters such as Redouté and Prévost were better served by their engravers. However, Ehret himself engraved the plates for *Plantae et papiliones rariores* ... and they are superior to those of his other works. Number 27 is a good example of his own skillful platework and fresh hand-coloring.



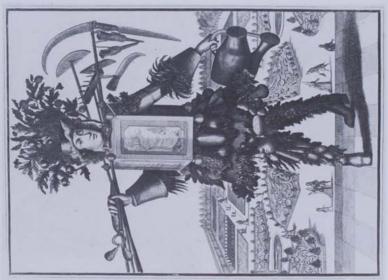


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German

28 [Gardener's diploma], 1741 Pen-and-ink, watercolor on vellum. 49.5×67.5 cm. (page 42)

This gardener's diploma was presented in 1741 to Peter Garseke by Friedrich Schuler, Head Gardener for Count Heinrich Katt (of Brandenburg), a Field Marshal of the King of Prusia. (Note the cat on his coat-of-arms.) The richly decorative document has something of the character of Pennsylvania Dutch "Frakturs."

ANONYMOUS

18th century

29 "Bilfen Kraut, Hyoscyamus niger L." [Henbane] Watercolor, 36.9 × 23.9 cm. (page 40)

30 "Pavia" [Red Buckeye, Aesculus pavia L.] Watercolor, 36.8 × 24 cm. (page 34)

These watercolors exemplify the many thousands of unsigned flower portraits painted by amateurs from the 16th through the 19th centuries. Such paintings — many bound into albums — record with affectionate care (and widely varying skill) both wildflowers and garden favorites.

GERRIT VAN SPAENDONCK Dutch, 1746-1822

31 "Tulipe des Jardins, Tulipa gesneriana L." [Tulips, Tulipa gesnerana L.]
Stipple engraving by P. F. Legrand. From van Spaendonck's Fleurs dessinées d'après nature (Paris, 1801).

49 × 32.5 cm. (page 40)

32 "Grande Capucine. Tropaeolum majus L." [Nasturtium, Tropaeolum sp.]
Stipple engraving by A. L. X. Chaponnier. From Fleurs dessinées d'après nature. 33 × 49.1 cm.

(page 44) 33 "Pavot cultivé. Papaver somniferum L." [Poppies, Papaver sp.] Supple engraving by P. F. Legrand. From Fleurs

dessinées d'après nature. 50.1×32.2 cm., 49.5×32.1 cm. (page 68)

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34 [Arrangement of fruits], 1781 Gouache. 38 × 27 cm. (page 47)

Van Spaendonck forms a direct link between Jan van Huysum, a late master of the Dutch school of floral still-life painting, and Pierre-Joseph Redouté, the best-known artist of what has been called the Golden Age of botanical illustration. Having been van Huysum's pupil and imitator, van Spaendonck settled in Paris and was appointed professor of flower painting at the Jardin du Roi, where he helped and strongly influenced the young Redouté. In his official capacity, van Spaendonck contributed magnificent paintings on vellum to the state collection that had grown year after year since the 1630s. Meanwhile he gained popularity as a painter and decorator and as a teacher. His classes at the Jardin des Plantes attracted both idle young ladies and serious students of both sexes, including many who were to become the leading artists of the brilliant period of French botanical art in the early decades of the 19th century.

Two techniques developed by van Spaendonck (and adopted by Redouté) were significant. His early watercolor paintings were done with opaque colors, but around 1783 he began to use transparent watercolors, enabling a subtler technique that could capture all the delicate hues and tones of flowers. For reproduction he adopted a stipple process — etched dots rather than engraved lines — to achieve modelling with smooth tonal gradation. The technique is shown clearly in the three uncolored plates (Numbers 31 to 33) from a suite of 24, the only publication of van Spaendonck's work done in his lifetime.

CLARA MARIA POPE English, 1750?-1838

English, 17502-1656

35 [Moss roses in Chinese vase], 1832 Hand-colored lithograph, 58.7 × 43.4 cm. (page 46)

In 40 years of exhibiting regularly at the Royal Academy, Pope displayed her versatility with portraits, genre scenes, miniatures and flower paintings. Several of the latter are reproduced in Samuel Curtis' *The beauties of Flora* ... (Gamston, Notts., 1806-1820), a rare work probably inspired by Thornton's *The temple of Flora*.



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FRANZ ANDREAS BAUER Austrian, 1758-1840

- 36 "Erica pyramidalis Soland." [Heath, Erica sp.] Watercolor. 37.6 × 26.6 cm. (page 68)
- 37 "Erica hughesi" [Heath, Erica speciosa Andr.] Watercolor. 37.9 × 26.8 cm. (page 46)

The brothers Franz and Ferdinand Bauer, who must surely be ranked among the greatest of botanical artists, could be adequately represented only by reference to originals in European collections and to the few publications whose engraved plates do justice to their skills in the analytical delineation of botanical details. Born near Vienna, the sons of a court painter to Prince Liechtenstein, both came to work principally through English connections.

Franz, the elder brother, had a long and relatively uneventful career. On a visit to England he met Sir Joseph Banks, enlightened and generous patron of the natural sciences, who saw in the young Austrian the ideal man to serve as permanent draughtsman for the Royal Gardens at Kew. Banks arranged for a lifelong salary from his own purse and, in 1790, Bauer settled in at Kew. Over the years he turned out a steady stream of superb paintings of introduced plants, took on the most exacting special projects (including microscopic drawings for which he became famous), and developed botanical skills to match the excellence of his draughtsmanship. These two sketches of heaths were probably made in connection with Bauer's Delineations of exotick plants cultivated in the Royal Garden at Kew ... (London, 1796-[1803]). This rare folio contains only 30 plates, engraved by Daniel Mackenzie. They are the only published plates that do justice to the power of Bauer's draughtsmanship. The folio has no descriptive text. The minute botanical details and the accuracy of the illustrations are such that, in Banks' words, "it would have been a useless task to have compiled ... any kind of explanation concerning them; each figure is intended to answer itself every question a Botanist can wish to ask, respecting the structure of the plant it represents."

Franz Bauer remained in dedicated and happy service at Kew for half a century. He was buried (beside Gainsborough and Zoffany) in the Kew churchyard.

FERDINAND LUCAS BAUER Austrian, 1760-1826

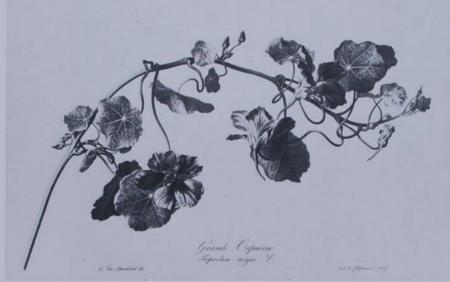
38 "Pinus pendula" [European Larch, Larix decidua Mill.] Hand-colored line and stipple engraving by Daniel Mackenzie, From A. B. Lambert's A description of the genus Pinus (London, 1803-1842), 54.8 × 36.6 cm., 44.9 × 30.3 cm. (page 50)

Ferdinand Bauer had a career more adventurous than his brother's. As botanical artist he sailed with the Oxford professor John Sibthorp on a tour of the Levant, making studies of flora which, after a long period of preparation in England, were published in Sibthorp's celebrated Flora Graeca (London, 1806-1840). Containing nearly 1,000 engravings with hand coloring, this production in ten folio volumes is one of the most sumptuous of English botanical works. In 1800 Bauer joined Captain Matthew Flinders on a hazardous expedition to Australia. Unfortunately, publication of Bauer's illustrations from this voyage was abandoned for lack of support after 15 plates had been issued. Some of his finest illustrations were published in A description of the genus Pinus. These plates were admired by Goethe, himself a keen botanist, who saw them in the Royal Library at Weimar. "It is a real joy to look at these plates," he wrote, "for nature is visible, art concealed."





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44

PIERRE-JOSEPH REDOUTÉ

Belgian, 1759-1840

39 [Golden Spider-Lily, Lycoris africana (Lam.) M. J. Roem.], 1788 Brush-and-ink monochrome with detail in watercolor.

Brush-and-ink monochrome with detail in watercolor. For Charles Louis L'Héritier de Brutelle's Sertum Anglicum (Paris, 1788), 56.6 × 40.7 cm. (page 72)

- 40 "Tulipa gesneriana var. dracontia. Tulipe des Jardins var. le Dragon" [Parrot Tulip, Tulipa gesnerana L.], 1816 Color-printed stipple engraving with hand coloring, by Langlois. From Les Liliacées. 54.6 × 36.7 cm., 52.3 × 35 cm. (page 49)
- 41 "Rosa gallica agatha incarnata" [French Rose, Rosa gallica L. cv. 'Agatha'], 1824 Watercolor on vellum. For Les roses, 38.4 × 26.7 cm. (page 72)
- 42 [Wreath of Austrian Briar Rose and Austrian Copper Rose, Rosa foetida J. Herrm. vars.] Watercolor on vellum. For frontispiece of Les roses. 24.2 × 23.5 cm. (page 50)
- 43 "Aster bidentatus" [Daisybush, Oleana sp.], 1814 Watercolor on vellum. 47.9 × 36.2 cm. (page 73)

- 44 "Erica" [Heath, Erica vestita Thunb.], 1813 Watercolor on vellum. 47.7 × 36.1 cm. (page 52)
- 45 [Bouquet of mixed flowers], 1839 Watercolor on vellum. 49.4 × 36.5 cm. (page 51)
- 46 [Rose, Rosa sp., and Anemone, Anemone sp.], 1813 Watercolor on vellum. 32 × 24.2 cm. (page 53)

Redouté is probably the most famous of botanical artists. He has been called the "Raphael of the rose." Born in Luxembourg into a family of painter-decorators, Redouté left home at the age of 13 to make his living as an itinerant artist. In the Low Countries he admired and studied the Dutch flower painters, particularly Jan van Huysum, an experience that was decisive in his development. Ten years after leaving home he joined an older brother, a designer of stage scenery, in Paris and soon discovered that the Jardin du Roi was the place to see and draw rare flowers. He himself was discovered there by the wealthy amateur botanist L'Héritier de

Brutelle, who recognized the young artist's promise, instructed him in the essentials of botany, gave him access to his own fine library, and engaged him to make illustrations for his botanical texts. Number 39 is the original for a plate in *Sertum Anglicum*, a book that resulted from a trip to England (and Kew Gardens) on which Redouté accompanied his patron. The drawing gives at least a hint of the greatness to come in the artist's mature work. The line engravings for this work, however, are far inferior to the color-stipple plates of Redouté's great folios published from around 1800 onward.

Gerrit van Spaendonck was also impressed by Redouté and he, too, befriended him, giving encouragement and training in art techniques to match L'Héritier's scientific instruction, and arranging Redoute's appointment to the staff of the Muséum at the Jardin. In his early Paris years, Redouté followed van Spaendonck's lead, painting in transparent watercolor and also adopting the stipple-engraving process. Redouté's own contribution consisted of simultaneous multicolor printing from a single plate on which inks of various colors had been applied to different areas with a rag stump or poupée. The process was laborious, but the resulting prints, when carefully hand-finished with watercolor washes, have almost the quality of watercolor paintings. The small army of highly skilled craftsmen who produced the stipple-engraved plates for van Spaendonck, Redouté and their followers played a significant role during this period.

Redouté had been appointed Draughtsman to the Cabinet of Marie-Antoinette (a meaningless title, since she is said to have hated pictures). Later, however, he found in Bonaparte's wife, Joséphine, a patroness whose passion for flowers matched his own, one who, moreover, had access to the means for indulging a taste for grandeur. Acquiring the estate at Malmaison in 1796, she proceeded to spend lavishly on its gardens — hiring botanists and horticulturists, collecting and cultivating rare and choice plants from both the Old and New Worlds, and engaging the already famous

Redouté, at a handsome salary, to record their splendor. The magnificent folios published under Joséphine's sponsorship contain most of the finest color plates of his career: Les Liliacées, Jardin de la Malmaison (Paris, 1803-1805), Description des plantes rares cultivées à Malmaison et à Navarre (Paris, 1812-1817) and Les roses. Redouté was then at the height of his artistic powers; the color stipple work by the teams of engravers (18 engravers for the nearly 500 plates of Les Liliacées) is of a high order, and the hand coloring, much of which had Redouté's personal attention, is superb. Numbers 43 and 44 are from a group of unpublished paintings probably commissioned by Joséphine.

Redouté's folio works - certainly among the most important monuments of botanical publication — established his fame and wealth. He was popular as a teacher (his pupils outranked even Ehret's; among them were two queens, two empresses and one claimant to the throne of France) and his lectures at the Muséum were well attended; he was made a Member of the Légion d'Honneur in 1825 (along with Ingres, Sir Thomas Lawrence and other artists) and he continued to produce important publications. His sincerity and even temperament kept his career on a smooth course - a remarkable fact in view of the political upheavals of that period in France. Through Revolution, the Commune. the First Empire and the Restoration, Redouté was able to find new patrons, and his life and work went on unruffled by events. But after Joséphine's death and the Empire's end, Redouté's habit of spending more than he earned finally led to financial embarrassment. In a struggle to escape disaster, he turned increasingly from straightforward botanical portraiture to more consciously elegant decorative compositions (number 45). But the old artist had outlived his popularity; he died in 1840, full of honors, and in poverty.

The three following artists — Bessa, Prévost and Poiteau — represent a French school of botanical art founded on the work of van Spaendonck and Redouté and realized through the technical perfection of color-stipple engraving and printing.







34 (p. 37)

PANCRACE BESSA French, 1772-1835

47 [Sour Cherry, Prinus cerasus L.] Color-printed stipple engraving by Lambert. From Bessa's Fleurs et fruits ... (Paris, 1808). 55.3 × 38.3 cm. (page 52)

Bessa was a gifted pupil of both van Spaendonck and Redouté. Following the pattern set by his masters, he instructed a number of the nobility and was appointed painter of flowers at the Jardin des Plantes (formerly the Jardin du Roi). He did nearly all the small drawings for the 600 plates of Mordant de Launay's Herbier général de l'amateur (Paris, 1810-1837), the most important French flower periodical of its day. His finest work, Fleurs et fruits ..., contains 24 large color-stipple plates that recall van Spaendonck's bold manner.

JEAN-LOUIS PRÉVOST French, ca. 1760-1810

48 [Poppy, Papaver sp., Larkspur Delphinium sp., and Rose leaves, Rosa sp.]
Gouache. 40.5 × 26.6 cm.
(page 55)

49 [Carnations, Dianthus sp.] Color-printed stipple engraving with hand coloring, by Louis Charles Ruotte. From Prévost's Collection des fleurs et des fruits ... (Paris, 1805), 52.7 × 34.6 cm. (page 54)

50 [Flowers in a basket] Hand-colored stipple engraving by A. Legrand. 29.5 × 42.2 cm., 26.9 × 34.1 cm. (page 76)

51 [Fruit in a basket] Hand-colored stipple engraving by A. P. Teillard. 29.6 × 42.6 cm., 27 × 38.8 cm. (page 59)

Little is known about the life of Jean-Louis Prévost, although an artist-lexicon lists over 30 members of his family for the period between 1400 and 1900. Born at Nointel, he came to Paris, where he exhibited at the Académie Royale and joined the circle of Gerrit van Spaendonck. In their simplified forms and compositions, the flower study in gouache (Number 48) and the two early prints of arrangements in baskets (Numbers 50 and 51), reflect a characteristically French trend away from Baroque extravagance and toward casual informality. The general effect is one of naive charm.

The most noteworthy of Prévost's mature works is his Collection des fleurs et fruits. It was intended to provide patterns and inspiration for manufacturers and designers, with the purpose of "maintaining the great French tradition for excellence of design and draughtsmanship." The 48 large plates of this work are an achievement shared by the engraver Ruotte (1754-1806), whose skills were perfectly matched with Prévost's. Behind the painter's seemingly artless compositions was a sophisticated and intuitive designer in cool control of form, line, rhythm and color. And Ruotte's sensitivity and mastery of the well-established color-stipple process captured the spirit of the painter's bouquets and casual groupings. Prévost's controlled passion and Ruotte's sympathetic platework and printing brought the flower subjects to vibrant life on paper.





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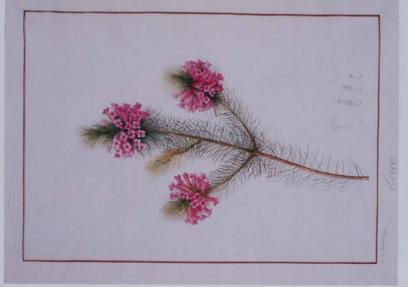


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(b. 69)







(69 (b. 69)





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65 (p. 81)



52 "Hibiscus esculentus. Ketmie comestible" [Okra, Abelmoschus esculentus (L.) Moench] Color-printed stipple engraving with hand coloring.

Color-printed supple engraving with hand coloring, by Bouquet. From R. de Tussac's Flore des Antilles ... (Paris, 1808-1827). 52.3 × 34.9 cm., 43.7 × 28 cm.

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Poiteau was a botanist who explored in the French West Indies. There he met and became a close friend of the excellent botanical illustrator Pierre J. F. Turpin (1775-1840), who taught him drawing and whom he instructed in botany. Poiteau is one of many botanists who were also competent illustrators, doing their own field sketches and sharpening their powers of observation through disciplined training in draughtsmanship. This fine okra plate is a particularly clear example of how effectively the color-stipple process can serve botanical portraiture.

PETER HENDERSON

English, active early 19th century

53 "The Blue Egyptian Water-Lily" [Egyptian or Blue Lotus, Nymphaea caerulea Savigny], 1807
Mixed intaglio: aquatint and stipple and line engraving, with hand coloring, by Stadler. From Robert Thornton's The temple of Flora (London, 1799-1807). 54.8 × 41.8 cm., 51.7 × 39.8 cm. (page 54)

54 "The Dragon-Arum" [Dracunculus vulgaris Schott], 1801 Mixed intaglio: mezzotint, aquatint and stipple engraving, with hand coloring, by Ward. From The temple of Flora. 57.7 × 45 cm., 47.5 × 35 cm.

(page 56)

PHILIP REINAGLE English, 1749-1833

55 "Large-Flowering Sensitive-Plant" [Calliandra grandiflora (L'Her.) Bentham], 1799
Mixed intaglio: color-printed mezzotint, aquatint and stipple engraving, with hand coloring, by Stadler. From The temple of Flora. 57.6 × 45.5 cm., 47.5 × 36 cm. (page 80)

Henderson and Reinagle, both competent painters, though scarcely of the first rank, owe their chief claim to fame to their involvement with that most celebrated of English flower books, Dr. Thornton's *The temple of Flora*, which brought both ruin and a measure of immortality to its author. As a student, Robert John Thornton (1768?-1837) had developed a passion for natural history and its current hero, Linnaeus, the great Swedish classifier of plants and animals. Having taken his Bachelor of Med-

icine degree at Cambridge, Thornton set up practice in London and served as lecturer in botany at Guy's Hospital. A family inheritance enabled him to launch a grandiose publishing project, a glorification of botany, allied to the arts of painting and engraving. His aim was to popularize Linnaeus' comprehensive system of classification in a work "surpassing anything published in France or elsewhere." National pride was invoked in a passage by James Thompson quoted on one of the book's title pages:

Shall Britons in the field Unconquer'd still, the better laurel lose?-In finer arts and public works shall they To Gallia yield?

65

The temple of Flora is part of the work announced in 1797 under the general title New illustrations of the sexual system of Carolus von Linnaeus. Thornton spent his fortune on painters, engravers, calligraphers and poets, expecting strong public support through subscriptions. A temporary slump in the market for sumptuous publications at a time of preoccupation with the Napoleonic wars forced Thornton to scale down his project. Finally he attempted to recoup his great losses with a lottery — as prizes, the original paintings for The temple of Flora. But this, too, failed, and the unlucky doctor never recovered.

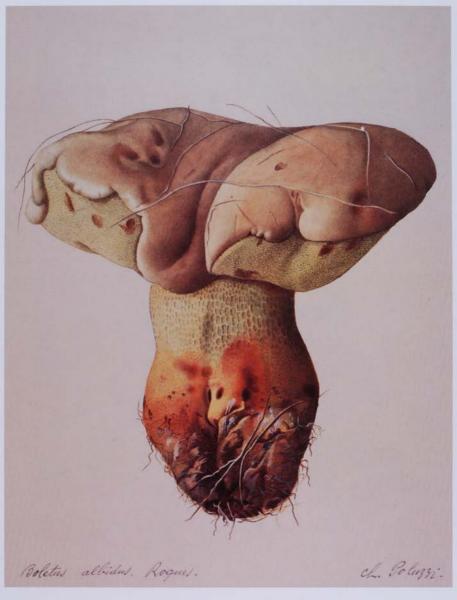
Thornton's work has no enduring scientific importance; its text is full of irrelevant triviality, pomposity and sentimentality. Indeed, his prose can be fully ludicrous. We are told that the White Lily "majestically presents its finely-polished bosom to the all-enlivening sun." And Thornton had an unerring taste for bad poetry:

With honey'd lips enamored Woodbines meet,

Clasp with fond arms, and mix their kisses sweet-"

Nevertheless the pages of *The temple of Flora* are well worth perusal as a curious and charming evocation of its romantic age. The 28 flower portraits, of a projected 70, are brilliantly highlighted against dramatic backgrounds — brooding landscapes, gothic moonlit nocturns, gardens with antique or oriental temples, rustic scenes and stormy skies. Redolent of the romantic spirit of their age, these plates still cast their spell of enchantment. For them, Thornton's excesses may be forgiven.





67 (p. 81)





RICHARD COSWAY

English, 1742-1821

56 "Flora dispensing Her Favours on the Earth," 1807 Mixed intaglio: aquatint and stipple engraving, with hand coloring, by T. Woolnoth. From *The temple of* Flora. 57.7 × 46 cm., 48.6 × 38.6 cm. (page 57)

Cosway, a popular portrait and miniaturist, did the original painting reproduced in this frontispiece from Thornton's great work. In another of its frontispieces, Flora is an attendant (along with Aesculapius, Ceres and Cupid) honoring the bust of Linnaeus. A third shows "Cupid Inspiring Plants with Love," his potent arrow aimed at a strelitzia in a lush tropical setting.

Flora is one of the great success stories of Greek mythology, wherein Chloris, a simple Earthnymph, was pursued by the amorous Zephyrus (West Wind), at whose touch (as pictured in Botticelli's "Primavera") she underwent a metamorphosis and became a goddess. As a bridal gift, her new husband turned over to her the entire realm of flowers; ever since, Flora has presided over the coming of Spring and all ceremonies, celebrations and other occasions having to do with flowers.

GEORGE BROOKSHAW

English, died ca. 1822

- 57 [Gooseberries, *Ribes uva-crispa* L..] Mixed intaglio: color-printed aquatint and stipple engraving. From Brookshaw's *Pomona Britannica* (London, 1812). 53.9 × 43.3 cm., 42 × 32.2 cm. (page 80)
- 58 "White Candida" [Melon, Cucumis sp.]
 Mixed intaglio: color-printed aquatint and stipple engraving. From Pomona Britannica. 57 × 45.4 cm., 47.5 × 38.1 cm. (page 60)
- 59 [Strawberries, Fragaria sp.] Mixed intaglio: color-printed aquatint and stipple engraving. From Pomona Britannica. 54 × 42.8 cm., 41.7 × 31.8 cm. (page 60)

Brookshaw was a horticulturist and artist. Though little is known of his life, his *Pomona Britannica*, which depicts fruits grown in the London area, is one of the finest of all color aquatint books. He also published one of the flower-painting instruction books of the time — A new treatise on flower painting; or every lady her own drawing master (London, 1816). Brookshaw's method, which he considered infallible, permitted a young lady, though she lack talent

for music, still to acquire a fashionable accomplishment. The day of the sentimental flower book was at hand.

GIULIA GUICCIARDINI

Italian, 19th century

60 [Mourning Iris, Iris susiana L..] Gouache, 48.2 × 37.4 cm. (page 61)

Guicciardini was apparently a gifted amateur painter whose works were not published.

Italy had the earliest of European botanical gardens and produced distinguished flower painters and botanical illustrators even before the middle of the 17th century. Nevertheless, during the 18th and 19th centuries its publication of botanical books did not begin to match that of the northern European countries.

With its almost sinister coloring, the Mourning Iris is unusual in a genus charcterized by flower colors nearly matching those of the rainbow, whose goddess in Greek mythology was Iris.

JOHANN FRIEDRICH STARKE

German, 1802-1872

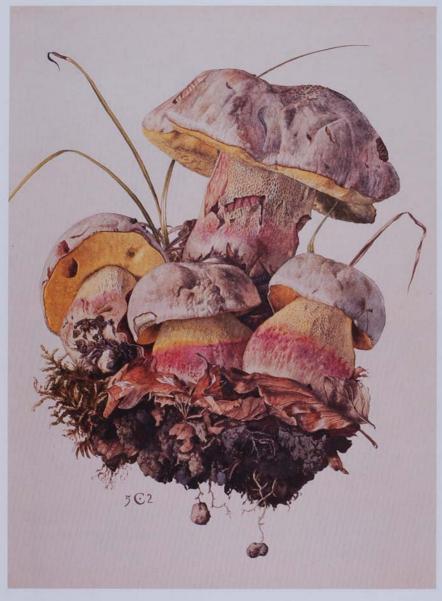
61 [Common Lilac, Syringa vulgaris L.] Gouache on olive ground. 36 × 29.2 cm. (page 61)

Having studied porcelain manufacturing at Meissen and the Dresden Academy, Starke worked for a time at the Gobelin Manufacturing Company in Beauvais.





13 (4.83)



77 (p. 85)





39 (p. 44











87 (p. 87)



50 (6.48)



84 (p.87) English, ca. 1802-after 1862

62 "Victoria regia; or the great water lily of America" [Giant Water-Lily, Victoria amazonica (Poepp.) Sowerby] Color lithograph. From J. F. Allen's Victoria regia; or the great water lily of America ... (Boston, 1854). 55.1 × 69 cm. (page 58)

Sharp was born in England but worked in America, pioneering in the use of color lithography. He produced the 110 color plates for Charles Mason Hovey's highly regarded *The fruits of America* (Boston, 1847-1856) as well as the large plates for *Victoria regia* ...

The Giant Water-Lily, whose leaves can measure over six feet in diameter, was first collected by a European on a river in British Guiana in 1837 — the year of the accession of Queen Victoria, for whom the plant was first named. It was grown, but refused to flower, at Kew Gardens. Joseph Paxton (later famous as the designer of the Crystal Palace for the Exhibition of 1851) built a special tank for the plant at the Duke of Devonshire's Chatsworth, and, in 1849, induced it to flower. The "vegetable wonder" caused a sensation, drawing astonished visitors to the scene. The leaves, whose ribbed structure Paxton later credited for his ingenious design of the Crystal Palace, were the special attraction. The Illustrated London news of 17 November 1849 reported that the weightcarrying capacity of one of the leaves was tested by placing Paxton's seven-year-old daughter on its surface, and that she "was borne up for some time in perfect safety." Peter Coats, in Flowers in history (New York, 1970) quoted Douglas Ierrold:

On unbent leaf in fairy guise, Reflected in the water, Beloved, admired by hearts and eyes, Stands Annie, Paxton's daughter ...

The plant shown in Sharp's print was one of the earliest grown in North America. Allen's Victoria regia folio, with several large plates showing the plant's stages of growth, was the first horticultural treatment of water-lilies and inspired something of a fad for growing them.

E. ADVENO BROOKE

English, active 1853-1864

63 " "The Alhambra Garden," Elvaston Castle ..." Color lithograph with hand coloring. From Brooke's The gardens of England (London, 1857), 37.5 × 54.1 cm. (page 59)

Brooke published 26 chromolithic plates depicting great English gardens. This 'Alhambra Garden' at Elvaston Castle apparently was a Victorian revival of Italian garden style, characterized by terraces, geometric beds, severely clipped hedges, topiaries and statuary.

WALTER HOOD FITCH

English, 1817-1892

64 "Lilium speciosum Thunb." [Showy Japanese Lily] Hand-colored lithograph. From H. J. Elwes Monograph of the genus Lilium (London, 1871-1880). 55.9 × 38,3 cm. (page 62)

Fitch was the outstanding botanical illustrator of his age, and the most prolific, with some 9,960 published illustrations to his credit. He was a brilliant exponent of the newly developed process of lithography, which was gradually replacing engraving and other metalplate techniques for illustrated publications. Fitch's remarkable ability to capture quickly the essential structure of a plant, and his facility as a draughtsman, which enabled him to draw directly on the stone without preliminary studies, were ideally suited to lithography.

Fitch was an apprentice to a firm of calico designers in Glasgow when he was discovered by William Hooker, who held the chair of botany at that city's university. Hooker engaged Fitch to make drawings and instructed him in botany. It was the beginning of a long association with a distinguished family. Sir William Hooker and his son, Sir Joseph Dalton Hooker, served successively as directors of the Royal Botanic Gardens at Kew from 1841 to 1904. Between them, from 1828 to 1904, they edited the most successful of botanical periodicals, Curtis's botanical magazine, which had been founded in 1787 and continues in publication today, illustrating and describing on average about 45



5 (6. 87

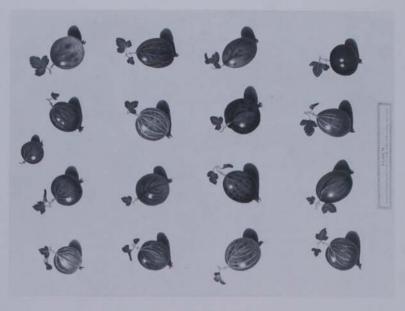


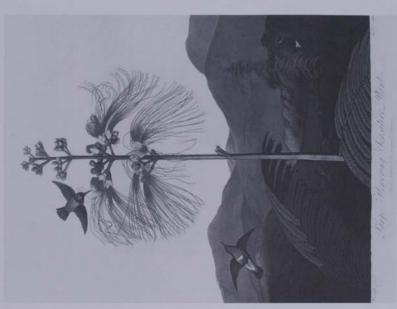
82 (p. 8





88 (p. 87)





15 (p. 65)

plants per year. For a span of over 40 years, Fitch did nearly all its illustrations. For the younger Hooker (an intrepid explorer and a friend and champion of Charles Darwin) Fitch produced the lithographic illustrations for J. D. Hooker's *Rhododendrons of Sikkim-Himalaya* (London, 1849-1851) and *Illustrations of Himalayan plants* (London, 1855), working from Hooker's excellent field sketches. The most important illustrations of Fitch's later years were done for G. Bentham's *Handbook of the British flora* (London, 1865 and subsequent editions.) and for Elwes' lily monograph, among the most finely produced of all such studies.

AUGUSTA INNES WITHERS

English, active 1827-1865

65 "Stanhopea tigrina Batem. ex Lindl." [Orchid] Watercolor. For James Bateman's The Orchidaceae of Mexico and Guatemala (London, 1837-1841). 77.8 × 50.8 cm. (page 63)

Withers was Botanical Painter to Queen Adelaide and a teacher of flower-painting to "ladies of leisure, living in the country." Little more is known of her life, but her excellent studies of flowers and fruit were reproduced in *Pomological magazine* (1828-1839?) and Benjamin Maund's *The botanist* (1838-1846) in addition to Bateman's great work on the orchids of Mexico and Guatemala. Its superb hand-colored lithographic plates were executed by M. Gauci after paintings by Mrs. Withers and Miss Drake, another excellent but little-known artist.

FREDERICK A. WALPOLE

American, 1861-1904

66 "Menispermum canadensis L." [Yellow Parilla] Watercolor. 35.2 × 25.4 cm. (page 62)

Born in New York State, Walpole had art training in Chicago and moved to Oregon in the 1880s. There, in 1896, a Department of Agriculture botanist doing field research saw his work and helped him get an appointment as Artist for the Division of Botany. In his short career he worked in Washington, D.C., and made several field trips to the Northwest, including Alaska. His unpublished journal, now at the Smithsonian, gives a vivid account of his work and adventures in the field. Walpole's many plant studies were done mostly in water-

color, but he also made remarkable ink drawings, using a small brush instead of a pen.

CARLO POLUZZI

Swiss, 1899-1978

67 "Boletus albidus Roques" [Mushroom], 1932 Watercolor, 23.7 × 17.8 cm. (page 67)

Originally from Milan, Poluzzi worked in Switzerland as a free-lance illustrator. He was a trained mycologist who served for years as official inspector of mushrooms for the city of Geneva and was an accomplished enamel painter and miniaturist. His meticulously accurate paintings of mushrooms have been reproduced in several Swiss publications.

SHODO KAWARAZAKI

Japanese, 1900-1973

68 [Tree Peony, Paeonia suffruticosa Andr.] Color woodcut. 40 × 27.5 cm. (page 66)

Shōdō Kawarazaki was a designer of color woodcuts executed in the traditional Japanese manner. He specialized in flower subjects.

ALBERT CLEUTER

Belgian, 1901-

69 [Tamarisk, Tamarix chinensis Lour.], 1971 Color crayon and pencil. 73 × 51 cm. (page 66)

70 "Phyllocactus, hybride" [Easter Cactus], 1969 Color crayon and pencil. 72.8 × 50.9 cm. (page 82)

Cleuter received a diploma in architecture from the Académie Royale des Beaux Arts in Brussels in 1922. From 1936 until his recent retirement he served as botanical illustrator at the Jardin Botanique National in Brussels, where his sensitive and accurate pen-and-ink stipple drawings have been reproduced in scientific papers by staff botanists. He has also executed dioramas for the museum's natural-history exhibits, and has done watercolors and colorpencil drawings as a hobby.





ANNE OPHELIA DOWDEN

American, 1907-

- 71 "Red Prairie Sunflower" [Helianthus sp.] Watercolor. For "The Red Prairie Sunflower" in Natural history 68(7):1959. 50.8 × 35.4 cm. (page 64)
- 72 [Hex aquifolium L., Hex cornuta Lindl. et Paxt., Hex opaca Art., Hex permi Franch.], 1967 Watercolor. 53.3 × 38 cm. (page 82)

Dowden had art training at Carnegie Institute of Technology (now Carnegie-Mellon University) and at the Beaux Arts Institute of Design and the Art Students League, both in New York. She has been an art instructor, a textile designer and, since 1950, a free-lance botanical artist who has illustrated several popular books on plant subjects, including *The secret life of the flowers* (New York, 1964), *Shakespeare's flowers* (New York, 1978). For some of these works, she has also written the texts.

ELSA M. FELSKO-SCHÜLKE

German, 1908-

- 73 "Lothario" [Bearded Iris, Iris × germanica cv. 'Lothario'] Watercolor. For Herbig Kalender, 1963. 40 × 30 cm. (page 70)
- 74 "'Kaiserkrone, Fritillaria imperialis L." [Crown-Imperial] Watercolor. For Herbig Kalender, 1964, 39.7 × 29.8 cm. (page 84)

A self-taught artist who started her career as an embroidery designer for a textile firm, Felsko subsequently had training in botanical illustration at the Berlin-Dahlem Botanisches Museum. Her graceful watercolor portraits of central European plants have been exhibited widely and reproduced in books as well as in *Herbig Kalender*. She has also produced studies of animals and shells, and a memorable suite of pen-and-ink drawings of historic trees.

MARGARET MEE

English, 1909-

75 "Pseudobombax grandiflorum (Cav.) A. Robyns" [False Bombax], 1964 Watercolor, For Mee's Flowers of the Brazilian forests (London, 1968), 66.3 × 48.7 cm. (bage 70)

Mee studied at several art schools in London and was awarded the National Diploma in Painting and Design in 1950. Since 1952 she has lived in Brazil, teaching art in São Paulo's British School and making expeditions into the jungle to collect and paint tropical flora.

YOAI OHTA

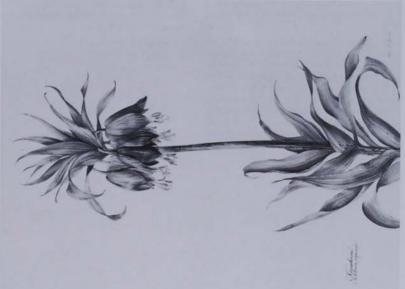
Japanese, 1910-

76 [Sargent or North Japanese Hill Cherry, Prunus sargentii Rehd.] Watercolor. 67.3 × 54 cm. (page 84)

Yoai Ohta was trained at the Manchurian School of Education, Department of Botany and studied botanical illustration under Ichiro Ohga. Japan's leading contemporary botanical artistillustrator, he has specialized in depicting flowering cherries, but his illustrations of a wide variety of other plant subjects have also been published extensively in books and periodicals. He is the founder of the Japan Botanical Art Association in Tokyo.







CLAUS CASPARI German, 1911-1980

- 77 "Boletus aestivalis Paulet ex Fr." [Mushroom], 1952 Gouache, 23.9 × 16.7 cm. (page 71)
- 78 [Seville Orange, Citrus aurantium L.], 1960 Gouache, 33.1 × 23.8 cm. (page 74)
- 79 "Iris pumila L., Niedrige Schwertlilie," 1962 Gouache, 30.3 × 21.7 cm. (page 86)
- 80 "Phragmipedium grande," 1957 Gouache. 32.8 × 24.3 cm. (page 86)

Caspari was a self-taught Munich artist who, before taking up painting, had spent several years as a salesman for an art dealer. His meticulously accurate paintings have been reproduced in important European books on natural-history subjects — mostly flowering plants, but also mushrooms, insects, fish and minerals.

JEANNE HOLGATE English, 1920-

81 "Magnolia campbellii Hook, f. et T. Thomas" Watercolor, 58.5 × 39 cm. (page 74)

Holgate is a self-trained London-born botanical painter who has worked in America since 1967. She was the official artist to the Royal Horticultural Society from 1954 to 1966. Her work was awarded the Society's Gold Medal in 1963 and again in 1964, and the Silver Trophy of the World Orchid Conference in 1966. In America she has continued her career, teaching courses in flower portraiture at Longwood Gardens and giving lectures on the art of flower illustration, as well as exhibiting extensively and executing a variety of commissions. Her paintings have been reproduced in a folio of large orchid plates and in periodicals, calendars and greeting cards.

FRANTIŠEK SEVERA

Czechoslovakian, 1924-

82 "Anemone coronaria L." [Crown Anemone], 1975 Watercolor, 30.1 × 19.4 cm. (page 78)

Severa, a graduate of the School of Arts and Crafts in Prague, is a free-lance graphic artist specializing in scientific and natural-history illustration. He has received several awards for his illustrations in books on horticulture and on insects.

ANNE MARIE TRECHSLIN

Swiss, 1927-

83 "Hemerocallis cv. 'Earliana' " [Day-Lily] Watercolor, 36.1 × 25.5 cm. (page 88)

Originally Milanese, Trechslin moved to Switzerland and attended art school in Berne. She has illustrated several flower books, mostly for Swiss publishers, including a sumptuous large folio of handsome rose portraits. Roses have been among her favorite subjects and she has been honored by having a new hybrid tea rose named after her. She has also designed several sets of flower and fruit stamps for the Republic of San Marino.



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RAYMOND C. BOOTH English, 1929-

84 [Peony, Paeonia lutea Delay, ex Franch.], 1965 Oil on paper, 44.5 × 66.7 (page 76)

85 [Bellflower, Campanula latifolia L.], 1969 Oil, 73.1 × 43.7 cm. (page 78)

Booth holds a National Diploma in Design from Leeds College of Art. His drawings and paintings of natural-history subjects have been reproduced in several English books and periodicals and he has won awards at Royal Horticultural Society exhibitions. Although he works in various media, he favors painting in oil on sized paper, an unusual medium for flower subjects.

RODERICK McEWEN

Scottish, 1932-1982

86 "Dianthus caryophyllus L. cv. 'Queen of Sheba''' [Carnation], 1962 Watercolor on vellum, 51.8 × 36.6 cm. (page 88)

87 "Tulipa clusiana var. chrysantha (yellow and red) N.W. India; T. c. var. stellata (pink) Afghanistan," 1962 Watercolor on vellum. 48.8 × 36.7 cm. (page 75)

Roderick (Rory) McEwen was Scottish, the great-great-grandson of the noted orchidologist John Lindley (1799-1865), whose library is at the Royal Horticultural Society in London. McEwen took a B.A. in literature at Cambridge and was Art Editor of *The spectator* from 1956 to 1960. In the small-brushstroke manner of manuscript miniatures, he has made memorable flower paintings on vellum, reminiscent of the splendid flower portraits of 17th-century masters. They have been reproduced in lavish editions of monographs, one of them the second edition of Wilfrid Blunt's *Tulips and tulipomania* (London, 1977). McEwen has also produced excellent etchings.

MARILENA PISTOIA

88 [Onions, Allium cepa L.] Watercolor, 28.8 × 39.1 cm. (page 79)

Pistoia is a free-lance botanical artist who studied in Milan and in Bologna. Many of her illustrations appear in F. Bianchini and F. Corbetta's I frutti della terra and its English translation, The complete book of fruits and vegetables (Verona and New York, 1973 and 1975).





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