

Bryophyte and Lichen Technical Committee

December 31, 2014

Annual Report



Anomodon attenuatus blanketing a sugar maple trunk in a mid-to-late successional northern hardwood forest in Susquehannock State Forest in Potter County. Extensive populations of this species covering tree trunks are indicative of very little disturbance to the forest community. (Photo credit: Scott Schuette, Pennsylvania Natural Heritage Program)

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2014 Year in Review

Bryophyte and lichen field activities this year were more limited, but focused in areas of need this year. The committee met in Pittsburgh to discuss activities, make determinations on developing tracking lists for mosses and liverworts, and proposed the formation of Pennsylvania Bryophyte and Lichen Association. Each committee member left the meeting energized and tasked with increasing awareness and appreciation of the overlooked segments of our biota. The following report highlights the activities that were undertaken across the state in 2014.

Preliminary State Ranks for Bryophytes and Lichens

A major task for the committee in 2014 was to begin the process of assigning state conservation ranks to all bryophyte and lichen species. We began with compiling the lists of taxa that are known from the state using herbarium, literature, and recent collection accounts. From these records we determined there are 478 mosses, 140 liverworts, 3 hornworts, and 625 lichens in Pennsylvania.

While data on lichen ranks are still being analyzed, preliminary rank data are ready for the bryophytes. A majority of our bryoflora (510 species) is globally common and stable. However we have 30 species of globally rare bryophytes in the state and 62 species that are unranked or not yet treated in NatureServe. Based on our currently known populations, 331 of the species qualify for state rare, threatened, or endangered status, while 142 species are considered stable, 78 species are historic, and 51 species are unranked or lack enough information for ranking.

From this analysis we can identify a small subset of species that will be proposed for state listing. All bryophytes are currently tracked by the Pennsylvania Natural Heritage Program, but by providing a small list of species for proposed protection we are taking the next step in saving this important component of our biota.

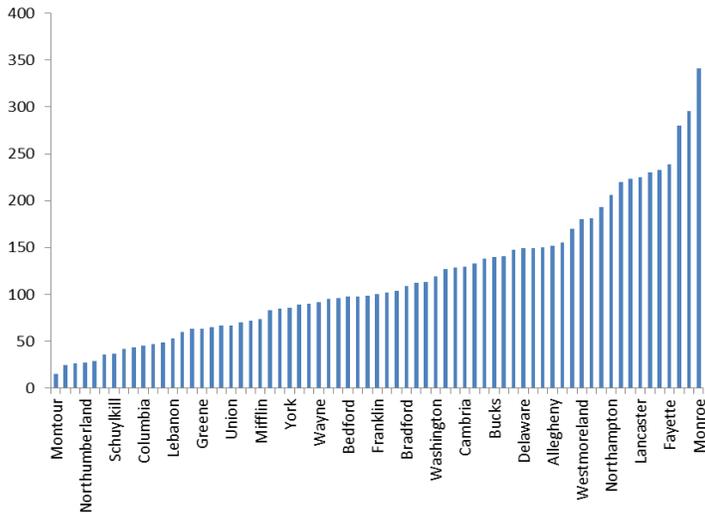


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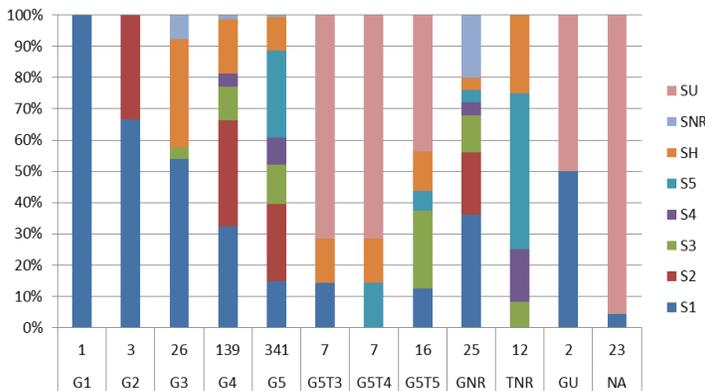
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of Bryophyte Taxa by County



Lobaria pulmonaria (a.k.a the Lung Lichen) shown here growing on a large boulder in a late successional forest stand in Loyalsock State Forest. This species is indicative of habitats with very low disturbances. (Photo Credit: Scott Schuette, Pennsylvania Natural Heritage Program)

Breakdown of Bryophyte Proposed State Ranks



Current BLTC Members

- Bryan Dolney, Pittsburgh Parks Conservancy
- Dr. David Kravesky, Slippery Rock University
- John Kunsman, PA Natural Heritage Program
- Dr. James Lendemer, New York Botanical Garden
- Dr. Don Davis, Penn State University*
- Dr. Susan Munch, Albright College
- Dr. Matthew Opdyke, Point Park University
- Dr. Tamyra d'Artenay, Penn State Shenango*
- Dr. Hank Webster, Penn State DuBois

*New members to the committee this year



Ulota crispera (right) growing on a red maple branch in a floodplain forest. (Photo credit: Scott Schuette, Pennsylvania Natural Heritage Program)

Upcoming Checklists

During the analysis for state ranking we were able to identify those counties that need more survey and inventory work. We found that the least species rich county is Montour with 15 documented species and the most species rich county is Monroe with 381 species. An updated checklist for Montour County has been prepared is expected to be published late 2015 or early 2016. Other under-collected counties (Northumberland and Jefferson) with low species numbers have been surveyed and checklists are prepared for publication in late 2015 or early 2016. In addition, work is underway on checklists for Erie, Lehigh, Northampton, and Lycoming counties



Pellia epiphylla (a simple thalloid liverwort) growing on wet soil along a stream in Buchanan State Forest in Bedford County. This species prefers acidic moist to wet substrates and is relatively common throughout Pennsylvania (Photo Credit: Scott Schuette, Pennsylvania Natural Heritage Program)



Trichocolea tomentella (a leafy liverwort) growing on wet decaying logs along Solomon's Run in Tiadaghton State Forest in Lycoming County. This species prefers circumneutral to calcareous moist substrates and is relatively common in Pennsylvania (Photo Credit: Scott Schuette, Pennsylvania Natural Heritage Program)

BLTC Goals for 2015

- Update state lists bryophytes and lichens
- Select test species cases to run through NatureServe Rank Calculator and Climate Change Vulnerability Index
- Analyze species distributions to determine rarity ranks
- Continue field work in regions of need