



Massachusetts Mosses of Interest

Moss is important to biodiversity not only in Massachusetts, but in the world. In Massachusetts, there are approximately 440 known species of moss, including 44 species of *Sphagnum*. Two Massachusetts moss experts have proposed 136 species (including 25 *Sphagnum* species) that are rare within the Commonwealth as Species of Greatest Conservation Need. *Sphagnum* species and their peat are thought to be the most efficient plants for sequestering carbon (Cardona-Correa et al. 2016, as cited in Karlin 2022). In addition, moss supports many animal species from micro-invertebrates to mammals. It is often overlooked yet it contributes to soil health and nutrient sequestration. The soil under a layer of moss contains higher levels of magnesium, nitrogen and phosphorus than adjacent bare soils (Eldridge et al. 2023). Rain is more easily absorbed by moss than by bare soil, and moss maintains soil moisture by releasing its moisture slowly. Through its ability to break down debris into soil and nutrients, it supports vascular plants.

Massachusetts is starting to look at the importance of moss in maintaining our biodiversity. Several species appear rare with few known locations. As such, these very uncommon moss species are included on the updated Plant Watch List. Their habitat needs and ecology are not well known in many cases, so fact sheets for these species have not been produced in the 2025 SWAP. Over the next 10 years, it is anticipated that more research into these species and their importance will be completed.

<u>Mosses of Interest</u>	<u>State Rank</u>	<u>Global Rank</u>	<u>Synonyms</u>	<u>SWAP Habitat</u>
<i>Abietinella abietina</i> (Hedw.) Fleisch.	S1	G5		Rock outcrops, cliffs and talus
<i>Acaulon muticum</i> (Hedw.) C. Mull.	S1	G4		Dry woodlands and barrens; cultural grasslands
<i>Amphidium lapponicum</i> (Hedw.) Schimp.	S1	G5		Forest Swamps and Seeps, Gently-sloping cold streams, Gently-sloping cool streams, steep cold streams, steep cool streams
<i>Amphidium mougeotii</i> (Bruch & Schimp. in B.S.G.) Schimp.	S1	G5		Forest Swamps and Seeps, Gently-sloping cold streams, Gently-sloping cool streams, steep cold streams, steep cool streams
<i>Anomodon rugelii</i> (C. Mull.) Keissl.	S2	G5		Mature Forests
<i>Anomodon viticulosus</i> (Hedw.) Hook. & Tayl.	S2	G5		Rock Outcrops, Cliffs and Talus

<i>Aphanorrhegma serratum</i> (Hook. f. & Wils. in Drumm.) Sull. in Gray	S2	G4	<i>Physcomitrium serratum</i> (Wilson & Hook.) Müll. Hal.	Cultural Grasslands; Gently-sloping Cold Streams; Gently-sloping Cool Streams
<i>Astomum muhlenbergianum</i> (Swartz) Grout	S1	G5	<i>Weissia muhlenbergiana</i> (Sw.) W.D. Reese & B.A.E. Lemmon	Cultural Grasslands; Marshes and Wet Meadows
<i>Atrichum tenellum</i> (Rohl.) Bruch & Schimp.	SU/S1	G4		Forest Swamps and Seeps, Gently-sloping cold streams, Gently-sloping cool streams, Acidic Peatlands
<i>Aulacomnium androgynum</i> (Hedw.) Schwaegr.	S1S2	G5		Forest Swamps and Seeps; Acidic Peatlands
<i>Barbula convoluta</i> Hedw.	S2	G5	<i>Streblotrichum convolutum</i> (Hedw.) P. Beauv.	Rock Outcrops, Cliffs and Talus
<i>Blindia acuta</i> (Hedw.) Bruch & Schimp. in B.S.G.	S2	G5		Rock outcrops, cliffs and talus; Steep cold streams; Steep Cool Streams; Steep Cold Rivers; Steep Cold Streams
<i>Bruchia flexuosa</i> (Sw. ex Schwaegr.) C. Mull.	S2	G4		Cultural grasslands
<i>Bryoerythrophyllum recurvirostrum</i> (Hedw.) Chen	S2	G5		Rock Outcrops, Cliffs and Talus; Steep Cold Rivers; Steep Cool Rivers; Gently-sloping Cold Rivers; Gently-sloping Cool Rivers; Gently-sloping Warm Rivers
<i>Bryum dichotomum</i> Hedw.	S1	G4	<i>Gemmabryum dichotomum</i> (Hedw.) J.R. Spence & H.P. Ramsay	Cultural Grasslands; Dry Woodlands and Barrens
<i>Bryum lisae</i> De Notaris var <i>cuspidatum</i> (Bruch & Schimper) Margadant	S2	G5	<i>Ptychostomum creberrimum</i> (Taylor) J.R. Spence & H.P. Ramsay	Cultural grasslands; Rock Outcrops, Cliffs and Talus
<i>Bryum violaceum</i> Crundw. & Nyholm	S1	G5	<i>Gemmabryum violaceum</i> (Crundw. & Nyholm) J.R. Spence	Cultural Grasslands
<i>Bucklandiella sudetica</i> (Funk) Bednarek-Ochyra & Ochyra	S2	G5		Rock Outcrops, Cliffs and Talus
<i>Buxbaumia minakatae</i> Okam.	S1	G3		Mature Forests

<i>Calliergon giganteum</i> (Schimp.) Kindb.	S2	G5		Calcareous Wetlands
<i>Campylium polygamum</i> (Schimp.) C.E.O. Jensen	S1S2	G5	Drepanocladus polygamus (Schimp.) Hedenäs	Calcareous Wetlands; Forest Swamps and Seeps; Marshes and Wet Meadows; Riparian and Floodplains; Shallow Drainage Lakes and Ponds; Shallow Headwater and Isolated Lakes and Ponds
<i>Campylium stellatum</i> (Heds.) C. Jens.	S2	G5		Calcareous Wetlands; Forest Swamps and Seeps; Marshes and Wet Meadows
<i>Campylostelium saxicola</i> (F. Weber & D. Mohr) Bruch & Schimper	S2	G4		Northern Hardwood and Conifer Forests; Oak Forests and Woodlands; Rock Outcrops, Cliffs and Talus.
<i>Cratoneuron filicinum</i> (Hedwig) Spruce	S1	G5		Calcareous Wetlands
<i>Cryphaea glomerata</i> Schimper ex Sullivant	S1	G5		Northern Hardwood and Conifer Forests; Mature Forests; Riparian and Floodplains
<i>Cyrto-hypnum minutulum</i> (Hedwig) W. R. Buck & H. A. Crum	S2/SU	G5	Pelekium minutulum (Hedw.) Touw	Rock Outcrops, Cliffs and Talus; Mature Forests; Calcareous Wetlands
<i>Cyrto-hypnum pygmaeum</i> (Schimper) W. R. Buck & H. A. Crum	S1	G4	Pelekium pygmaeum (Schimp.) Touw	Mature Forests, Rock Outcrops, Cliffs, and Talus
<i>Desmatodon plinthobius</i> Sullivant & Lesquereux in A. Gray,	S1	G4	Tortula plinthobia (Sull. & Lesq.) Broth.	Rock Outcrops, Cliffs and Talus
<i>Dichodontium pellucidum</i> (Hedwig) Schimper	S2	G5		Steep Cold Rivers; Steep Cold Streams; Steep Cool Rivers; Steep Cool Streams; Rock Outcrops, Cliffs and Talus
<i>Dicranella schreberiana</i> (Hedwig) Hilfert ex H.A.Crum & L.E.Anderson	S1	G5	Aongstroemia schreberiana (Hedw.) Bonfim Santos & Fedosov	Rock Outcrops, Cliffs and Talus; Forest Swamps and Seeps; Calcareous Wetlands
<i>Dicranum bonjeanii</i> De Notaris	SU/S2	G5		Acidic Peatlands; Calcareous Wetlands
<i>Dicranum ontariense</i> W.L. Peterson	S2	G5		Young Forests; Northern Hardwood and Conifer Forests
<i>Dicranum undulatum</i> Bridel	S1/SU	G5		Acidic Peatlands
<i>Didymodon fallax</i> (Hedwig) R. H. Zander	S1	G5	Geheebia fallax (Hedw.) R.H. Zander	Rock Outcrops, Cliffs, and Talus; Dry Woodlands and Barrens

<i>Didymodon rigidulus</i> Hedwig, Sp. Musc. Frond.	S1	G5	Rock Outcrops, Cliffs, and Talus; Gently-sloping Cold Streams; Gently-sloping Cool Streams; Steep Cold Streams; Calcareous Wetlands
<i>Ditrichum rhynchostegium</i> Kindb.	S1	G4	Mature Forests; Northern Hardwood and Conifer Forests; Oak Forests and Woodlands; Gently-sloping Cold Streams; Gently-sloping Cool Streams
<i>Drummondia prorepens</i> (Hedwig) E. Britton, Mem.	S1	G5	Northern Hardwood and Conifer Forests; Oak Forests and Woodlands
<i>Encalypta procera</i> Bruch, Abh.; Cl. Königl. Bayer. Akad. Wiss.	S2	G5	Rock Outcrops, Cliffs and Talus
<i>Ephemerum cohaerens</i> (Hedwig) Hampe	S1	G4	Cultural Grasslands
<i>Ephemerum crassinervium</i> (Schwägrichen) Hampe	S1	G4	Cultural Grasslands
<i>Ephemerum spinulosum</i> Bruch & Schimper	S2	G4	Cultural Grasslands
<i>Fissidens exilis</i> Hedw.	S1	G3	Gently-sloping Cold Streams; Gently-sloping Cool Streams; Forest Swamps and Seeps; Riparian and Floodplains
<i>Fissidens fontanus</i> (Bachelot de la Pylaie) Steudel	S2	G5	Gently-sloping Cold Rivers; Gently-sloping Cold Streams; Gently-sloping Cool Rivers; Gently-sloping Cool Streams; Shallow Drainage Lakes and Ponds; Tidal Wetlands
<i>Fissidens osmundioides</i> Hedw.	S2	G5	Gently-sloping Cold Streams; Gently-sloping Cool Streams; Mature Forests; Northern Hardwood and Conifer Forests; Rock Outcrops, Cliffs and Talus; Riparian and Floodplains
<i>Fontinalis hypnoides</i> Hartm.	S1	G5	Gently-sloping Cold Streams; Gently-sloping Cool Streams; Forest Swamps and Seeps; Shallow Drainage Lakes and Ponds; Shallow Headwater and Isolated Lakes and Ponds
<i>Fontinalis sphagnifolia</i> (C. Mull.) Wijk & Marg.	S1	G4	Gently-sloping Cold Streams; Gently-sloping Cool Streams
<i>Forsstroemia trichomitria</i> (Hedw.) Lindb.	S2	G5	Gently-sloping Cold Streams; Gently-sloping Cool Streams; Mature Forests; Rock Outcrops, Cliffs and Talus; Riparian and Floodplains

<i>Funaria flavicans</i> Michx.	S1	G5		Cultural Grasslands; Dry Grasslands and Heathlands; Dry Woodlands and Barrens
<i>Grimmia incurva</i> Schwaegr.	S1	NR		Rock Outcrops, Cliffs, and Talus
<i>Hageniella micans</i> (Mitt.) B.C. Tan & Y. Jia	S1	G4		Gently-sloping Cold Streams; Gently-sloping Cool Streams
<i>Haplocladium microphyllum</i> (Hedw.) Broth.	SU/S2	G5		Northern Hardwood and Conifer Forests; Young Forests; Cultural Shrublands
<i>Helodium blandowii</i> (Web. & Mohr) Warnst.	S1	G5		Calcareous Wetlands; Forest Swamps and Seeps
<i>Helodium elodioides</i> (Ren. and Card.) Crum, et al	S1	G3	<i>Elodium elodioides</i> (Renauld & Cardot ex Röhl) Eckel	Acidic Peatlands, Calcareous Wetlands; Forest Swamps and Seeps; Shallow Drainage Lakes and Ponds; Shallow Headwater and Isolated Lakes and Ponds
<i>Homalotheciella subcapillata</i> (Hedw.) Broth.	S1	G5		Oak Forests and Woodlands; Forest Swamps and Seeps
<i>Hygrohypnum duriusculum</i> (De Not.) Jamieson	S2	G5	<i>Platyhypnum duriusculum</i> (De Not.) Ochyra	Steep Cold Streams; Steep Cool Streams
<i>Hygrohypnum luridum</i> (Hedw.) Jenn.	S1	G5		Steep Cold Streams; Steep Cool Streams; Calcareous Wetlands
<i>Hygrohypnum montanum</i> (Lindb.) Broth	S1	G4	<i>Campylophyllum montanum</i> (Lindb.) B.H. Allen	Steep Cold Streams; Steep Cool Streams; Rock Outcrops, Cliffs, and Talus
<i>Hylocomiastrum pyrenaicum</i> (Spruce) Fleisch. in Broth.	S1	G5	<i>Hylocomium pyrenaicum</i> (Spruce) Lindb.	Steep Cold Streams; Steep Cool Streams; Calcareous Wetlands
<i>Hylocomium brevirostre</i> (Bridel) Schimper	S1	G5	<i>Loeskeobryum brevirostre</i> (Brid.) M. Fleisch.	
<i>Hylocomium umbratum</i> (Hedw.) Fleisch. in Broth.	S1	G5	<i>Hylocomiastrum umbratum</i> (Hedw.) M. Fleisch. ex Broth.	Forest Swamps and Seeps; Calcareous Wetlands; Northern Hardwood and Conifer Forests; Riparian and Floodplains
<i>Hymenostylium recurvirostrum</i> (Hedw.) Dix.	S1	G5	<i>Gymnostomum recurvirostrum</i> Hedw.	Rock Outcrops, Cliffs, and Talus; Steep Cold Streams; Steep Cool Streams
<i>Hyophila involuta</i> (Hook.) Jaeg.	S1	G4		Gently-sloping Cold Streams: Gently-sloping Cool Streams; Steep Cold Streams; Steep Cool Streams; Rock Outcrops, Cliffs, and Talus; Mature Forests

<i>Hypnum fauriei</i> Cardot	SU	G5	Pseudohygrohypnum fauriei (Cardot) Jan Kučera & Ignatov	Mature Forests; Northern Hardwood and Conifer Forests
<i>Hypnum fertile</i> Sendtn.	SU		Pseudohygrohypnum fertile (Sendtn.) Jan Kučera & Ignatov	
<i>Isopterygium tenerum</i> (Sw.) Mitt.	S2	G5		Northern Hardwood and Conifer Forests; Mature Forests
<i>Leskeella nervosa</i> (Brid.) Loeske	S2	G5	Pseudoleskeella nervosa (Brid.) Nyholm	Mature Forests; Northern Hardwood and Conifer Forests; Calcareous Wetlands
<i>Leucodon andrewsianus</i> (Crum & Anderson) Reese & Anderson	S2	G5	Leucodon sciuroides (Hedw.) Schwägr.	Forest Swamps and Seeps; Northern Hardwoods and Conifer Forests, Oak Forests and Woodlands; Rock Outcrops, Cliffs, and Talus
<i>Leucodon brachypus</i> Brid.	S1/SU	G5		Mature Forests; Northern Hardwoods and Conifer Forests; Rock Outcrops, Cliffs, and Talus
<i>Lindbergia brachyptera</i> (Mitt.) Kindb.	S1	G5		Northern Hardwood and Conifer Forests; Mature Forests; Rock Outcrops, Cliffs, and Talus
<i>Micromitrium megalosporum</i> Aust.	S1	G4		Shallow Drainage Lakes and Ponds; Shallow Headwater and Isolated Lakes and Ponds; Vernal Pools; Cultural Grasslands
<i>Micromitrium tenerum</i> (Bruch & Schimp. in B.S.G.) Crosby	S1	G4		Cultural Grasslands; Shallow Drainage Lakes and Ponds; Shallow Headwater and Isolated Lakes and Ponds; Vernal Pools; Forest Swamps and Seeps
<i>Myurella sibirica</i> (C. Mull.) Reim.	S2	G5		Rock Outcrops, Cliffs, and Talus; Steep Cold Streams; Steep Cool Streams
<i>Oncophorus wahlenbergii</i> Brid.	S2	G5	Brideliella wahlenbergii (Brid.) Fedosov, M. Stech & Ignatov	Forested Swamps and Seeps; Mature Forests; Northern Harwood and Conifer Forests; Riparian and Floodplains
<i>Orthotrichum lescurii</i> Aust.	S1	NR		Calcareous Wetlands; Rock Outcrops, Cliffs and Talus
<i>Orthotrichum pusillum</i> Mitten	S2	G5		Oak Forests and Woodlands; Northern Hardwoods and Confer Forests; Dry Woodlands and Barrens
<i>Orthotrichum strangulatum</i> P. Beauv.	S1	G4		Rock Outcrops, Cliffs, and Talus; Dry Woodlands and Barrens
<i>Philonotis marchica</i> (Hedw.) Brid.	S1	G5		Forest Swamps and Seeps; Calcareous Wetlands

<i>Physcomitrella patens</i> (Hedw.) Bruch & Schimp. in B.S.G.	S1	G4	Physcomitrium patens (Hedw.) Mitt.	Riparian and Floodplains
<i>Plagiomnium medium</i>	S2	G5		Forest Swamps and Seeps, Riparian and Floodplains, Vernal Pools
<i>Plagiomnium rostratum</i>	S2	G5		Rock Outcrops, Cliffs and Talus
<i>Plagiopus oederiana</i>	S1	G5		Forest Swamps and Seeps, Rock Outcrops, Cliffs and Talus
<i>Platydictya confervoides</i>	S1	G4	Serpoleskea confervoides (Brid.) Loeske	Riparian and Floodplains, Rock Outcrops, Cliffs and Talus
<i>Platydictya jungermannioides</i>	S2	G5		Rock Outcrops, Cliffs and Talus
<i>Platydictya subtilis</i>	S2	G5	Pseudoamblystegium subtile (Hedw.) Vanderp. & Hedenäs	Mature Forests, Northern Hardwoods and Conifer Forests
<i>Pogonatum dentatum</i>	S1	G5		Dry Grasslands and Heathlands
<i>Pogonatum urnigerum</i>	S2	G5		Dry Grasslands and Heathlands, Rock Outcrops, Cliffs and Talus
<i>Pohlia bulbifera</i>	S2	G5		Riparian and Floodplains, Vernal Pools
<i>Pohlia lescuriana</i>	SU	G4		Northern Hardwoods and Coniferous Forests, Riparian and Floodplains
<i>Polytrichum formosum</i>	S2	G5		Forest Swamps and Seeps, Mature Forests, Northern Hardwoods and Coniferous Forests
<i>Polytrichum longisetum</i>	S2	G5		Forest Swamps and Seeps, Mature Forests, Northern Hardwoods and Coniferous Forests
<i>Ptychomitrium serratum</i>	S1	G4		Rock Outcrops, Cliffs and Talus
<i>Pylaisiadelpha tenuirostris</i>	S2	G5		Mature Forests, Northern Hardwoods and Coniferous Forests
<i>Saelania glaucescens</i>	S1	G5		Rock Outcrops, Cliffs and Talus
<i>Schistidium dupretii</i>	S1	NR		Rock Outcrops, Cliffs and Talus
<i>Schistidium liliputanum</i>	S1	NR		Rock Outcrops, Cliffs and Talus
<i>Schistostega pennata</i>	S1	G4		Caves and Karsts, Rock Outcrops, Cliffs and Talus
<i>Schwetschkeopsis fabronia</i>	S1	G5		Mature Forests, Northern Hardwoods and Coniferous Forests

<i>Sematophyllum adnatum</i>	S1	G5	Forest Swamps and Seeps, Mature Forests, Northern Hardwoods and Coniferous Forests
<i>Sematophyllum marylandicum</i>	S1	G5	Riparian and Floodplains, Steep Cold Streams, Steep Cool Streams
<i>Splachnum ampullaceum</i>	S1	G5	Acidic Peatlands, Forest Swamps and Seeps
<i>Straminiergon (Calliergon) stramineum</i>	S2	G5	Acidic Peatlands, Calcareous Wetlands, Forest Swamps and Seeps
<i>Syntrichia ruralis</i>	S2	G5	Rock Outcrops, Cliffs and Talus
<i>Taxiphyllum deplanatum</i>	S2	G4	Mature Forests, Northern Hardwoods and Conifer Forests, Rock Outcrops, Cliffs and Talus, Calcareous Wetlands
<i>Timmia megapolitana</i>	S1	G5	Caves and Karsts, Mature Forests, Northern Hardwoods and Conifer Forests, Calcareous Wetlands
<i>Tomentypnum nitens</i>	S1	G5	Calcareous Wetlands, Forest Swamps and Seeps, Marshes and Wet Meadows
<i>Tortula mucronifolia</i>	S1	G5	Rock Outcrops, Cliffs and Talus
<i>Tortula muralis</i>	S1	G5	Rock Outcrops, Cliffs and Talus
<i>Trematodon longicollis</i>	S1	G5	Cultural Grasslands
<i>Weissia brachycarpa</i>	S1	NR	Cultural Grasslands
<i>Zygodon conoideus</i>	S1	G4	Mature Forests, Northern Hardwoods and Conifer Forests
<i>Zygodon viridissimus</i>	S1	G5	Mature Forests, Northern Hardwoods and Conifer Forests