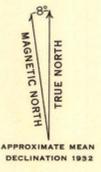


EXPLANATION

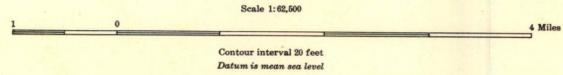
-  **Qal**
Alluvium
Alluvium on flood plains. Thickness ranges from a few to more than 100 feet. Sand to silty loam, 1 to 3 feet thick, overlies pebbly, cobbly, bouldery, or rubbly sandy loam to gravel; contains lenses of silt loam or clay loam and organic matter in places. Along principal streams probably overlies Pleistocene deposits
-  **Qf**
Alluvial fan
Rubbly, pebbly, cobbly, or bouldery sandy loam to silty clay loam; in large part unstratified but includes local lenses of stratified sand and gravel
-  **Qt**
Kame terrace
Pebbly to bouldery gravel and sand forming terraces and isolated knolls with a few ledges. Thickness ranges from about 10 to perhaps as much as 200 feet. The proportion of sand to gravel varies greatly from place to place. A few layers of silt and clay are present
-  **Qk**
Till
Till mantling lower valley walls, valley bottoms, and small areas on uplands; some underlies low knolls and ridges. Thickness ranges from about 5 to more than 10 feet. Till ranges in texture from pebbly to bouldery, clayey to rubbly sandy loam to silty clay loam. The upper 1 to 3 feet of the till is loose; below, moderately firm to compact. Erratics compose less than about 1 percent by volume of the till. In many places the ground commonly is wet and the water table usually near the surface, springs and small swamps numerous, and outcrops of bedrock scarce
-  **Qs**
Paleosol
Yellowish-red to red clay loam to silt loam that underlies small areas on uplands. Thickness ranges from 1 to 4 feet. Compact, hard when dry and sticky when wet; contains a few fragments of sandstone weathered to yellowish red. Overlies partly disintegrated bedrock; in many places overlies by 1 to at least 5 feet of periglacial deposits. The symbol \blacktriangle denotes places where paleosol was observed in excavations or test holes
-  **Qp**
Periglacial deposit
Rubbles mantling lower valley walls and a few small areas on or near ridge tops. Includes some material that contains only a few fragments of rock. Thickness ranges from 5 to 10 feet or more. Texture ranges from unsorted, channelry, rubbly, or bouldery sandy loam to silty clay loam; dominant texture of matrix is silt loam. The lithology is closely related to the adjacent bedrock. Along many lower valley walls the material is a faintly stratified, rubbly colluvium. Outcrops of bedrock scarce
-  **Qm**
Thin mantle
Miscellaneous surficial deposits of diverse origin mantling slopes, uplands, and valley bottoms. Thickness mostly less than 5 feet. Extensive areas covered by rubble that resembles periglacial deposits. Within glaciated area includes some drift. Outcrops of bedrock are more abundant than in areas covered by till or by periglacial deposits
-  **Qb**
Block field
Area where boulders or blocks from 2 to 80 feet in diameter cover more than half the ground surface
-  **Known outcrops of bedrock**
-  **Contact**
Dashed where approximately located
-  **Border of glaciated area**
Dashed where approximately located
-  **Gravel and sand pits**
-  **Erratics**
Pebbles, cobbles, and boulders of igneous or metamorphic rock
-  **Known area where boulders or blocks are abundant but cover less than half of the ground surface**

Recent
Pleistocene
Wisconsin stage
Sangamon interglacial stage (?)



Base from U. S. Geological Survey map of Genesee quadrangle, Pennsylvania-New York, 1952
INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C. M 1951
Geology mapped by C. S. Denny, assisted by B. J. O'Neil, Jr., F. J. Wagner, and D. U. Wise, 1948-51

MAP OF GENESSEE QUADRANGLE, PENNSYLVANIA—NEW YORK, SHOWING SURFICIAL GEOLOGY



QUATERNARY