The Flora of Brush Creek Canyon State Preserve

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Brush Creek Canyon State Preserve in Fayette County is one of Iowa's striking natural areas. Brush Creek winds its way through rocky ravine walls, forming a lovely wooded area of high relief (Figure 1). The variations in angle of slope, amount of shading and depth of soil combine to produce a diversity of habitats, each supporting a somewhat different woodland community. Rock outcrops furnish additional plant habitats, as do the streams with their associated alluvial flats. As a result of the diversity of habitats, Brush Creek Canyon supports a rich and varied flora.

Natural History

Brush Creek is a rapid stream with considerable fall, and it created steep ravines as it cut its way down through more than 100 feet of the bedrock. The rock that forms the walls of these ravines is a dolomitic limestone (dolomite) belonging to the Alexandrian series of Silurian age.

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Figure 1. Topographic map of Brush Creek Canyon State Preserve.

Figure 2. Aerial photograph.

The preserve is on the northern edge of the area last covered by the Kansan glaciation, and a few miles to the south one encounters the gently rolling topography characteristic of the Iowan erosional surface of the Kansan till. Little of this till remains in the preserve; the streams have swept most of it away since the time of the Kansan glaciation. Only
scattered glacial erratics remain along the stream bed as evidence.

Notes on the Plant Communities of Brush Creek Canyon

The plant communities described below have been delimited subjectively, based on my experience and observations in the field during the growing season of 1972. An aerial photograph (Figure 2) shows clearly that the dominant vegetational type is woodland. Figure 3 illustrates the locations and extent of the several kinds of woodland present, and also locates some of the other smaller plant communities.

List of Plant Communities
2. Upland woods.
3. Woods on south- and west-facing slopes.
5. Edge of woods along picnic area.
6. Open, alluvial woods.
7. Prairie remnant, top of rocky bluff.
8. Plants on vertical, dry rock outcrops.
9. Plants on vertical, moist rock outcrops.
10. Plants of the cascades area.
11. Plants of the springs area.
12. Plants of open, disturbed areas.

Description of Plant Communities

1. Shrubby, Second-Growth Woods

There are several shrubby places in the southern part of the preserve (Figure 3). Evidently, the largest of these had been nearly cleared at one time. Since then, succession of the vegetation has been toward re-establishing an upland woods community. Staghorn sumac (Rhus typhina) is the dominant woody species at present, forming dense thickets. Missouri gooseberry (Ribes missouriensis) is also very common, along with blackberries and raspberries (Rubus spp.). The herbaceous flora reflects the open nature of the habitat: wild bergamot (Monarda fistulosa), thimbleweed (Anemone virginiana) and giant goldenrod (Solidago gigantea) are found throughout. Pioneer tree species that are invading the area are box elder (Acer negundo) and quaking aspen (Populus tremuloides), though seedlings, saplings and occasional mature trees of the climax vegetation occur here and there.

2. Upland Woods

The upland woods community (Figure 4) covers the flat-
to-gently-rolling land of the highest elevations. The woods are more open than those of the shaded ravines. Shagbark hickory (*Carya ovata*) and beaked hazelnut (*Corylus cornuta*) are characteristic species. Associated species are American hazelnut (*Corylus americana*), gray dogwood (*Cornus racemosa*), wild honeysuckle (*Lonicera periclymenum*), May apple (*Podophyllum peltatum*) and wild geranium (*Geranium maculatum*). There are usually no well-marked discontinuities separating the upland woods from the adjacent wooded habitats, and some common plants of the neighboring slopes are found here and there on the uplands, also. Basswood (*Tilia americana*), red elm (*Ulmus americana*), pagoda dogwood (*Cornus alternifolia*) and toothwort (*Dentaria laciniata*) are examples.

3. Woods on South- and West-Facing Slopes

Because they receive the full force of the afternoon sun, the microclimate within these woods (Figure 5) is somewhat warmer and drier than that of the other wooded habitats. The species composition is not much different from the upland woods, but oaks, particularly white oak (*Quercus alba*), make up a greater percentage of the canopy. Blue beech (*Carpinus caroliniana*) and ironwood (*Ostrya virginiana*) are also more prevalent. Leatherwood (*Ditaea palustris*) and bladdernut (*Staphylea trifolia*) are found on the higher parts of these slopes. Toward the ravine bottom the shading increases and this habitat merges with the next.

4. Woods on North- and East-Facing Slopes

These woods are deeply shaded, humid and cool. The dominant trees are sugar maple (*Acer saccharum*) and basswood, but the most characteristic species seem to be shinleaf (*Pyrola elliptica*) and American yew (*Taxus canadensis*). Here is where the spring woodland wildflowers are found in greatest abundance. *Hepatica acutiloba*, bloodroot (*Sanguinaria canadensis*), wild ginger (*Asarum canadense*), dutchman’s breeches (*Dicentra cucullaria*), bishop’s cap (*Mitella diphylla*) and others occur in dense patches.

5. Edge of Woods Along Picnic Area

This artificially-maintained ecotone supports a mixed assemblage of plant species. Shrubs and briers are particularly noticeable, e.g., staghorn sumac (*Rhus typhina*), hazelnut (*Corylus americana*), chokecherry (*Prunus virginiana*), common blackberry (*Rubus allegheniensis*), black raspberry (*R. occidentalis*), and prickly ash (*Xanthoxylum americanum*).

6. Open, Alluvial Woods

Stretching along the course of Brush Creek is a ribbon of low, open woodland (Figure 6). The water table is close to the surface near the stream and parts of the area are subject to periodic flooding. One finds the greatest diversity of plant species here because of the rich soil, abundant moisture and the open nature of the habitat. The majority of the “weedy” adventives in the preserve are found here. Many of these are annuals or biennials that reseed year after year and cannot survive in competition with the native perennial plants of the woodlands. The characteristic trees are box elder, green ash (*Fraxinus pennsylvanica*), cottonwood (*Populus deltoides*), heart-leaved willow (*Salix rigida*), hackberry (*Celtis occidentalis*) and American elm (*Ulmus americana*).

7. Prairie Remnant, Top of Rocky Bluff

A sparse prairie vegetation is found on top of a large block of dolomite above the cascades area. Probably the western, shadeless exposure maintains a suitable habitat for this small plant community. Big bluestem (*Andropogon gerardii*) grows here along with bush clover (*Lespedeza capitata*), flowering

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**Figure 5.** West-facing woods with dry rock outcrop at left.

**Figure 6.** Open, alluvial woods.
spurge (Euphorbia corollata), lead plant (Amorpha canescens) and wild quinine (Parthenium integrifolium).

A unique feature of this habitat is a small population of the low, semi-viny shrub, bearberry (Arctostaphylos uva-ursi). This appears to be the only verified site for this species in Iowa, though it is common in northern Minnesota and Wisconsin. The presence of this species makes the preserve all the more important.

8. Plants on Vertical, Dry Rock Outcrops

There are few plants that can withstand the severe conditions imposed by an exposed, dry rock wall. Of these, the smooth cliff-brake fern (Pellaea glabella), growing out of crevices in the dolomite, andpellitory (Parietaria pensylvanica) and prickly gooseberry (Ribes cymosum), growing on the rock ledges, are most common.

9. Plants on Vertical, Moist Rock Outcrops

A different assemblage of plants grows on the dolomite walls where they are shaded most of the day and the humidity is higher. Three ferns were found: the slender cliff-brake (Cryptogramma stelleri), the common bladder fern (Cystopteris fragilis) and the bulblet bladder fern (Cystopteris bulbifera). On the upper walls wild spikenard (Aralia racemosa), woodland strawberry (Fragaria vesca) and American yew occur; shaded rock faces along the streams support harebell (Campanula rotundifolia), clearweed (Pilea pumila), and in two particularly sheltered locations, Sulicantia renifolia (Figure 7).

10. Plants of the Cascades Area

Huge, jumbled blocks of dolomite nearly choke the V-shaped ravine below the prairie remnant (Figure 8). Here the stream forms a series of small cascades as it tumbles over the boulders. After a heavy rain the roar of the falling water fills the ravine. In my opinion, this is one of the loveliest spots in Iowa. It is always intensely green during the growing season because the boulders are covered with mosses, liverworts, walking fern (Asplenium rhizophyllum), and bishop’s cap. The banks of the ravine are lush with a dense growth of waterleaf (Hydrophyllum virginianum), false rue anemone (Isopyrum biternatum), sweet cicely (Osmorhiza claytonii) and anise-root (Osmorhiza longistylis), among others.

11. Plants of the Springs Area

This is only a small spring where a clump of marsh marigold (Caltha palustris) grows. But the water is cool and fresh and it is a spot worth visiting.

12. Plants of Open, Disturbed Areas

There are only a few markedly man-disturbed areas in Bush Creek Canyon—roadsides and the small picnic areas—

Figure 7. Sulicantia renifolia on moist, shaded rock outcrop.

Figure 8. Boulders in the cascades area.
a measure of the quality of the preserve. The mowing of the picnic grounds and maintenance of the road allow introduced plants to grow here that don't succeed elsewhere in competition with the native vegetation. Examples are white clover (Trifolium repens) and red clover (Trifolium pratense), along with plantain (Plantago rugelii), timothy (Phleum pratense) and Kentucky bluegrass (Poa pratensis).

CHECKLIST OF PLANTS AND THEIR HABITATS

The vascular plants listed below were found in Brush Creek Canyon State Preserve during the growing season of 1972. Voucher specimens were collected for each species cited in the checklist and were deposited in the University of Northern Iowa Herbarium. Although the preserve was visited at least six times during that period, it is likely that a few rare and interesting plants were missed. Thus, I would appreciate learning of any plants that are not listed below.

Within each major category of plants in the checklist (ARTHROPHYTA, PTERIDOPHYTA, etc.), the plant families are in alphabetical order with the genera and species in each family also arranged alphabetically. An asterisk before the scientific binomial indicates that the plant is not native to Iowa. A common name (if different from the genus name) is given in parentheses after the binomial. This is followed by numbers indicating the plant communities in which the plant was found (see the list of plant communities above).

Many of these plants have several common names. Since there are no rules governing the application of common names, the reader is free to use whatever names he prefers. The scientific names can be found in regional manuals (Fernald, 1950; Gleason and Cronquist, 1963) except in a few cases where recent study has shown that another name is more appropriate.

ARTHROPHYTA (Horsetails and Scouring Rushes)
Equisetaceae (Horsetail and Scouring Rush Family)
Equisetum hyemale L. (Scouring Rush)–6

PTERIDOPHYTA (Ferns and Relatives)
Ophioglossaceae (Adder's Tongue Family)
Botrychium virginianum (L.) Sw. (Rattlesnake Fern)–2, 4, 6

Osmundaceae (Cinnamon Fern Family)
Osmunda claytoniana L. (Interrupted Fern)–4
Pteridaceae (Bracken Fern Family)
Adiantum pedatum L. (Maidenhair Fern)–2, 4
Cryptogramma stelleri (Gmel.) Prantl (Slender Cliff-Brake)–9

Pellaea glabella Mett. (Smooth Cliff-Brake)–8
Aspidaceae (Shield Fern Family)
Athyrium filix-femina (L.) Roth. (Lady Fern)–4

Cystopteris bulbifera (L.) Bernh. (Bulblet Bladder Fern)–4, 9
C. fragilis (L.) Bernh. (Common Bladder Fern)–3, 4, 6, 9

Thelypteris hexagonoptera (Michx.) Weatherby (Broad Beech Fern)–4
Aspleniaceseae (Spleenwort Family)
Asplenium rhizophyllum L. (Walking Fern)–10

CONIFEROPHYTA (Conifers)
Cupressaceae (Cypress Family)
Juniperus communis L. var. depressa Pursh (Ground Juniper)–7

J. virginiana L. (Red Cedar)–1, 2, 6, 7
Taxaceae (Yew Family)

Taxus canadensis March. (American Yew)–4, 7, 8, 9

ANTHROPHYTA (Flowering Plants)
Dietesietaceae (Dietes)
Aceraceae (Maple Family)

Acer negundo L. (Box Elder)–1, 5, 6
A. nigrum Michx. f. (Black Maple)–4, 9
A. saccharum L. (Silver Maple)–1, 3
A. saccharinum Marsh. (Sugar Maple)–3, 4, 5

Amaranthaceae (Amaranth Family)
*Amaranthus retroflexus L. (Pigweed)–6

Anacardiaceae (Cashew Family)

Rhus glabra L. (Smooth Sumac)–5
R. radicans L. (Poison Ivy)–4, 6
R. typhina L. (Staghorn Sumac)–1, 5, 6

Apocynaceae (Dogbane Family)

Apolynus androsaemifolium L. (Spreading Dogbane)–7

Araliaceae (Ginseng Family)

Aralia nudicaulis L. (Wild Sarsaparilla)–4
A. racemosa L. (Spikenard)–4, 9

Panax quinquenervis L. (Ginseng)–4

Aristolochiaceae (Birthwort Family)
Asarum canadense L. (Wild Ginger)–4, 9, 10
Asclepiadaceae (Milkweed Family)

Asclepias exaltata L. (Firke Milkweed)–6
A. incarnata L. (Swamp Milkweed)–6

Balsaminaceae (Touch-Me-Not Family)

Impatiens bifora Walt. (Spotted Touch-Me-Not)–6
Berberidaceae (Barberry Family)

Caulophyllum thalictroides (L.) Michx. (Blue Cohosh)–2, 4
Podophyllum peltatum L. (May Apple)–2, 4, 5
Betulaceae (Birch Family)

Betula papyrifera Marsh. (Canoe Birch)–6, 7
Carpinus caroliniana Walt. (Musclewood, Blue Beech)–2, 3, 4, 8

Corylus americana Walt. (Hazelnut)–2, 5
C. cornuta Marsh. (Beaked Hazelnut)–2, 4
Ostrya virginiana (Mill.) K. Koch (Ironwood, Hop Hornbeam)–2, 3, 4, 5

Boraginaceae (Borage Family)

Lithospermum canescens (Michx.) Lehm. (Puccoon)–7
L. latifolium Michx.–5

Campanulaceae (Bluebell Family)

Campanula americana L. (Tall Bellflower)–6
C. rotundifolia L. (Harebell)–8, 9

Loelia inflata L. (Indian Tobacco)–12

S. siphilitica L. (Great Lobelia)–6

Caprifoliaceae (Honeysuckle Family)

Lonicerio dioica L. (Wild Honeysuckle)–4
L. prolifera (Kirchn.) Rehd. (Wild Honeysuckle)–2

Sambucus canadensis L. (Common Elder)–6
Triosteum aurantiacum Bickn. (Horse Gentian)–2

Viburnum lentago L. (Nannyberry)–2, 3, 6, 7

V. opulus L. var. opulus (High-Bush Cranberry)–6
V. rafinesquianum Schultes (Downy Arrowwood)–2, 3, 4

Caryophyllaceae (Pink Family)

Arenaria lateriflora L. (Sandwort)–4
*Cerastium vulgatum L. (Mouse-Ear Chickweed)–6

*Lychins alba Mill. (White Campion)–6

Celastraceae (Staff-Tree Family)

Celastrus scandens L. (Bittersweet)–4, 7
Euonymus atropurpureus Jacq. (Wahoo, Burning Bush)–6

Chenopodiaceae (Goosefoot Family)

*Chenopodium album L. (Goosefoot, Lamb's Quarters)–6

Compositae (Sunflower Family)
Ambrosia artemisiifolia L. (Ragweed)—6
Antennaria plantaginifolia (L.) Richards (Pussy-Toes)—7
*Arctium minus* (Hill) Bernh. (Burdock)—6
Aster ontariois Wieg.—2
A. prenanthoides Muhl.—6
A. sagittifolius Willd.—4, 7
A. simplex Willd.—6
Bidens frondosa L. (Stick-Tight, Spanish Needle)—10
*Cirsium vulgare* (Savi) Tenore (Bull Thistle)—6
Erigeron annuus (L.) Pers. (Daisy Fleabane)—2, 5, 6
E. strigosus Muhl. (Daisy Fleabane)—6
Eupatorium purpureum L. (Joe-Pye Weed)—6
E. rugosum Houtt. (White Snakeroot)—6
Helianthus annuus L. (Sneezeweed)—6
Helianthus tuberosus L. (Jerusalem Artichoke)—6
Helopsis helianthoides (L.) Sweet (Ox-Eye)—6
Krigia biflora (Walt.) Blake (Cynthis)—7
Parthenium integrifolium L. (Wild Quinine)—7
Polymnia canadensis L. (Leafcup)—10
Prunella vulgaris L. (Rattlesnake Root)—5, 6
Ratibida pinnata (Vent.) Barnh. (Coneflower)—6, 7
Rudbeckia laciniata L. (Tall Coneflower)—6
R. triloba L. (Brown-Eyed-Susan)—6
Senecio aureus L. (Golden Ragwort)—6
Silphium perfoliatum L. (Cup Plant)—6
Solidago flexicaulis L. (Zig-Zag Goldenrod)—4, 6
S. gigantea Ait. (Giant Goldenrod)—1, 6
S. kiiptida Muhl. (Goldenrod)—7
S. nemoralis Ait. (Goldenrod)—7
*Taraxacum officinale* Weber (Common Dandelion)—5, 11
Cornaceae (Dogwood Family)
Cornus alternifolia L. (Alternate-Leaved Dogwood, Pagoda Dogwood)—2, 3, 4, 5, 9, 10
C. obliqua Raf. (Silky Dogwood)—6
C. racemosa Lam. (Gray Dogwood)—1, 2, 4, 5
C. rugosa Lam. (Speckled Dogwood)—2, 8
Cruciferae (Mustard Family)
*Barbaraea vulgaris* R. Br. (Yellow Rocket)—6
*Brassica juncea* (L.) Coss. (Chinese Mustard)—6
*Capsella bursa-pastoris* (L.) Medic. (Shepherd’s Purse)—6
Dentaria laciniata Muhl. (Toothwort)—2, 4
*Sisymbrium officinale* (L.) Scop. (Hedge Mustard)—6
Curcurbitaceae (Gourd Family)
Echinocystis lobata (Michx.) T. & G. (Wild Balsam-Apple)—6
Eriaceae (Heath Family)
Arcostaphyllos uva-ursi (L.) Spreng. (Bearberry)—7
Pyrola elliptica Nutt. (Shinleaf)—4
Euphorbiaceae (Spurge Family)
Euphorbia corollata L. (Flowering Spurge)—7
Fagaceae (Beech Family)
Quercus alba L. (White Oak)—2, 3, 4, 7
Q. ellipsoidea E. J. Hill (Northern Pin Oak)—7
Q. macrocarpa Michx. (Bur Oak)—7
Q. borealis Michx. f. (Red Oak)—3, 4, 5, 7
Fumariaceae (Fumitory Family)
Dicentra cucullaria (L.) Bernh. (Dutchman’s Breeches)—4, 10
Geraniaceae (Geranium Family)
Geranium maculatum L. (Wild Geranium)—2, 4, 5
Guttiferae (St-John’s Wort Family)
Hypericum punctatum Lam. (St-John’s-Wort)—6
Hydrophyllaceae (Waterleaf Family)
Hydrophyllum appendiculatum Michx. (Waterleaf)—2
H. virginianum L. (Waterleaf)—2, 4, 5, 6, 10
Juglandaceae (Walnut Family)
Carya cordiformis (Wang.) K. Koch (Bitternut Hickory)—1, 2, 3, 4, 5
C. ovata (Mill.) K. Koch (Shagbark Hickory)—1, 2, 4, 5
Juglans cinerea L. (Butternut)—1, 2, 3, 4, 6, 9
Labiateae (Mint Family)
Blephilia hirsuta (Pursh) Bentham. (Wood Mint)—6
*Glecoma hederacea* L. (Ground Ivy)—11
Lycopus americanus Muhl. (Water Horehound)—6
Monarda fistulosa L. (Wild Bergamot)—1, 6
*Prunella vulgaris* L. (Self-Heal)—5, 6
Scutellaria parvula Michx. (Skullcap)—7
Teucrium canadense L. (Wood Sage)—6
Leguminosae (Clover Family)
Amorpha canescens Pursh (Lead Plant)—7
Amphicarpia bracteata (L.) Fern. (Hog Peanut)—4
Desmodium cuspidatum (Muhl.) Loud. (Tick Clover)—7
D. glutinosum (Muhl.) Wood (Tick Clover)—4, 5
Lespedeza capitata Michx. (Bush Clover)—7
*Lotus corniculatus* L. (Bird’s-Foot Trefoil)—6
*Medicago lupulina* L. (Black Medick)—6
*Melilotus alba* Desr. (White Sweet Clover)—6
*Trifolium hybridum* L. (Alsike Clover)—6
*T. pratense* L. (Red Clover)—5, 6, 12
*T. repens* L. (White Clover)—12
Malvaceae (Mallow Family)
*Abutilon theophrasti* Medic. (Velvet Leaf)—6
Menispermaceae (Moonseed Family)
Menispernum canadense L. (Moonseed)—3
Moraceae (Mulberry Family)
*Cannabis sativa* L. (Hemp)—6
Oleaceae (Olive Family)
Fraxinus americana L. (White Ash)—2, 3, 4, 5
F. nigra Marsh. (Black Ash)—2, 4, 6, 9
F. pennsylvaniaica Marsh. (Green Ash)—1, 6
Onagraceae (Evening Primrose Family)
Circaea quadriradiata (Maxim.) Franch. & Sav. (Enchantress’s Nightshade)—3, 4
Oenothera biennis L. (Evening Primrose)—12
Oxalidaceae (Wood Sorrel Family)
Oxalis stricta L. (Wood Sorrel)—6, 9
Papaveraceae (Poppy Family)
Sanguinaria canadensis L. (Bloodroot)—4, 5, 7
Phrymaceae (Losepseed Family)
Phryma leptostachya L. (Losepseed)—3, 4
Plantaginaceae (Plantain Family)
Plantago rugelii G. Don. (Plantain)—6, 12
Polemoniaceae (Phlox Family)
Phlox divaricata L. (Woodland Phlox)—3, 4, 6
*P. paniculata* L. (Garden Phlox)—6
Polemonium reptans L. (Jacob’s Ladder)—2, 4, 6
Polygonaceae (Buckwheat Family)
*Polygonum persicaria* L. (Lady’s Thumb)—6
P. scandens L. (False Buckwheat)—5
P. virginianum L. (Johnny Jump-Seed)—6
*Rumex crispus* L. (Curly Dock)—6
Portulacaceae (Purslane Family)
Claytonia virginica L. (Spring Beauty)—2, 4, 6, 11
Primulaceae (Primrose Family)
Lysimachia ciliata L. (Loosestrife)—6
*L. nummularia* L. (Moneywort)—6
Ranunculaceae (Buttercup Family)
Actaea pachypoda Ell. (White Baneberry)—4
A. rubra (Ait.) Willd. (Red Daneberry)—8
Anemone quinquefolia L. (Wood Anemone)—4
A. virginiana L. (Thimbleweed)—1, 3, 4
Aquilegia canadensis L. (Columbine)—4, 5, 7
Caltha palustris L. (Marsh Marigold)—11
Clematis virginiana L. (Virgin’s Bower)—6
Hepatica acutiloba DC. (Liver Leaf)—4, 10
Isopyrum bidentatum (Raf.) T. & G. (False Rue-Anemone)
—4, 6, 8, 10
Ranunculus abortivus L. (Small-Flowered Buttercup)—4, 5, 8, 10
R. septentronics Poir. (Marsh Buttercup)—6
Thalictrum dasycarpum Fisch. & Lall. (Meadow Rue)—6
Rosaceae (Rose Family)
Agrimonia gryposepala Wallr. (Agrimony)—5, 12
Amelanchier arborea (Michx.) f. Fern. (Serviceberry)—3, 4
Fragaria vesca L. (Woodland Strawberry)—4, 8, 9
F. virginiana Duch. (Wild Strawberry)—6, 7
Geum canadense Jacq. (White Avens)—4, 5
Physocarpus opulifolius (L.) Maxim. (Nin-Bark)—6, 8
Potentilla recta Nutt. (Cinquefoil)—6
P. simplex Michx. (Common Cinquefoil)—2
Prunus americana Marsh. (Wild Plum)—6
P. serotina Ehrh. (Wild Black Cherry)—1, 3, 4, 5, 6
P. virginiana L. (Chokecherry)—2, 3, 4, 5, 7
Rubus allegheniensis Porter (Common Blackberry)—1, 3, 5, 6
R. occidentalis L. (Black Raspberry)—1, 4, 5, 6
R. strigosus Michx. (Wild Red Raspberry)—4, 6
*Sorbus aucuparia L. (European Mountain Ash)—3
Rubiacaeae (Madder Family)
Gaultheria procumbens Michx. (Cranberry)—4, 5
G. boreale L. (Northern Bedstraw)—7
G. concinnum T. & C. (Bedstraw)—4, 5
G. triflora Michx. (Sweet-Scented Bedstraw)—5, 6
Rutaceae (Citrus Family)
Xanthoxylum americanum Mill. (Prickly Ash)—2, 4, 5, 6
Salicaceae (Willow Family)
Populus deltoides Marsh. (Cottonwood)—5, 6
P. grandidentata Michx. (Large-Toothed Aspen)—2, 3
P. tremuloides Michx. (Quaking Aspen)—1, 2, 4, 5, 7
*Salix fragilis L. (Crack-Willow)—6
S. rigida Michx. (Heart-Leaved Willow)—6
Salicaceae (Sandalwood Family)
Comandra umbellata (L.) Nutt. (Bastard Toad-Flax)—7
Saxifragaceae (Saxifrage Family)
Heuchera richardsonii R. Br. (Alum Root)—6
Mitella diphylla L. (Bishop’s Cap)—4, 10
Ribes americanum Mill. (Wild Black Currant)—6
R. cynosbati L. (Prickly Gooseberry)—4, 8, 9, 10
R. missouriense Nutt. (Gooseberry)—1, 5
Sulciatia renifolia Bosed.—9
Scurrulaceaes (Fagaceae Family)
Minimus ringens L. (Monkey Flower)—6
Scrophulariaceae (Figwort Family)
*Verbascum thapsus L. (Mullein)—6
Veronicastrum virginicum (L.) Farw. (Culver’s Root)—4
Solanaceae (Nightshade Family)
*Solanum nigra L. (Black Nightshade)—6
Staphyleaceae (Bladdernut Family)
Staphylea trifolia L. (Bladdernut)—3, 4
Thymelaeaceae (Mesereum Family)
Dirca palustris L. (Leatherwood)—3, 4
Tiliaceae (Linden Family)
Tilia americana L. (Basswood)—1, 2, 3, 4, 5, 7, 9
Ulmaceae (Elm Family)
Celtis occidentalis L. (Hackberry)—3, 6
Ulmus americana L. (American Elm)—1, 4, 5, 6
U. rubra Muhl. (Red Elm, Slippery Elm)—1, 2, 4, 5, 6
Umbelliferae (Parsley Family)
Cicuta bulbifera L. (Cowbane)—6
Cryptotenias canadensis (L.) DC. (Honewort)—4
Heracleum lanatum Michx. (Cow Parsnip)—6
Osmorhiza claytoni (Michx.) C. B. Clarke (Sweet Cicely)—4, 5, 10
O. longisylis (Torr.) DC. (Anise-Root)—4, 10
Pastinaca sativa L. (Wild Parsnip)—6
Santicula gregaria Michx. (Black Snakeroot)—4
S. marilandica L. (Black Snakeroot)—4, 5
Thaspium barbinode (Michx.) Nutt. (Marsh Parsnip)—6
Zizia aurea (L.) Koch (Golden Alexanders)—8
Urticaceae (Nettle Family)
Laportea canadensis (L.) Wedd. (Wood Nettle)—10
Paritaria pensylvanica Muhl. (Pellitory)—8
Pilea pumila (L.) Gray (Clear-Weed)—6, 9
Urteca procerca Muhl. (Nettle)—6
Violaceae (Violet Family)
Viola erici-carpata Schw. (Smooth Yellow Violet)—2, 4
V. papilionacea Pursh (Meadow Violet)—6
V. renifolia Gray (Kidney-Leaved Violet)—10
V. sororia Willd. (Downy Blue Violet)—4, 6
V. papilionacea Pursh X V. sororia Willd. (?)—6
Vitaceae (Vine Family)
Parthenocissus quinquefolia (L.) Planch. (Virginia Creeper)
—3, 4, 5
Vitis riparia Michx. (Riverbank Grape)—2, 5, 6
ANTHOPHYTA (Flowering Plants)
Monocotyledonae (Monocots)
Araeaceae (Arame Family)
Arisaema triphyllum (L.) Schott (Jack-in-the-Pulpit)—4
Cyperaceae (Sedge Family)
Carex albusina Sheldon (Sedge)—3, 4
C. bland Dew.—10
C. concinna Mack.—4
C. hirtifolia Mack.—4
C. pensylvanica Lam.—7
C. sparganooides Muhl.—4
Cyperus strigosus L. (Galangale)—6
Dioscoreaceae (Yam Family)
Dioscorea villosa L. (Wild Yam)—4
Gramineae (Grass Family)
*Agrostis alba L. (Redtop)—6
Andropogon gerardi Vitman (Big Bluestem, Turkeyfoot)—6, 7
*Bromus inermis Leyss. (Smooth Bromes)—6
B. pubescent Muhl. ex Wildl. (Brone Grass)—4
Echinochloa muricata (Beauv.) Fern. (Barnyard Grass)—6
Elymus villosus Muhl. (Wild Rye)—4
Festucia obtusa Biehler (Fescue)—4, 6
Glyceria striata (Lam.) Hitchc. (Manna Grass)—6
Hystrix patula Moench. (Bottlebrush Grass)—4
Leersia virginica Willdl. (White Grass)—4
Muhlenbergia frondosa (Poir.) Fern. (Muhly Grass)—6
Oryzopsis racemosa (J. E. Smith) Bieker (Rice Grass)—4
Panicum lattifolium L. (Pan Grass)—4
P. leibergii (Vasey) Scribn.—7
Phalaris arundinacea L. (Reed Canary Grass)—6
*Phleum pratense L. (Timothy)—12
The Flora of Brush Creek Canyon includes a variety of plant species, mostly within the Iridaceae and Liliaceae families. Notable species are:

- *Poa pratensis* L. (Kentucky Bluegrass) – 5, 12
- *Setaria faberi* Herr. (Nodding Foxtail) – 6
- *S. lutescens* (Weigel) Hubb. (Yellow Foxtail) – 6
- *Sisyrinchium campestre* Bickn. (Blue-Eyed Grass) – 7
- *Setaria lutescens* (Weigel) Hubb. (Yellow Foxtail) – 6
- *Allium tricoccum* Ait. (Ramp, Wild Leek) – 3, 4
- *Erythronium albidum* Nutt. (Trout Lily) – 6
- *Hemerocallis fulva* L. (Day Lily) – 6
- *Polygonatum biflorum* (Walt.) Ell. (Solomon's Seal) – 5
- *Smilacina racemosa* (L.) Desf. (False Solomon's Seal) – 4, 7, 9
- *S. stellata* (L.) Desf. – 7
- *Smilax cernuta* (Engelm.) Wats. (Greenbrier) – 4
- *S. hispida* Muhl. (Bristly Greenbrier) – 3, 5, 6
- *Trillium flexipes* Raf. (Nodding Trillium) – 2, 4

*Uvularia grandiflora* Sm. (Bellwort) – 2, 4

Orchidaceae (Orchid Family)

- *Aplectrum hyemale* (Muhl.) Torr. (Putty-Root Orchid) – 2
- *Cypripedium calceolus* L. var. *pubescens* (Willd.) Correll (Yellow Lady-Slipper) – 4
- *Orchis spectabilis* L. (Showy Orchis) – 2

Totals: 75 families, 193 genera, 268 species.

**Literature Cited**
