

Formatting Requirements for Abstract Submission:

- No more than 300 words
- Use Times New Roman font size 10
- List authors with affiliation (Dept., Institution). Abbreviate Department to Dept.
- Single-space
- No blank lines between paragraphs, indent new paragraphs 6 spaces (0.25")
- No citations

Example of an acceptable abstract:**Linking Stream Geomorphology, Watershed Condition, and Aquatic Ecosystem Health**

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Twenty-five independent stream reaches in northwestern Vermont were surveyed to assess the influences of local-scale and watershed-scale variables on stream biota (fish, birds, and macroinvertebrates) diversity and condition. Data was collected during the summers of 2003 and 2004 at multiple spatial scales. Local-scale data included quantitative and qualitative geomorphic and habitat surveys. Watershed-scale data included land use characterization and modeled average annual flow and sediment loading. Diversity and condition for each taxon were assessed using common measures including: 1) fish– species richness, Shannon-Weaver Index, Simpson’s Index, Vermont Mixed Waters Index of Biotic Integrity, and biomass; 2) macroinvertebrates – % EPT, % chironomids, and density; and 3) birds – river corridor and piscivore abundance, and species richness. PCA (with varimax rotation) was used to generate sets of factors for combinations of local-scale and watershed-scale characteristics. The factors were then used as the independent variables in stepwise multiple regression models using the biological data as the dependent variables. Forty significant models were built using the eleven biological community variables and eight sets of local watershed variables. Fish community diversity and condition were best predicted when using a combination of local-scale and watershed-scale data. In significant macroinvertebrate models, local-scale data and sediment from modeling were important factors. Bird abundance and richness were best predicted using local geomorphic characteristics and the qualitative geomorphic and habitat assessments. These results reinforce the concept that, while both local-scale and watershed-scale variables impact stream biota to some extent, their relative influence depends upon the individual ecology of each taxon. In order to address these issues, comprehensive watershed management and restoration/protection plans should include assessment at multiple scales from an in-stream geomorphological, watershed, and ecological perspective.