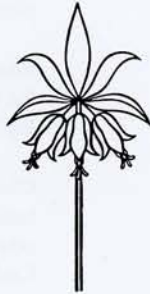


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Reviews

Downie, Mary Alice and Mary Hamilton, eds. *'and some brought flowers'.* *Plants in a new world.* Illustrations by E. J. Revell. Toronto, Buffalo, London: University of Toronto Press, 1980. \$24.95 Canadian. 164 pp., illustr. ISBN 0-8020-2363-0.

When Martin Frobisher reached the ice-bound coast of Labrador in 1576, "he commanded his company, if by any possible means they could get ashore, to bring him whatsoever things they could first find, whether it were living or dead, stock or stone, in token of Christian possession ... and some brought flowers." Early travelers to Canada experienced both the harshness and the astonishing bounty of the new continent. From the Indians, the French and English newcomers learned much of the lore and uses of the native plants that provided food, shelter, clothing and medicine, and that offered delight to eye and spirit. This unusual volume presents 70 watercolor illustrations of those plants, accompanied by quotations from the writings of explorers, settlers, missionaries, traders and professional scientists, together with botanical descriptions and notes on habitat and distribution.

This is an attractive book, of generous size, and well laid out; each full-page plant portrait faces a page of captions, descriptions and quotations citing the plant. The illustrations are generally satisfactory (though a few specimens had to be drawn from photographs rather than living material). The draftsmanship is both accurate and sensitive. Many of the plates, however, have a rather thin, washed-out appearance. This may, of course, result from necessary compromises during color separation and printing.

The book should prove attractive to the general reader as well as to those particularly interested in plants or in early explorations and settlements in North America. More suitable for dipping into than for reading straight through, it yields up a diversity of odd facts and odd expressions. A Jesuit wrote that groundnut roots "are like truffles, but better, and grow under the ground strung to each other like a rosary." A history of New France, from 1609, reports

that "we would have made them [the natives] to eat of the grape, but, having taken it into their mouths, they spitted it out, so ignorant is this people of the best things that God hath given to man next to bread." Indian corn had many uses, including that recorded in an account of "a poor Irish settler" whose bottle of whiskey stood on a table "with a 'corn cob', or ear of Indian corn, stripped of its grain, for a cork."

A particularly valuable feature of this work is its 20-odd pages of short biographies of men and women whose writings are quoted in the main body. The accompanying bibliographic notes, as well as a general bibliography, lead to a rich body of unusual travel and exploration writing.

John V. Brindle
Hunt Institute

Forbes, Vernon S. and John Rourke. *Paterson's Cape travels 1777 to 1779.* Johannesburg: The Brenthurst Press (Pty) Ltd, 1980. 202 pp., 62 pls. (most in color). R125.00. ISBN 0-909079-12-9 (standard ed.).

William Paterson (1755-1810), son of a Scottish gardener, conducted four botanical journeys totalling 5,600 miles within the Cape region between 1777 and 1779. He subsequently published *A narrative of four journeys into the country of the Hottentots and Caffraria* ... (London, 1789), the first book in English about travel in that area. In fact, Paterson was in the first party of Europeans to reach the mouth of the Orange River.

The Brenthurst Library, a private collection in Johannesburg, has acquired not only the original manuscript but also three unpublished folios of watercolor drawings from Paterson's collection. Forbes and Rourke, geographer and botanist respectively, have made a most thorough presentation of the manuscript and drawings, carefully researched, copiously footnoted and easy to follow. Maps clearly outline each of Paterson's journeys. Ample captions leave no ques-

tion unanswered. Even the paper is pleasant to see and handle.

Limited to 1,000 copies (25 bound in full leather, 125 half-leather, 850 cloth), the book contains a color portrait of Paterson as lieutenant-governor of New South Wales and a chapter on his life and career. Though his herbarium specimens are lost and Paterson himself never published descriptions of new species, some of the engravings in his *Narrative* are iconotypes of species published by Willdenow and A. P. de Candolle. Paterson's name is remembered with *Pater-sonia*, *Erica patersonia* and *Sarcocaulon patersonii*. His many introductions of new plants include species of *Pelargonium*, *Protea*, *Tritonia* and *Pleiospilos* (under the name *Mesembryanthemum*).

Much of the charm of this latest Benthurst offering (the sixth in a series from the press) lies in the nearly 60 color plates of plants, animals (including birds, snakes, fish, crabs and insects), people, views and artifacts. These are representative of the over 300 drawings in Paterson's albums, of which three-fifths portray botanical subjects. Most are pencil drawings with watercolor washes and stippling; few if any are by Paterson himself, although two are signed with his name. Clearly several artists were involved.

One of the more naively rendered drawings is especially charming. A chameleon with an upturned cartoon-like mouth, its eye a spot within a circle, gazes into space while clenching the limbs of a plant which sprout what at first glance seem graceful green valentines. Paterson, too, surely enjoyed this drawing.

We are indebted to the Countess of Strathmore for her initial sponsorship of Paterson's explorations, to those responsible for preserving the manuscript and drawings, and to the authors and publisher for bringing them to our attention so carefully and attractively.

James J. White
Hunt Institute

Grubert, Meinhard. *Mucilage or gum in seeds and fruits of angiosperms, a review*. Munich: Minerva Publication, 1981. vii, 397 pp. DM 48 (paper). ISBN 3-597-10279-4.

Grubert has managed to produce a comprehensive and fairly exhaustive survey of existing information on this broad subject. The book has two main parts. The first covers all the angiosperm families and subordinate taxa whose seeds or fruits are known to

contain mucilage or gum. Under each taxon is a list of the various tissues or plant parts involved, together with numerical leads to the pertinent literature, which is cited under three categories: that on general occurrence of mucilage or gum in seeds or fruits; that dealing with processing procedures and physical and chemical studies; and that on various uses of mucilaginous seeds and fruit, and of mucilage polysaccharides. The second part is a consolidated bibliography of the more than 2,800(!) references cited in the first part. Those with a special interest in pharmacognosy, chemotaxonomy, anatomy or economic botany will find this an exceedingly useful and relatively inexpensive (approximately \$20.00) reference.

T. D. Jacobsen
Hunt Institute

Pursh, Frederick. *Flora Americae Septentrionalis or, a systematic arrangement and description of the plants of North America*. [London: White, Cochrane, and Co., 1814. 2 vols.] Edited and introduced by Joseph Ewan. Reprint, Vaduz: J. Cramer, 1979. 117, xxxvi, 751 pp., illustr. DM 120. ISBN 3-7682-1242-4.

On 21 December 1813, Friedrich Traugott Pursh presented the Linnean Society of London with an advance copy of his newly printed *Flora Americae Septentrionalis*. Those two volumes, with over 750 pages of close-printed text, represented the fruit of some 14 years' sustained botanical zeal on the part of the energetic and opportunistic young German-born author. After receiving training at the Royal Botanic Garden at Dresden, Pursh set sail for Baltimore and the New World "... with a determination not to return to Europe until I should have examined the country to the utmost extent of my means and abilities." Just how successful he was in this goal may be judged by the fact that he returned to Europe after 12 years with material enough to compile America's first continental botanic manual. Some 6,000 miles of lonely travel, "... principally made on foot, the most appropriate way for attentive observation, ... with no other companions than my dog and gun ...," took him out from Philadelphia to northern New England and south to the North Carolina border. He made the acquaintance of every notable American botanist of the day, drew heavily on their knowledge and opinions, studied plants in nurseries, botanic gardens and herbaria, and incorporated material from the pioneer expeditions by Lewis and Clark and by Ensen. Thus his

work covered four regions of the New World — the Columbia River and Pacific Northwest, the Missouri River country, the Southeast as far as New Orleans, and, especially fully, the best-known Middle-Atlantic States.

In 1811, having failed to get a publisher for his work, Pursh took his materials to England and was soon — once again — in touch with leading figures in the botanical world, notably Joseph Banks, A. B. Lambert, William Roscoe and George Williams. With their unrivalled libraries, herbaria and botanic gardens at his disposal, he industriously combed all those resources for any scrap that he could use, incorporating much of value. Not least among the older collections he examined were those of Clayton, Pallas, Plukenet, Catesby, Walter, Morison and Michaux, and he included even writings by some of the Fathers of Botany in his bibliography of sources. It was to A. B. Lambert, his generous and patient patron for these two years in England, that Pursh dedicated his book, and no doubt under Lambert's Vice Presidency that the author presented the finished work to the Linnean Society's meeting.

Pursh's *Flora* was replete with information of invaluable worth to his contemporaries and successors. With several other industrious and critical rivals at work on floristic compilations at the time, it was understandable that Pursh should come in for some peevish criticism, and the shortcomings in such an ambitiously conceived work — to which he frankly admitted in his preface — were deservedly underlined by others. Nevertheless, its worth was recognized for years after and its content widely used by later authors. Its remarkable compass was in no small measure a result of Pursh's documentation of materials from 41 other collectors, his citation of the writings of 190 authors, and his appetite for any morsel of information that could be gleaned from the efforts of others. Today's botanists and historians still value and consult Pursh's work, and only the scarcity and expense of secondhand copies limit its wider appreciation and use. A facsimile reprint was called for and has now been provided.

Cramer's dumpy little volume comprehends the original two volumes of 780 pages and a 117-page historical and nomenclatural introduction by Prof. Ewan. The original page size has been reduced to a spare 7½ by 4¼ inches. The type area remains undiminished but margins are meanly narrow and the plates are reduced in size. Three pairs of plates are 'backed-up' on single leaves and the first one has lost its plate number altogether. Richard Taylor's letter-

press is reproduced in uniformly clear and dark inking but on a paper which allows a distracting amount of 'see-through.' Hooker's plates are cleanly reproduced from an uncoloured copy.

Professor Ewan's comprehensive contribution is loaded with the kinds of historical, biographical, bibliographical, geographical and nomenclatural facts that we have come to expect of him, presented in his familiar tones with many characteristic turns of phrase. He has emulated Pursh's industry in searching out obscure literature, in exploring unpublished papers, in rummaging through American and European herbaria, and in liberally documenting and clarifying the nomenclature. His "Sertum Purshianum" — as he styles it, a suggestion box of critical comment on about 800 new species proposed by Pursh — is the most valuable element in the introduction. Despite the efforts of some 30 years' research on typifying Pursh's binomials, Ewan admits that the picture is not yet complete. Nevertheless, botanists will greatly applaud what has been achieved and now have a firm springboard from which to launch further investigation. It is unfortunate that an addendum of current names "inadvertently omitted from the catalogue" could not have been included with it, and users should be mindful of the need to consult both lists when seeking any specific name. The introduction is clearly, if plainly, set and is free from all but minor misprints.

Many libraries, botanists and historians of science with an interest in American botany will be keen to acquire this reprint despite its graceless format. It presents original research as well as the opportunity to make a classic flora much more widely available.

Gavin D. R. Bridson
Hunt Institute

Rix, Martyn. *The art of the plant world*[:] *The great botanical illustrators and their work*. Woodstock, New York: The Overlook Press, (1981?). 224 pp., 314 illustrs. (64 in color). ISBN 0-87951-118-4 (standard ed.), 0-87951-139-7 (deluxe ed.).

Published simultaneously in Great Britain as *The art of the botanist*, this work was produced to accompany S. Peter Dance's *The art of natural history*[:] *Animal illustrators and their work*. Its publisher calls it "extraordinary" and "outstanding," and it has been characterized as a "definitive account of

plant and flower illustration" by Peter Stageman (*The garden*, February 1982). However, in their reviews both Sandra Raphael (*Nature*, December 1981) and Anthony Huxley (*The Times literary supplement*, March 1982) have cited serious inadequacies and omissions in Rix's work. Their perceptions are not amiss.

The basis for much of Rix's text appears to be Wilfrid Blunt's classic, *The art of botanical illustration* (London: Collins, 1950). Indeed, the wording itself is often markedly similar. For one example among many: In Rix's account of the Codex Vinobonensis, his "Seven years later, the *Codex* found its way into the Imperial Library in Vienna" is strikingly reminiscent of Blunt's "But seven years later the precious manuscript found its way into the Imperial Library in Vienna ..." Although Blunt is cited later in regard to the style of the Codex paintings, there is no indication in Rix's paragraph containing the above quotation that Blunt or any other reference was consulted. There are strong similarities, too, in many of the chapter titles and scopes.

Redouté, although one of the best known of all plant illustrators, does not merit a chapter; "Linnaeus and Ehret" do, however. The chapters on "Floras and florilegia" and "Floras from around the world" (page 191 instead of page 161 as cited in the Contents) are organizationally confusing. Misspellings in the References include at least the names Pittsburgh, Stevenson and Pierpont.

The work is undated, but presumably published in 1981. Therefore the author, whose slant is toward botanical exploration, probably did not learn until more recently of the Institute's recent acquisition of the long-lost original collection of biological illustrations made during the Sessé and Mociño expedition to New Spain (1787 to 1803). However, these scientifically and artistically important watercolors have been known all along through copies in Madrid and Geneva, and it is regrettable that Rix mentions nothing of them, of the botanists Sessé and Mociño, or of the artists Echeverría and Cerda.

Rix has reproduced three woodcuts from Fuchs' *De historia stirpium*, but does not report the discovery in 1954 of 1,525 drawings made for this important sixteenth-century herbal by Albrecht Meyer, Heinrich Füllmaurer and at least one other artist. These originals are now in the Österreichische Nationalbibliothek in Vienna (see Blunt and Raphael, *The illustrated herbal*, 1979).

We wish that more than only a dozen artists were listed in the excessively brief chapter on twentieth-century illustrators. There are many first-rate contemporary artists and most of them have been represented over the years in our series of international exhibitions and catalogues, to name just one source for knowing about them. Rix evidently did consult at least one of those catalogues, but we have no idea where he found 373 as the number of artists "represented in the Hunt Botanical Library" (the Library is only one department of the Institute, whose Department of Art curates over 30,000 works by thousands of artists).

Unfortunately, the text contains no references to the illustrations. For instance, one does not learn, in reading about F. H. Round, that a full-page color illustration of one of his works is located in another chapter. The reproductions themselves are quite adequate, and it is only for their attractiveness that I would recommend purchasing this book.

James J. White
Hunt Institute

Wheeler, Alwyne and James H. Price, eds. *History in the service of systematics. Papers from the conference to celebrate the centenary of the British Museum (Natural History) 13-16 April, 1981*. London: Society for the Bibliography of Natural History (Special Publication #1), 1981. 164 pp. \$20.00. ISBN 0-90-184305-9.

Since its founding a century ago, the British Museum (Natural History) has been an eminent leader in both biological systematics and the bibliography of natural history. Scholars utilizing the collections there have unearthed such facts as publication dates for rare texts, the whereabouts of preserved type specimens, and references to names of species published in obscure colonial journals by little-known botanists. The 21 papers delivered at the Museum's centenary celebration and gathered in this work illuminate the crucial role that historical research plays in escaping the cul-de-sacs that taxonomists often encounter.

Discussing "Bibliography in the British Museum (Natural History)," W. T. Stearn considers bibliographic research to be one of the main wheels of the systematist's wagon. For example, to assess the priority of a species name that first appeared in a publication, the taxonomist must ascertain the im-

print date of the particular fascicle bearing the new name. But the dated part-wrappers were often discarded when such works went to the binder, so the taxonomist may have to search for it in museum archives or in unlikely places like desk drawers, rubbish cans or rarely used storage areas. Such fascicular publications abound in 18th- and 19th-century natural-history literature, and often vex taxonomists, who depend on the works of that era for an established nomenclature. As Stearn reminds us, "the nomenclature of a taxonomic group is based upon priority of publication." He identifies some tools needed to help the systematist resolve the bibliographic nightmare; these include manuscript material as well as the usual corpus of books and periodicals. Like many other research institutions, BM(NH) has an excellent collection of both early and current works in natural history, and its archives house such documents as reviews and publishers' advertisements, original wrappers of part-works and library accession records. Also, one should not forget the extra-bibliographic archival resources, e.g. diaries and correspondence, that often supplement the information in publications and on labels of herbarium sheets or specimen bottles.

All these sources are a historian's treasures, to be sure, and have prospered the inquiries of such scholars as D. J. Mabberley, who, while sifting through the papers of Robert Brown, stumbled upon the letters of Edward N. Bancroft, one of Brown's lesser-known associates. Bancroft practiced medicine in Jamaica and published in local periodicals many new names and descriptions of the plant species that he collected. Although these names take precedence according to the current *International code of botanical nomenclature*, most large floras of that time were completed at the expense of ignoring such locally published accounts of new species. Floristicians excused this practice with the claim that, if time were taken to ferret out these names, the floras would never have been completed. Such a policy is understandable, but, in "Robert Brown of the British Museum: Some ramifications," Mabberley notes that "some work was deliberately suppressed." He argues that the rival factions at BM(NH) and Kew at the end of the 19th century were guilty of ignoring some botanists' works and writing abusively of others'. Moreover, many new names were carelessly rushed into print, e.g., by Richard A. Salisbury (Kew) for species of Proteaceae, before names that had already been presented publicly by Robert Brown could be published. Subsequently, Salisbury's names were by and large ignored in favor of Brown's. Mabberley maintains that in such situa-

tions the nomenclatural injustice should be corrected; Bancroft and Salisbury validly published their new names, never mind the conditions under which that was done.

That reasons of temperament or politics are often behind the suppression or ignoring of certain species names adds what Mabberley calls the "human element" to his historical research on Robert Brown. Today many historians of biology are writing biographies, and in assessing a scientist's life and work the biographer/historian often speaks to the "human element" and its effects on biological research. Some effects may be unfortunate, as with Bancroft's disregarded names: because they are generally unreported, Mabberley says, "there is a real possibility that unsuspecting botanists might coin [identical] new names which would be, in effect, superfluous homonyms." Other effects may be fortunate, in that an investigator's focus may be deflected from a specific line of inquiry to a tangential one which ultimately produces new information beneficial to science. Such a case on the grand scale is recorded by Stearn in a personal aside toward the end of his essay. He mentions how curious he became upon seeing the bibliographer C. Davies Sherborn's remark about the dating of the fascicular work *Histoire naturelle des Îles Canaries* by Webb and Berthelot. Sherborn had indicated that after years of searching no more was known of the work's publication dates than that they spanned 1836 to 1850. This prompted a specific quest for the missing data, in which Stearn succeeded, and encouraged his subsequent major involvement with botanical history and bibliography, for which modern systematists are surely grateful.

I would not want the reader to assume that only two papers in this book are worthy of their attention. I chose Mabberley's and Stearn's to illustrate two things: that BM(NH) has served scholars well in disentangling historically knotty problems, and thereby has advanced taxonomic research as a whole; and that more generally, while history has served systematics well, the reverse is also true. Such reciprocity between the "two cultures" is noteworthy.

The topics covered in this symposium were many. Four papers address bibliographic matters *per se*. Three others discuss expeditions and their contributions to systematic natural history. Eight authors devote themselves to geology, lichenology, mammology, ornithology, malacology, entomology or botany. Two of them consider botany in Australia, one focussing on the genus *Banksia* and the other on German collectors of Australian algae. Two gentlemen significantly re-

lated to BM(NH) — Robert Brown and Sir Hans Sloane — receive handsome treatment. One paper attends to the problems and pitfalls in botanical nomenclature, another to those in zoological nomenclature. For the educator, one essayist presents his pedagogical approach to teaching systematics through history. In most every symposium one hopes to find at least one presentation that epitomizes its general

theme, and this one does not disappoint in that regard: the final offering is a delightful summary view of history in the service of systematics.

Michael T. Stieber
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