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A Freshwater Community on the Shawangunk Ridge in the Lower Mid-Hudson Valley, New York

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Northeastern Section - 50th Annual Meeting (23–25 March 2015)

Paper No. 4

Presentation Time: 8:00 AM-12:00 PM

A FRESHWATER COMMUNITY ON THE SHAWANGUNK RIDGE IN THE LOWER MID-HUDSON VALLEY, NEW YORK

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The Shawangunk Ridge in the lower mid-Hudson Valley extends from the vicinity of Rosendale through New Jersey, Pennsylvania, Maryland and Virginia. Within the first thirty miles can be found five “sky lakes”: Mohonk, Minnewaska, Awosting, Mud Pond and Maratanza. Since these lakes occur on the top of the ridge they have no drainage basin. Here we report on the pH and other abiotic factors that impact the aquatic fauna of Mohonk Lake. The pH of the lake is 7 near the surface. Lake Minnewaska’s pH increased from 4 to 6 in the last twenty years. The pH of the other three sky lakes (pH=4) may be influenced by acid seeps, reactivation of faults permitting acidic water to migrate into the lakes, or a decrease in the buffering capacity of the underlying Martinsburg Formation. Nine taxa of aquatic insects were collected from Mohonk Lake along with six invertebrate (Isopoda, Amphipoda, Gastropoda, Hirudinea, Crustacea, Hexapoda) and four vertebrate taxa with a diversity index of 55.5. This system was less diverse than the Lily Pond, a site studied previously, but had significantly higher counts of individuals. This is most likely due, at least in part, to the larger scale and deeper water column of Mohonk Lake. The other Sky Lakes are believed to possess a comparable species composition since the habitats are similar, but may differ somewhat depending on the specific pH of each lake.

Session No. 14--Booth# 61

[T31. Hydropedology at Hubbard Brook Experimental Forest: Landscape Patterns and Hydrologic Processes \(Posters\)](#)

Monday, 23 March 2015: 8:00 AM-12:00 PM

Presidential Ballroom (Omni Mount Washington Resort)

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