

CORRELATING PLEISTOCENE STRATIGRAPHY  
IN THE SPRING CREEK VALLEY OF  
WESTCENTRAL ILLINOIS

A Thesis

Presented to the  
Department of Geography  
Western Illinois University

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

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May 1985

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## ABSTRACT

This study was conducted to determine if a common Pleistocene stratigraphy exists in the Spring Creek Valley of Western Illinois; and if it could be correlated with the nearby Campus section in the Lamoine River Valley. Clay minerals indicate that there is not a common stratigraphy in the sites studied. While correlations may be drawn between the Thorell Sand Pit and Yard's Bog, Bland's Bog and Sand Hill #1 correlate with the Campus section.

An intra-Illinoian paleosol was identified at Bland's Bog and Sand Hill #1 that had not previously been recognized. Unnamed Till A is in superposition with the "typical" Kellerville Till, and separated by the paleosol, at Sand Hill #1. The till below the paleosol at Bland's Bog, however, is not the "typical" Kellerville Till; the montmorillonite percentage is too high. It is thought that the clay minerals in the lower till unit, at Bland's Bog have been altered by being in a reduced environment, at some time in the past.

The Thorell Sand Pit is proposed to be the type section for the Alburnett Formation in Illinois. Additionally, it is proposed that the Alburnett Formation be subdivided into the Alburnett Till--upper unit and the Macomb Till--lower unit.

A thermoluminescence date was obtained from a soil that separates the Alburnett Till from the Macomb Till at the Thorell Sand Pit. The date of 158,000 years ago is an Illinoian Stage date, while the Alburnett Formation is the oldest Pleistocene deposit in Illinois.

The complexity of the sediments examined precludes one interpretation for the Pleistocene history of the study area. Three models are offered as the most likely sequence of events.