

James Madison University
Statistics Colloquium

**Two Applications in Ecological Assessment and a Small
Piece of New Zealand**

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Friday, January 27
2:30 p.m.

Room 30, Burruss Hall

Abstract

I will begin my talk with a brief introduction to New Zealand, my country of birth. This will also serve to adjust you to the “Kiwi” accent. I will then present two interesting applications that I have been involved in recently in the field of ecological assessment. Both arose around a set of data collected at stream-segments in the Mid-Atlantic Highlands (PA, WV, VA, DE & MD). Some of these stream-segments can be used as “reference sites”, that is, segments that are not adversely affected or are least affected by some source of stress (e.g. some measure of urbanization or agriculture). These reference sites tell us important information about what the range of biological or chemical measurements should be at Mid-Atlantic Highland stream-segments and we can use them to scale measurements from another site to determine whether that site is impaired. I will describe the approach we take to this scaling (which uses only some of the reference sites, rather than all of them). In the second application, we are no longer concerned about reference or non-reference. Rather we want to group the stream-segments so that within each group of stream-segments there is some strong/dominant relationship of interest.

Dr. Prins is a candidate for an open position in Statistics.