

Jefferson's Botanical Catalog in *Notes on the State of Virginia*

THOMAS JEFFERSON'S record of North American plants in *Notes on the State of Virginia*, his only published book, not only offers insights into the native species he deemed valuable to early Americans, but also serves as an important reference and primary resource document. Originally written to refute European misconceptions about the natural history of North America, Jefferson's responses to a list of queries, which he began answering 1781-82, ultimately developed into a comprehensive and masterfully rendered portrait of his native land.

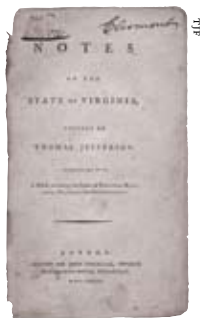
Jefferson consulted the floras and botanical treatises of the most learned scholars of his day upon which to base his own scientific conclusions. In the introductory paragraph to his essay on Virginia's flora Jefferson clarifies that he added "the Linnaean to the popular names, as the latter might not convey precise information

to a foreigner." The Swedish scientist Carolus Linnaeus (1707-1778), considered the Father of Taxonomy, created the binomial system, which hence forward revolutionized our way of identifying living things based on shared physical characteristics.

Among his many scientific tomes, Linnaeus' great work *Systema Natura* (1735) ran through twelve editions and his *Species Plantarum* (1753) was published within Jefferson's lifetime. In addition to Linnaeus, Jefferson cited



William Bartram



the English-born botanist John Clayton (c. 1693-1773), who lived for many years at Windsor in Gloucester County, Virginia and whose botanical investigations are embodied in John Frederick Gronovius' *Flora Virginica* (1739). Jefferson's mention "of Millar" referred to his third source, Philip Miller (1691-1771), the

English botanist and head gardener at Chelsea Physic Gardens whose essential works *The Gardener's Dictionary* (1731) and *The Gardener's Kalendar* (1732) informed Jefferson on many gardening related topics throughout his life time. It was not until the 7th edition, published in 1759, that Miller used the Linnaean scientific system of nomenclature. Jefferson's library contained at least three of Miller's books, including the 1768 edition of the *Dictionary*, and the 1765 edition of the *Kalendar*. In one revision made years later, Jefferson turned to William Bartram's *Travels through North and South Carolina* (1791) to answer his question about the identification of willows (*Salix* species) that grow along the banks of rivers.

Jefferson organized the "Vegetables" in chapter VI into four major categories: 1. Medicinal, 2. Esculent, 3. Ornamental, and 4. Useful for Fabrication. But, his lists are bare bones, sparingly embellished, and by his own admission, a selective and incomplete inventory. He does not elaborate upon or explain his reasons for assigning a plant to one particular category as opposed to another. No cures are included with the medicinal plants, no recipes for the edibles,

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Sketch out those which would principally attract notice, as being 1. Medicinal, 2. Efficacious, 3. Ornamental, or 4. Useful for fabrication; adding the Linnaean to the popular names, as the latter might not convey precise information to a foreigner. I shall confine myself too to native plants.

- 1. Senna. *Cassia ligustrina*.
- Artsmart. *Polygonum Sagittatum*.
- Clivers, or goose-grass. *Galium spurium*.
- Lobelia of several species.
- Palma Christi. *Ricinus*.
- (3.) James-town weed. *Datura Stramonium*.
- Mallow. *Malva rotundifolia*.
- Syrian mallow. *Hibiscus mofehentos*.
- Hibiscus virginicus*.
- Indian mallow. *Sida rhombifolia*.
- Sida abutilon*.
- Virginia Marshmallow. *Napaea hermaphrodita*.
- Napaea dioica*.
- Indian physic. *Spiraea trifoliata*.
- Euphorbia *Ipecacuanhae*.
- Pleurisy root. *Asclepias decumbens*.
- Virginia snake-root. *Aristolochia serpentaria*.
- Black snake-root. *Achua racemosa*.
- Seneca rattlesnake-root. *Polygala Senega*.
- Valerian. *Valeriana locusta radiata*.
- Gentiana*,



Cardinal Flower

and no directions on how to profit from the useful plants. Is his list of medicinal plants based solely on documentation from Native American tribes, or were these cures used by the early colonists as well? There are a number of plants whose historical names bear scant resemblance to current nomenclature. Deciphering their true identity is a challenge even for the most astute student of taxonomy and natural history. And, despite Jefferson's disclaimer that "I confine myself too to native plants," his list is not exclusively limited to Eastern North American spe-

1. MEDICINAL

- Wild Senna (*Cassia marilandica* Linnaeus)
- Arrowleaf Tearthumb (*Polygonum sagittatum* L.)
- Bedstraw (*Galium tinctorium* L.)
- "Lobelia of several species"
(*Lobelia cardinalis* L., *Lobelia inflata* L., *Lobelia siphilitica* L.)
- Castor Bean (*Ricinus communis* L.)
- Jimson Weed (*Datura stramonium* L.)
- Common Mallow (*Malva neglecta* Wallroth)
- Rose Mallow (*Hibiscus moscheutos* L.)
- Saltmarsh Mallow (*Hibiscus virginicus*),
(*Kosteletzkya virginica* L.) Presl
- Arrowleaf Sida (*Sida rhombifolia* L., *Sida abutilon*)
- Velvet Leaf (*Abutilon theophrasti* Medicus)
- Virginia Mallow (*Sida hermaphrodita* Rusby),
(*Napaea dioica*)
- Glade Mallow (*Napaea dioica* L.)
- Indian Physic (*Gillenia trifoliata* L. Moench)
- Carolina Ipecac (*Euphorbia ipecacuanhae* L.)
- Butterfly Weed (*Asclepias tuberosa* L.)
- Black Cohosh (*Cimicifuga racemosa* Nuttall)
- Senega Root, Seneca Snakeroot (*Polygala senega* L.)
- Corn Salad (*Valerianella locusta*, *V. radiata* L.)

cies. Were these non-native species already naturalized in North America, or was he applying names of European species to American natives that were not, at the time, distinguished as separate species? These vagaries and unanswered questions are, in themselves, endlessly intriguing.



In this article, Jefferson's plant lists from *Notes* are shown paired with what we have determined to be the modern common and botanical names. I extend special thanks to Peter Hatch and to Joel Fry, curator at Bartram's Garden, for their help with the identification of certain species. Further analysis of Jefferson's botanical catalog will be made available on our Web site.

Peggy Cornett, Director
Thomas Jefferson Center for Historic Plants

- Sampson Snakeroot, Soapwort. (*Gentiana villosa* L., *G. saponaria* L.)
- Ginseng (*Panax quinquefolium* L.)
- Hairy Angelica (*Angelica venenosa* Greenway)
- Spurge Nettle (*Cnidioscolus urens* L. Arthur, or *Cnidioscolus stimulosus* (Michaux) Engelmann & Gray [?])

2. ESCULENT

- Arrow Arum, Tuckahoe (*Peltandra virginica* L.)
- Jerusalem Artichoke (*Helianthus tuberosus* L.)
- Sweet Potato (*Ipomoea batatas* L. Lamarck)
- Passionflower (*Passiflora incarnata* L.)
- Native grasses *Panicum* species
- Velvet Grass (*Holcus lanatus* L.), Oat Grass [?] Sorghum [?]
- Wild Rice (*Zizania aquatica* L.)
- Wild Pea (*Apios americana* Walter [?])
- Lupine (*Lupinus perennis* L.)
- Wild Hops (*Humulus lupulus* L.)
- Choke Cherry (*Prunus virginiana* L.)
- Chickasaw Plum (*Prunus angustifolia* Marshall)
- Wild Plum (*Prunus americana* Marshall)
- Wild Crab Apple (*Malus coronaria* L. Miller)
- Red Mulberry (*Morus rubra* L.)
- Persimmon (*Diospyros virginiana* L.)
- Sugar Maple (*Acer saccharum* Marshall)
- Shagbark Hickory (*Carya ovata* (Miller) K. Koch)
- Mockernut, Pignut, etc. (*Carya* species)



Red Buckeye



Tulip Poplar



Sweet Shrub

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Paccas, or Illinois nut. Not described by Linnæus, Millar, or Clayton. Were I to venture to describe this, speaking of the fruit from memory, and of the leaf from plants of two years growth, I should specify it as the *Juglans alba, foliis lanceolatis, acuminatis, ferratis, tomentosis, fructu minore, ovato, compresso, vix insculpto, dulci, putamine, tenerimo*. It grows on the Illinois, Wabash, Ohio, and Missisipi. It is spoken of by Don Ulloa under the name of Pacanos, in his *Noticias Americanas*. Entret. 6.

Black walnut. *Juglans nigra*.

White walnut. *Juglans alba*.

Chestnut. *Fagus castanea*.

Chinquapin. *Fagus pumila*.

Hazlenut. *Corylus avellana*.

Grapes. *Vitis*. Various kinds, though only three described by Clayton.

Scarlet Strawberries. *Fragaria Virginiana* of Millar.

Whortleberries. *Vaccinium uliginosum*?

Wild gooseberries. *Ribes groenlandicum*.

Cranberries. *Vaccinium oxycoccos*.

Black raspberries. *Rubus occidentalis*.

Blackberries. *Rubus fruticosus*.

Dewberries. *Rubus cæsius*.

Cloud-berries. *Rubus chamaemorus*.

3. Plane-

Pecan (*Carya illinoensis* (Wang.) K. Koch)

Black Walnut (*Juglans nigra* L.)

Bitternut, White Walnut (*Juglans cinerea* L.)

American Chestnut (*Castanea dentata* (Marshall) Borkh)

Chinquapin (*Castanea pumila* L. Miller)

Hazelnut (*Corylus americana* Walter)

Native Grapes (*Vitis* species)

Wild Strawberry (*Fragaria virginiana* L.)

Highbush Blueberry (*Vaccinium corymbosum* L.)

Gooseberry (*Ribes rotundifolium* Michaux)

Cranberry (*Vaccinium macrocarpon* Aiton)

Black-cap, Black Raspberry (*Rubus occidentalis* L.)

Blackberry (*Rubus argutus* Link)

Dewberry (*Rubus flagellaris* Willdenow or *R. hispidus* L. [?])

Cloudberry (*Rubus chamaemorus* L.)



Jimson Weed

3. ORNAMENTAL

- Sycamore (*Platanus occidentalis* L.)
- Tulip Poplar (*Liriodendron tulipifera* L.)
- Swamp Cottonwood (*Populus heterophylla* L.)
- Black Poplar (*Populus nigra* L.)
- Quaking Aspen (*Populus tremuloides* Michaux)
- Linden, Basswood (*Tilia americana* L.)
- Red Maple (*Acer rubrum* L.)
- Red Buckeye (*Aesculus pavia* L.)
- Catalpa (*Catalpa bignonioides* Walter)
- Umbrella Magnolia (*Magnolia tripetala* L.)
- Sweet Bay Magnolia (*Magnolia virginica* L.)
- Cucumber Magnolia (*Magnolia acuminata* L.)
- Indian Bay (*Persea indica* L. Sprengel)
- Red Bay (*Persea borbonia* L. Sprengel)
- Rosebay, Great Laurel (*Rhododendron maximum* L.)
- “Laurel of the western country. Qu. species?” [?]
- Spicebush (*Lindera benzoin* L. Blume)
- Sassafras (*Sassafras albidum* (Nutt.) Nees)
- Black Locust (*Robinia pseudo-acacia* L.)
- Honey Locust (*Gleditsia triacanthos* L.)
- Flowering Dogwood (*Cornus florida* L.)
- Fringe Tree (*Chionanthus virginicus* L.)
- Barberry (*Berberis vulgaris* L.)
- Redbud (*Cercis canadensis* L.)
- American Holly (*Ilex opaca* Aiton)
- Cockspur Thorn (*Crataegus crus-gali* L.)
- Burningbush or Wahoo (*Euonymus atropurpureus* Jaquin)

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3. Plane-tree. *Platanus occidentalis*.
 Poplar. *Liriodendron tulipifera*.
 Populus heterophylla.
 Black poplar. *Populus nigra*.
 Aspen. *Populus tremula*.
 Linden, or lime. *Tilia Americana*.
 Red flowering maple. *Acer rubrum*.
 Horse-chestnut, or Buck's-eye. *Aesculus*
 pavia.
 Catalpa. *Bignonia catalpa*.
 Umbrella. *Magnolia tripetala*.
 Swamp laurel. *Magnolia glauca*.
 Cucumber-tree. *Magnolia acuminata*.
 Portugal bay. *Laurus indica*.
 Red bay. *Laurus borbonia*.
 Dwarf-rose bay. *Rhododendron maximum*.
 Laurel of the western country. *Qu. species?*
 Wild pimento. *Laurus benzoin*.
 Sassafras. *Laurus sassafras*.
 Locust. *Robinia pseudo-acacia*.
 Honey-locust. *Gleditsia* 1. 6.
 Dogwood. *Cornus florida*.
 Fringe or snow-drop tree. *Chionanthus*
 Virginica.
 Barberry. *Berberis vulgaris*.
 Redbud, or Judas-tree. *Cercis Canadensis*.
 Holly. *Ilex aquifolium*.
 Cockspur hawthorn. *Crataegus coccinea*.
 Spindle-tree. *Euonymus Europaeus*.
Evergreen



Umbrella Magnolia



Fringe Tree



Butterfly Weed

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Evergreen spindle-tree. *Euonymus Americanus*.

Itea Virginia.

Elder. *Sambucus nigra*.

Papaw. *Annona triloba*.

Candleberry myrtle. *Myrica cerifera*.

Dwarf-laurel. *Kalmia angustifolia* } called ivy
folia. *Kalmia latifolia* } with us.

Ivy. *Hedera quinquefolia*.

Trumpet honeysuckle. *Lonicera sempervirens*.

Upright honeysuckle. *Azalea nudiflora*.

Yellow jasmine. *Bignonia sempervirens*.

Calycanthus floridus.

American aloe. *Agave Virginia*.

Sumach. *Rhus*. Qu. species?

Poke. *Phytolacca decandra*.

Long moss. *Tillandsia Usneoides*.

4. Reed. *Arundo phragmitis*.

Virginia hemp. *Acnida cannabina*.

Flax. *Linum Virginianum*.

Black, or pitch-pine. *Pinus taeda*.

White pine. *Pinus strobus*.

Yellow pine. *Pinus Virginia*.

Spruce pine. *Pinus foliis singularibus*.
Clayton.

Hemlock spruce fir. *Pinus Canadensis*.

Arbor vitae. *Thuja occidentalis*.

Juniper.

Strawberry Bush, Hearts 'a Bustin' (*Euonymus americana* L.)

Virginia Willow, Sweetspire (*Itea virginica* L.)

Elderberry (*Sambucus canadensis* L.)

Pawpaw (*Asimina triloba* L. Dunal)

Wax Myrtle (*Myrica cerifera* L.)

Mountain Laurel (*Kalmia latifolia* L.)

Virginia Creeper (*Parthenocissus quinquefolia* L. Planchon)

Trumpet Honeysuckle (*Lonicera sempervirens* L.)

"Azalea nudiflora" Wild Azalea (*Rhododendron perichlymenoides* Michaux)

Swamp Azalea (*Rhododendron viscosum* L. Torrey)

Yellow Jessamine (*Gelsemium sempervirens* L. Aiton)

Sweet Shrub (*Calycanthus floridus* L.)

False Aloe (*Agave virginica* L. syn. *Manfreda virginica*)

Winged Sumac (*Rhus copallina* L.)

Smooth Sumac (*Rhus glabra* L.)

Staghorn Sumac (*Rhus typhina* L.)

Pokeweed (*Phytolacca americana* L.)

Spanish Moss (*Tillandsia usneoides* L.)

4. USEFUL FOR FABRICATION

Giant Reed (*Arundo donax* L.)

Water-hemp (*Amaranthus cannabinus* L. JD Sauer)

Flax (*Linum virginianum* L.)

Loblolly or Pitch Pine (*Pinus taeda* L.; *P. rigida*)

White Pine (*Pinus strobus* L.)

Virginia Pine (*Pinus virginiana* L.)

Red Spruce (*Picea rubens* Sargent)

Canada Hemlock (*Tsuga canadensis* (L.) Carriere)

American Arbor Vitae (*Thuja occidentalis* L.)

Ginseng



- Red Cedar (*Juniperus virginiana* L.)
- Bald Cypress (*Taxodium distichum* L. Richard)
- White Cedar (*Chamaecyparis thyoides* L. B.S.P.)
- Black Oak (*Quercus velutina* Lamarck)
- White Oak (*Quercus alba* L.)
- Red Oak (*Quercus rubra* L.)
- Willow Oak (*Quercus phellos* L.)
- Chestnut Oak (*Quercus prinus* L.)
- Water Oak (*Quercus nigra* L.)
- Dwarf Chinquapin Oak (*Quercus prinoides* Willdenow), or Bear Oak (*Quercus ilicifolia* Wangenheim [?])
- Live Oak (*Quercus virginiana* Miller)
- River Birch (*Betula nigra* L.)
- White Birch (*Betula populifolia* Marshall)
- American Beech (*Fagus grandiflora* Duchesne)
- American or White Ash (*Fraxinus americana* L.)
- “Fraxinus Novae Angliae Millar”
Water Ash (*Fraxinus caroliniana* Miller)
- American Elm (*Ulmus americana* L.)
- Swamp Willow (*Salix caroliniana* Michaux)
- Black Willow (*Salix nigra* Marshall)
- Silky Willow (*Salix sericea* Marshall)
- Sweet Gum (*Liquidambar styraciflua* L.)
- Tobacco (*Nicotiana*)
- Maize (*Zea mays*)

- Round potatoes (*Solanum tuberosum*)
- Pumpkins (*Cucurbita pepo*)
- Cymlings (*Cucurbita verrucosa*)
- Squashes (*Cucurbita meopepo*)

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Juniper. *Juniperus virginica* (called cedar with us).

Cypress. *Cupressus disticha*.

White cedar. *Cupressus Thyoides*.

Black oak. *Quercus nigra*.

White oak. *Quercus alba*.

Red oak. *Quercus rubra*.

Willow oak. *Quercus phellos*.

Chestnut oak. *Quercus prinus*.

Black jack oak. *Quercus aquatica*. Clayton. Query?

Ground oak. *Quercus pumila*. Clayton.

Live oak. *Quercus Virginiana*. Millar.

Black Birch. *Betula nigra*.

White birch. *Betula alba*.

Beech. *Fagus sylvatica*.

Ash. *Fraxinus Americana*.

Fraxinus Novae Angliæ. Millar.

Elm. *Ulmus Americana*.

Willow. *Salix*. Query species?

Sweet Gum. *Liquidambar styraciflua*.

The following were found in Virginia when first visited by the English; but it is not said whether of spontaneous growth, or by cultivation only. Most probably they were natives of more southern climates, and handed along the continent from one nation to another of the savages.

Tobacco. *Nicotiana*.

Maize. *Zea mays*.

Round

- Round potatoes. *Solanum tuberosum*.
- Pumpkins. *Cucurbita pepo*.
- Cymlings. *Cucurbita verrucosa*.
- Squashes. *Cucurbita melopepo*.

There is an infinitude of other plants and flowers, for an enumeration and scientific description of which I must refer to the *Flora Virginica* of our great botanist Dr. Clayton, published by Gronovius at Leyden, in 1762. This accurate observer was a native and resident of this state, passed a long life in exploring and describing its plants, and is supposed to have enlarged the botanical catalogue as much as almost any man who has lived



Catalpa

nts, which are native, our
at, rye, barley, oats, buck
, and Indian corn. The
well enough wherever the
, hemp, flax, and cotton,
ities. Indico yields two
-worm is a native, and the
or its food, grows kindly.
o potatoes, both the long
ernips, carrots, parsneps,
and nuts (*Arachis*.) Our
, St. Foin, Burnet, Timo
rd grass; red, white, and
enferd, blue grass, and

The

A Catalog of Historic Plant Seeds

The following seed varieties for 2009 are illustrated and described in detail on the Monticello Web site. Note the added column of introduction dates. We have reinstated this important information to facilitate in research and documentation.

The “TJ” dates indicate the first Jefferson reference documented in his diaries, correspondence, his book *Notes on the State of Virginia*, and other primary sources. The “L&C” dates refer to the introductions from the Lewis and Clark Expedition (1803-1806). The undesignated dates denote our best opinion of the period the plant was first being cultivated in America based on documentation in standard resources such as Bernard McMahon’s *The American Gardener’s Calendar*, period catalogs and seed lists, introduction dates from Kew Gardens and other British and European resources, and documentation from other historic sites.

Place orders online at www.twinleaf.org, or call 1-800-243-1743. For questions about your order, please call Customer Service at 1-800-243-0743, 9 a.m. to 5 p.m. Eastern Time, Monday through Friday, or e-mail us at catalog@monticello.org. All seed packets are \$2.50 plus shipping.

This is the *Twinleaf* 2009 seed list, alphabetical by common name. A listing by Latin names is available on the Web site, www.twinleaf.org.

FLOWERS

	INTRO	ITEM NO.
Ageratum, annual <i>Ageratum houstonianum</i>	1822	600028
Angel’s Trumpet <i>Datura innoxia</i>	1830	631038
Bachelor’s Button <i>Centaurea cyanus</i>	TJ, 1786	631008
Balsam <i>Impatiens balsamina</i>	1700; TJ, 1767	600206
Balsam Apple <i>Momordica balsamina</i>	BY 1700; TJ, 1810	631049
Bean, Hyacinth <i>Dolichos lablab</i>	BY 1800	600091
Bean, Scarlet Runner <i>Phaseolus coccineus</i>	TJ, 1791	631047
Bean, Scarlet Runner ‘Painted Lady’ <i>P. coccineus</i> cv	EARLY 1800s	631103
Blackberry Lily <i>Belamcanda chinensis</i>	TJ, 1807	631064
Black-eyed Susan <i>Rudbeckia hirta</i>	PRE 1800	600027
Blanket Flower, perennial <i>Gaillardia aristata</i>	L&C, 1806	631097
Bloodflower <i>Asclepias curassavica</i>	1806	631110
Butterfly Weed <i>Asclepias tuberosa</i>	EARLY 1800s	631003
Calendula, Pot Marigold <i>Calendula officinalis</i>	TJ, 1767	600024

Monticello Plants

In addition to seeds, the Monticello catalog also offers a selection of plants, including perennial flowers, roses, and apple trees. For a current listing of available plants visit the Monticello Web site regularly for updated availability and shipping details.

WEB: www.twinleaf.org