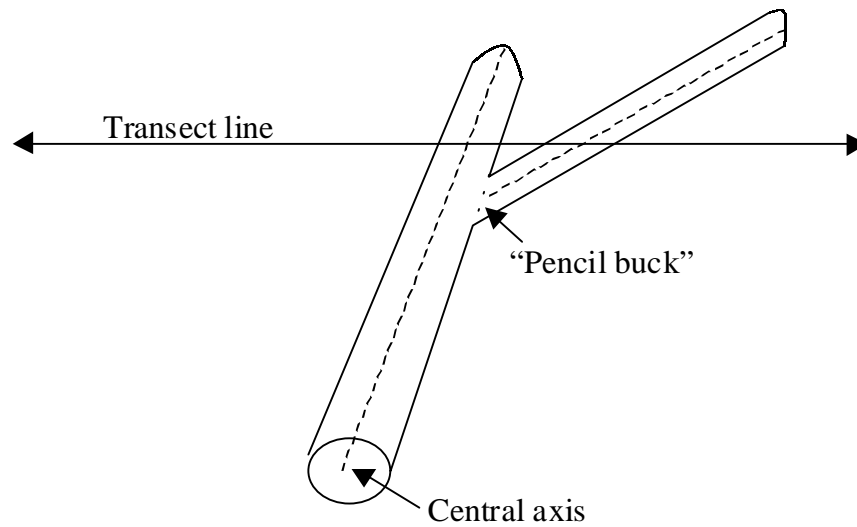


Using Line Intersect Sampling for Coarse Woody Debris

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ABSTRACT

Coarse woody debris (CWD), i.e., downed dead wood, is an important structural component of forest and stream ecosystems, and is linked to both biodiversity and ecosystem processes. In response to the growing recognition of the ecological importance of CWD, and to the need for quantitative data to guide forest management practices, there is increasing interest in sampling methods. Various methods exist for sampling CWD; however, line intersect sampling (LIS) is probably the most common technique currently in use.

Much of the published literature on LIS falls under the topic areas of field procedures or research. While LIS theory and the background to commonly used formulas are formally covered in certain statistical textbooks, it is difficult and time consuming for the field practitioner to review, integrate, and apply published information about LIS to new and existing projects. The purpose of this Technical Report is to provide an integrated overview of information on LIS for field practitioners who are in the initial stages of designing a sampling program, or who are interested in the theory from a compilation perspective. This report is not intended as a field procedures manual, but it does answer some of the more commonly asked field-related questions.

This report:

1. Briefly describes the field-sampling requirements for LIS.
2. Explains the theory underlying LIS for round pieces, semi-round pieces, and odd-shaped pieces and accumulations of CWD.
3. Provides basic formulas for estimating various CWD parameters.
4. Relates field-sampling requirements and commonly asked field questions to the underlying sampling theories for round pieces, semi-round pieces, and odd-shaped pieces and accumulations of CWD.

KEYWORDS

line intersect sampling, LIS, coarse woody debris, CWD, forest ecology, sampling methods

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