Late Wisconsinan stratigraphy, New Sharon and Mercer, Maine

Thomas K. Weddle
Maine Geological Survey, State House Station #22, Augusta, Maine 04333, U.S.A.

Quaternary glacigenic deposits exposed along the Sandy River valley in New Sharon and Mercer, Maine, are associated with ice-proximal deposition in a northeast-trending stream valley. Fine-grained sediments represent distal deposits by turbidite deposition, turbid sediment plumes, and associated ice-rafted debris in a proglacial lake. Coarse-grained deposits and stratified diamicton are ice-proximal sediments deposited by gravity flow processes, subaqueous sediment discharge, and fluvial deposition. Massive diamicton was deposited by subaqueous sediment discharge or by basal ice processes.

Kinetostratigraphic data reflect an upsection shift in deformation from a northeast to a northwest source, attributed to Late Wisconsinan sublobes in the Sandy River and Kennebec River valleys. Ice in the Kennebec River valley dammed drainage in the northeast-oriented lower Sandy River valley creating a proglacial lake into which both sublobes deposited and deformed proglacial sediments during the early Late Wisconsinan. Main phase Laurentide ice eventually merged with and overwhelmed the sublobes. The glacigenic sediments were deposited entirely during a single glacial cycle, the Late Wisconsinan.