

Adirondack High Peaks Watershed Vegetation Survey Data

Background: In 1978, Donald R. Whitehead (Indiana University) organized various crews of students to conduct vegetation surveys for watersheds of lakes in the Adirondack High Peaks region. These lakes were part of an NSF-funded study (PI: DR Whitehead; Co-PI: PM Vitousek) of watershed-lake interactions, including vegetational and limnological history.

In May/June 1978, Whitehead, together with graduate and undergraduate students enrolled in L465 (Advanced Field Biology), camped for three weeks at Heart Lake. Students in the class conducted vegetation surveys under Whitehead's supervision, and several analysed the data as part of their class projects. Vegetation surveys for Heart Lake, Round Pond, and Livingston Pond were completed during this period.

In October 1978, Mark C. Sheehan (graduate student) supervised a small field crew to sample vegetation at Upper Wallface Pond. Sampling was incomplete owing to adverse weather. The sampling at Upper Wallface Pond was completed in May 1979 (Mark C. Sheehan, Kathy Green, Stephen T. Jackson, Mike Peek). Jackson (graduate student) completed 4 additional transects at Livingston Pond in 1980, sampling only trees.

Methods: A buoy was emplaced at the approximate geometric center of each lake. The watershed was divided into four quarters (cardinal directions for Heart; unclear for others). Within each quarter, three compass bearings were randomly selected. Transects followed these bearings. Quarters are identified by letters (ABCD); transects by numbers (123); thus C2 is transect 2 in the C quarter. Not all transects were completed. In some cases this appears to be due to inadequate field time. In others, the transect ran up against an impassable barrier, usually a cliff.

At 25-m intervals along the transect (apparently starting from the lakeshore), point-quarter sampling was used for tree sampling. It is unknown whether the quarters were aligned with cardinal directions or the transect bearing. At each point, distance to and diameter at breast height (DBH) of the nearest tree in each quarter was recorded. In addition, "Herb Plots" were emplaced at each sampling point at Heart, Round, and Livingston. As best I can tell, these plots used a hoop within which all herbs were identified and counted. Dimensions of the hoop aren't clear, nor is the emplacement of the hoop (random? centered on the transect point?).

Data: The data comprise xerox copies of the original field sheets, as well as various calculations and summaries. The various documents come from two or three sources, and there is duplication among these documents. Most were copied from original files in Whitehead's lab by Donald F. Charles between 1979 and 1981, and sent to Jackson many years later. Some are from Jackson's files, copied from the originals in Whitehead's lab between 1979 and 1981. And a few were salvaged by Jackson from Whitehead's files in 1999 as Whitehead was closing up his lab.

Information concerning the lakes is available in the papers cited below. The vegetation data were not used in any publications.

Sites:

Heart Lake

Round Pond

Livingston Pond

[Upper Wallface Pond]

Missing Data:

All original data sheets are missing, and presumably lost during one of Whitehead's lab/office relocations in the 1990s. All data from Upper Wallface Pond appear to be missing. Jackson recalls surveying four additional transects (trees only) at Livingston Pond in summer 1980, and filing the data with the other Livingston Pond data. Those data also appear to be missing. Jackson and Charles will look for copies as we go through our various files.

Names (on data sheets):

Whitehead = Donald R. Whitehead

Lyden [sic] = Barbara W. Leyden (grad student, Whitehead lab)

Reed = Susan Reed (grad student, Whitehead lab)

Cooper = Mary Cooper (undergrad)

Peek = Mike Peek (undergrad)

Landis = Patty Landis (undergrad)

Villeau = Nanette Villeau (undergrad)

Dayson = Kathleen Dayson (undergrad)

Clark = Susan Clark (undergrad?)

Cunningham = ?

Barnes = Charlie Barnes (MS student, School of Public & Environmental Affairs)

References:

Charles, D.F. 1982. *Studies of Adirondack Mountain (N.Y.) lakes: limnological characteristics and sediment diatom – water chemistry relationships*. Ph.D. thesis, Indiana University, Bloomington, IN.

Charles, D.F. 1985. Relationships between surface sediment diatom assemblages and lakewater characteristics in Adirondack lakes. *Ecology* 66: 994-1011.

Whitehead, D.R., and S.T. Jackson. 1990. Regional vegetational history of the High Peaks (Adirondack Mountains), New York. *New York State Museum and Science Service Bulletin* 478. 27 p.

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