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Comparison of the Centroid Method and Four Standard Formulas for  
Estimating Log Volumes

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**Abstract:** Centroid Sampling was tested on 21 logs of Ash ( *Fraxinus angustifolia* subsp. *oxycarpa*), 38 logs of Spruce ( *Picea orientalis* (L.) Link.), and 33 logs of Beech ( *Fagus orientalis* Lipsky.) all of which were measured in detail. The volume of each log was estimated using Huber's, Smalian's, Newton, Riecke's, Hosfeld's formulas and Centroid Sampling. These estimates were compared with "true" volume of each log which was determined by aggregating the volumes of measured short sections (1 m.) using Smalian's formula. The mean error of the Centroid estimate of the log volumes was not significant for *Fraxinus angustifolia* subsp. *oxycarpa*, *Picea orientalis* (L.) Link., and *Fagus orientalis* Lipsky. and was less than those derived from Huber's, Smalian's, Newton-Riecke's, and Hosfeld's formulas. When three species were combined, the Centroid estimate was clearly more accurate, and its mean error was not significant at 0.05 probability level.

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