GLACIAL MAP OF THE UNITED STATES EAST OF THE ROCKY MOUNTAINS

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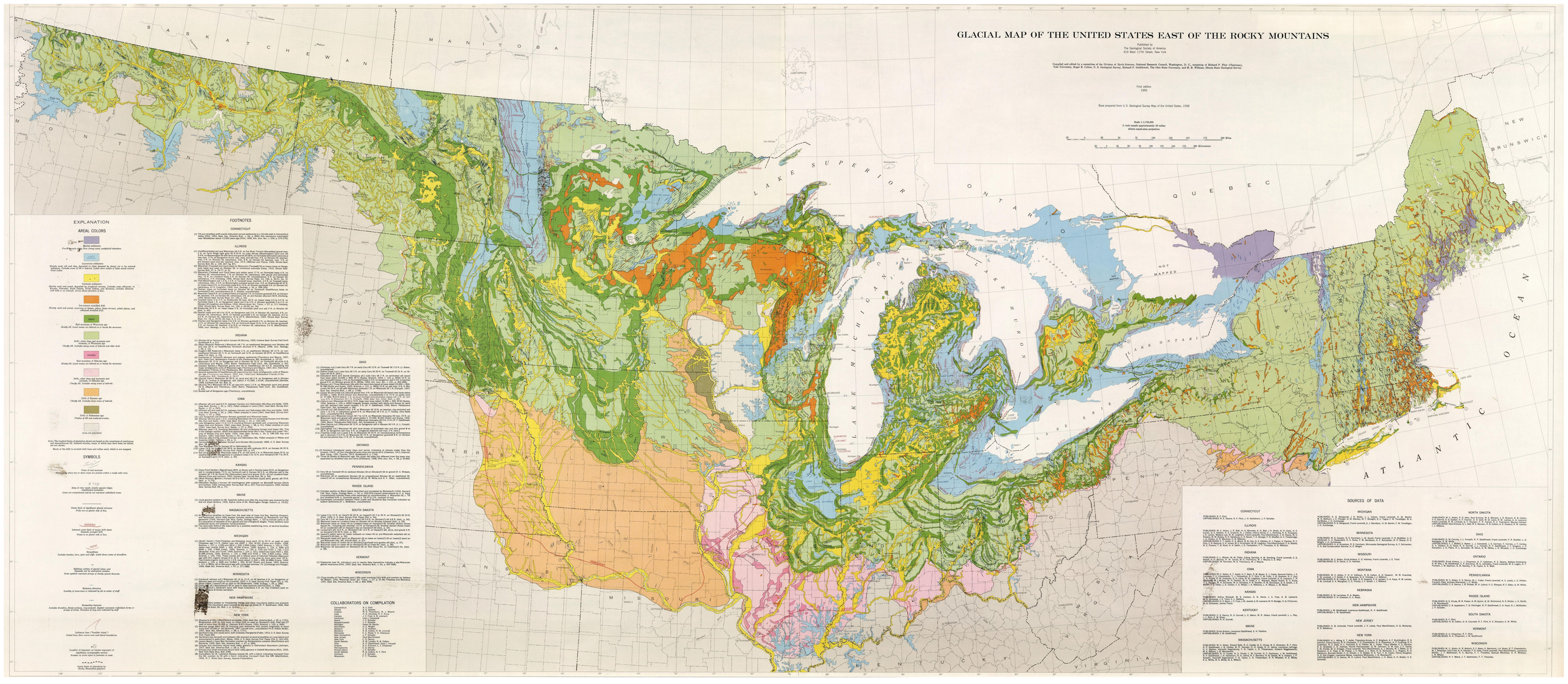
1959

Base prepared from U. S. Geological Survey Map of the United States, 1958

Scale 1:5,750,000
(1 inch equals approximately 90 miles)
Albers equal-area projection.

90 0 90 180 270 360 450 540 630 720 810 900 990 Miles

90 0 90 180 270 360 450 540 630 720 810 900 990 Kilometers



EXPLANATION

AREAL COLORS

Recent sediments
Pre-Wisconsin sediments from Jersey coast, postglacial elsewhere.

Lacustrine sediments
Mainly sand, silt and clay, deposited in lakes dammed by glacier ice or by outcrops of bedrock. Includes some of Gilbert's Delaware Valley series of lake sands and gravels.

Outwash sediments
Mainly sand and gravel, deposited by glacial streams. Includes some alluvium; in Kansas, Nebraska, South Dakota, by postglacial streams, includes alluvium with little or no outwash. Arrow shows direction of flow.

Unconsolidated drift
Mainly sand and gravel, occurring as kames, esker, kame terraces, pitted plains, and reticulated morainic drift.

DRIFT

Drift terminus of Wisconsin age
Mostly till. Local moraines are delineated in or beyond the terminus.

Drift, either clay and moraines and outwash, of Illinois age
Chiefly till. Includes many areas of bedrock and older drift.

FAYETTE

Drift terminus of Illinois age
Mostly till. Local moraines are delineated in or beyond the terminus.

Drift, either clay and moraines and outwash, of Kansan age
Chiefly till. Includes many areas of bedrock.

Drift of Kansan age
Chiefly till. Includes large areas of bedrock.

Drift of Nebraskan age
Patches of till and unaltered residuum.

Area not glaciated

Note: The implied limits of glaciation shown are based on the occurrence of continuous and discontinuous till. Isolated erratics, many of which may have been ice rafted, are not shown.

Block of the drift is covered with loess and other wind, which is not mapped.

SYMBOLS

Crest of end moraine
Designating where two or more crests are present within a single color area.

Area of very small, closely spaced ridges
Mostly end moraine.

Lines are conventional and do not represent individual crests.

Outer limit of significant glacial advance
Ticks are on glacier side of line.

KANSAN

Indicated outer limit of major drift sheet
Ticks are on glacier side of line.

Terminus is on glacier side of line.

Includes beaches, bars, spits and cliffs. Label shows name of strandline.

Highway outlier of glacial lakes, and
Moraine not by endmoraine terminus
Some symbols represent groups of closely spaced moraines.

Striation direction
Locality of striations is indicated by dot at center of staff.

Dropstone location
Includes dropstones, fluted pebbles, and striated pebbles. Dot represents individual items or groups of items. Direction of long axis indicated by staff.

Indicator loss ("boulder trains")
Dotted lines show course over land between boundaries.

Locality of exposure (or former exposure) of Cretaceous or Tertiary rocks
Known in creek valley in Dakotas to cause.

Outer limit of glaciation by Early Wisconsin glaciers

FOOTNOTES

CONNECTICUT

(1) Till and stratified drift rarely disturbed varved sediments in a 10-mile belt in Connecticut Valley (Flint, 1943, Geol. Soc. America Bull., v. 54, p. 808); this moraine extrapolated near Middletown about 15,000 years ago (Flint, 1945, Am. Jour. Sci., v. 243, p. 273-274).

ILLINOIS

(1) Unaffiliated and and Wisconsin till, 3 ft. on Fox River Terrace (Mennefee) glacial erosion, 5 ft. on Farm Ridge high gray till, 10 ft.(?) on Lake Bloomington (Mennefee) sand and silt, 10 ft. on Bloomington (Mennefee) gray till, 10 ft. on Bloomington (Mennefee) sand and clay-loam, 17 ft. on Sangamon muck, clay, sand and silt-loam, 5 ft. on Illinoian till, Hartshorn Ridge (Leverett, 1932, U. S. Geol. Survey Prof. Paper 199, p. 19-20); 15 ft. on Kansan sand and silt, Hartshorn, 15 ft. (Willman and Frye, 1948, Illinois Geol. Survey Bull. 70, p. 77).

(2) Wisconsin (Tazewell and Cary) loess on Wisconsin (Tazewell) till on loess loess on Sangamon muck, 3 ft. on Illinoian till, Bloomington (Leverett, 1932, U. S. Geol. Survey Prof. Paper 199, p. 20-21).

(3) Wisconsin till, 10 ft. on Illinois coal seam (Leverett, 1932, U. S. Geol. Survey Prof. Paper 199, p. 21); 10 ft. on Illinoian till, Lexington, 15 ft. on Illinoian till, Lexington, with gravel and lacustrine sediments, 5 ft. on Sangamon muck, Lexington (Leverett, 1932, U. S. Geol. Survey Prof. Paper 199, p. 21-22); 20 ft. (Frye, 1948, Illinois Geol. Survey Rept. Inv. 124, p. 24-25); 20 ft. on Illinoian till, Lexington (Leverett, 1932, U. S. Geol. Survey Prof. Paper 199, p. 22); 15 ft. on Sangamon muck, 2 ft. on Illinoian till, Lexington (Leverett, 1932, U. S. Geol. Survey Prof. Paper 199, p. 22); 10