

Adaptive Cluster Sampling in forest inventories

Dieter R. Pelz
Department of Forest Biometry
University of Freiburg
79085 Freiburg/Germany

e-mail: pelz@biom.uni-freiburg.de

Many biological phenomena occur in clusters, for which standard inventory procedures are not efficient. Adaptive cluster sampling is a method that is especially suited for the assessment of clustered populations. For this method, the selection of a sampling unit is dependent on the result of the previous sample unit. An initial sample is selected randomly or systematically. For each selected sampling unit, the neighborhood is assessed until no new elements are found. A review of the method and the efficiency of the HT- and HH-estimators is presented. Several applications for the assessment of natural populations are discussed, such as for the assessment of rare tree species, the assessment of ant nests and the assessment of Non-Timber Forest Products in a forest inventory.