

A COMPARISON OF FOREST VEGETATION AND
 ENVIRONMENT IN THE ILLINOIS SOUTHERN
 TILL PLAIN AND SHAWNEE HILLS REGIONS

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ABSTRACT

The Shawnee Hills are an east-west escarpment transecting the southern tip of Illinois. Directly north of this region is the Southern Till Plain that extends north into central Illinois. The latter is climatically drier, has little topographic relief, and is underlain by glacial till. The Shawnee Hills are underlain by massive sandstone. Both regions are covered by loess deposited during two distinct time periods, hence the presence of a buried A2 (A2' or Bx) horizon that severely affects the moisture relationship and species distributions.

Based on a sample of approximately 30 relatively undisturbed stands in each region, this paper will examine soil profile characteristics and site types, and compare stand composition and basal area level for similar environments. Emphasis will be on the forests and environment of the Till Plain as Fralish (1976) reported on the forests of the Shawnee Hills.

In both regions, stands are composed of similar species (Q. stellata, Q. velutina, Q. alba, Q. rubra, F. americana, U. rubra, C. occidentalis, and A. saccharum). Juniperus virginiana is nearly absent in the Till Plain but is relatively common and dominates some stands in the Shawnee Hills. In the Till Plain, Q. velutina frequently dominates stands while it is a relatively minor species in the Shawnee Hills.

Within both regions, stand composition is strongly influenced by soil characteristics, aspect, slope position, and drainage. However, within the Till Plain there appears to be a distinct geographic-climatic variation with A. saccharum becoming a minor species in the northern portion.