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SPECIES ACCOUNTS

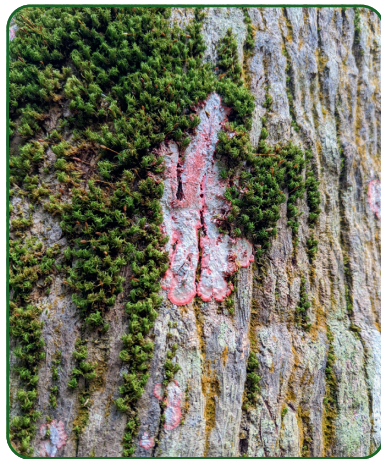


THE MAJOR ADVANTAGE OF TREE BARK as a substrate for mosses is that it places them out of competition with small vascular plants, most of which cannot grow on bark. Above the base of the tree, beginning at a height of a few centimeters above the ground in dry habitats or up to a meter or more in moist forests, trunks and limbs present an environment stressed by low relative humidity, greater sun, and drying winds. Mosses growing here can dry out quickly and become dormant for prolonged periods of time. As a result, they tend to be tiny and form only small tufts and patches. They can be difficult to see when dry, but upon moistening the leaves spread, swell in size, and turn from dull to a brighter green. Most tree bark mosses grow only on tree bark, but are not limited to a single tree species.

Precipitation that falls directly on branches and leaves that is directed toward the trunk is called **stemflow**. Stemflow water counterbalances some of the effects of tree bark desiccation. As stemflow washes over rough bark, it absorbs the water and brings significant nutrients to the tree bark mosses. Because stemflow differs between species of trees, some patterns of moss diversity and abundance are likely partially attributable to stemflow.

Because conifer trees have more acidic bark and branches that shed water away from their trunks, they support a lower diversity of mosses. Deciduous trees, in contrast, have branches that reach upward and outward, intercepting precipitation and directing it to the stem, thus providing moisture that supports a greater diversity of tree bark mosses.

Some mosses growing on tree bases also grow on rotten logs, or soil, or rock on the forest floor. In this guide those not specific to tree bark are included among the **FOREST FLOOR MOSSES**.





Claopodium rostratum (p. 72)



Cryphaea glomerata (p. 90)



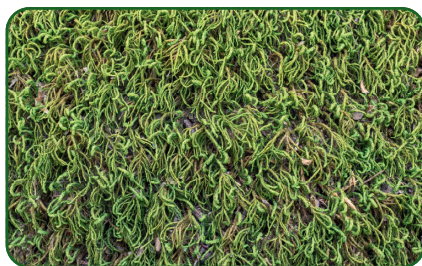
Drummondia prorepens (p. 56)



Forsstroemia trichomitria (p. 96)



Leucodon julaceus (p. 98)



Pseudanomodon attenuatus (p. 106)



Schlotheimia rugifolia (p. 58)



Thelia hirtella (p. 108)

Fissidens bryoides

BARK POCKETMOSS

APPEARANCE: Tiny, dull green plants, 0.4–1 cm long, scattered or in dense patches. Among our pocketmosses, it is the one most likely to be found growing abundantly on a tree trunk, especially above the base where other *Fissidens* species sometimes mix in. Leaves are aligned into columns, spreading outward from either side of the stem to form a flat spray. When dry, leaves bend downward and their tips loosely curl under.

LEAVES: Oblong, 1–2 mm long, abruptly tapered at the apex to an obtuse or acute point, sometimes with a tiny prick at the tip. Basal pocket covers one-half to two-thirds of the leaf length. Unlike other pocketmosses, the midrib appears to end well below the apex because it is obscured by a blanket of green cells lying over it. Edges are smooth and borderless.

CAPSULES: Erect, cylindrical, 1–2 mm long, held aloft on short, yellow to red stalks, 2–5 mm, arising among leaves at the shoot base.

HABITAT: Characteristically growing on tree bark, but sometimes on rock faces or rotting wood, in shady forests.

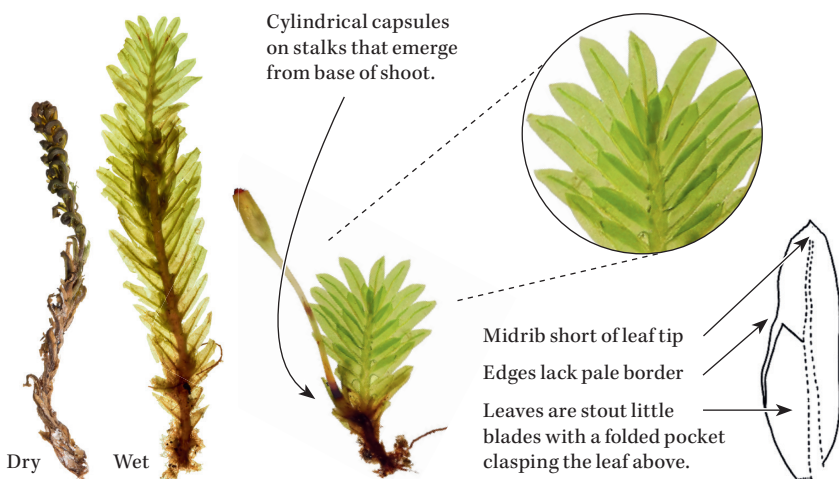
DISTRIBUTION: Widespread in the Southeast, especially common in the Appalachian Mountains and Interior Highlands.

SIMILAR SPECIES

See the Pocketmosses **QUICK GUIDE** on p. 36.

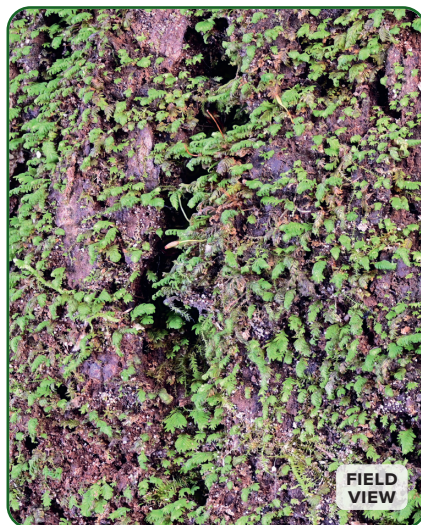
Fissidens bryoides (p. 250) Leaves have a thin, pale border, although difficult to see (use 20× lens). Capsule stalks arise from tip of leafy shoot and are often present.

Fissidens taxifolius (p. 252) Leaves slightly larger and end in a projecting tip. Capsules are inclined and slightly curved on stalks 8–17 mm long.



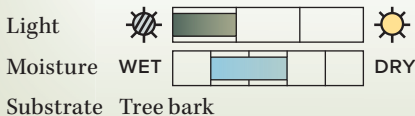


TREE BARK

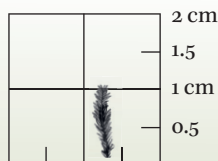


When dry, with its curled leaves, patches of this moss look drab and undistinguished. But when wet, shoots unfurl into flat, featherlike sprays that stand out from the tree or rock below.

TYPICAL HABITAT PREFERENCE



LIFE SIZE



T

TONGUE TWISTER MOSS

APPEARANCE: Tiny, dull green, yellow-green, or yellow-brown plants, 0.3–1 cm tall, sometimes growing as dense turfs but more often as inconspicuous loose tufts or scattered individuals. Dry plants have leaves folded lengthwise and strongly crisped; wet plants have spreading leaves, opened into a shallow keel.

LEAVES: Tongue-shaped, 1–2½ mm long, from a scarcely differentiated, oblong-oval, colorless base, ending in a blunt rounded or notched apex. Midrib is strong to the tip; edges are smooth.

CAPSULES: Not producing sporophytes in the Southeast region.

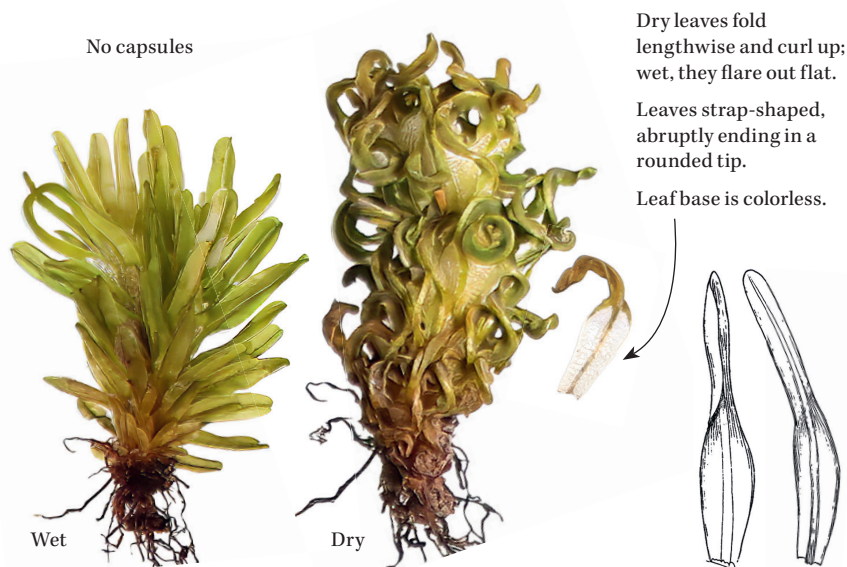
HABITAT: Bark of trees, especially common in fissures, in swamp forests, hammocks, and along rivers; sometimes on rotted wood, rarely on rock.

DISTRIBUTION: Coastal Plain; largely restricted to Florida but reported from Georgia to Louisiana along coast.

SIMILAR SPECIES

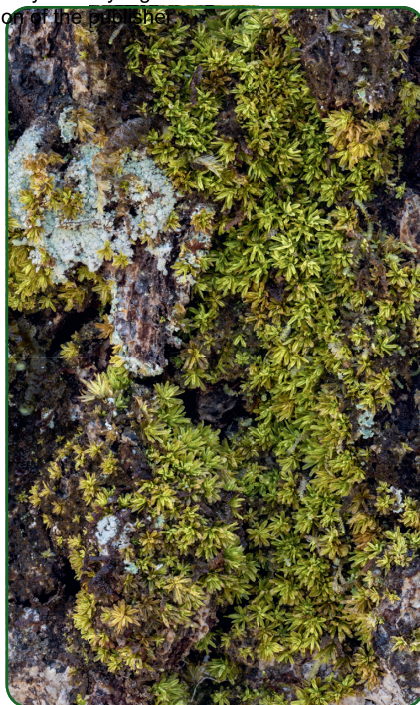
Ptychomitrium drummondii (p. 48) Also on bark in humid swamp forests and along streams but even smaller, 0.1–0.5 cm tall. Lance-shaped leaves taper to acute apex. Plants fruit frequently and abundantly, with capsules raised above leaves on short stalks.

Orthotrichum pusillum (p. 50) Another tiny bark acrocarp, 0.2–0.5 cm tall. Leaves loosely appressed to stem when dry, not contorted or crisped. Capsules hidden among leaves or the upper half peeking out from them.



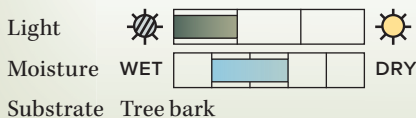


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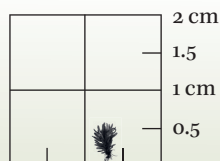


Plants change dramatically between wet and dry states. Dry leaves fold and twist around. Wet leaves open wide, like many blunt-fingered sunbursts. Check carefully for capsules; their lack actually supports this species' identification.

TYPICAL HABITAT PREFERENCE



LIFE SIZE



T

RAGGED MITRE MOSS

APPEARANCE: Tiny, upright plants, 0.1–0.5 cm tall, form scattered small tufts to large, dense, dark green to blackish green colonies on tree trunks. When wet, the leaves are a bit brighter in color and spread from the stem at about a 45° angle. As they dry, the dull leaves fold lengthwise along the midrib and press closer to the stem, but they remain straight or curve only slightly (not curling like pig tails). The plants fruit frequently and abundantly. Even though the yellow capsules are tiny, they catch the eye and aid in separating this species from other small, bark mosses.

LEAVES: Lance-shaped, 1½–2 mm long, gradually tapering to an acute apex. Midrib runs to the tip. Edges are smooth.

CAPSULES: Upright, oblong-elliptic, about 1 mm long, atop a 1–3 mm stalk. The long-beaked lid and about half of the capsule are covered by a mitre-shaped hood, its lower portion torn into lobes.

HABITAT: Bark, especially of trees in humid sites such as along streams or in swamps, but also common on the trunks of city shade trees. Rarely on rock, concrete, asphalt pavement, or roof shingles.

DISTRIBUTION: Widespread in the Southeast—common on the Coastal Plain and in the Piedmont, but largely absent from the Appalachian Mountains and Interior Highlands.

SIMILAR SPECIES

Drummondia proprepens (p. 56) Has upright shoots of a similar size and appearance on bark. However, those shoots are attached to a creeping stem, which creates distinctive lines of shoots.

Orthotrichum pusillum (p. 50) Another tiny bark acrocarp of similar size and appearance, but with capsules hidden among the leaves or barely poking out from them. The hoods are pleated and dome-shaped without a long apical beak or basal lobes.

Ptychomitrium incurvum (p. 238) Similar in size but nearly always growing on rock. Dry leaves are glossy and strongly curled like pig tails.



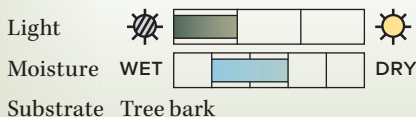


TREE BARK

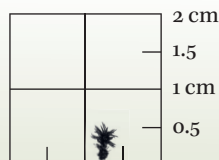


Like tiny baby birds with upturned beaks, the abundant capsules on this moss catch the observant eye. Plants grow in small flat clusters or large patchy colonies. The field view shows a clump of *P. drummondii* with capsules (a) between stringy branches of *Leucodon julaceus* (b).

TYPICAL HABITAT PREFERENCE



LIFE SIZE



T

TINY BRISTLEMOSS

APPEARANCE: Tiny, only 0.2–0.5 cm high, green, dark green, or blackish green, upright plants in scattered clusters of a few plants or in larger colonies. When dry, easily overlooked hidden among bigger bark mosses and lichens, the leaves are loosely appressed to the stem. Upon wetting, the leaves brighten in color and bristle outward, making the diminutive plants more likely to catch the eye.

LEAVES: Lance-shaped, 1–2 mm, ending in a bluntly pointed tip. Midrib runs to just below the apex. Edges are rolled under and smooth.

CAPSULES: Upright, oblong-ovate, 1–1½ mm long, on a very short stalk, thus hidden among the surrounding leaves or with the upper half emergent from them. Delicate and straw-colored, the dry capsules are smooth to somewhat wrinkled, occasionally with 8 barely discernable ribs, and are not constricted below the mouth, which is ringed with 16 erect teeth (sometimes recurved or broken off with age). Hood is pleated and hairless.

HABITAT: On bark of hardwoods in rather open sites, occasionally on junipers; look for it on trees lining city streets and at highway rest areas.

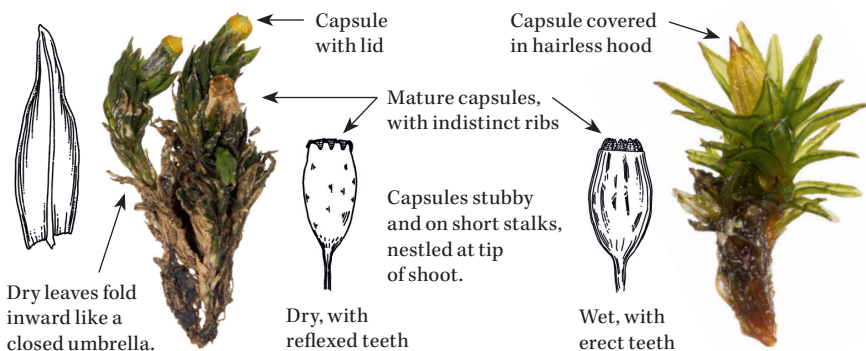
DISTRIBUTION: Widespread in the Southeast; the most common *Orthotrichum* of the southern Piedmont and Coastal Plain provinces.

SIMILAR SPECIES

Orthotrichum ohioense (p. 52) Plants grow on trees and are 0.4–1.4 cm tall. Dry capsules have 8 ribs and are not or only weakly constricted below the mouth; their tops emerge above the leaf tips. Hoods are hairless to slightly hairy.

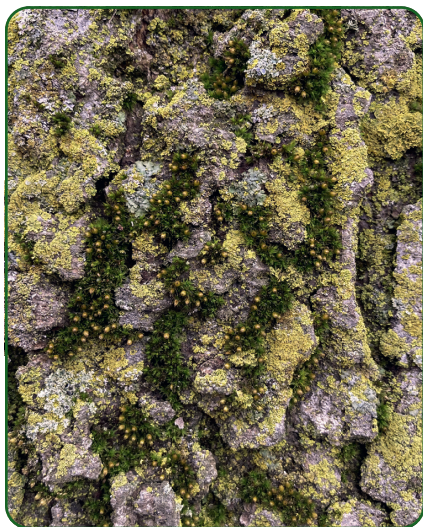
Orthotrichum stellatum (p. 52) Plants grow on trees and are only 0.3–0.8 cm high. Dry capsules are 8-ribbed and strongly constricted below mouth, which bears 8 reflexed teeth. Hoods are hairless or sometimes slightly hairy.

Ptychomitrium drummondii (p. 48) Is of similar size and appearance but with stalks lifting the capsules clearly above the leaves. Hood is bell-shaped with a long apical beak and basal lobes.



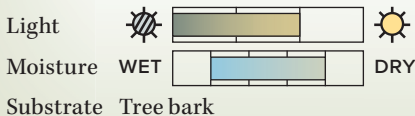


TREE BARK

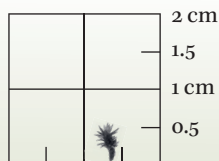


When dry, this moss looks like a scattering of tiny balls over tree bark. Wet leaves flare open as starlike crowns around each tiny, nestled capsule. Look closer to confirm its unribbed capsules and hairless hoods.

TYPICAL HABITAT PREFERENCE



LIFE SIZE



T

BALD BRISTLEMOSS

APPEARANCE: Upright, yellow-green to brownish plants, 0.3–0.8 cm tall, in small clusters. Leaves are densely crowded and are drawn together tightly and erect when dry, like dry paintbrushes. Wet plants turn bright lime green and look starry as leaves spread outward 60° near top of stems, 45° further down.

LEAVES: Lance-shaped, 2–2½ mm long, coming to a short-angled point. Midrib is strong to tip. Leaf edges are smooth and curled down, making the borders look dark.

CAPSULES: About 2 mm long, cylindrical; upon drying, becoming vase-shaped with 8 broad ribs and very strongly constricted below wide-flaring mouth which bears 8 reflexed teeth. Hoods are pleated and hairless or sometimes slightly hairy. Capsules are borne on short stalks, barely emerging above the leaf tips.

HABITAT: On tree trunks and branches of hardwoods, especially in oak-hickory forests, occasionally on logs or stumps.

DISTRIBUTION: Widespread south to North Carolina, Tennessee, and northern Arkansas; scattered locations reported further south.

SIMILAR SPECIES

***Orthotrichum ohioense*, THISTLE BRISTLEMOSS:** Slightly larger, otherwise similar plants with a similar habitat and distribution. Plants stand 0.4–1.0 cm, or rarely to 1.4 cm tall. Dry capsules have 8 narrow ribs and are not or only weakly constricted below the mouth, which is ringed with 16 reflexed teeth (sometimes in 8 pairs when young). Hoods are hairless to slightly hairy.

***Orthotrichum pusillum* (p. 50)** Plants grow on trees and are only 0.2–0.5 cm high. Dry capsules are delicate with a smooth or wrinkled surface, sometimes ever so slightly 8-ribbed in age, and not contracted below the mouth, which bears 16 teeth. Hoods are hairless.

O. stellatum

Capsules constricted below 8-toothed mouth.



Leaves shaped like daggers, with prominent midrib and edges.

Dry leaves draw inward without contorting.

O. ohioense

Capsules not much constricted below 16-toothed mouth.



O. stellatum

O. ohioense

DRY

DRY

a

b

WET

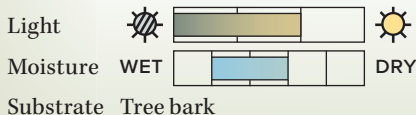
FIELD VIEW

TREE BARK

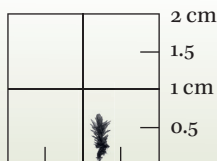
T

Inconspicuous clusters cling to tree bark. Dry plants close up like a folded umbrella, and when moist they open like tiny starfish. Capsules are nestled in close, just peeking from the branch tips. Capsules with pleated hoods (b), and without (a), showing their puckered mouths.

TYPICAL HABITAT PREFERENCE



LIFE SIZE



Ulota crispata

CRISPY TUFT MOSS

APPEARANCE: Upright plants form dense, rounded mounds, usually 0.5–1.5 cm high (occasionally taller), of dull, green to yellow-green on tree trunks. When dry, leaves are tightly curled-crisped. Wet leaves straighten and spread outward, revealing reddish brown stems matted with fuzz at the base.

LEAVES: Narrowly lance-shaped, coming to a sharp point but without needle or hair extensions, 2–3 mm long. Midrib is strong to tip. Edges are smooth and usually lack a dark border from curled leaf edges. Pale and translucent except for dark green midrib and red leaf base.

CAPSULES: Oblong-cylindrical, 1–2 mm long, constricted below the mouth when older, becoming vase-shaped; the base gradually tapers to stalk. Dry capsules are strongly 8-ribbed, with 8 tan, reflexed teeth around mouth. Lid is stoutly beaked and hood bears numerous long hairs. Stalks 1–4 mm tall lift capsules well above leaves.

HABITAT: Tree trunks and branches in moist forests; also on rotting logs.

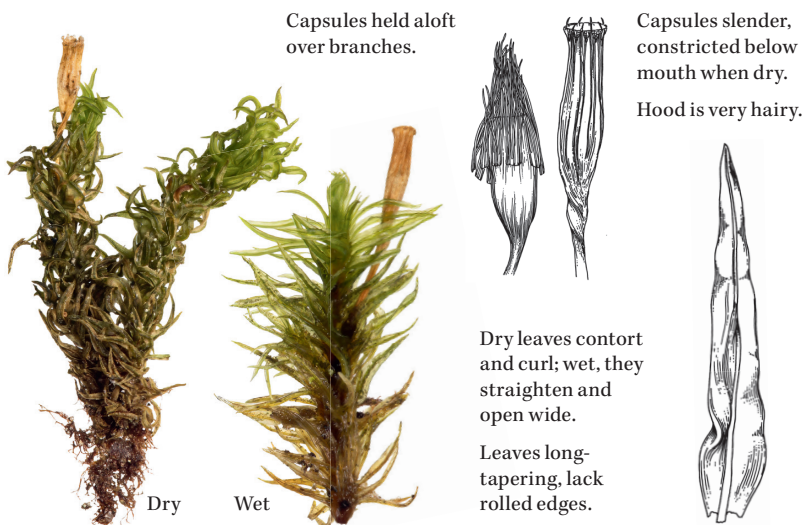
DISTRIBUTION: Appalachian Mountains.

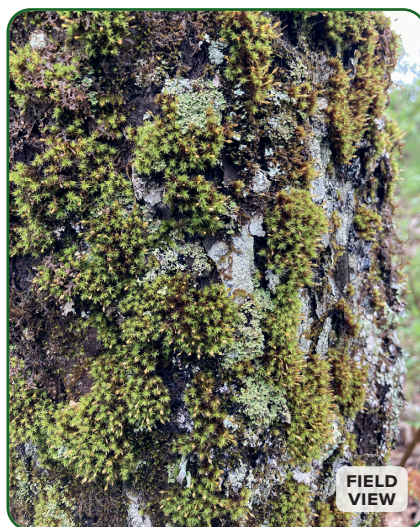
OTHER NAME: *Ulota crispa*

SIMILAR SPECIES

Ulota hutchinsiae (p. 242) Grows typically on rocks but occasionally spreads to nearby trees; leaves are pressed to stem when dry, but not curled-contorted.

Orthotrichum (pp. 50, 52, 240) Has very short stalks so that the capsules are largely surrounded by leaves; when dry, leaves are drawn close to the stem but not curled or contorted.

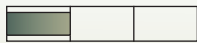




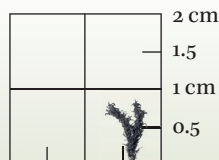
TREE BARK

These dense cushions adhere to tree bark, transforming from crispy, curled up mounds to bright starry patches when wet. Abundant capsules, like tiny torches, project above leaves. Areas with especially high humidity allow plants to lengthen into sprawling plumes (a).

TYPICAL HABITAT PREFERENCE

Light   
 Moisture **WET**  **DRY**
 Substrate Tree bark

LIFE SIZE



T

Drummondia pulchella

TRAILBLAZER MOSS

APPEARANCE: Dull, dark green to blackish mats on tree bark with distinctive lines radiating outward from the mat. On either side of trailing stems, up to 10 cm long, arise closely spaced upright shoots, 0.1–0.6 cm tall, which are often forked and somewhat curved when dry. Dark hairs tightly attach the threadlike stems to bark. The erect shoots appear budlike when dry, their leaves overlapping and held close to the branch, and starlike when wet as their leaves spread widely outward.

LEAVES: Oblong-lance-shaped, 1–2 mm long, keeled along midrib like a boat, coming to a pointed or blunt apex. Midrib ends just below tip. Leaf surface is not wrinkled; edges are smooth.

CAPSULES: Oblong-ellipsoid, about 1 mm long, upright with a wide, toothless mouth. Lid has a long, spindly beak from a convex base and is covered by a hairless hood. Stalk is 2–4 mm tall and holds the capsule above the leafy shoot.

HABITAT: Bark of trees, especially hardwoods such as oaks.

DISTRIBUTION: Widespread, most common in the Appalachian Mountains and Interior Highlands, but absent from much of the Coastal Plain.

SIMILAR SPECIES

Orthotrichum (pp. 50, 52, 240) Without a creeping stem, plants form clusters rather than trailing in dark lines along bark. Capsules are toothed and just peeking out from amid leaves.

Schlotheimia rugifolia (p. 58) Has trailing stems densely covered in brown fuzz, but they less commonly extend outward from the mat as distinctive lines. Upright branches are plumper and 0.2–0.8 cm tall. Leaves show wrinkles, both wet and dry.

Ulota crispula (p. 54) Plants form clusters, rather than trailing in dark lines along bark. Leaves are 2–3 mm long. Capsules are toothed and covered with a hairy hood during development.



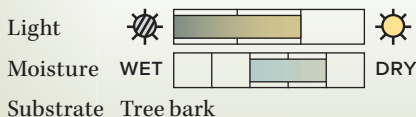


TREE BARK

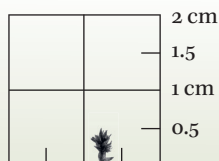


Plants spread outward like subway map lines traced over tree bark. Starlike, moist shoots draw closed when dry, like tiny buds. Capsules look like long-stemmed wine glasses, and are covered in beaked hoods while developing.

TYPICAL HABITAT PREFERENCE



LIFE SIZE



T

WRINKLED TREE CLIMBER

APPEARANCE: Medium-sized plants form low, dark green to reddish brown mats, with growing tips being a lighter green, especially when wet. Ascending to erect branches, 0.2–0.8 cm tall, may appear at first to be individual plants, but they arise from long, creeping stems that are obscured by a dense covering of reddish brown hairs, which hold the plants fast to tree trunks and limbs. When dry, the crowded, overlapping leaves are gently spiraled like soft-serve ice cream and held tightly around the branches; when moist, they spread widely outward, roselike.

LEAVES: Oblong to elongate tongue-shaped, 1–2 mm long, broadly pointed to nearly rounded at the apex. The leaf surface is wrinkled crosswise, wet or dry; a strong midrib protrudes from the lower surface like a boat keel and extends at the tip as a short nib.

CAPSULES: Oblong-cylindrical, erect, about 2 mm long, extending just a tad above the surrounding leaves on short stalks, 2–4 mm long. An unusually large hood, resembling a candle snuffer, covers the entire capsule to maturity; it is hairless, not pleated, and split at the base into 4–6 flaps.

HABITAT: On bark of tree trunks and branches, often high in the canopy, in mesic and wet forests; occasionally on logs or other substrates.

DISTRIBUTION: Coastal Plain; disjunctive to the southern end of the Appalachians.

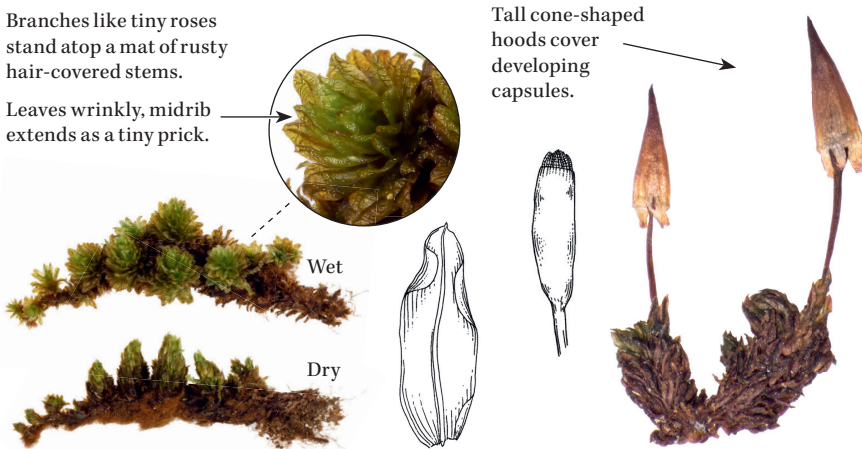
SIMILAR SPECIES

Drummondia prorepens (p. 56) A bit smaller with a similar habit, but the edges of the mat typically extend outward as creeping dark lines with upright shoots on either side, 0.1–0.6 cm tall. Leaves are not wrinkled, and creeping stems are less densely hairy.

Orthotrichum (pp. 50, 52, 240) Typically occurs as small clusters of erect plants and lacks creeping stems. Capsules are nearly hidden by surrounding leaves with only their tops showing; the hoods are pleated and not split at the base.

Branches like tiny roses stand atop a mat of rusty hair-covered stems.

Leaves wrinkly, midrib extends as a tiny prick.



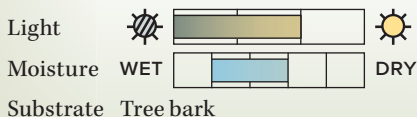


TREE BARK

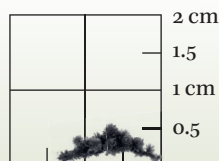


Wet plants look like green roses on a carpet of rusty hairs. The bright leaves are enfolded by older growth when dry, turning the mats brown and scruffy. As interspecies communities are more common than isolation, *S. rugifolia* is shown here growing with a wormlike, leafy liverwort (a).

TYPICAL HABITAT PREFERENCE



LIFE SIZE



T

FROST MOSS

APPEARANCE: Small, glossy and attractive, green to grayish green when moist and turning gray to cream-colored as they dry, in 0.5–1 (occasionally to 3) cm high tufts. The crowded straplike leaves bend outward from wider, upright bases, some spreading widely and arching downward. Short sporophytes are often present.

LEAVES: Flat, oblong straps from a winged base, 4–6 mm long, the tips rounded to broadly pointed and ending in a short, white tooth. Being several cell layers thick, the leaves are opaque, a bit fleshy in texture, and completely hide the midrib. Older dry leaves can become fragile.

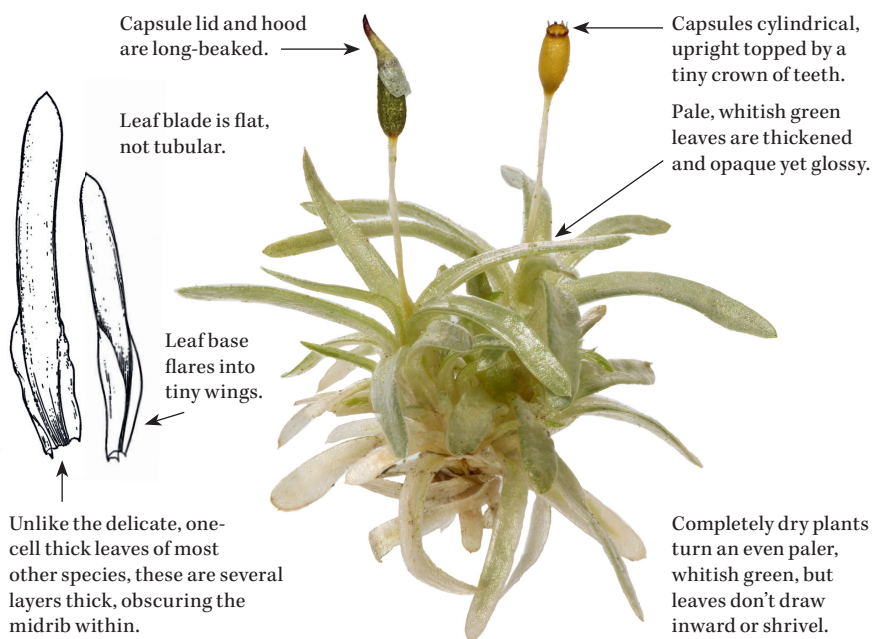
CAPSULES: Upright, ovoid-cylindrical, about 1 mm long, light brown, lifted above the leaves on yellow stalks, 3–5 mm tall. Lid is long-beaked and about two-thirds the length of the urn. Around the mouth are 8 short, triangular teeth.

HABITAT: On bark, especially on the trunks of palms, also live oaks and other hardwoods, and on rotting logs; occasionally on soil and humus.

DISTRIBUTION: Common only in peninsular Florida.

SIMILAR SPECIES

Leucobryum albidum (p. 128) Leaves usually 2–4 mm long with a deeply concave to tubular upper half. Capsules are inclined, curved when dry, and 1–2 mm long. Grows on soil, humus, rotten wood; when on trees, it is usually near the base and favors pines.



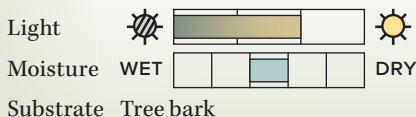


TREE BARK

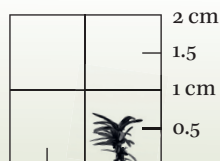


Wide-spreading, straplike leaves have a distinctive pale white-green hue. They are glossy, but thicker and more opaque than most mosses, like tiny succulents. Plants spread like ice crystals or frost flowers over tree trunks, especially on palm trees.

TYPICAL HABITAT PREFERENCE



LIFE SIZE



S

Dicranum viride

BRITTLE BROOM MOSS

APPEARANCE: Upright stems form dark green to yellow-green cushions, 1–3 cm high, bearing leaves that are broken toward the tips, as though plants were given a messy haircut. Wet leaves are straight and point out from reddish stems, looking spiky-starry. Dry leaves are modestly incurled and stiffly upright. Brown fuzz covers the stems.

LEAVES: Long-triangular tapering blade, 4–7 mm long, with fine tips that are often broken off, leaving a flat end. Midrib is wide and dark, disappears into tip. Edges are smooth. Leaves are neither curved as a group to one side nor tightly crisped when dry, as in related species.

CAPSULES: Rare; cylindrical, straight, upright, 2–3 mm long. Stalk extends 10–17 mm. More frequently reproduces vegetatively via the broken leaf tips.

HABITAT: Tree trunks, tree bases, and rotting logs; rarely on rock.

DISTRIBUTION: Restricted to the Appalachian Mountains.

OTHER NAME: *Orthodicranum viride*

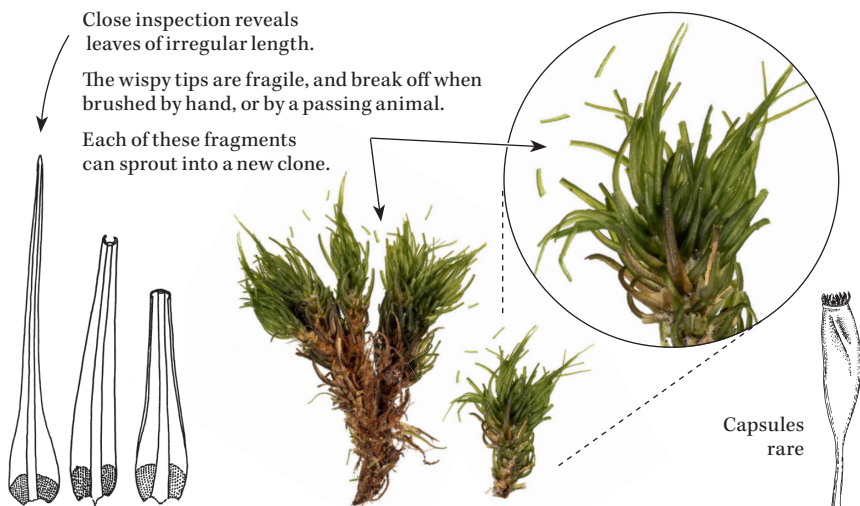
SIMILAR SPECIES

See the Broom Mosses & Look-alikes **QUICK GUIDE** on p. 38.

Dicranum flagellare (p. 132) Tiny, asparagus-stalklike branches are produced at tops of stems among normal wispy leaves.

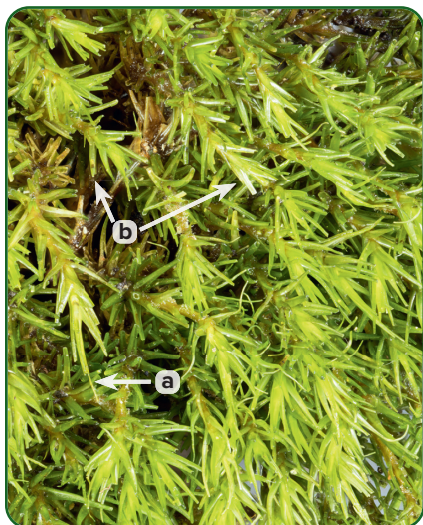
Dicranum fulvum (p. 256) Plants are usually larger, 2–5 cm. Leaves lack the many broken tips. On rock.

Dicranum montanum (p. 126) Leaves no more than 4 mm long, with intact tips that are very tightly curled-contorted when dry.



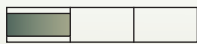


TREE BARK

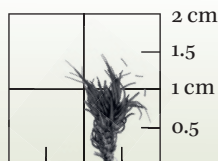


Plants form scruffy clumps. Some leaves retain their long-tapering, wispy tips (a), but many, on closer inspection, are missing their tips (b). Though seemingly the victim of an unfortunate haircut, actually these brittle fragments are an adaptation to help vegetatively spread the moss.

TYPICAL HABITAT PREFERENCE

Light   
 Moisture **WET**  **DRY**
 Substrate Tree bark

LIFE SIZE



S

SILVER BROOM MOSS

APPEARANCE: Plants form windswept patches with leaves densely packed along upright stems, 1–5 cm high. When dry, plants are whitish green to green with a characteristic gray sheen. Upon wetting, the silvery cast fades and the plants become a brighter green, but the leaves maintain their gentle curl to one side, wet or dry. Lower stems are often covered in fuzz.

LEAVES: Hairlike, 4–8 mm long. Edges are smooth and curved upward like a canoe, nearly forming a tube. All but the leaf base is made entirely of midrib; its backside has faint white and green parallel stripes running the length of leaf (visible when viewed with a hand lens).

CAPSULES: Cylindrical, straight, 2–3 mm long, upright on a 10–20 mm stalk. Lid is long-beaked.

HABITAT: Tree trunks, rotten logs, occasionally on rock and thin soil or humus over rocks and boulders, especially in moist forests.

DISTRIBUTION: Appalachian Mountains, especially the higher elevations.

SIMILAR SPECIES

See the Broom Mosses & Look-alikes **QUICK GUIDE** on p. 38.

Dicranum scoparium (p. 134) Lacks the grayish tint. Capsules curved, inclined or horizontal. Usually on soil or humus; not directly on rock or bark. Widespread.

Dicranum fulvum (p. 256) Darker green to brownish, without silvery color. Dry leaves tightly curl in many directions or off to one side. Widespread.



Narrow leaves are inrolled, like the sides of a canoe.

Midrib fills whole blade, except at base.

Peel off a leaf to see the tiny transparent wings on either side of the thickened midrib.

Cylindrical capsules are held far above wispy leaves.



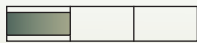
TREE BARK



FIELD VIEW

Silver Broom Moss looks like an antique fur pelt wrapped around a tree trunk; its leaves are windswept, gently curled, and hairlike whether wet or dry. Moisture does affect color: wet plants are bright green; when they dry, they acquire a silvery sheen.

TYPICAL HABITAT PREFERENCE

Light   
 Moisture WET  DRY
 Substrate Tree bark

LIFE SIZE



S

Syrrhopodon texanus

NET MOSS

APPEARANCE: Loose, dull, green to brown tufts, 0.5–3 cm high, sometimes forming dense, extensive mats almost completely covering a tree trunk. Stems stand erect, fork repeatedly, and are often matted with red-brown fuzz. Leaves roll lengthwise, curve to one side, and twist at the tip when dry; leaves spread and somewhat flatten to form a channeled blade when moistened.

LEAVES: Lance-shaped, 2½–5 mm long, from an oblong, colorless base held close to stem (appears white when dry in strong contrast to green upper leaf) bends and narrows at shoulder to a long lance- or strap-shaped limb, ending in a broadly acute, obtuse, or rounded apex. Midrib is strong and ends at tip. Edges have a thickened border plus tiny teeth too small to see, except perhaps with a 20× lens and good light. Leaves sometimes bear tiny, clustered, asexually reproductive propagules (gemmae) near their tips.

CAPSULES: Upright, cylindrical, 1–2½ mm long, held well above leaves on 5–12 mm stalks. Lid is slenderly long-beaked. Sporophytes recorded only from Florida.

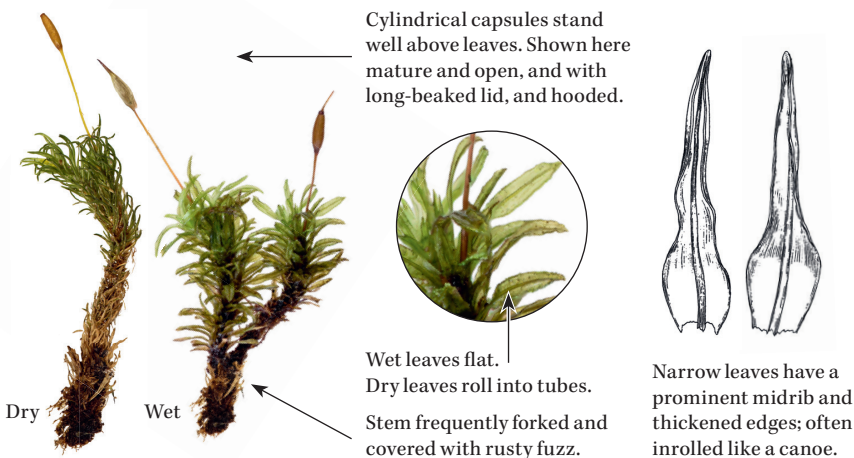
HABITAT: On trunks, bases, and roots of trees, especially palms; also on rotten logs and stumps.

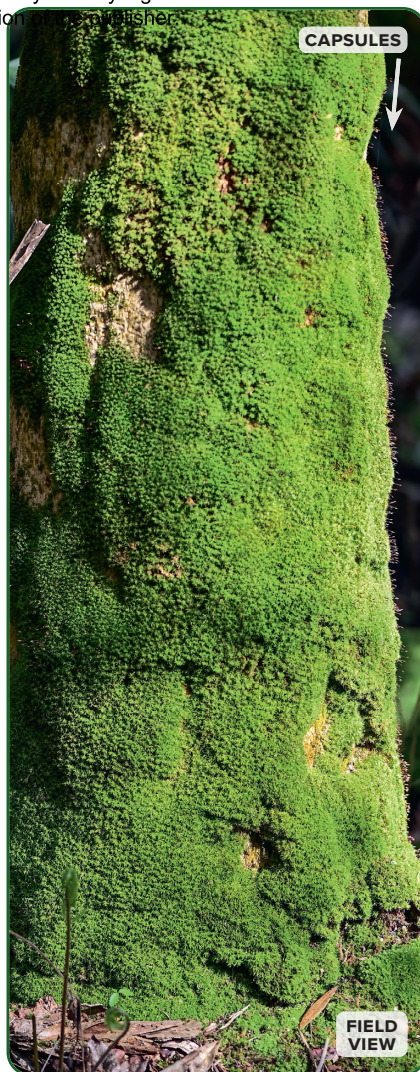
DISTRIBUTION: Florida and along the Gulf and Atlantic Coasts.

SIMILAR SPECIES

Syrrhopodon texanus (p. 144) Often bearing gemmae at tips of leaves that are narrower and more rigid than the leaves below. In addition to Coastal Plain, plants occur on rock in the Interior Highlands and Appalachian Mountains.

Tortella humilis (p. 124) Grows on bark at base of trees but also on soil, rock, and mortar; almost always with sporophytes. Capsule teeth are filamentous and twisted like a tornado funnel. Widespread in the Southeast.

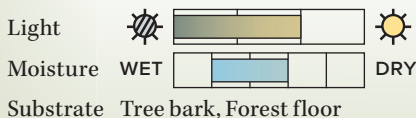




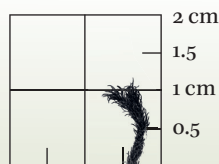
TREE BARK

Scruffy, loose tufts lacking capsules are common for this species. On palms in Florida, the starry plants pack together like a dense knit blanket wrapped around the tree base and are liberally sprinkled with capsules (see right side profile of Field View image above).

TYPICAL HABITAT PREFERENCE



LIFE SIZE



S

RAPUNZEL MOSS

APPEARANCE: Plants form stringy, flat, irregularly branching mats, with the branches running downward, parallel to each other like strands of combed hair. Shoots are slender and dark green to pale green with a gentle golden sheen. Stems tend to be conspicuously broader than branches, some of which taper to a long, very slender tip bearing tiny leaves. Shoots are densely covered in leaves that are drawn together, scalelike when dry. Wet leaves are still overlapping and upright with only their wispy tips spreading outward.

LEAVES: Lance-shaped with bowed sides to egg-shaped, tapering gradually to a short, slender point, shorter than 1 mm. Midrib is lacking and edges are smooth.

CAPSULES: Oblong-cylindrical, about 1 mm long, with a conical lid. Stalk is orange-red, 4–8 mm long. Infrequent.

HABITAT: Bark, especially toward the base of hardwood trees, rocks, rotten logs.

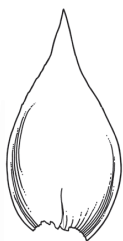
DISTRIBUTION: Widespread in the Southeast.

SIMILAR SPECIES

Pylaisiadelphina tenuirostris (p. 278) Similarly small and shiny, but with leaves curved off to either side of branch. Lid is slenderly beaked.

Jochenia pallescens (p. 70) Shoots are more regularly branched, featherlike. Leaf tips curl off to one side like sickles. Capsules are very common.

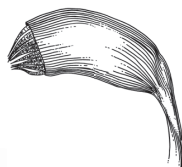
Clasmatodon parvulus (p. 78) Plants are dull rather than shiny and less evenly branched. Stem and branches are similar in width; leaves have a midrib.

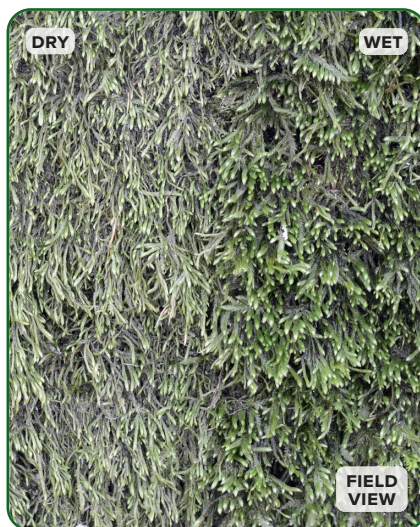
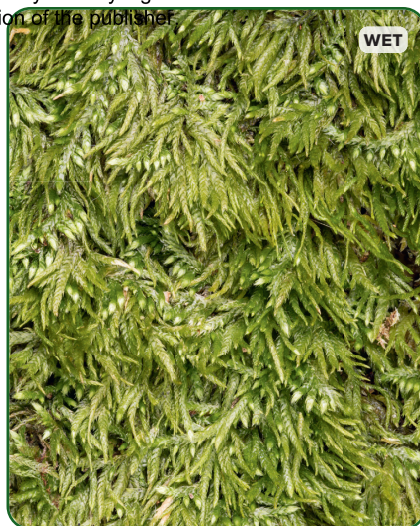
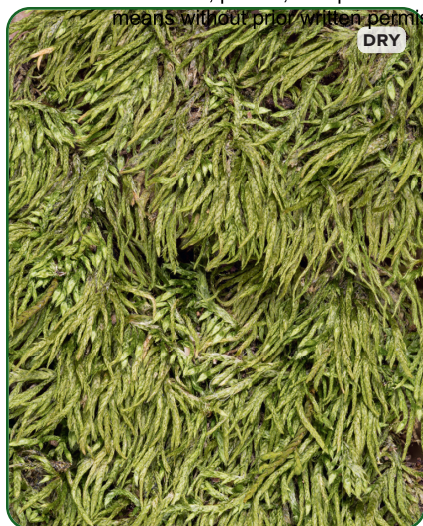


Leaves are tiny, taper to a sharp point, and lack a midrib.

Plants branch irregularly and are densely covered in overlapping leaves that flare out only slightly when wet.

Capsules uncommon; short-cylindrical with a conical lid on a reddish stalk.

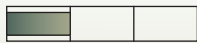




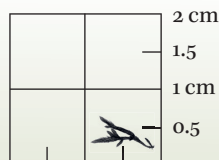
TREE BARK

Slender plants with a golden sheen, *S. fabronia* branches look like tresses that have been combed and braided into a flowing, thin mat. Not much changed wet to dry. Some branches taper into particularly slender tails covered in even tinier leaves (a).

TYPICAL HABITAT PREFERENCE

Light   
 Moisture **WET**  **DRY**
 Substrate Tree bark, Rock

LIFE SIZE



T

Jochenia pallescens

LESSER PLAITMOSS

APPEARANCE: Carpets of tiny, shiny, dark green moss (their thin tips appearing paler), creep like satin threads over bark and rock. Branches are regularly pinnate and densely covered with leaves. The leaves overlap, with their tiny sharp tips curled way under, giving the branches the tight and tidy look of embroidery floss. Not much changed wet or dry. Often produces a cloud of capsules.

LEAVES: Narrowly ovate, up to 1 mm long, cupped, with a long, curved tip, like a sickle. Midrib is lacking and edges are smooth.

CAPSULES: Often abundant, cylindrical, 1–2 mm long, erect in the basal two-thirds but upper one-third curving 90° to horizontal at maturity, contracted below the mouth when dry; lid is beaked. Stalk rises 6–15 mm.

HABITAT: On bark, especially at the base of trees, rotting logs, and rocks in dry to moist forests.

OTHER NAME: *Hypnum pallescens*

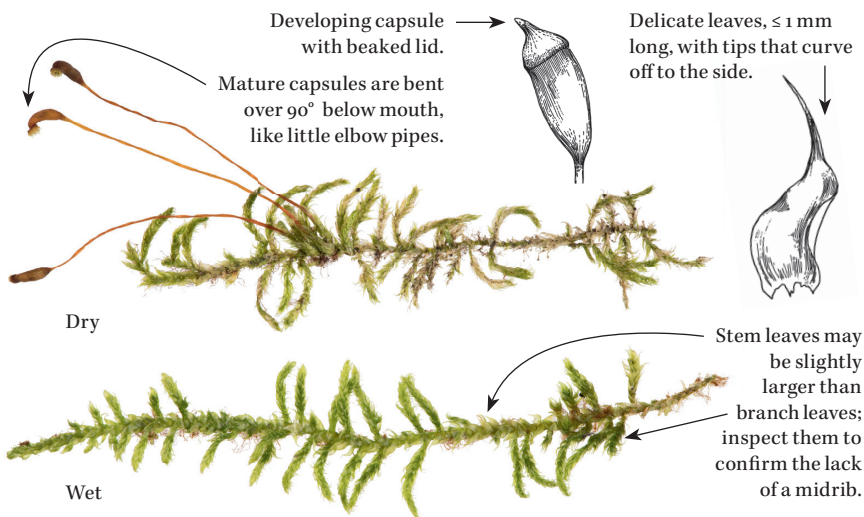
DISTRIBUTION: Largely restricted to the Appalachian Mountains.

SIMILAR SPECIES

Callicladium imponens (p. 214) Tends to be a bit bigger with leaves about 2 mm long, and branches very regularly. Capsules are barely curved atop 10–30-mm stalks.

Pylaisiadelphina tenuirostris (p. 278) Similar in size and aspect, but leaves are less curved, and capsules are erect and straight.

Schwetschkeopsis fabronia (p. 68) Plants branch irregularly and resemble fine combed strands of hair. Leaf tips are not curved to one side, and capsules are very uncommon.



Bold italic: currently accepted species names

Italic: other names used for the species

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