Introduction

Purpose of this study was to test the LNH with streams in natural settings

Methods

• Stream sampling period took place June-August 2015. 22 stream sites were sampled in Southeastern New York state. Streams had varying land use and canopy cover.
• Data analyzed using Spearman correlations through SYSTAT v. 13

Results and Discussion

Table 1. Summary algal periphyton data of chlorophyll a, biomass, and nutrient stoichiometry. Stoichiometry calculated using molar values. Algal periphyton sampled from 22 streams in Southeastern New York.

<table>
<thead>
<tr>
<th>Periphyton Properties</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chl/AFDM (mg/g)</td>
<td>0.1</td>
<td>4.8</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>AFDM/Surface Area (g/cm² * 10⁶)</td>
<td>28.9</td>
<td>154.0</td>
<td>73.9</td>
<td>38.1</td>
</tr>
<tr>
<td>C:N</td>
<td>7.1</td>
<td>12.3</td>
<td>9.1</td>
<td>1.2</td>
</tr>
<tr>
<td>C:P</td>
<td>10.5</td>
<td>1468.2</td>
<td>339.3</td>
<td>315.8</td>
</tr>
</tbody>
</table>

Correlations of Ash-free dry mass and:

- Open Canopy (%)
- Total Dissolved Phosphorus (µg/L)
- Total Inorganic Nitrogen (µmol/L)

LNH and Nitrogen

LNH and Phosphorous

- Figure 6a. Correlation of the ratio of Open Canopy to TIN compared to the ratio of Periphyton Nitrogen to AFDM. Data gathered from 22 samples.
- Figure 6b/c. The ratio of Periphyton N to AFDM compared to (b) TIN independently and (c) Open Canopy independently.

Evidence suggests LNH patterns can be applied to Periphyton P in natural settings, but not Periphyton N. Reduction in relative Periphyton P showed to be significantly correlated with available light independently; however correlation is stronger with Open Canopy: TDP.

Contact Information:
Ariana B. Dionisio
dionisa@students.wwu.edu

Literature Cited: