

Moss Collection and Identification

Mosses, having no vascular system, are unable to grow where their cells cannot directly absorb water. This prevents mosses from growing very big, and they therefore have very minute morphological characteristics that make mosses difficult to identify in the field. Using dissecting and compound microscopes in the lab, these morphological characteristics become more apparent and allows one to follow a dichotomous key for identification.

To identify the mosses in the RCESC, the first step was to look in *Revised Plants of the Pacific Northwest* by Pojar & Mackinnon (2004) as well as *Some Mosses of British Columbia* by W.B. Schofield (1969) to identify common species, or see if there is a species that looks similar to the one in question. After recording data about where the moss was found and how it was growing, a sample of leafy tissue and sporophytes was collected and returned to the lab. Once there, *Mosses and Other Bryophytes: An Illustrated Glossary* by Bill and Nancy Malcolm (2000), *Moss Flora of the Pacific Northwest* by Elva Lawton (1971), and *How to Know the Mosses and Liverworts* by Henry Conard (1956) were used to key out and identify the mosses.

Identified with botanical keys:

Kindbergia praelonga var. *stokesii*



This species has undergone several name changes, and is synonymous with *Eurhynchium praelongum* var. *stokesii* and *Stokesiella praelonga* var. *stokesii*. It is common as mats on logs and tree bases, as well as along the ground and on humus. *Kindbergia praelonga* is smaller and more irregularly branched than another common species, *K. oregana*.

Homalothecium nuttallii



Often found on the trunks of deciduous trees like maple, alder, oak, and cottonwood, this species was found on a bigleaf maple at the edge of the forest. Its shiny golden color is characteristic of the genus, and it is used as a horticultural moss because of its color and curling appearance.

Identified with field guide:

Dendroalsia abietina



Also called “plume moss”, this species is easy to identify because of the way the moss fronds curl downwards when they dry. Most other moss species curl upwards when they dry, making this moss easy to spot in the forest. It is epiphytic on trunks of Oregon white oak and bigleaf maple, and sometimes occurs on cliff faces. This specimen was collected from the trunk of a bigleaf maple.

Orthotrichum lyellii



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Also called “Lyell’s bristle moss”, this species is common in loose tufts on trunks and branches of deciduous trees in lowland forests as well as some urban areas. This specimen was found on a fallen branch in the forest, although it was also identified growing on the branches of trees in the parking lot. It’s characteristic leaf shape, growth habit, and partially exposed sporophytes make this a fairly easy moss to identify.

Other suspected common species:

Isoetecium myosuroides

Described in Pojar & Mackinnon as “dirt common”, this species is almost always present in lowland forests. While a specimen of this moss was not collected for more thorough analysis, it is suspected to be covering many of the trunks and branches of the RCESC forest.

Neckera douglasii

This is another species that is very common and has a characteristic arching look that is almost unmistakable (other than for the slightly larger variety *Metaneckera menziesii*). A specimen was not collected to analyze for further distinction between these two mosses, but their characteristic look can be seen on many of the trees and branches in the bottomland forest of the RCERC.