

# James River Rock Pool Flora

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## WILDFLOWERS

### Wildflowers

Wildflowers are herbaceous plants of moist to dry conditions. Soft-stemmed perennials or annuals, they grow in silt that collects around the edges of rock pools or in the sand and soil that accumulates between rocks. They may be in standing water part of the time, but also tolerate dry areas among the rocks. Some have large or colorful flowers, and some have small flowers, often in showy clusters. Most bloom in mid-summer to fall.



## Buttonweed

*Diodia teres* Walter

Madder Family (Rubiaceae)

### Buttonweed

This many-branched, sprawling plant roots in quickly draining, sandy soils that accumulate among the rocks around pools. It has 4-sided, hairy stems and leaves that are narrowly-shaped, grow opposite each other, and clasp the stem. White or pale purple flowers have 4 small petals and grow out of the leaf axils- where leaves attach to the plant stem.



➡ LOOK FOR oval or top-shaped seeds. These were reportedly used in Colonial times as ball-like buttons. Tied to a thread, they could be passed thru a cloth loop instead of a buttonhole, a design still used in Tibetan shirts today.



## Common Sneezeweed

*Helenium autumnale* L.

Aster Family (Asteraceae)

### Common Sneezeweed

This perennial, from 1 to 3 feet tall, is usually found around the edges of sandy or muddy pools. The leaves are lance-shaped to oblong and slightly toothed. The leaf bases taper down onto the stem forming slight wings. From late summer into fall, many bright yellow flower heads top the open-branched plants. Flowers have dome-shaped centers formed by a cluster of small gold flowers surrounded by golden ray petals which bend downward as the flowers mature. The common name comes from a powder made from dry flowers which was used to make snuff.



➡ LOOK FOR a plant in full flower and take a big sniff to understand the name.





## Cardinal-flower

*Lobelia cardinalis* L.

Lobelia Family (Lobeliaceae)

### Cardinal-flower

These perennial plants vary from about a foot to several feet tall. Around the rock pools, where flooding exposes them to damage, they are often shorter with fewer leaves and flowers than Cardinal-flowers growing along the riverbanks in deeper soils. Leaves are alternate, lance-shaped, tapering at both ends, and irregularly toothed. Spectacular scarlet, 2-lipped, tubular flowers on spikes topping single stems call attention to these plants in late summer and fall and earn the plant its colorful name. Hummingbirds as well as insects are attracted to these bright flowers.



➡ **LOOK FOR** the special way the flowers bloom to reduce self-pollination. The stringy male parts appear first on the lower flowers, then work their way up the stem. As they die back, you can find the female parts that look like little pedestals inside the flower throat.



## Joe-pye-weed

*Eutrochium maculatum* (L.) E.E. Lamont  
Aster Family (Asteraceae)

### Joe-pye-weed

A tall plant (2 to 6 ft +) with whorls of lance-shaped, toothed leaves on a spotted stem. Large clusters of small, tightly packed, pinkish-purple flowers make Joe-pye-weed unmistakable in late summer and fall. This perennial plant requires damp soil: shorter plants grow in shallow soils around the pools, taller ones in deeper soils.



➡ LOOK FOR the small tubes of the disk flowers. These hold nectar and attract insects like butterflies and bees. The tightly packed design also facilitates self-fertilization. Brush your fingers across the flowers to watch the pollen-bearing stamens contact the pollen-catching stigmas.





## Late Thoroughwort

*Eupatorium serotinum* Michx.  
Aster Family (Asteraceae)

### Late Thoroughwort

Flat-topped clusters of tiny white flowers on erect, fuzzy stems identify this perennial in late summer and fall. The opposite, oval-to-lance-shaped leaves are slightly toothed and smooth on the upper surface, but softly fuzzy on the lower surface. Like Joe-pye-weed, these plants attract butterflies and other pollinating insects.



➡ LOOK FOR pollinating insects on the flowers.



## Lespedeza

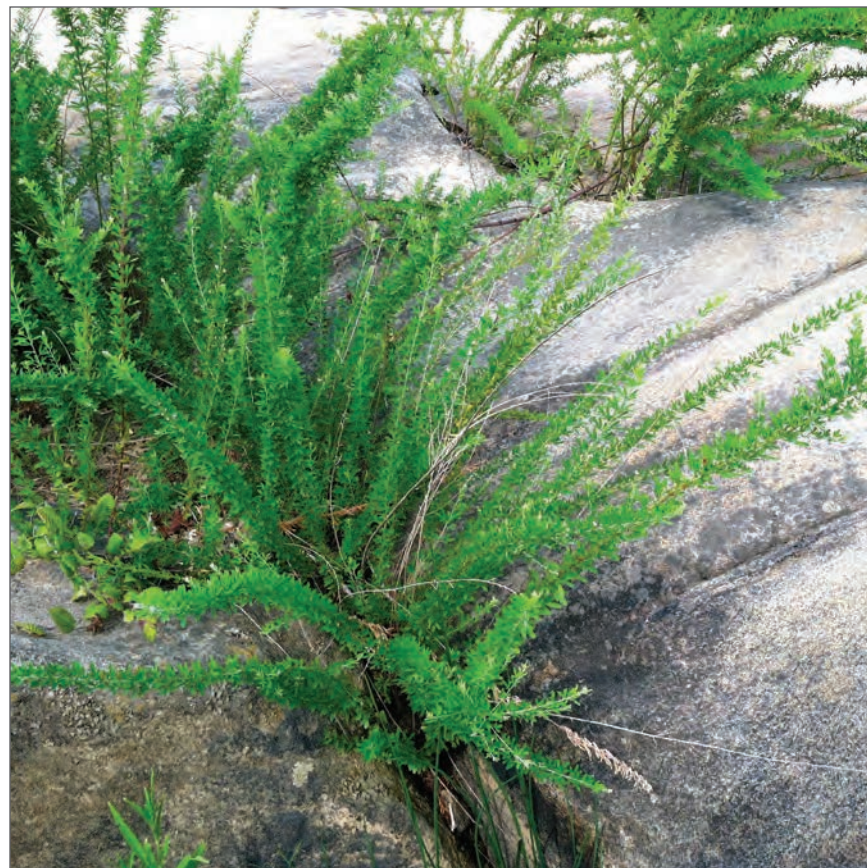
*Lespedeza cuneata* (Dumont-Cours.) G. Don  
Legume Family (Fabaceae)

### Lespedeza

*(Non-native and aggressively invasive.)*

This non-native perennial from Asia grows to 4 feet tall from a woody taproot and is distinctive for its many wand-like branches. Short, alternate leaves are clustered densely along the stem. Each leaf is divided into 3 wedge-shaped leaflets, narrowed at the base, broader and blunt at the tips. Tiny pea-like flowers, shorter than the leaves, are borne in clusters of 1 to 4 between the stem and leaves along the upper parts of the stems. Blooms appear from July to October.

Lespedeza was introduced in the late 1800's and has been widely used as cover for disturbed areas. It out-competes native plants and its seeds can remain viable for decades, making it difficult to eradicate.



➡ LOOK FOR stiff hairs on the somewhat woody stems and white flowers with purple markings.





## Marsh Seedbox

*Ludwigia palustris* (L.) Elliott  
Evening Primrose Family (Onagraceae)

### Marsh Seedbox

Another name for this sprawling, creeping, or partially floating perennial is Common Water-purslane. Its stems are soft, smooth and succulent. The leaves are lance-shaped, slightly toothed and spaced alternately on the stem. Flowers are small and reddish, borne singly in axils of the leaves from May to October. The fruits are elongated, rounded, 4-sided capsules (hence the name 'seedbox') with distinctive darker green bands and remains of flower parts that resemble a tiny crown.



➡ LOOK FOR a tiny “crown” shape on the side of the unripe seed pod. These are the remains of the flower parts.





## Mistflower

*Conoclinium coelestinum* (L.) DC  
Aster Family (Asteraceae)

### Mistflower

This perennial with fuzzy periwinkle blue flowers resembles a cultivated plant called Argeratum. It grows from 2 to 12 inches high and often forms colonies. The opposite leaves are oval with slightly toothed or wavy edges and taper to pointed tips. They may be smooth or slightly hairy on the upper surface, but are softly hairy or sticky on lower surface. .



➡ LOOK FOR dense clusters of 'misty' looking blue flower heads attracting many small bees and butterflies.



## New York Ironweed

*Vernonia noveboracensis* (L.) Michx.  
Aster Family (Asteraceae)

### New York Ironweed

Tall, coarse, perennial with narrowly ovate leaves and eye-catching sprays of tiny, dark purple flowers, it is impressive in early fall. The oval, pointed, opposite leaves can be 1 to 3 inches long, 3 to 5 inches wide, and are slightly hairy beneath. Large clusters of small flowers can be 20 inches across. Seed heads have individual seeds with tufts of hair in 2 rows that facilitate dispersal by wind. Yellow goldfinches feeding on these seeds among late-blooming flowers can provide spectacular photos.

photo courtesy of E. Gianfortoni



➡ **LOOK FOR** small and medium sized butterflies like skippers probing the tubes of the disk flowers in mid – summer.





## Pennsylvania Knotweed

*Persicaria pennsylvanicum* (L.) M. Gomez  
Buckwheat Family (Polygonaceae)

### Pennsylvania Knotweed or Pinkweed

This erect annual grows 1 to 3 feet tall with shiny, lance-shaped leaves 4 to 6 inches long. Sheathes around the stem form at the base of each leaf and stems are thicker at these nodes and often reddish. This gives the appearance of jointed stems. Compact spikes 1 to 2 inches long of small pink flowers appear at the stem tips from summer until frost. The flower spikes often weigh the stems downward, placing ripening seeds conveniently near the ground or water. Knotweed grows in moist or wet, disturbed areas and is an important source of food for waterfowl and birds.



➡ LOOK FOR thickened areas at the leaf nodes. These 'knots' are where it gets one of its common names.



## Purple Loosestrife

*Lythrum salicaria* L.

Loosestrife Family (Lythraceae)

### Purple Loosestrife

*(Non-native and aggressively invasive!)*

Stout, shrub-like herb with slightly fuzzy stems that grow 3 to 5 feet high in damp, disturbed areas. Leaves are lance-shaped, 3 to 5 inches long, an inch or so wide, and grow opposite one another or in whorls. In late summer, tall spires of pinkish purple flowers clustered in the leaf axils are colorful but call attention to this invasive plant that spreads readily, replacing native plants. Introduced from Europe for horticultural use, it has become a significant nuisance in wetlands.



➡ LOOK FOR any kinds of wildlife utilizing this plant. Usually there is very little to see except an occasional honey bee.





## Seaside Spurge

*Euphorbia polygonifolia* L.

Spurge Family (Euphorbiaceae)

### Seaside Spurge

A low, branching, prostrate, plant with tiny leaves scattered along a succulent stem. It hugs the rocks or sand. The tiny flowers are greenish-white (tinged with red) and cluster in the leaf axils. The plant has a milky juice that can irritate bare skin and was once used in tiny drops to remove warts. It was also used in medieval poison recipes. The word 'spurge' comes from the Latin for 'purge' meaning that it will make you vomit.



➡ LOOK FOR the 'false flowers'. What look like petals are really a kind of leaf called a 'bract'.



## Tickseed Sunflower

*Bidens coronata* (L.) Britt  
Aster Family (Asteraceae)

### Tickseed Sunflower

Sometimes called swamp marigold, these tall, slender sunflowers can grow 2 to 5 feet tall, but usually are shorter around the rock pools because of river flood action. The leaves are deeply divided into narrow segments, almost fern-like. The golden yellow flowers bloom from August through September and create a colorful show all along the river. The flower heads are 2 inches across with small yellow-gold center flowers surrounded by longer rays of yellow-gold petal-like flowers. The flat, black seeds are designed to stick to fur and thereby facilitate dispersal. They are an important food for finches and other small birds in the winter.



➡ LOOK FOR 2 slender bristles (called “awns”) on the wedge-shaped seeds that allow them to stick to your clothing. Congratulations. You’ve become a part of nature’s plan to disperse the seeds! The Latin name for the plant is “2 teeth”.





## Toothcup

*Rotala ramosior* (L.) Koehne  
Loosestrife Family (Lythraceae)

### Toothcup

An aquatic or semiaquatic native plant related to the invasive swamp loosestrife is known also as lowland rotala. The leaves are up to 2 inches long and narrow, arranged in pairs, each at right angles to the pairs above and below. The inconspicuous flowers are borne in a calyx cup (hence the common name) in the leaf axils with 4 petals that vary from pink to white and drop off quickly. The fruit is a dry capsule that holds many small oval brownish seeds. An annual, it grows in lakes, streams, and irrigation ditches as well as pools in the river. For most of the season, the whole plant is inconspicuous, but it can easily be recognized in late summer and fall by the bright red colors in stems leaves and fruit.



➡ LOOK FOR the calyx cup and see what you can find inside.



## Virginia Dayflower

*Commelina virginica* L.

Dayflower Family (Commelinaceae)

### Virginia Dayflower

Growing tall in surrounding grass or creeping along the edges, perennial blue dayflowers like the sun and earn their name by opening one bloom a day through the summer with the maturing buds almost hidden in a folded leaf. Leaves are longer than wide, pointed and slightly folded, clasping the stem. The flowers are almost 1 inch across on very short stems and have 3 green sepals and 3 sky-blue petals, one of which is slightly smaller than the others. Seeds mature in the fall. Related to both the invasive Dewflower and native Spiderwort, these native plants are found in many other areas besides the rock pools.



➡ LOOK FOR the brilliant golden stamens with black pollen tips that are highlighted against the blue pedals.