

Scientists of Kentucky

Common Names of Vascular Plants Reported by C.S. Rafinesque in an 1819 Descriptive Outline of Four Vegetation Regions of Kentucky

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In the flora of North America, knowledge is scarce on the sources and origins of the common names applied to vascular plants. In botanical literature, however, a large number of studies have been published with the purpose of providing common names of plants for either general or specific regions of the United States. McAtee (1913–1933), in a series of five papers published over a 20-year period, listed 410 common names with the geographic areas in which they were used, and 60 sources of information. His list, consisting mostly of plants of aquatic and marsh habitats, is of names learned during field work for the Biological Survey in the United States Department of Agriculture. McAtee's list, containing an index to the plant names in each of his five papers, provides an excellent working base for obtaining local common names from literature sources published during the first third of the 20th century or earlier.

Constantine Samuel Rafinesque (1783–1840) (Figure 1), the controversial, eccentric, sometimes considered erratic European botanist who traveled in eastern North America during the first third of the 19th century, published articles and books totaling over 900 titles in botany. Many of these publications were on taxonomic botany, including catalogues of floras (Rafinesque 1836, 1836–1838, 1840), geographical floras (Rafinesque 1817b, 1817c, 1819a, 1824), medical floras (Rafinesque 1828, 1830), and studies of genera (Rafinesque 1811, 1820). In his *Medical Flora*, Rafinesque (1828, 1830) provided an English, French, and German name, one or more officinal names (i.e., names used in pharmacy),

and one to several “vulgar names” for each species, the last being additional names in English used by members of the public but not preferred for scholarly communication. Otherwise, in these well-known publications, he did not provide common names for the plants listed or described, many of which were designated by him as new taxa. In a few of his papers among this vast output of botanical information, he reported the common names of vascular plants.

Rafinesque traveled and explored for plants in Kentucky during the years 1818 to 1826 and was Professor of Botany and Natural History at Transylvania University in Lexington from 1819 to 1825. During this period he wrote a short article (Rafinesque 1819c; Figure 2) consisting of a descriptive outline of the vascular-plant vegetation in four major regions of the state. This paper was published in 1819 in the second number of the first volume of *The Western Review and Miscellaneous Magazine*, edited by William Gibbs Hunt (Rafinesque 1819c). In addition to providing general remarks, Rafinesque characterized each of the four botanical regions as to geographical location, general topography, kinds of bedrock, and unique features of the vegetation. He also provided a short list of vascular plants that he considered somewhat specific or “peculiar” to each region. Along with each binomial scientific plant name, he added the common name, or in his terminology, the “vulgar” name, noting, however, that “the vulgar names of the plants . . . cannot claim to be generally understood even in [Kentucky], many being merely



Figure 1. Portrait of C.S. Rafinesque by American artist William Birch (1755–1834). After a long succession of private owners, this enamel miniature (2 ¼" diameter) was purchased by Transylvania University, Lexington, Kentucky, in 1938. Photo courtesy of Transylvania University Special Collections.

local or personal. The botanical names are alone to be relied on."

Two years earlier, in his review of the first edition of Amos Eaton's *Manual of Botany for the Northern States* . . . [1817], Rafinesque (1817a) supported the idea of providing the vulgar names in works on local taxonomic botany, and he noted that their inclusion in Eaton's *Manual* was "valuable." He commented that most of them had been taken by Eaton from other cited published sources, rather than being "taken directly from the vulgar," and wrote further that "vulgar names are at all times a valuable appendage to classical synonymy, and indispensable in local botanical writings."

Rafinesque probably prepared the article on vegetation of Kentucky for a popular audience, which would explain his use of the com-

mon names of plants, but he reminded his readers that the botanical names were the intended authentic ones to be used for scientific accuracy. Botanists always have and, it is expected, always will recognize that the botanical names should be used in authoritative floristic and vegetational studies. Botanists, however, must also communicate with and make their studies useful to those who work in other fields of study but who are not familiar with Latin binomials. Among these fields are geology, zoology, wildlife and fisheries studies, natural resources management, endangered species preservation, conservation organizations, environmental law, ecological consultation, and other groups with environmental concerns.

The use of common names of plants is of more importance now than it was 25 or 50

MISCELLANY.

BOTANY OF KENTUCKY.

On its principal features, by C. S. RAFINESQUE, Professor of Botany and Natural History in Transylvania University.

THE state of Kentucky being situated in the centre of the western country, has a *flora* similar to the generality of the western states, and participating in their peculiar features, while it offers in itself a complete specimen of the western botany.

The peculiarities of this botany consist principally in the total want of the maritime and mountain regions, which form such remarkable sections in the local floras of the Atlantic states, and abound with plants peculiar to themselves. Another striking feature in the vegetation of Kentucky and the western states is the propensity which many plants and trees exhibit of growing in a social state, to the almost total exclusion of every other. There are many plants which grow crowded together, all over the United States; such for instance as the grasses, ferns, the *Comptonia*, the *Studfonia*, &c. but they allow many other plants to grow with them; while, in the western country, many extensive spaces of ground are covered with one or a few crowded species, to the exclusion of many others, which are found in their company elsewhere. The plants which may be quoted as a striking instance of this singular fact are not few, among which I shall select the following:

<i>Vernonia pycnantha</i> ,	Iron Weed,
<i>Baptisia cerulea</i> ,	Blue Wild Indigo,
<i>Cacalia reniformis</i> ,	Kidney Weed,
<i>Stedeoma pulegioides</i> ,	Penny-a-royal,
<i>Chenopodium anthelminticum</i> ,	Worm Weed,
<i>Elephantopus scaber</i> ,	Elephant's Foot,

Figure 2. First page of C.S. Rafinesque's paper on "Botany of Kentucky[:] on its principal features," which was published in 1819 in volume 1(2) of *The Western Review and Miscellaneous Magazine*.

years ago; it will become more and more prevalent and necessary as time progresses. With increasing frequency, floristic manuals, such as that of Gleason and Cronquist (1991) and the ongoing *Flora of North America North of Mexico*, are providing vernacular names for all or most of the species described therein. The use of common names will demand more accuracy and stability to the extent that nomenclatural guidelines may need to be established in the future. These guidelines may develop in a manner similar to those parameters provided in the *International Code of Botanical Nomenclature*. The correct interpretation of earlier papers in which common names were used requires that the authors' applications of such names be accurately determined. Some names may have been applied in senses different from more recent usage, and some may have

fallen into disuse. Efforts to standardize common nomenclature require the selection of appropriate and otherwise acceptable names that will not perpetuate or introduce confusion. Attaining these objectives will require consideration of historic and regional applications of vernacular plant names. For these reasons we bring to the attention of the scientific public the common plant names in Rafinesque's early 19th century publication on the botany of Kentucky.

Rafinesque's paper on the botany of Kentucky is transcribed below. His lists of plant species are annotated, as indicated in the following paragraphs, to permit their interpretation using current botanical and common names. Separate indexes to botanical and common names are provided in Appendix 1.

Rafinesque—owing, he said in the errata, to his absence from town—had no opportunity for proofreading until after the paper had gone to press. Consequently, the original lists of plant names are rife with typographical errors, even among the common names. Rafinesque (1819d) published corrections of a number of these errors in a later issue of the same journal, on page 128. Several others, however, escaped his notice. "Tris" for "Iris," and "Pin week" for "Pin weed," for example, are obvious typographical errors.

In some cases, however, minor alterations presumably do represent Rafinesque's intent. From some of his other publications, it is evident that he preferred a simplified spelling such as "*cerulea*" to the original "*caerulea*" or "*coerulea*" and "*catesbei*" for "*catesbaei*," and that he frequently made such arbitrary abridgments. Such changes, whether required or proscribed by present rules of nomenclature, are not regarded as new names, and they remain attributed to the original authors. Because of the circumstances discussed above, it appeared best to retain Rafinesque's original format in the lists, which omitted the attribution of the authorship of the botanical names. As the lists appear in the present paper, the botanical names used by Rafinesque are in italic type; the common names, in roman type. (At the left margin we have numbered, in parentheses, each species for indexing purposes.) Indented and in square brackets and smaller type below the names we have added, first, the corrected orthography of the

botanical name used by Rafinesque, in italics if it is not the currently accepted botanical name, with authorship; second, where appropriate and in roman type, the currently accepted botanical name; and third, a common name or names in current use. When the botanical name used (or intended) by Rafinesque remains in use for the species, this name appears in roman type, with the orthography corrected if necessary and the authorship indicated. Curly brackets have been used to indicate the corrections made by Rafinesque (1819d) in the errata. In Appendix 2, notes, mostly on nomenclature, have been added for 14 taxa.

The modern common names we include have generally been obtained from Fernald (1950), Gleason and Cronquist (1991), and the popular field guides by Peterson and McKenny (1968) and Newcomb (1977). The original *Illustrated Flora* by Britton and Brown (1896–1898), which provided common names for nearly every species covered and also recorded many local or otherwise relatively obscure vernacular names, was also consulted.

Rafinesque's paper (Rafinesque 1819c) on the principal features of the botany of Kentucky is as follows:

Botany of Kentucky

On its principal features, by C.S. Rafinesque, Professor of Botany and Natural History in the Transylvania University.

The state of Kentucky being situated in the centre of the western country, has a *flora* similar to the generality of the western states and participating in their peculiar features, while it offers in itself a complete specimen of the western botany.

The peculiarities of this botany consist principally in the total want of the maritime and mountains regions, which form such remarkable sections in the local floras of the Atlantic states, and abound with plants peculiar to themselves. Another striking feature in the vegetation of Kentucky and the western states is the propensity which many plants and trees exhibit of growing in a social state, to the almost total exclusion of every other. There are many plants which grow crowded together, all over the United States; such for instance as the grasses, ferns, the *Comptonia*, the *Stud-*

fonia {*Hudsonia*}, &c. but they allow many other plants to grow with them; while, in the western country, many extensive spaces of ground are covered with one or a few crowded species, to the exclusion of many others, which are found in their company elsewhere. The plants which may be quoted as a striking instance of this singular fact are not few, among which I shall select the following:

- (1) *Vernonia prealta*, Iron Weed,
[*Vernonia praealta* Michx.; *V. gigantea* (Walter) Trel. ssp. *gigantea*; tall ironweed]
- (2) *Baptisia cerulea*, Blue Wild Indigo,
[*Baptisia coerulea* Eaton & Wright; *B. australis* (L.) R.Br. ex W.T. Aiton; blue false-indigo]
- (3) *Cacalia reniformis*, Kidney Weed,
[*Cacalia reniformis* Muhl. ex Willd.; *C. muhlenbergii* (Sch. Bip.) Fern; *Arnoglossum muehlenbergii* (Sch. Bip.) H. Rob.; great Indian-plantain; see Appendix 2, entry 1, for discussion of nomenclature of this species]
- (4) *Stedeoma pulegiovides* {*Hedeoma pulegioides*}, Penny-aoyal {Penny royal},
[*Hedeoma pulegioides* (L.) Pers.; American penny-royal, bastard pennyroyal, blue-curls]
- (5) *Chenopodium anthelminthicum*, Worm Weed,
[*Chenopodium anthelminticum* L.; *C. ambrosioides* L. var. *anthelminticum* (L.) A. Gray; wormseed; see Appendix 2, entry 2, for discussion of nomenclature of this species]
- (6) *Elephantopus scaber*, Elephant's Foot,
[*Elephantopus scaber* L.; *E. carolinianus* Raeusch.; leafy elephant's-foot; see Appendix 2, entry 3, for discussion of nomenclature of this species]
- (7) *Gillenia stipulacea*, Indian Physic,
[*Gillenia stipulata* (Muhl. ex Willd.) Nutt.; *Porteranthus stipulatus* (Muhl. ex Willd.) Britton; American ipecac]
- (8) *Miagia arupedinaria* {*Mieigia arundinaria*}, Cane, &c.&c.
[*Mieigia arundinaria* Raf., nom. nud., presumably intended orthography; *Arundinaria gigantea* (Walter) Muhl.; giant cane]

I consider the state of Kentucky as divided into four natural sections, or botanical regions, which are all distinguished by some peculiarities in their vegetation. They are:

1. THE FLUVIATILE REGION. This includes all the valleys, and bottoms of the large rivers,

such as the Ohio, Mississippi, Tennessee, Cumberland, Kentucky, &c. with their tributary streams. The bottoms of the valleys are formed of an alluvial soil, or the washings from the hills. They are level and often overflowed: while the sides of the valleys are steep, craggy, and composed of limestone, sandstone, or slaty rocks. The following are some of the trees and plants peculiar to this region, and giving a decided character to its vegetation:

- (9) *Platanus occidentalis*, Sycamore or Button wood,
[*Platanus occidentalis* L.; sycamore, buttonwood]
- (10) *Hesperis pinnatifida*, Ohio Wall Flower,
[*Hesperis pinnatifida* Michx.; *Iodanthus pinnatifidus* (Michx.) Steud.; purple rocket]
- (11) *Jeffersonia cinata* {*Jeffersonia binata*}, Tavin Weed {Twin leaf},
[*Jeffersonia binata* Barton; *J. diphylla* (L.) Pers.; twinleaf]
- (12) *Capraria multifida*, Sand Ragweed,
[*Capraria multifida* Michx.; *Leucospora multifida* (Michx.) Nutt.; see Appendix 2, entry 4, for discussion of nomenclature of this species]
- (13) *Solanum Carolinianum*, Sand Briar
[An orthographic variant of *Solanum carolinense* L., possibly preferred and originated by Rafinesque; horse-nettle]
- (14) *Lupatorium calutinum* {*Eupatorium coelestinum*}, Sy-weed {Sky weed},
[*Eupatorium coelestinum* L.; mist-flower]
- (15) *Polanina* {*Polanisia*} *graveolens*, Stinking weed,
[*Polanisia graveolens* Raf.; *Polanisia dodecandra* (L.) DC. ssp. *dodecandra*; clammy-weed]
- (16) *Heliotropium Indicum*, Heliotrope,
[*Heliotropium indicum* L.; Indian heliotrope, turnsole; see Appendix 2, entry 5, for discussion of nomenclature of this species]
- (17) *Catalpium cordata*, Catalpa tree,
[*Catalpium cordifolium* (J.St.-Hil.) Raf.; *Catalpa speciosa* (Warder ex Barney) Engelm.; northern catalpa; see Appendix 2, entry 6, for discussion of nomenclature of this species]
- (18) *Populus angulata*, Cotton tree,
[*Populus angulata* Aiton; *P. deltoides* Marshall var. *deltoides*; cottonwood]
- (19) *Porcelia tribuba* {*Porcelia triloba*}, Papaw tree,

[*Porcelia triloba* (L.) Pers.; *Asimina triloba* (L.) Dunal; pawpaw]

- (20) *Synandra grandiflora*, Cow mint,
[*Synandra grandiflora* Nutt.; *S. hispidula* (Michx.) Baill.; see Appendix 2, entry 7, for discussion of nomenclature of this species]
- (21) *Nelumbium pentapetalum*, Swamp lily,
[*Nelumbium pentapetalum* (Walter) Willd.; *Nelumbo lutea* (Willd.) Pers.; American lotus, yellow lotus]; see Appendix 2, entry 8, for discussion of nomenclature of this species]
- (22) *Pancratium liviosone* {*Pancratium lirisme*}, Lily,
[*Pancratium lirisme* Raf.; *Hymenocallis caroliniana* (L.) Herbert; spider-lily; see Appendix 2, entry 9, for discussion of nomenclature of this species]
- (23) *Iris crocea*, Red lily,
[*Iris crocea* Raf., nomen nudum; presumably *I. fulva* Ker Gawl.; copper iris]
- (24) *Houstonia fruticosa*, Rock weed,
[*Houstonia fruticosa* Raf., nomen nudum; *H. nigricans* (Lam.) Fernald var. *nigricans*; narrow-leaved houstonia; see Appendix 2, entry 10, for discussion of nomenclature of this species]
- (25) *Prunus pendula*, Cliff plumb, &c.&c.
[*Prunus pendula* Raf., nomen nudum, non Maxim. nec K.Koch; not definitely identified, probably *P. munsoniana* W. Wight & Hedrick; wild plum; see Appendix 2, entry 11, for discussion of nomenclature of this species]

These two last are new species from the cliffs of the Kentucky river.

2. THE CENTRAL REGION. It is formed by the limestone tract included between the valley of the Ohio and the hilly ridges or knobs. The ground is slightly broken, very fertile and mostly under cultivation. This section is remarkably poor in the number of botanical species growing spontaneously; I conceive that its flora hardly contains 500 species, including trees, shrubs, and naturalized plants! There are hardly any species peculiar to it; but the following ones, rare elsewhere, are here very common:

- (26) *Eupatorium urticifolium*, White nettle,
[*Eupatorium urticifolium* Reichard, "*urticaefolium*"; *E. rugosum* Houtt.; white snakeroot]
- (27) *Pavia muricata*, Prickly Buck-eye,
[*Pavia muricata* Raf., nomen nudum; *Aesculus glabra* Willd. var. *glabra*; Ohio buckeye]

- (28) *Isanthus ceruleus*, Blue Penny-royal,
[Rafinesque's preferred orthography for *Isanthus coeruleus* Michx.; *I. brachiatus* (L.) BSP.; False pennyroyal]
- (29) *Polymnia uvedalia*, Scented Sun flower,
[*Polymnia uvedalia* L.; large-flowered leafcup, yellow-flowered leafcup]
- (30) *Phlox glaberrima*, Pink, &c.&c.
[*Phlox glaberrima* L.; smooth phlox]

It is also highly singular that in this region, the woods are open as parks, without shrubs and with very few plants, except grass or some social weeds.

3. THE HILLY REGION. It contains the hills and ridges which divide the waters of the Kentucky, Green, Licking, Cumberland and Sandy rivers, &c. being spurs from the Cumberland mountains. Those hills are often called knobs, although they have not always the knobby or rounded appearance. The rocks are limestone, or sandstone, or slate. The vegetation approximates exceedingly to that of Virginia and Pennsylvania. On the Cumberland mountain and the highest ridges, I am told that there is a similarity with the Alleghany regions, and that the *Kalmia latifolia*, Common Laurel, and the *Gaultheria procumbens*, Mountain Tea, grow there; but having not yet visited them, I am unable to ascertain whether they ought to form another distinct region, which might be called the mountain region. The hilly region is rich in plants; I shall mention a few of those peculiar to it in Kentucky:

- (31) *Iris cristata*, Crested Tris or Flag,
[*Iris cristata* Aiton; crested iris, crested dwarf iris]
- (32) *Stylvianthes* {*Stylosanthes*} *elator*, Yellow Pea-clover,
[*Stylosanthes elator* Raf., nomen nudum; *S. biflora* (L.) Britton et al.; pencil-flower]
- (33) *Orchis ciliaris*, Yellow-bunch,
[*Orchis ciliaris* L.; *Platanthera ciliaris* (L.) Lindl.; orange fringed-orchid, yellow fringed-orchid]
- (34) *Juniperus Virginiana*, Red Cedar,
[*Juniperus virginiana* L.; red cedar]
- (35) *Vaccinium album*, Wild Currant,
[*Vaccinium album* Pursh, non L. nec Lam.; *V. stamineum* L.; deerberry]
- (36) *Pinus rigida*, Pitch Pine,
[*Pinus rigida* Mill.; pitch pine]

- (37) *Lechea minor*, Pin weed,
[*Lechea minor* L.; small pinweed]
- (38) *Rudbeckia fulgida*, Rough Wort,
[*Rudbeckia fulgida* Aiton, presumably var. *fulgida*; orange coneflower, eastern coneflower]
- (39) *Gerardia glabrata*, Yellow Wort,
[*Gerardia glabrata* Raf., nomen nudum; not definitely identified, probably *Aureolaria laevigata* (Raf.) Raf.; Appalachian false-foxglove; see Appendix 2, entry 12, for discussion of nomenclature of this species]
- (40) *Asarum Virginicum*, Heart-leaf, &c.&c.
[*Asarum virginicum* L.; *Hexastylis virginica* (L.) Small; heart-leaf, little brown jugs; see Appendix 2, entry 13, for discussion of identity of this species]

4. THE BARREN REGION, or rather the open region. This has an extensive range in Kentucky, particularly in the western and southern parts of the state. The numerous *barrens* and *licks* compose it, lying scattered and irregularly among the central and hilly regions. The *barrens* are tracts of ground destitute of trees, or with few scattered small ones; but thickly covered with a luxuriant growth of plants; while the *licks* are almost destitute of them, and those that grow in their immediate neighbourhood are all small, which is owing to their poor, slaty or argillaceous soil. Their vegetation is however similar to that of the *barrens*. Both have a growth of plants very similar to the vegetation of the *prairies* of Ohio, Indiana, and Illinois, and more different from that of the Atlantic states, than the three foregoing regions. The plants peculiar to them are very numerous; I shall mention only a few, among the most remarkable and singular.

- (41) *Solidago rigida*, Stiff Golden-rod,
[*Solidago rigida* L.; stiff goldenrod]
- (42) *Polygala polygama*, Nimble weed,
[*Polygala polygama* Walter; racemed milkwort, bitter milkwort]
- (43) *Rudbeckia purpurea*, Purple Sun-flower,
[*Rudbeckia purpurea* L.; *Echinacea purpurea* (L.) Moench; purple coneflower]

- (44) *Ruellia oblongifolia*, Rough Bell,
[*Ruellia oblongifolia* Raf., nomen nudum, Raf. ex Nees, pro syn., non Michx.; *R. caroliniensis* (J.F. Gmel.) Steud. ssp. *ciliosa* (Pursh) R.W. Long; hairy ruellia]
- (45) *Andropogon arenaceum*, Barren Oats,
[*Andropogon avenaceus* Michx.; *Sorghastrum nutans* (L.) Nash; Indian grass]
- (46) [*Andropogon*] *nutans*, Barren Oats,
[*Andropogon nutans* L.; *Sorghastrum nutans* (L.) Nash; Indian grass]
- (47) *Petalvitemon* {*Petalostemon*} *candidum*, Nimble clover,
[*Petalostemon candidum* (Michx. ex Willd.) Michx.; *Dalea candida* Michx. ex Willd.; white prairie-clover]
- (48) [{*Petalostemon*}] *purpureum*, Nimble clover,
[*Petalostemon purpureum* (Vent.) Rydb.; *Dalea purpurea* Vent. var. *purpurea*; purple prairie-clover]
- (49) *Silphium therebinthaceum*, Turpentine weed,
[Presumably an intentional abridgement of *Silphium terebinthinaceum* Jacq.; prairie-dock]
- (50) *Silene catesbri* {*Silene catesbei*}, Scarlet Pink,
[*Silene catesbaei* Walter; *S. virginica* L.; fire-pink]
- (51) *Gentiana amarellvides* {*Gentiana amar-elloides*}, Yellow Gentian,
[*Gentiana amarelloides* Michx.; *Gentianella quinquefolia* (L.) Small var. *quinquefolia*; stiff gentian; see Appendix 2, entry 14, for discussion of nomenclature of this species]
- (52) *Buchnera Americana*, Black Wort, &c.&c.
[*Buchnera americana* L.; blue-hearts]

From the above a faint, but correct idea may be formed of the display and peculiarities of the wide range of vegetation in Kentucky and throughout the western states, wherein the same peculiar divisions or regions may be traced.

The vulgar names of the plants above mentioned are such as I found used in some parts of Kentucky; but they cannot claim to be generally understood even in this state, many being merely local or personal. The botanical names are alone to be relied on, being universal and not liable to mislead.

APPENDIX 1: Indexes to Botanical and Common Names of Plants as Originally Listed and Those Added to Rafinesque's 1819 Paper on the Botany of Kentucky.

A. Botanical or Scientific Names

Aesculus glabra Willd.
var. *glabra* (27)
Andropogon arenaceum (45)
Andropogon avenaceus Michx. (45)
Andropogon nutans L. (46)
Arnoglossum muehlenbergii (Sch. Bip.) H. Rob. (3)
Arundinaria gigantea (Walter) Muhl. (8)
Aureolaria laevigata (Raf.) Raf. (39)
Asarum virginicum L. (40)
Asimina triloba (L.) Dunal (19)
Baptisia australis (L.) R. Br. ex W.T. Aiton (2)
Baptisia cerulea (2)
Baptisia coerulea Eaton & Wright (2)
Buchnera americana L. (52)
Cacalia muhlenbergii (Sch. Bip.) Fernald (3)
Cacalia reniformis Muhl. ex Willd. (3)
Capraria multifida Michx. (12)
Catalpa speciosa (Warder ex Barney) Engelm. (17)
Catalpium cordata (17)
Catalpium cordifolium (J. St.-Hil.) Raf. (17)
Chenopodium anthelminthicum L. (5)
Chenopodium ambrosioides L.
var. *anthelminticum* (L.) A. Gray (5)
Dalea candida Michx. ex Willd. (47)
Dalea purpurea Vent.
var. *purpurea* (48)
Echinacea purpurea (L.) Moench (43)
Elephantopus carolinianus Raeusch. (6)
Elephantopus scaber L. (6)
Eupatorium celestinum (14)
Eupatorium coelestinum L. (14)
Eupatorium rugosum Houtt. (25)
Eupatorium urticifolium (26)
Eupatorium urticifolium Reichard (26)
Gentiana amarelloides Michx. (51)
Gentiana amarellvides (51)
Gentiana quinquefolia (L.) Small
var. *quinquefolia* (51)
Gerardia glabrata Raf. (39)
Gillenia stipulacea (7)
Gillenia stipulata (Muhl. ex Willd.) Nutt. (7)
Hedeoma pulegioides (L.) Pers. (4)
Heliotropium indicum L. (16)
Hesperis pinnatifida Michx. (10)
Hexastylis virginica (L.) Small (40)
Houstonia fruticosa Raf. (24)
Houstonia nigricans (Lam.) Fernald
var. *nigricans* (24)
Hymenocallis caroliniana (L.) Herbert (22)
Iodanthus pinnatifidus (Michx.) Steud. (10)
Iris cristata Aiton (31)
Iris crocea Raf. (23)

Iris fulva Ker Gawl. (23)
Isanthus brachiatus (L.) BSP. (28)
Isanthus caeruleus Michx. (28)
Isanthus ceruleus (28)
Jeffersonia binata (11)
Jeffersonia cinata (11)
Jeffersonia diphylla (L.) Pers. (11)
Juniperus virginiana L. (34)
Lechea minor L. (37)
Leucospora multifida (Michx.) Nutt. (12)
Lupatorium calutinum (14)
Miagia arupedinaria (8)
Miegia arundinaria Raf. (8)
Nelumbium pentapetalum (Walter) Willd. (21)
Nelumbo lutea (Willd.) Pers. (21)
Orchis ciliaris L. (33)
Pancratium lirisome Raf. (22)
Pancratium liviosone (22)
Pavia muricata Raf. (27)
Petalostemon candidum (Michx. ex Willd.) Michx. (47)
Petalostemon purpureum (Vent.) Rydb. (48)
Petalvitemon candidum (47)
Phlox glaberrima L. (30)
Pinus rigida Mill. (36)
Platanus occidentalis L. (9)
Platanthera ciliaris (L.) Lindl. (33)
Polanina graveolens (15)
Polanisia graveolens Raf. (15)
Polanisia dodecandra (L.) DC.
 ssp. *dodecandra* (15)
Polygala polygama Walter (42)
Polymnia uvedalia L. (29)
Populus angulata Aiton (18)
Populus deltoides Marshall
 var. *deltoides* (18)
Porcelia tribuba (19)
Porcelia triloba (L.) Pers. (19)
Porteranthus stipulatus (Muhl. ex Willd.) Britton (7)
Prunus munsoniana W. Wight & Hedrick (25)
Prunus pendula Raf. (25)
Ruellia caroliniensis (J.F. Gmel.) Steud.
 ssp. *ciliosa* (Pursh) R.W. Long (44)
Ruellia oblongifolia Raf. (44)
Rudbeckia fulgida Aiton (38)
Rudbeckia purpurea L. (43)
Silene catesbaei Walter (50)
Silene catesbei (50)
Silene catesbri (50)
Silene virginica L. (50)
Silphium terebinthaceum (49)
Silphium terebinthinaceum Jacq. (49)
Solanum carolinianum (13)
Solanum caroliniense L. (13)
Solidago rigida L. (41)
Sorghastrum nutans (L.) Nash (45, 46)
Stedeoma pulegioides (4)
Stylosanthes biflora (L.) BSP. (32)
Stylosanthes elatior Raf. (32)

Stylianthes elatior (32)
Synandra grandiflora Nutt. (20)
Synandra hispidula (Michx.) Baill. (20)
Vaccinium album Pursh (35)
Vaccinium stamineum L. (35)
Vernonia gigantea (Walter) Trel.
 ssp. *gigantea* (1)
Vernonia praealta Michx. (1)
Vernonia prealta (1)

B. Index to Common or Vulgar Names

Appalachian false-foxglove (39)
 American ipecac (7)
 American lotus (21)
 American pennyroyal (4)
 Barren oats (45, 46)
 Bastard pennyroyal (4)
 Bitter milkwort (42)
 Black wort (52)
 Blue-curls (4)
 Blue-hearts (52)
 Blue penny-royal (28)
 Blue false-indigo (2)
 Blue wild indigo (2)
 Button wood (9)
 Buttonwood (9)
 Cane (8)
 Catalpa tree (17)
 Clammy-weed (15)
 Cliff plumb (25)
 Copper iris (23)
 Cotton tree (18)
 Cottonwood (18)
 Cow mint (20)
 Crested dwarf iris (31)
 Crested flag (31)
 Crested iris (31)
 Crested tris (31)
 Deerberry (35)
 Eastern coneflower (38)
 Elephant's foot (6)
 False pennyroyal (28)
 Fire-pink (50)
 Flag (31)
 Giant cane (8)
 Great Indian-plantain (3)
 Hairy ruellia (44)
 Heart-leaf (40)
 Heliotrope (16)
 Horse nettle (13)
 Indian grass (45, 46)
 Indian heliotrope (16)
 Indian physic (7)
 Iron weed (1)
 Kidney weed (3)
 Large-flowered leafcup (29)
 Leafy elephant's-foot (6)
 Lily (22)

Little brown jugs (40)
 Mist-flower (14)
 Narrow-leaved houstonia (24)
 Nimble clover (47, 48)
 Nimble weed (42)
 Northern catalpa (17)
 Ohio buckeye (27)
 Ohio wall flower (10)
 Orange coneflower (38)
 Orange fringed-orchid (33)
 Pawpaw (19)
 Pawpaw tree (19)
 Pencil-flower (32)
 Penny-aoyal (4)
 Penny-royal (4)
 Pink (30)
 Pin weed (37)
 Pitch pine (36)
 Prairie-dock (49)
 Prickly buck-eye (27)
 Purple coneflower (43)
 Purple prairie-clover (48)
 Purple rocket (10)
 Purple sun-flower (43)
 Racemed milkwort (42)
 Red cedar (34)
 Red lily (23)
 Rock weed (24)
 Rough bell (44)
 Rough wort (38)
 Sand briar (13)
 Sand ragweed (12)
 Scarlet pink (50)
 Scented sun flower (29)
 Sky-weed (14)
 Small pinweed (37)
 Smooth phlox (30)
 Spider-lily (22)
 Stiff gentian (51)
 Stiff golden-rod (41)
 Stiff goldenrod (41)
 Stinking weed (15)
 Swamp lily (21)
 Sycamore (9)
 Sy-weed (14)
 Tall ironweed (1)
 Tavin weed (11)
 Turnsole (16)
 Turpentine weed (49)
 Twinleaf (11)
 Twin weed (11)
 White nettle (26)
 White prairie-clover (47)
 White snakeroot (26)
 Wild currant (35)
 Wild plum (25)
 Wormseed (5)
 Worm weed (5)

Yellow-bunch (33)
 Yellow-flowered leafcup (29)
 Yellow fringed-orchid (33)
 Yellow gentian (51)
 Yellow lotus (21)
 Yellow pea-clover (32)
 Yellow wort (39)

APPENDIX 2: Notes on the Botanical and Common Names (by J.S.P.)

1. The nomenclature of this species is unsettled at the time of this writing, not only because of differences of opinion as to appropriate generic circumscriptions, but also pending a decision on proposals to reject the name *Cacalia*, or, alternatively, for conserved typification. If *Cacalia* is rejected or is typified otherwise than as noted below, this species will presumably be placed in *Arnoglossum* regardless of whether the genus is circumscribed so as to include *Synosma* Raf. ex Britton & A. Brown; if *Cacalia* is not rejected, but is conserved with *C. atriplicifolia* L. as the type, the correct name for this species will be *Cacalia muehlenbergii* (Sch. Bip.) Fernald.

2. The use of "wormseed" in works by other authors from the same period indicates that "worm weed" probably represents a typographical error rather than a version used in Kentucky during Rafinesque's time.

3. The name *Elephantopus scaber* L. remains the correct name for an accepted species, but not for a species that occurs in Kentucky. *Elephantopus scaber* sensu Michaux has been identified as the species now called *E. carolinianus*.

4. No common name has been located for *Leucospora multifida* in recent references other than the generic name, or the now-obsolete generic name *Conobea*, used as such. If the use of "sand-ragweed" actually persists, it might be revived for wider application, hyphenated because this species is not in the ragweed genus *Ambrosia* (Asteraceae). If, however, this was a coinage that expired with Rafinesque, a name that might seem to indicate a relationship to the true ragweeds would not be ideal.

5. *Heliotropium indicum* L. is now extensively but sporadically adventive or naturalized in the southeastern United States, and, despite Kentucky's inland location, it is not inconceivable that Rafinesque might have found a small population there as early as 1819. However, because no other North American authors mentioned *H. indicum* as a naturalized species until considerably later, and because to the present day *H. indicum* has remained sporadic in its North American occurrences, it hardly seems credible that Rafinesque could have found this species in such abundance that it was among those "giving a decided character to [the] vegetation" of any part of Kentucky. Rafinesque's (1838) later description of the species he had so identified, which he then called *Elopiia riparia* Raf., appears to have been derived largely from published descriptions of *H. indicum*, but inevitably one wonders if his concept of the species was actually based on some other boraginaceous species.

6. Rafinesque presumably referred to the *Catalpa* species that is native to Kentucky, viz. *C. speciosa* (Warder ex Barney) Engelm., which he might have seen on his trip to the mouth of the Ohio River in 1818. There seems to be an error in *Index Rafinesquianus* (Merrill 1949) on this point. It is probably appropriate to assume from the similarity of the epithets, as Merrill evidently did, that *Catalpium cordatum* Raf. (Rafinesque 1819c) was intended to be the same as his *C. cordifolium* Raf. (Rafinesque 1819b), published slightly earlier, the second being either a lapsus calami or an intentionally amended orthography for the first. According to Merrill, *Catalpium cordifolium* Raf. was tied nomenclaturally to *Catalpa cordifolia* J. St.-Hil. Merrill apparently confused *C. cordifolia* J. St.-Hil. of 1804 with *C. cordifolia* Moench of 1794, which is a synonym of *C. bignonioides* (Rehder 1949). The illegitimate homonym *Catalpa cordifolia* J. St.-Hil., however, is a synonym of *C. speciosa*, according to Rehder; this fits well with Rafinesque's report of his *Catalpium cordifolium*/*C. cordatum* from Kentucky.

7. We have located no common name for *Synandra hispidula* in recent literature, except for the generic name used as such. As "cow-mint" does not appear to be used for any other species, it could be considered for this species, which is in the mint family (Lamiaceae).

8. Some recent authors have advocated "lotus-lily" or "water-lotus" for *Nelumbo*, presumably because *Lotus* is the botanical name for a genus in the Fabaceae. With this genus very generally being known simply as "lotus," this illustrates the recurrent question as to what extent standardized English-language names should vary from names actually in common usage. In this case, one might also ask whether "lotus-lily," even if hyphenated, is all that much preferable for standardization, since *Nelumbo* is not in the Liliaceae.

9. The name *Pancratium lirisme* Raf., published 2 years earlier by Rafinesque (1817c), is the basionym of *Hymenocallis lirisme* (Raf.) Shinnars. The species thus named is native to Arkansas, Louisiana, Oklahoma, and Texas. According to Shinnars (1951), Rafinesque (1817c), in describing *P. lirisme*, "was relying on [Claude C.] Robin's description of plants that the latter had observed wild in Louisiana." The only species of *Hymenocallis* native to Kentucky is *H. caroliniana* (L.) Herb., formerly known as *H. occidentalis* (Leconte) Kunth.

10. No satisfactory common name appears to be available for this species. In popular field guides, the generic name *Houstonia* is used as a common name for species of this genus, except for two species of different aspect that are called "blueets." Britton and Brown (1896–1898) called this species "narrow-leaved houstonia," when it was known botanically *H. angustifolia* Michx., but in the popular field guide by Newcomb (1977), "narrow-leaved houstonia" is used for *H. tenuifolia* Nutt. Complicating the issue, some botanists prefer to include *Houstonia* in *Hedyotis*. The name madderwort has reportedly been applied to *Houstonia*, but this may have been in a context extending to other genera in the Rubiaceae (madder family).

"Rock weed" has little to recommend it, having been applied to *Asperula odorata* L. and possibly other species.

11. From the habitat given by Rafinesque—"cliffs of the Kentucky River"—an anonymous reviewer has concluded that Rafinesque's *Prunus pendula* is probably *P. munsoniana* W. Wight & Hedrick, a species that was not otherwise recognized as distinct and given a scientific name until 1911. Under the current rules of botanical nomenclature, because Rafinesque provided no description of his "new species," and because another botanist had used the name *Prunus pendula* for a different species 4 years earlier, this interpretation does not affect the nomenclature of *P. munsoniana*.

12. On the basis of Rafinesque's phytogeographic comments, *Aureolaria laevigata*, "Appalachian false-foxglove," seems the most likely identity of this species, but *A. flava* (L.) Farw., "smooth false-foxglove," cannot be ruled out.

13. Rafinesque's "outline of four vegetation regions of Kentucky" was published before its author visited that portion of Kentucky in which *Hexastylis* species occur; for this reason it has been suggested that his *Asarum virginicum* might not have been any species now referred to *Hexastylis*, the alternative interpretation being that it was actually *A. canadense* L. This seems unlikely because Rafinesque presumably would have been familiar with *A. canadense* under its correct name and because, in all of the literature available prior to 1819 in which *A. virginicum* is described, that species is said to have glabrous, mottled leaves. (Similarly, Rafinesque had not at that time traveled into areas of Kentucky where any species of *Lechea* is native, but one would hardly assume that he had misidentified some other genus as *Lechea*.) Even if Rafinesque's concept of the "Hilly Region" included the Knobs that are east of Lexington but west of the Pottsville escarpment, it seems likely that some of his information, at least in this relatively brief section of the paper, was more or less secondhand, perhaps derived from a combination of accounts from other naturalists, studies of specimens in their herbaria, and extrapolations from his firsthand knowledge of the flora of adjacent states.

14. The name *Gentiana amarelloides* Michx. is a heterotypic synonym of *Gentianella quinquefolia* (L.) Small var. *quinquefolia*, but in Kentucky this species is represented by var. *occidentalis*. From the *Medical Flora*, it is evident that Rafinesque (1828) considered the plants with yellow corollas to be a different species from the more widespread form with purple corollas.

LITERATURE CITED

- Britton, N.L., and A. Brown. 1896–1898. An illustrated flora of the northern United States, Canada and the British possessions . . . Charles Scribner's Sons, New York, NY.
- Fernald, M.L. 1950. Gray's manual of botany. 8th ed. American Book Company, New York, NY. Reprinted 1970, D. Van Nostrand Co., New York, NY.
- Gleason, H.A., and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent

- Canada. 2nd ed. New York Botanical Garden, New York, NY.
- McAtee, W.L. 1913–1933. Some local names of plants, I–V. *Torreyia* 13:225–236 (1913); 16:235–242 (1916); 20:17–27 (1920); 26:3–10 (1926); 33:81–86 (1933).
- Merrill, E.D. 1949. Index Rafinesquianus: the plant names published by C.S. Rafinesque with reductions, and a consideration of his methods, objectives, and attainments. Arnold Arboretum of Harvard University, Jamaica Plain, MA.
- Newcomb, L. 1977. Newcomb's wildflower guide. Little, Brown and Company, Boston, MA.
- Peterson, R.T., and M. McKenny. 1968. A field guide to wildflowers of northeastern and north-central North America. Houghton Mifflin Company, Boston, MA.
- Rafinesque, C.S. 1811. Botanical information concerning two families of plants. I. Species of the genus *Callitriche*. II. North American species of the genus *Potamogeton*. *Med. Repos.*, third hexade 2(4):407–409.
- Rafinesque, C.S. 1817a. [Review of Amos Eaton's] A manual of botany for the northern states, comprising generic descriptions of all phenogamous and cryptogamous plants to the north of Virginia. *Am. Monthly Mag. & Crit. Rev.* 1(6):426–430.
- Rafinesque, C.S. 1817b. Florula of the White Mountain of New-Hampshire. *Am. Monthly Mag. & Crit. Rev.* 1(6):440–442.
- Rafinesque, C.S. 1817c. Florula Ludoviciana: or, a flora of the state of Louisiana. C. Wiley & Co., New York, NY. Facsimile ed. 1967, with introduction by Joseph Ewan, Hafner Publishing Co., New York, NY.
- Rafinesque, C.S. 1819a. Prodrome des nouveaux genres de plantes observés en 1817 et 1818 dans l'intérieur des états-Unis d'Amérique. *J. Phys. Chim. Hist. Nat. Arts* 89(2):96–107.
- Rafinesque, C.S. 1819b. [Review of] The genera of North-American plants and a catalogue of the species to the year 1817. By Thomas Nuttall, F.L.S. &c. 2 vols. 12 mo. Philadelphia, PA. 1818. *Am. Monthly Mag. & Crit. Rev.* 1(3):184–196.
- Rafinesque, C.S. 1819c. Botany of Kentucky[:] on its principal features. *Western Rev. & Misc. Mag.* 1(2):92–95.
- Rafinesque, C.S. 1819d. Errata [to botany of Kentucky]. *Western Rev. & Misc. Mag.* 1(3):128.
- Rafinesque, C.S. 1820. Prodrome d'une monographie des rosiers del l'Amérique septentrionale, contenant la description de quinze nouvelles espèces et vingt variétés. *Ann. Gén. Sci. Phys.* 5(14):210–220.
- Rafinesque, C.S. 1824. Florula Kentuckensis. Catalogue of the principal trees, shrubs and plants of Kentucky. Pages [12]–16 in First catalogues and circulars of the Botanical Garden of Transylvania University at Lexington in Kentucky, for the year 1824. Printed for the Botanical Garden Company by John M. McCalla, Lexington, KY.
- Rafinesque, C.S. 1828. Medical flora; or, Manual of the medical botany of the United States of North America . . . , volume the first. Atkinson & Alexander, Philadelphia, PA.
- Rafinesque, C.S. 1830. Medical flora; or Manual of the medical botany of the United States of North America . . . , volume the second. Samuel C. Atkinson, Philadelphia, PA.
- Rafinesque, C.S. 1836–[1838]. New flora of North America. Published by the author, Philadelphia, PA. Facsimile ed. 1946, Arnold Arboretum, Jamaica Plain, MA.
- Rafinesque, C.S. "1836" [1837–1838]. Flora Telluriana. Published by the author, Philadelphia. Facsimile ed. 1946, Arnold Arboretum, Jamaica Plain, MA.
- Rafinesque, C.S. 1838. Sylva Telluriana. Published by the author, Philadelphia. 184 pp. Facsimile ed. 1943, Arnold Arboretum, Jamaica Plain, MA.
- Rafinesque, C.S. 1840. Autikon botanikon or botanical illustrations Published by the author, Philadelphia, PA. Facsimile ed. 1942, Arnold Arboretum, Jamaica Plain, MA.
- Rehder, A. 1949. Bibliography of cultivated trees and shrubs hardy in the cooler temperate regions of the northern hemisphere. Arnold Arboretum of Harvard University, Jamaica Plain, MA.
- Shinners, L.H. 1951. The north Texas species of *Hymenocallis* (Amaryllidaceae). *Field & Lab.* 19:102–104.



Stuckey, Ronald L and Pringle, James S. 1997. "Scientists of Kentucky: Common Names of Vascular Plants Reported by C.S. Rafinesque in an 1819 Descriptive Outline of Four Vegetation Regions of Kentucky." *Transactions of the Kentucky Academy of Science* 58(1), 9–19.

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