

# A Bryoflora of the Gifford Pinchot National Forest

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### Abstract

The Gifford Pinchot National Forest (GPNF) covers 1.3 million acres and extends from Mt. Rainier National Park to the Columbia River. Because the Gifford Pinchot National Forest has such a wide range in the western region of Washington, there is a substantial amount of recorded flora present in the forest. However, there are many areas in the forest still lacking bryophyte collection data. A survey of the bryophytes in these sites could add previously unrecorded species for this part of Washington. This study aims to establish a preliminary checklist of the bryophytes in the Gifford Pinchot National Forest based on previous and new data. The checklist will also feature a dichotomous key for the taxa represented.

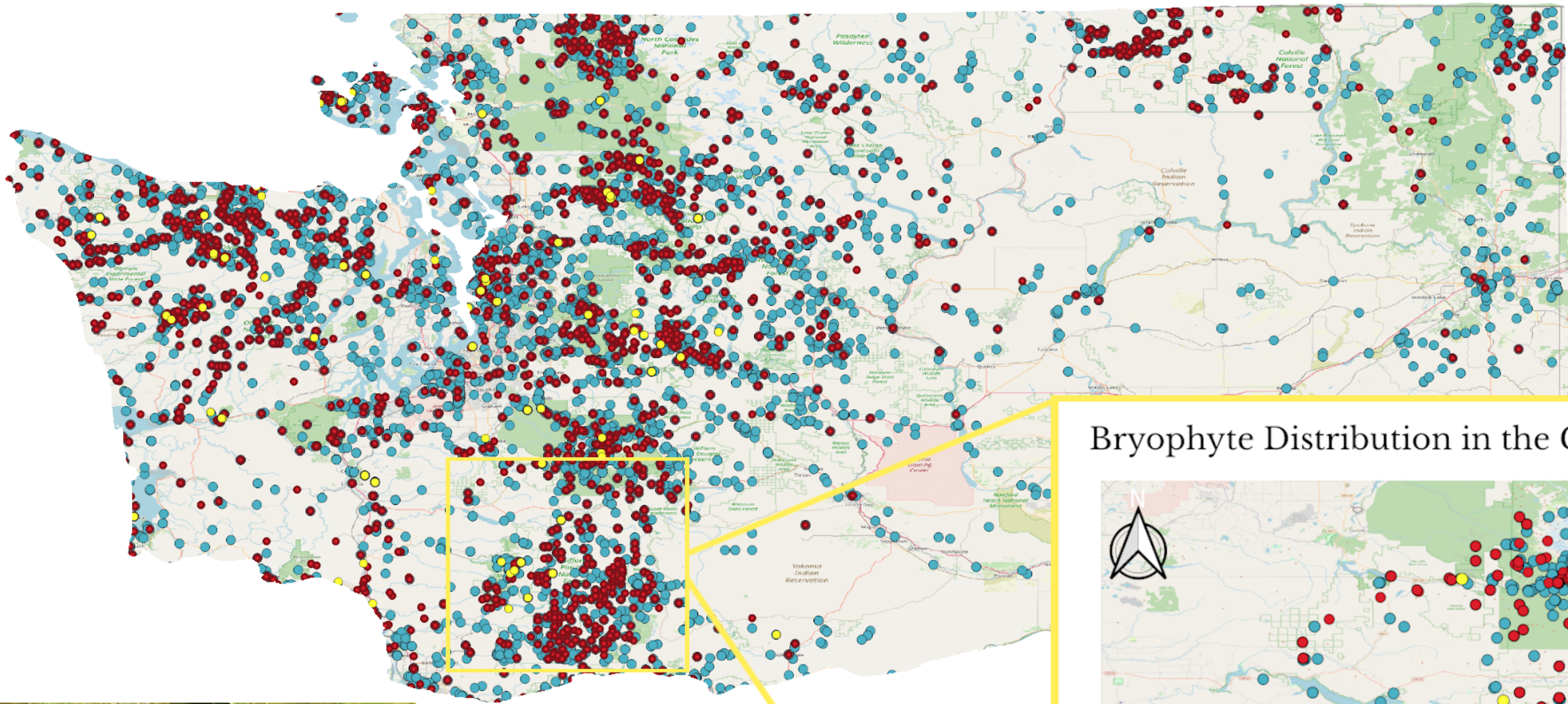
### Background

Bryophytes are land plants without vascular tissue, and they form the sister lineage to all other land plants (flowering plants, gymnosperms, ferns, etc.). Bryophyte distributions and abundance data is grossly underrepresented in floristics studies throughout the United States. Plant conservation efforts fall short if they do not also include bryophyte population distributions and abundance data, and so efforts to understand non-vascular plant distributions in the state of Washington is underway. The increasing occurrence of wildfires in the Pacific Northwest reinforces the importance of knowing what bryophyte microhabitats are present so that management plans can be designed accordingly.

### Methods

I utilized existing occurrence data from the Consortium of North American Bryophyte Herbaria to first determine the collection history in the GPNF. From the digitized data available, I was able to determine sites in the forest that had little to no collection history. I plan on collecting bryophytes in these sites to potentially add any previously unrecorded species to a working bryophyte checklist of the GPNF. Many of the existing collections of bryophytes are categorized as “historical” (collected pre-1988). Recollection of these species will validate their persistence in the the GPNF. Discovery of any rare bryophytes may also spur further conservation planning for these species. At the end of my survey, I will develop a dichotomous key for the forest to assist in future field bryophyte surveys, both within the GPNF and the state of Washington. I also plan on using QGIS software to produce a phytogeographical figure of the working bryophyte distribution data for both the entire state and for the GPNF, in greater detail.

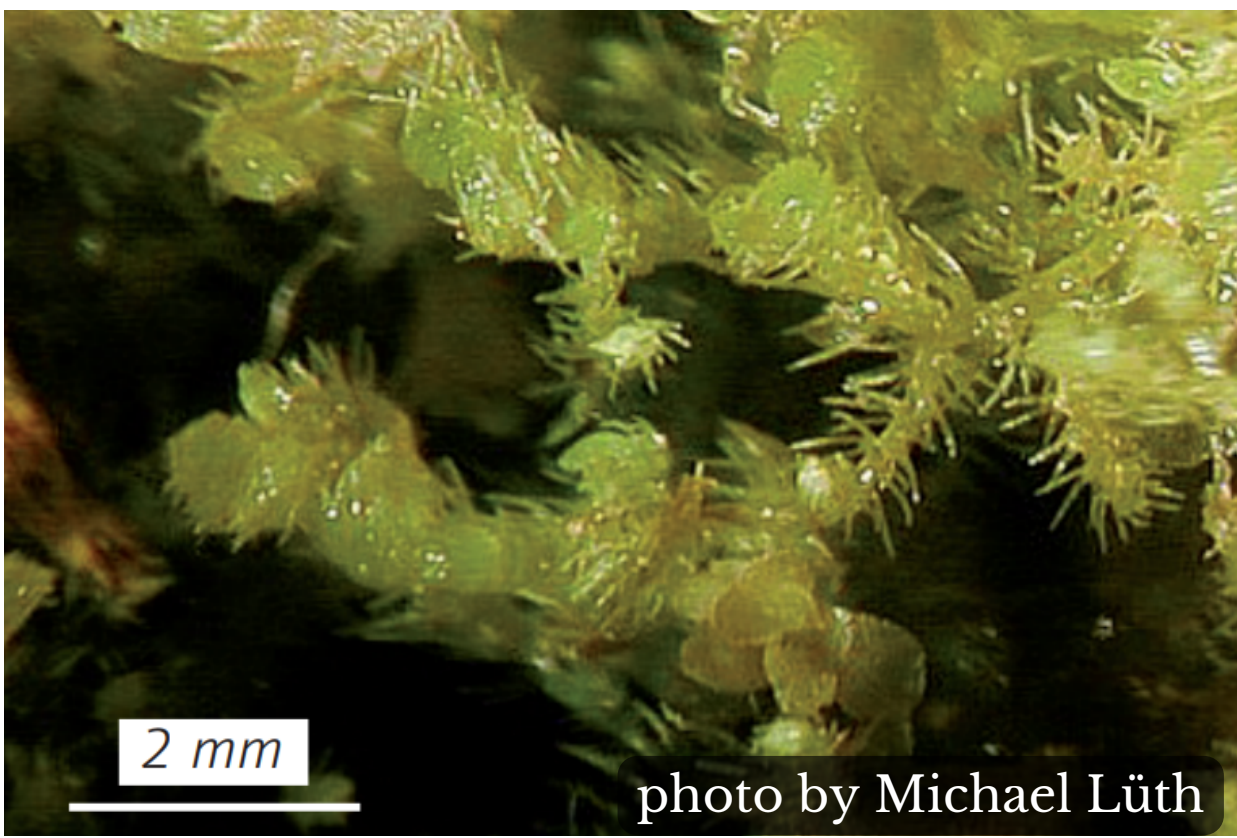
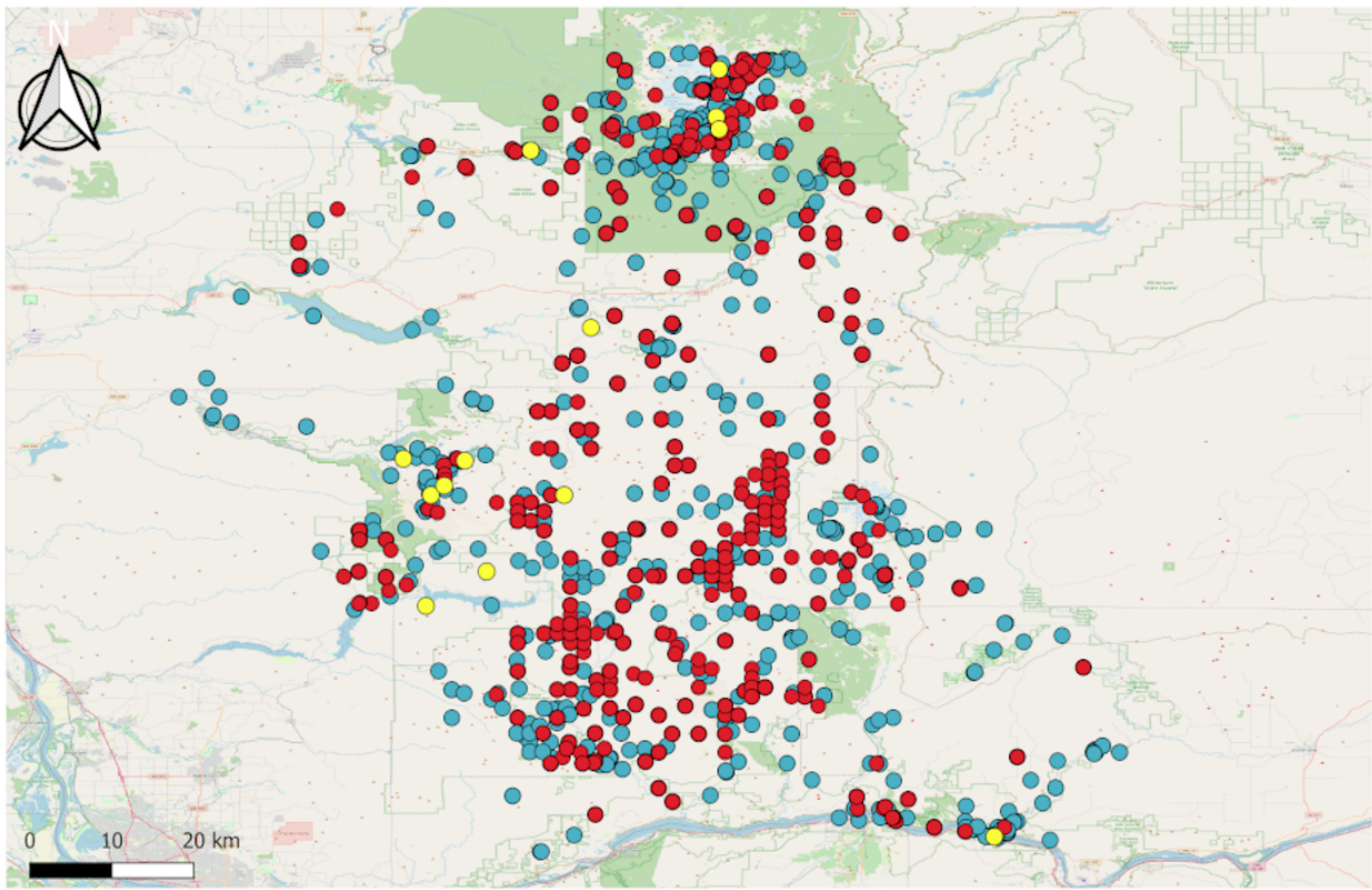
Bryophyte Occurrence in the State of Washington



### Legend

- Hornworts
- Liverworts
- Mosses

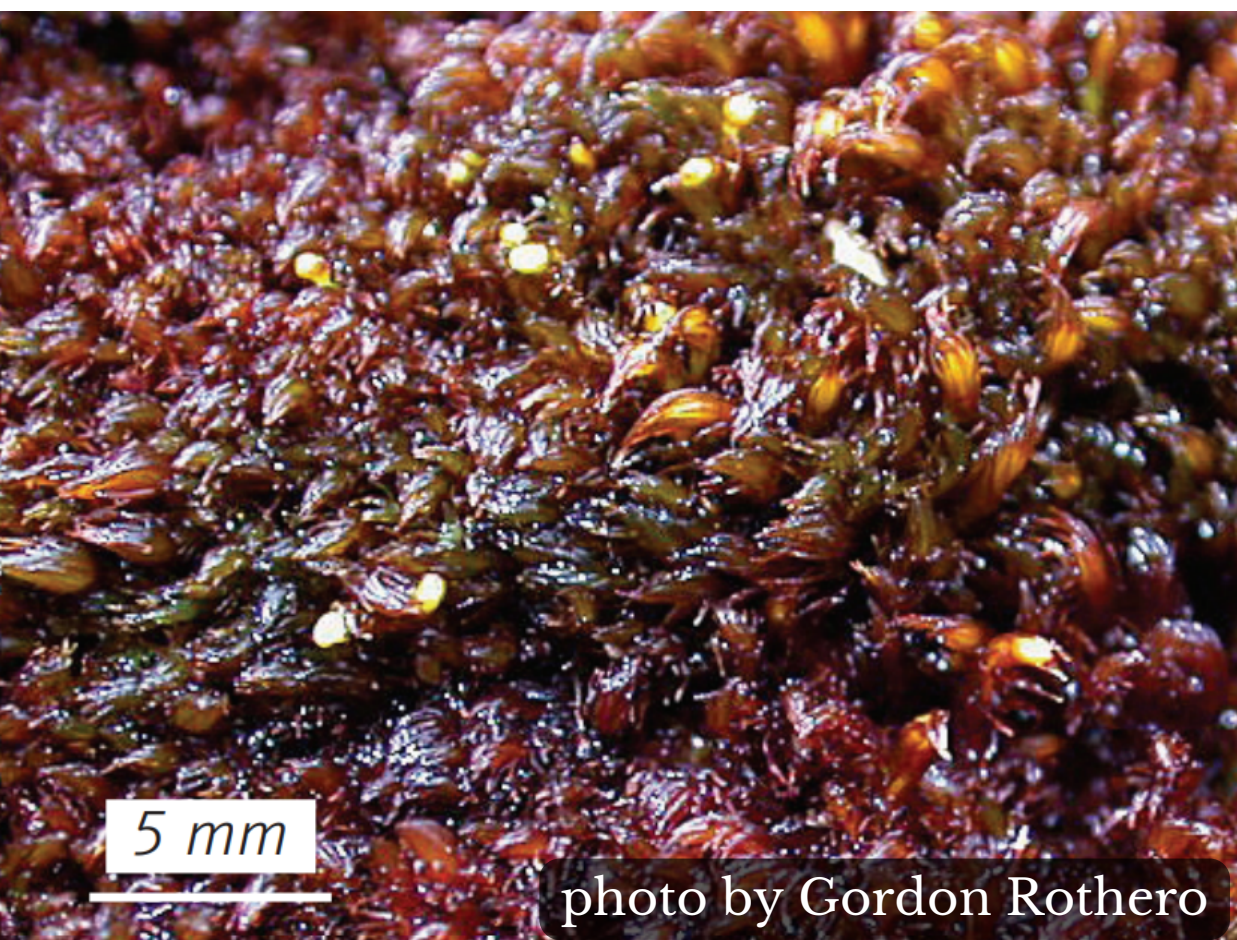
Bryophyte Distribution in the Gifford Pinchot National Forest



*Blepharostoma trichophyllum*  
(liverwort)



*Phaeoceros laevis*  
(hornwort)



*Andreaea nivalis*  
(moss)



Mount St. Helens



Panther Creek Falls



Big Creek Falls Overlook