



Healthy People



The Medical Botany of John Bartram

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When European settlers began to arrive in what is now Massachusetts at the beginning of the 17th century, they brought the plants and remedies they knew, along with a few of the famous works on herbal medicine that were consulted by all. For instance, it is known that Dodoens' *New Herbal* was on the Mayflower when it landed at Plymouth in 1620.¹ This important Dutch herbal was translated into English in 1578 by Henry Lyte,² and alongside of such well-thumbed English herbals as Gerard (1633),³ Parkinson (1629),⁴ and Culpeper (1649),⁵ formed a body of works that were important sources of information about herbal-based medicines eventually available from early colonial apothecary shops. So important were these books, that they were kept on the mantle, along with the family Bible,⁶ often made use of by "wise women" or housewives with the knowledge of simples, or herbal remedies.⁷

These herbals listed the botanical affinities, descriptions, uses and preparations of European herbs, with the addition of a number of famous exotic remedies, such as ginger and cinnamon, but few, if any medicinal plants indigenous only from North America. Besides the herbals, a number of English medical works, consulted more by doctors, or professional practitioners, such as the many editions of the Edinburgh New Dispensatories were common.⁸ American editions of these works, for instance by Lewis and Duncan were printed, but still did not contain more than a handful of American plants--until about 1818, when Jacob Dyckman, a physician from New York added over 50 native American medicinal plants to the 8th (and last) *Edinburgh New Dispensatory*, with their descriptions and uses.⁹

Since there was generally a shortage of trained physicians and pharmacists, or even such interim practitioners as clergymen with medical knowledge in the Colonies,^{10,11,12,13} the common person might have to depend upon one of the popular herbals of the day; or other works such as Almanacs, which sometimes gave information on popular medicines,¹⁴ family health advisors, such as Buchan's popular *Domestic Medicine*, first printed in America in 1771,¹⁵ among other works.¹⁶

Another important source of information on the indigenous drug plants was the Native American materia medica. It is likely that a number of important official and non-official drugs were learned from the first inhabitants of America and the extent of the impact of this knowledge on future medical practice has been discussed. For a critical discussion, see Cowan's *The impact of the materia medica of*

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the North American Indians on professional practice,¹⁷ or Vogel, for a more detailed, though less critical view.¹⁸

The medical skill of the native American people has been observed and written about in detail,^{19,20,21,22,23} and it is known that they had an extensive materia medica. However, knowledge of medicinal plants of diverse tribes, while sometimes shared freely with the white man in the early 1700s, did not find its way into print, except in rare bits and pieces,^{24,25} until the late 19th and early 20th centuries. By this time it must be considered that much of this tribal knowledge was considerably influenced by European culture.

The various works already mentioned, then, remained nearly the sole written source of medical information to the colonists until the close of the 18th century, when, for instance, medical men such as Benjamin Smith Barton (1810) wrote one of the most extensive works on indigenous materia medica.²⁶

It is with considerable interest, then, that any scrap of writing on American medicinal plants before 1800 is encountered. One of the more interesting early essays on American remedies of the mid 18th century is from John Bartram, who was among the most respected botanists of the colonial era. His eminence is supported by a statement of Linneaus that Bartram was "the greatest natural botanist in the world." It is also of consequence that Bartram's name was second only to Benjamin Franklin's on the list of original members of the American Philosophical Society (1742), and that he was eventually appointed botanist and naturalist of the American Colonies to the King, George III.²⁷ Until now, this work has not been reprinted and is largely unavailable, except in a few rare book rooms of libraries in the northeastern U.S. The author is gratified, therefore, to make the entire text of this work available--hopefully to be read and appreciated by a wider audience. The text was entered directly from the copy at the Harvard Medical school library into a laptop computer.

To this scarce mid-18th century work on medical botany is added a short sketch of the life and work of John Bartram and an elucidation of the probable sources that Bartram drew the material from to write the article. Preceding the reprint of Bartram's work is a table of the plants he writes about with their modern Latin names.

JOHN BARTRAM and his MEDICAL BOTANY

The following short sketch of Bartram's life and career were taken mainly from William Bartram's short biography of his father,²⁸ the *Dictionary of Scientific Biography*,²⁹ Earnest,³⁰ Darlington,³¹ Gordon,³² and Youman³³

The grandfather of John Bartram, Richard Bartram, was born and lived his entire life in Derbyshire, England. Richard's son, John, moved to Pennsylvania in 1682, the year Philadelphia was founded. Of his three sons, John, Isaac, and William, the latter (William) also had three sons--one of which was John Bartram, the botanist. The family had a peculiar fancy for the names William and John, and one, if not two, of the names were used each generation, often making things a bit confusing.

John was born in 1699, and at the age of 24 was already married and a respected member of the community. At the same age, he purchased a tract of land consisting of 102 acres and began to farm.

There are conflicting ideas about John's early education, but his letters demonstrate that he had little formal training in grammar; it is uncertain if he pursued even the moderately adequate education available to him in the early rural Colonies. Bartram himself mentions the lack of polish in his writing.

Other accounts indicate that he had a keen interest in nature and science at an early age. Darlington says of him,

"He had, however, all or most of the education that could at that time be acquired in country schools; and whenever an opportunity offered he studied such of the Latin and Greek grammars and classics, as his circumstances enabled him to purchase; and he always sought the society of the most learned and virtuous men. He had a very early inclination to the study of physic and surgery...and, in many instances he gave great relief to his poor neighbours. It is extremely probable that, as most of his medicines were derived from the vegetable kingdom, this circumstance might point out to him the necessity of, and excite a desire for, the study of Botany."

In 1727, at the age of 28, his first wife Mary died, but two years later he married Ann, with whom he had nine children. His son William was later to become a close companion in some of his botanical travels and eventually surpassed his father in learning and science, writing an important and influential early American literary work, *The Travels of William Bartram*.³⁴

John seems to have been a fair businessman, buying and selling property and by sheer energy and industriousness, made a moderate success at farming. He even split heavy rocks and built his house from stone with his own hands.

As he grew older, he began to correspond with some of the greatest naturalists of the day, both in Europe and America, including Linnaeus, Gronovius, Clayton, Kalm, and Peter Collinson. Collinson was an especially important connection, which lasted for 33 years, from 1735 to 1768. Collinson commissioned Bartram to collect and send plants and seed to himself and others, both scientists and wealthy supporters of science. Bartram did this with amazing energy and skill, making many arduous and perilous trips throughout the eastern colonies, often traveling alone. He seemed to have a native genius for science, especially botany--in fact it was Linnaeus himself who called him *"the greatest natural botanist in the world."*

It is often written that Bartram founded the first botanical garden in the U.S. (about 1729-30), at his farm on the Schuylkill river, then 3 miles from Philadelphia. This was not the case, as his garden was preceded, at least, by those of a sect of German mystics led by Kelpius on the Wissahickon river, and of Dr. Christopher Witt at Germantown.³⁵ Today, his famous garden is immortalized and stands right in the thick of the city as a memorial park.

Darlington, as well as Bartram's son William have both stated in their writings that John took an early interest in the practice of medicine and the medicinal uses of plants. An interest which may have been an important factor in the development of his love of botany.

It is known that he owned copies of Salmon, Culpeper and Turner, who were given to him by his mentor James Logan--all about 1729, along with Parkinson's *Paridisi in Sole Paradisus Terrestris*. Logan was the secretary to William Penn, and later became Governor of the Province. He was in constant negotiations with the Iriquois, who often came to his Germantown estate. Here, Logan may have introduced him to native American people who had knowledge of the medicinal uses of the local plants he writes about in his *Appendix* to the 3rd American edition of Short's *Medicina Britanica*, the object of this present reprint.

Bartram was not a prolific writer, but his interest in medicinal plants is shown by an essay of his that was printed in the *American Almanac* (Philadelphia) for 1741 by John German on the "True Indian physic, or ipecacuanha" (*Gillenia trifoliata*, *G. stipulacea* or less likely *Apocynum cannabinum*), which he said to be useful in the treatment of "the bloody flux" (dysentery). This publication is one of the earliest in American pharmacognosy and was published in Ben Franklin's *Poor Richard's Almanack* the same year³⁶ (Guerra, *Journal of the History of Medicine*: July, 1961).

Besides the opportunities to meet Native Americans and peruse Logan's extensive library, it is known that Logan arranged for Bartram to accompany an interpreter, Conrad Weiser, on the journey to Onondaga (near Lake Ontario), which was to be one of his longest botanical expeditions. This would have allowed a perfect opportunity to learn the uses of plants from the Iriquois. After this trip, Bartram wrote *Observations on the inhabitants, Climate, soil, rivers, productions worthy of notice, made by John Bartram in his travels from Pennsylvania to Onondaga, Oswego, and the Lake Ontario in Canada* (London, J. Whiston & B. White, 1751. vii, 94 p., 20 cm.). This was published in the same year as *Description...*, adding support to the possibility that Bartram gathered some of the therapeutic information on the native plants listed in this latter work from this same expedition.

It is almost universally agreed that John Bartram was not only a very gifted scientist and botanist--largely self-taught, but was very even-tempered and cheerful--he seemed to have been blessed with a kindly and energetic temperament. He was said to be "naturally industrious and active, both in body and mind," and was of exceedingly moral and spiritual character. Bartram was a Quaker and very much acknowledged the influence of a higher guiding power all through his life. It is to his credit that he came to be strongly against slavery, even before this was common. It is often told that Bartram always ate dinner seated at table with his "negros," to whom he had freed and paid a salary--his kindness developed a strong loyalty and friendship with them in his later years.

The work that follows is an exact copy of Bartram's *Description, virtues and uses of sundry plants of these northern parts of America, and particularly of the newly discovered Indian cure for the venereal*

disease. This 7-page work was published separately in 1751, but was usually bound with *Medicina Britannica: containing a particular account of their nature, virtues, and uses* of Thomas Short, a popular English materia medica, which was reprinted by Franklin and Hall, based on the 2nd English edition, as a 3rd American edition.³⁷ It is said that Franklin knew of the need for the availability of more practical information of the medical uses of native American plants. Besides the appendix, the Short American 3rd edition also contained "a preface by Mr. John Bartram, botanist of Pennsylvania, and his notes throughout the work, shewing the places where many of the described plants are to be found in these parts of America, their differences in name, appearance and virtue, from those of the same kind in Europe."

Since there is some confusion about the identity of Bartram's plants, the following table is added, where I have considered the common and Latin names, as well as the descriptions to arrive at a modern binomial.^{38,39,40,41,42,43,44,45} I have indicated where the name of a given plant may be in question. Ten out of twenty plants (50%) were "official" in the *United States Pharmacopeia* or *National Formulary* at some time which gives an indication of their popularity and eventual use in medicine.^{46,47}

List of Plants Included in Bartram's Appendix **Bartram's Plant Names Latin Binomial Official Drug Plant**

Aralia (Spikenard, Wild Liquorice) *Aralia racemosa* USP 1820-70

Aralia Caule Nudo (Sarsaparilla) *Aralia nudicaulis* USP 1820-70

Erigeron possibly *Erigeron philadelphicus* L., USP 1820-50

Barton mentions (in *Collections*) this USP 1820-70

species as being "one of the most (*E. canadensis*)

common plants;" or *E. canadensis*

Saururus (Aristolochia) *Saururus cernuus* never official

Collinsonia *Collinsonia canadensis* never official

Sanguinaria (Red Root, Turmeric) *Sanguinaria canadensis* USP 1820-IX

NF V-VII

Virga-aurea (a kind of Golden Rod) possibly *Solidago calcicola* Fern., never official

said by Fernald to be "our closest approach to the European *S.*

virgaurea L.;" not *S. canadensis*

Jacea (Throat-wort) The old name for *Centaurea*, but never official

more likely the related *Liatrus*

spicata (L.) Willd., which fits Bar-

tram's description and was the only plant known as Throat-wort

Uvularia (Formerly, Solomon's Seal) probably *Uvularia perfoliata* L., never official

possibly *U. grandiflora* J.E. Smith

Triostreospermum (Dr. Tinker's *Triosteum perfoliatum* USP 1820-70 weed, gentian, Fever Root)

Blazing Star (Devil's-bit) *Chamaelirium luteum* (L.) A. Gray NF IV-VII

Star grass *Aletris farinosa* L. USP 1820-60

NF IV-VII

Liriodendrum (Poplar) *Liriodendron tulipifera* L. USP 1820-70

Apocinum *Asclepias tuberosa* L. (Butter-fly weed, Pleurisy-Root) NF IV-V

Orchis probably *Orchis spectabilis* L., never official
possibly *Leptoorchis liliifolia* (L.) Kuntze

Centaurium Luteum (Ground-Pine) probably *Lycopodium complanatum* L. USP 1860-XII

or *L. clavatum* L. (*L. clavatum*)

Elichrysum (Cottonweed, Life-everlasting) probably *Anaphalis margaritacum* L.; never official

cultivated as a drug plant

Lobelia most likely *Lobelia syphilitica* never official

the closely-related *L. inflata*: USP 1820-

X, NF VI-VII

[Unnamed shrub with red roots] most likely *Ceanothus americanus*, never official

Jersey tea or Red root; cultivated as a drug plant

Veronica Spicata *Veronicastrum virginicum* (Culver's root) USP 1860-1900,

NF IV-VII

Eupatorium Folium Perfoliatum *Eupatorium perfoliatum* USP 1820-1900,

NF IV-VII

Appendix to Thomas Short's Medicina Britanica: or a Treatise on such Physical Plants as are Generally to be found in Fields or Gardens in Great-Britain, 3rd edition, London.

Printed: Philadelphia Re-printed, and sold by B. Franklin, and D. Hall, at the Post-Office in Market-street 1751.

With a preface by Mr. John Bartram, Botanist of Pennsylvania, and his Notes throughout the Work, shewing the places where may of the described Plants are to be found in these Parts of America, their Differences in Name, Appearance and Virtue, from those of the same Kind in Europe; and an Appendix, containing a Description of a Number of Plants peculiar to America, their Uses, Virtues, &c.

Mr. Bartram's Appendix:

Containing Descriptions, Virtues and Uses, of sundry Plants of these Northern Parts of America; and particularly of the newley discovered Indian Cure for the Venereal Disease.

Aralia, called by some Spikenard, by others Wild Liquorice; this bears large Clusters of Berries, ripe in September, which are pleasant and wholesome to eat: The Roots are of a balsamick Nature; the black Inhabitants use them to cure fresh Wounds; they bruise the Roots, then pour a little Spring Water to them, mixing them together, which brings the Mass to a mucilaginous Balsam, which they apply with good Success; the Roots chewed, and the Juice swallowed, help the Pains of the Loins.

Aralia Caule Nudo, commonly called Sarsaparilla, hath a long creeping Root, something like the Spanish, but is really a very different Plant, yet of great Virtue. The Decoction daily drank as Diet-drink, is much commended for cleansing the Blood, and curing a

Dropsy; and outwardly applied is extoll'd for curing of the Shingles, and cleansing and healing of Ulcers.

Erigeron, used by some for the Bite of a Snake; it bears a white Flower in the Spring, something like a large Daisy, about a Foot high, the Roots run under the Surface of the Ground in small Fibres or Threads, of a hot Taste: The Indians pound this Root, and apply it to cold hard Tumours to dissolve them.

Saururus. Some of the Dutch call it Aristolochia, I suppose, because the Shape of the Leaf hath some Resemblance to that Plant. It grows in wet Places, and produceth a long Spike of white Flowers; the Root is spongy like a Rush, and runs near the Surface of the Mud.

It is of excellent Virtue; being made into a Poultice, and applied to sore and imposthumated Breasts, it ripens and heals them. The dried Leaves made into a Tea and drank, is commended for the Pains of the Breast and Back.

Collinsonia. This Plant grows five Feet high; hath, in the Fall, after Harvest, a Smell something like Hops; the Seed is much like Sage Seed. This, in some Parts of the Country, is called Horse Weed, not only because Horses are very greedy of it, but it also is good for sore gall'd Backs. The Root is hard and knobby, and is much commended for Womens After-pains, being pounded, boiled and the Decoction drank.

Chelidonium, or Sanguinaria, called by the Country People, Red Root, or Turmerick. The Leaves broken yield a yellow Juice, like the Garden Celandine; the Flower is white, and opens early in the Spring; the Root dried and powdered is commended by Dr. Colden, as a Cure for the Jaundice, the Powder being given to the Weight of a Drachm in Small Beer; and by others, for the Bite of a Rattle-Snake.

Virga-aurea, or that Species of Golden Rod, that is so famous for the Bite of Rattle-Snake. This elegant Species hath slender purple Stalks, rising a Foot high, with a Spike of fine yellow Flowers of near one third Part of the Length of the Plant; the Flowers grow out of the Bosom of the Leaves, three or four in little Tufts. This is extolled as a very effectual Cure for the Bite of a Rattle-Snake; the Herb boiled, and the Decoction drank, and the warm Herb applied to the Wound. It is used with good Success to cure the Swelling of the Throat and Neck, and Pains of the Breast, it being a powerful Dissolver of viscid Humours.

Jacea, called by some Throat-wort, because of its Virtue for the Cure of Sore-Throats. The Roots are as big as a Hicory Nut, with some small Fibres; the Stalk is about four or five Feet high, without any Branches, with long narrow Leaves growing alternately thereon; the Flowers put forth toward the Top, surrounding the Stalk in a long Spike of purple Flowers.

The Root bruised and boiled in water, and the Decoction drank and gargled in the Mouth, and the Root applied, with warm Cloths dipped in the hot Decoction, to the Throat, gives Relief, it being of a warm discussing Nature.

Uvulary. It was formerly taken for a Species of Solomon's Seal, having smooth leaves like it; but the Stalk grows through the Leaf, and the little yellowish Flowers something resemble a Lily; it grows about a Foot high, the Root is white, and spreads like a Crow's Foot; some People call it by that Name for that Reason; it is good Root for gathering and breaking a Boil, and makes a fine Salve for healing Wounds and Ulcers; it makes a fine maturing Poultice.

Triosteospermum, called in our Northern Colonies Dr. Tinker's Weed; in Pennsylvania, Gentian; and to the Southward Fever Root, where it is used for the Fever and Ague: With us it was used with good Success for the Pleurisy, and in New-England, for a Vomit. It is a powerful Worker, a little churlish, yet may be a noble Medicine in skilful Hands.

Blazing-Star, as it is called by the black Inhabitants, by others, Devil's-bit, both fanciful Names; the Leaves spread on the Ground, four or five from one Root, and are three or four Inches long; and near one broad; in June it shoots up a Stalk eighteen Inches long, with a fine Spike of white Flowers six Inches long; it grows plentifully in the back Parts of the Country, on dry rich Soil; the Root is white, and about as thick as a Pipe-shank, and extremely bitter.

This precious Root is a great Resister of fermenting Poisons, and the grievous Pains of Bowels, taken in Powder, or the Root bruised and steeped in Rum, of which take a Spoonful at once, and as often as Need requires, until the Pains remit.

Star-Grass. This hath some Resemblance to the last, but the Leaves are narrower and more pointed, and in Winter more yellow, and this grows in moist Places, amongst Hurtleberries, very plentiful in Jersey, and some low Grounds in Pennsylvania and Maryland. The Decoction of this Root drank, easeth the Pains of the Stomach and Bowels.

Liriodendrum, commonly called Poplar. The Bark of the Root steeped in Rum, and the Rum drank, is much commended for the Cure of the Fever and Ague; and to the Northward, for the Gout and Rheumatism.

Apocinum. From the Roots that run deep in the Ground, arise several hairy Stalks about two Feet high, with narrow long Leaves set alternately round thereon; at the Top grow large Tufts of orange-coloured Flowers, which are succeeded by long Pods, containing flat Seeds, joined to white Down, which is by the Wind carried away when the Seed is ripe and bursts open; this hath been for many Years used with good Success for the Cure of the Bloody Flux; the Root must be powdered and given in a Spoonful of Rum, or rather as the Indians give it, bruise the Root, and boil it in Water, and drink the Decoction: Peter Kalm saith it is excellent for the hysteric Passion.

Orchis. It hath a Root as big as an Onion, it hath one or two Leaves green all Winter, which are six or seven Inches long, and two broad, striped with white Lines from one End to the other. This Root bruised and applied to the Ears, easeth the Pains thereof, and helps to break Boils.

Centuarium Luteum, commonly called Ground-Pine. It grows about a Span high, its slender Branches spread all round from one small fibrous Root, like our Penny-royal, but as small as Wire, or the Leaves of Pine, from which it had its Name; the little Flowers are yellow, succeeded by little red pods on the Tops of the Branches; it smells as strong as the Leaves of Pine; it commonly grows on old poor Clay Ground; it is of excellent Virtue, being made into an Ointment with Penny-royal, Hemlock and Henbane (or it may do alone made into an Ointment) for Bruises and Strains, if it be green, for it loseth much of its Virtue when dry, it being of an active penetrating Nature.

Elichrysum, called also Cottonweed, or Life-everlasting, is very good for Baths or Fomentations for cold Tumors, Bruises or Strains; it may be mixed with Ground-Pine.

Lobelia. This curious Plant riseth from a fibrous Root to three or four Feet high, with a Spike of blue Flowers surrounding the Stalk for near a Foot in Length: It grows in rich shady Ground; it is a scarce Plant in many Parts of the country. The learned Peter Kalm (who gained the Knowledge of it from Colonel Johnson, who learned it of the Indians, who, after great Rewards bestowed on several of them, revealed the Secret to him) saith, That the Roots of this Plant cureth the Pox much more perfectly and easily than any mercurial Preparations, and is generally used by the Canada Indians, for the Cure of themselves and the French that trade amongst them, tho' deeply infected with it. They take a Handful of the Roots, and boil them in a Quart of Water, and drink the Decoction, beginning with Half a Pint at first, if the Patient be weak, then increase the Dose every Day as he can bear its purging; but if he can't bear it every Day, let him omit it a Day or two, then take to it again, as he finds Occasion, until he is cured: They wash the Ulcer with the Decoction; but if it be deep and rotten, they put some powder of the inner Bark of the Spruce-tree into it, which helps to dry it up; but if the Disease is inveterate, they drink the Decoction of Ranunculus Folio Reniformus. An old Sachem told Colonel Johnson of another Shrub, with a red Root, from which proceeds several slender Branches, eighteen Inches or two Feet long, on which grow Spikes of white Flowers, which produce three-square black Seed-Pods; the Leaves some of our People drink as Tea, and some smook it with Tobacco; the Roots of this, bruised and Boiled, and the Decoction drank, the Sachem said, he rather preferred to the Lobelia; but the Lobelia seems to be of the most general Use, and with extraordinary Success.

More particular Directions how to use the Lobelia-Root for the Venereal Disorder, obtained from the Indians, by Col. J. "After making a decoction of it, the Patient is to drink about two Gills of it very early in the Morning, fasting, the same before Dinner, and Bed-time. Add or diminish as you find it agrees with the Patient's Constitution: The third Day begin Bathing, and continue it twice a Day, until the Sores are well cleansed, and partly healed, then use the Lotion but once a Day till quite well; observing all the Time to use a slender Diet (vegetable Food, and small Drink) as in other Courses of Physick, a Salivation excepted. These are the Directions I have had from the Person who gave me the Secret."

Veronica Spicata. This Plant, from a fibrous Root, raiseth two or three

Stalks from three to five Feet high, with three or four Leaves set at one Joint (if they are set across) with a long Spike of white Flowers on the Top of each Stalk.

One Handful of the Roots of this Plant, boiled in a Pint of Milk, and drank, is used by the black Inhabitants for a powerful Vomit.

Eupatorium Folium Perfoliatum. This Plant grows in moist Places; the Stalks grow (through the Leaves, which are rough and pointed) two or three Feet high, branching out towards the Top, producing a large Bunch of white Flowers, which are succeeded by fine Down, which bloweth away with the Seed.

This Herb boiled in Water and the Decoction drank, is commended for a Vomit in the intermitting Fevers, and used as a Fomentation for Pains in the Limbs.

Bibliography

R.B. Austin, *Early American Medical Imprints* (Washington, 1961).

B.S. Barton, *Collections for an Essay Towards a Materia Medica of the United-States* (Philadelphia, 1810).

W. Bartram, *The Travels of William Bartram* (1791; New York, 1955).

N.L. Britton and A. Brown, *An Illustrated Flora of the Northern United States, Canada and the British Possessions* (New York, 1898).

N. Culpeper, *A Physicall Directory or A translation of the London Dispensatory Made by the Colledge of Physicians in London* (London, 1649).

W. Darlington, *Memorials of John Bartram and Humphry Marshall* (1849; New York, 1967).

E. Earnest, *John and William Bartram* (Philadelphia, 1940).

M.L. Fernald, *Gray's Manual of Botany*, 8th ed. (New York, 1970).

E.N. Gathercoal and H.W. Youngken, *Check List of Native and Introduced Drug Plants in the United States* (Chicago, 1942).

G.E. Gifford, Jr., "Botanic Remedies in Colonial Massachusetts, 1620-1820" In *Medicine in Colonial Massachusetts, 1620-1820* (Boston, 1978).

A. Gray, *A Manual of the Botany of the Northern United States* (Boston & Cambridge, 1848).

F. Guerra, *American Medical Bibliography* (New York, 1962).

F. Guerra, "Medical Almanacs of the American Colonial Period." *Journal of the History of Medicine*, July, 1961.

C. Hobbs, *The Echinacea Handbook* (Capitola, 1990).

C. Linnaeus, *Species Plantarum* (1753; London, 1959).

R. Morison, *Plantarum Historiae Universalis Oxoniensis* (Oxford, 1699).

J.M. Nickell, *Botanical Ready Reference* (Palo Alto, CA, 1978).

W. Salmon, *Botanologia. The English Herbal: or History of Plants* (London, 1710).

T. Short, *Medicina Britannica*, 3rd ed. (Philadelphia, 1751).

G. Sonnedecker, *Kremers and Urdang's History of Pharmacy* (Philadelphia, 1976).

W. Turner, *A new Herbal* (London, 1551).


R. Wright, *The Story of Gardening* (1934; New York, 1963).

Formerly published in *Pharmacy in History*

1. Gifford, G.E. "Botanic Remedies in Colonial Massachusetts, 1620-1820," *Medicine in Colonial Massachusetts, 1620-1820*, p. 263.

2. Dodoens, R. *A New Herball, or Historie of Plants* (London, 1586).
3. Gerard, J. & T. Johnson (ed.). *The Herbal or General History of Plants* (New York, 1975 [1633]).
4. Parkinson, J. *Theatrum Botanicum: The Theater of Plants* (London, 1640).
5. Culpeper, N. *The Complete Herbal*. (London, 1847).
6. Leighton, A. *Early American Gardens* (Boston, 1970), p. 139.
7. Sonnedecker, G. *Kremers and Urdang's History of PHarmacy*, 4th ed. (Philadelphia, 1976).
8. Cowen, D. *Pre-Pharmacopoeial Literature* Madison, AIHP, 1961.
9. Duncan, A. *The Edinburgh New Dispensatory, from the 8th edition, with Large Additions, relating principally to the vegetable production of the United States* by J. Dyckman (New York, 1818).
10. Seward, B.P. "Pioneer Medicine in VIrginia," *Annals of Medical History* xx, xx.
11. Blanton, W.B. *Medicine in Virginia in the Seventeenth Century* (Richmond, 1930).
12. Gifford, *Botanic Remedies*.
13. Blanton, W.B. *Medicine in Virginia in the Eighteenth Century* (Richmond, 1931).
14. Such as John German's *American Almanac*.
15. Austin, R.B. *American Medical Imprints* (Washington, 1961).
16. Sonnedecker.
17. Cowan, D. "The Impact of the *Materia Medica* of the North American Indians on Professional Practice," in W.-H. Hein (ed.) *Botanical Drugs of the Americas in the Old and New Worlds, Veröffentlichungen der Internationalen Gesellschaft f, r Geschichte der Pharmazie, NF Band 53*.
18. Vogel, *American Indian Medicine* (Norman, 1970).
19. Hobbs, C. *Echinacea Handbook* (Capitola, CA, 1990).
20. Densmore, F. "Uses of Plants by the Chippewa Indians," *Ann. Rep. Bur. Amer. Ethnol.* 44 (1928) 275-398.
21. Hoffman, W.J. "The Midewiwin or 'Grand Medicine Society,'" *Ann. Rep. Bur. Amer. Ethnol.* 7 (1891) 143-300.
22. Mooney, J. "The Sacred Formulas of the Cherokees." *Ann. Rep. Bur. Amer. Ethnol.* 7 (1891) 301-397.
23. Smith, H.H. "Ethnobotany of the Menomini Indians." *Bull. Pub. Mus. City of Milwaukee* 4 (1923) 1-174.
24. Cowen, *The Impact..*
25. Hobbs, C. "Golden Seal in Early American Medical Botany." *Pharmacy in History* 32 (1990) 79.
26. Barton, B.S. *Collections for an Essay Towards a Materia Medica of the United States* (Philadelphia, 1810).
27. Earnest, E. *John and William Bartram* (Philadelphia, 1940).
28. Bartram, W. *John Bartram, 1699-1777, His Garden and his House*. (Philadelphia, 1938).
29. Gillispie, C.C. (ed.) *The Dictionary of Scientific Biography* (New York, 1972).
30. Earnest.
31. Darlington, W. *Memorials of John Bartram and Humphry Marshall* (New York, 1967 [1849]).
32. Gordon, M.B. *Aesclepias Comes to the Colonies* (Ventnor, NJ, 1949).
33. Youmans, W.J. *Pioneers of Science* (New York, 1896 [1896]), 24-39.
34. Bartram, W. *The Travels of William Bartram* (New York, 1928 [1791]).

35. Earnest.
36. Guerra, F. American Medical Bibliography 1639-1783 (New York, 1962).
37. Austin.
38. Fernald, M.L. Gray's Manual of Botany (New York, 1970).
39. Britton, N.L. & Hon. A. Brown. An Illustrated Flora of the Northern United States, Canada and the British Possessions (New York, 1898).
40. Bailey, L.H. & Staff of the Liberty Hyde Bailey Hortorium. Hortus Third (New York, 1975).
41. Hocking, G.M. A Dictionary of Terms in PHarmacognosy (Springfield, 1955).
42. Uphof, J.C. Th. Dictionary of Economic Plants (New York, 1959).
43. Young, C. J.M. Nickell's Botanical Ready Reference (Palo Alto, 1978).
44. Hobbs, C.E. 1876. C.E. Hobbs' Botanical Hand-Book. Boston: Chas. C. Roberts.
45. Barton, Collections.
46. Gathercoal, E.N. & H.W. Youngken. Check List of Native and Introduced Drug Plants in the United States (Chicago, 1942).
47. The original USP's and NF's, all of which are in the Institute for Natural Products Library, were consulted. The Medical Botany of John Bartram (Draft ver. 1.0) C. Hobbs 7/17/91 10

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