

Self-Guided Moss ID Hike

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Moss is a non-vascular plant in the family of plants called bryophytes. Most of us recognize moss by its variable green colors, small size, and tendency to cling to surfaces of all kinds, including trees, rocks and soil. It is found everywhere on earth. There are 323 species in the State of Missouri and 22,000 worldwide.

This guide will direct you to the locations of 10 common mosses of Missouri. It follows the well marked Turkey Creek Trail located in Three Creeks Conservation Area. Moss is best viewed in the Winter and early Spring as it tends to dry in Summer. Fall is hunting season in Three Creeks CA so be sure to know if it is deer season.

The moss ID part of the hike will include the location of the moss, the scientific name and the common name, and perhaps some interesting facts. The GPS coordinates listed with each moss are for verification if you need it, but not necessary for orientation. The mosses should be visible from the trail and easily found with just these verbal directions. You don't need to bring a magnifying glass, but it might enhance your experience to see the moss through a magnification lens. Please do not remove the moss. View it in its natural surroundings.

The hike is approximately 2 miles long. It begins in the parking lot at the Deer Park entrance to the CA. The parking lot area and the first 1/4 mile offer excellent displays of some of Missouri's native trees. The parking area is lined with Eastern redbud (*Cercis canadensis*), Eastern red cedar (*Juniperus virginiana*), and white pine trees.

The hike starts by entering the trail at the iron gate. As you walk past the gate on the left side, the trees to the left are Osage Orange (*Machura pomifera*). Begin walking down the double track trail past some large white and red oaks (*Quercus*) and tulip trees (*Liriodendron tulipifera*). An outstanding tulip tree towers tall on the left. It is recognizable in the Spring by its beautiful greenish/yellow flowers that are orange banded at the base.

Moss #1 and #2 (N. 38 50'51.787"; W. 92 16' 59.545")

The first and second mosses are located on the right side of the double track trail that you entered on. They are at the base of the very last tree (oak) before the landscape opens up into an open grassland on the right. There are two mosses here and both are usually quite visible.

Moss #1 is *Atrichum angustatum* (little star moss). This green moss has a star-like appearance when you look straight down on it. Each star sits atop a stem as an individual (acrocarp). It produces many sporophytes and will often be covered with these thin red seta with capsules on top. The preponderance of sporophytes has given this moss the nickname haircap moss as it looks like it is covered with hair.

Moss #2 is in the same location. It is *Plagiomnium cuspidatum* (baby tooth moss). It sits on the ground in front of *Atrichum*. It is a mat type moss that runs along the surface of the ground (pleurocarp). Its leaves are broad and visible with the naked eye. It may have sporophytes that are green. Compared to *Atrichum* it has few sporophytes.

Moss #3 (N. 38 50' 37.617"; W. 92 17" 2.328")

From here proceed down the double track until you come to a trail to the left. There is a wooden sign here that directs you onto Turkey Creek Trail. Turn left onto the Turkey Creek Trail passing by a thicket of small trees, many of them wild plum (*Prunus americana*). You will come to a spot with a large Shingle oak (*Quercus imbricaria*) and another tree (wrapped in a vine) grouped together on the left. To the right is the very beginnings of a pond. About 15 feet further down from the shingle oak is a jumbled pile of old fencing. Look under the Shingle oak for a concrete pier that was part of an old foundation. There are at least 5 of these that appear at regular intervals perpendicular to the trail disappearing into the woods. Each one is covered with moss.

Moss #3 is *Entodon seductrix* (cord glaze moss). This moss is found in many locations throughout the park. It grows well on acidic rock such as these old concrete foundation blocks.

Moss #4 and #5 (N. 38 50' 53.236"; W. 92 19' 2.591")

Continue down the trail until you come to a crossroad in the path, with one path leading right and the other slight left. Go on the slight left to begin the descent down to the Creek. There is a trail marker sign there. Soon after you make the turn you will see an obvious concrete foundation to the left.

Moss #4 is *Schistidium viride* (canniken moss). This moss prefers concrete and limestone rocks (like those found at Three Creeks). It is also found on old concrete bridges and old cemetery gravestones. It clings tightly to the concrete foundation walls and has a dark green, almost black, look to it. If you brought a magnifier look into the moss and hidden among the leaves look for capsules

that are like tiny acorns or cups only 1mm long. If the lid has fallen off the capsule you will see a bright orange color coming from the “teeth” ringing the mouth of the capsule.

Moss #5 is *Platygyrium repens* (oil spill moss). This moss is growing profusely on an old board lying across the top of the foundation. This moss gets its common name from the golden and green colors that blend together on it. It seems to me a more pleasing nickname would be patina moss as it makes the old wood look like it has a golden patina. This moss is often covered with many sporophytes. You will likely see this moss throughout the woods on top of old rotting logs.

Moss #6 (N. 38 50' 31.126"; W. 92 16' 56.824")

Continue on the path down the hill. The path gets rocky here and many of the rocks are decorated with mosses. These moss rocks are a gallery of moss displays and can be appreciated all along this path. As you descend the path you will come to a spot on the left that gives you the first clear look at the creek down below. After this, continue down the path and keep an eye out for a light green moss with some yellow overtones that is growing on the right edge of the path. There is a rather large display of this ground moss in several spots. If you are having trouble, look for a dead oak tree with holes in it and a large rotted opening down low. *Thuidium delicatulum* grows at its base.

Moss #6 is *Thuidium delicatulum* (delicate fern moss). This is the most common moss in the world. Note its tiny branches look like ferns.

Moss #7 (N. 38 50' 27.363"; W 92 19' 2.591")

Continue to descend toward the Creek. You will come to another split in the trail. Take the branch to the right and round the bend. As the trail flattens out a little and continues along Turkey Creek, look to the right and discover a beautiful natural moss garden. There are several mosses present. The *Atrichum* you saw at the first stop on the trail also grows here. There is a lovely display of *Leucobryum albidium* mixed with reindeer moss which is not a moss at all, but a lichen. The reindeer moss is the very light green stiff looking plant that mixes in with the mosses.

Moss #7 is *Leucobryum albidium* (pincushion moss). This is one of the lightest green mosses whose name reflects this lack of strong color as “leuco” refers to white. It sits in mounds all along the hillside. The mounds do resemble pincushions.

Moss #8 (N.38 50' 27.271"; W 92 16" 53.593")

Continue along this creekside path as it opens up with mosses growing on both sides of the path. Moss loves damp, foggy areas and this path provides a perfect setting. Soon you will come to a post marker with the letter "I". It is marking a sinkhole that borders the trail. Walk past the sinkhole and look on the hillside that borders it. There are several nice swatches of *Dicranum scoparium* tucked into this hill. If you get to marker "J" you have gone too far.

Moss #8 is *Dicranum scoparium* (windswept broom moss). It is easily recognized by its feature of looking like all the branches are leaning off in the same direction. Hence it looks like it is blowing in the wind, which gives it its name of windswept broom moss. It is one of several species of "broom" mosses.

Moss #9 (N.38 50' 32.235"; W. 92 16' 50.105")

Turn around here and enjoy a leisurely walk back down this trail past the moss displays. When you get to the junction of 2 paths, turn Right. Enjoy this pleasant leisurely walk. Note the rather large stand of Christmas fern on the right along the way as it cascades down the hillside toward the water. After awhile you will approach a spot where the trail crosses Turkey Creek. Before you get to the crossing note the rocky hillside on your left with its rich green display of mosses. Walk up close to the hillside to examine the moss as there is a particularly stunning moss that covers the soil. and tumbles down over the rocks.

Moss #9 is *Climacium americanum* (palm tree moss). This moss has large branches and stems that stand up like little palm trees. It is a rich green color and is very prolific here. There are several other mosses mixed in with it, but you will easily recognize the outsized palm trees.

Moss #10 (N. 38 84'1.924"; W. 92 28' 1.387")

Step back onto the trail in the same direction that you were going (toward the creek crossing). Looking straight ahead you will see a very large boulder covered in moss. There is a lightly worn foot path that leads up to it. Walk up to the boulder and feel the moss that grows there. If the weather is wet, it will feel lush and begs you to sink your hand into it. In dry weather, it is rough. The rock also supports many lichen and even some walking ferns (*Asplenium rhizophyllum*).

Moss #10 is *Anomodon attenuatus* (tree apron moss or poodle moss). This is the predominant moss that covers the limestone bluffs along Turkey Creek. Mostly it is seen from a distance as it covers the rock faces all along the bluffs. Since mosses seldom grow in by themselves, there are other mosses to be

found mixed in with it. Notably, It was a delightful surprise to me as I was walking the dry creek bed one day while admiring the expanse of *Anomodon* and gently running my hands along it, that I suddenly saw something new to me that was a very beautiful moss in the shape of a rose. It was *Rhodobryum ontariense* (rose moss) growing right in with it. Looking up at the unreachable mosses along the cliff face, I wondered what other wonders might be hiding there. I would not have found this moss if the creek had not been dry.

Anomodon looks quite different when wet than it does when dry. When dry it will form thick and thin mats on this rock and some branches will taper to a stringy tail, others are blunt tipped and curl into knobby pompoms giving it a bird talon appearance. This is when it also looks most like tightly curled poodle fur. During more wet seasons it looks glossier, moist and thick. It gets its common name of tree apron moss from its usual habit of growing on the bark at the base of trees. It can be found on many of the trees in Three Creeks. Look for it on your way back to the parking lot.

To return to the parking lot you can retrace your steps back. At every trail junction stay on the trail to the right. You will walk along the creek to the first junction and then turn right to go up the hill. At the next junction, just past the concrete foundation, stay to the right. You will come to the wooden sign that says Turkey Creek Trail, turn right to take the double track back to the parking lot.

If the creek is crossable, you can continue your hike by going forward on the trail and following it all the way to its end at the parking lot. There will be several creek crossings along this route and the hike will be slightly longer.

References and Acknowledgements

For moss identification, I relied heavily on the field guide *Common Mosses of the Northeast and Appalachians* by Carl B. McKnight, Joseph R. Rohrer, Kirsten McKnight Ward, and Warren J. Perdrizet published by Princeton University Press

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Contact me at lfenner@hotmail.com. I welcome any suggestions, corrections, or comments.

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