Glaciation of Wisconsin

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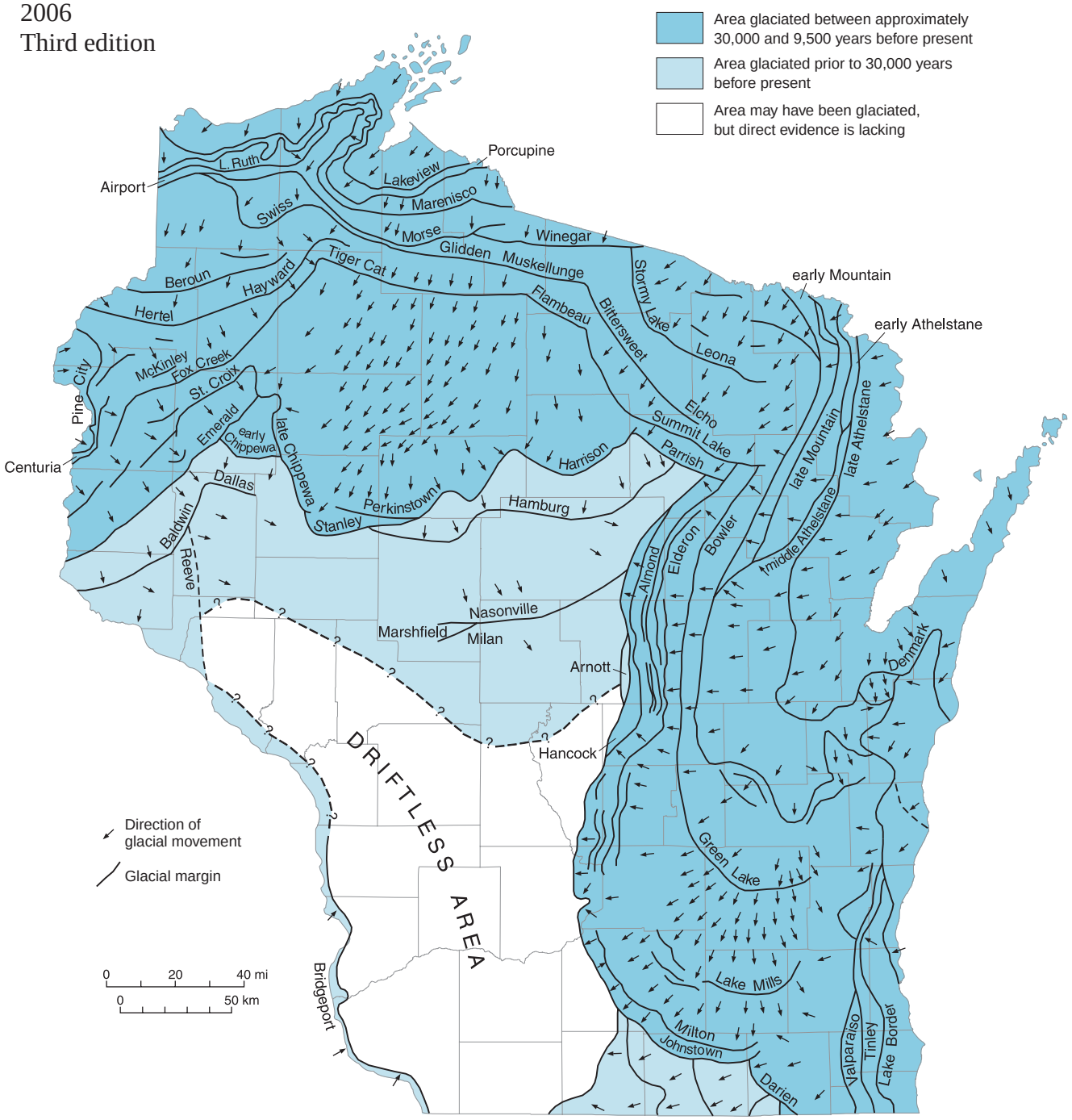

Figure 1. Phases of glaciation. A *phase* is a geologic event rather than a period of time. Most phases represent at least a minor advance of the edge of the Laurentide Ice Sheet. Each line marks the southern edge of the ice sheet during a phase of glaciation. For example, during the Johnstown Phase of the Wisconsin Glaciation, the southern edge of the Green Bay Lobe (see fig. 4 for lobe locations) of the Laurentide Ice Sheet advanced to the line marked "Johnstown" in south-central Wisconsin; figure 3 shows that this occurred approximately 16,000 years before present. Only the most recent phase is shown at any location.

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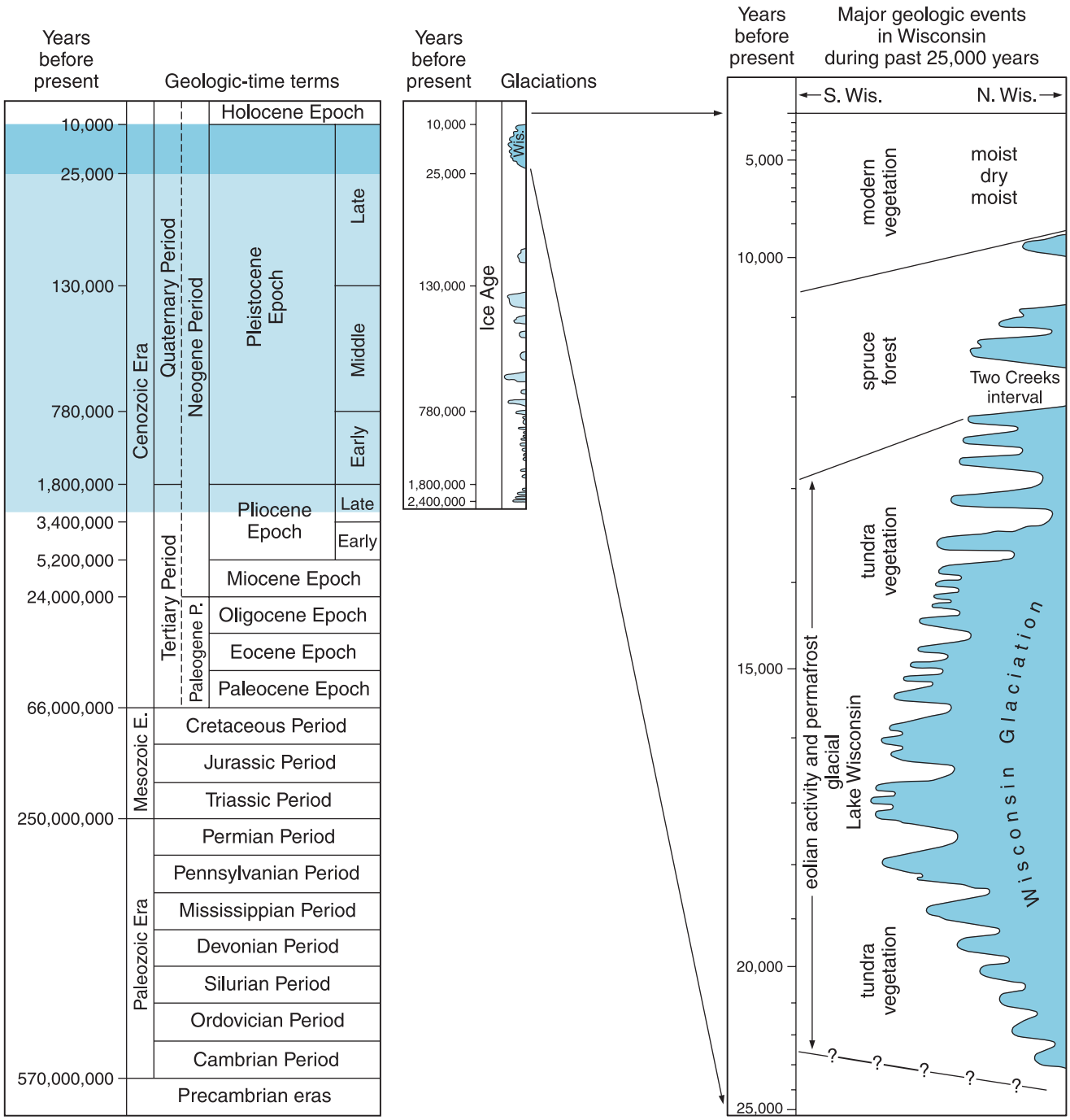

Figure 2. Geologic history of Wisconsin, with emphasis on the Ice Age. Geologic-time terms are given in the left part of the diagram. Two often-used alternative schemes for subdividing the Cenozoic Era are separated by a dashed line. The Pleistocene is sometimes considered to continue to the present, in which case it is equivalent to the Quaternary. The center column shows the glaciations during the Ice Age (based on oxygen isotopes in deep-sea sediment), including the Wisconsin Glaciation; some less extensive glaciations may not have reached Wisconsin. The past 25,000 years is expanded in the right column, which shows the phases of the Wisconsin Glaciation and the conditions south of the glacier. The horizontal axis on this diagram represents the approximate distance from southern (or southwestern) to northern (or northeastern) Wisconsin (250 miles [400 km]), and the left edge of the blue area represents the position of the margin of the glacier at any given time. For example, the margin of the glacier retreated into northern Michigan or Ontario between approximately 11,000 and 10,000 years before present; approximately 9,800 years before present it readvanced into northern Wisconsin for a few hundred years. The time scale, on the vertical axis, is irregular.

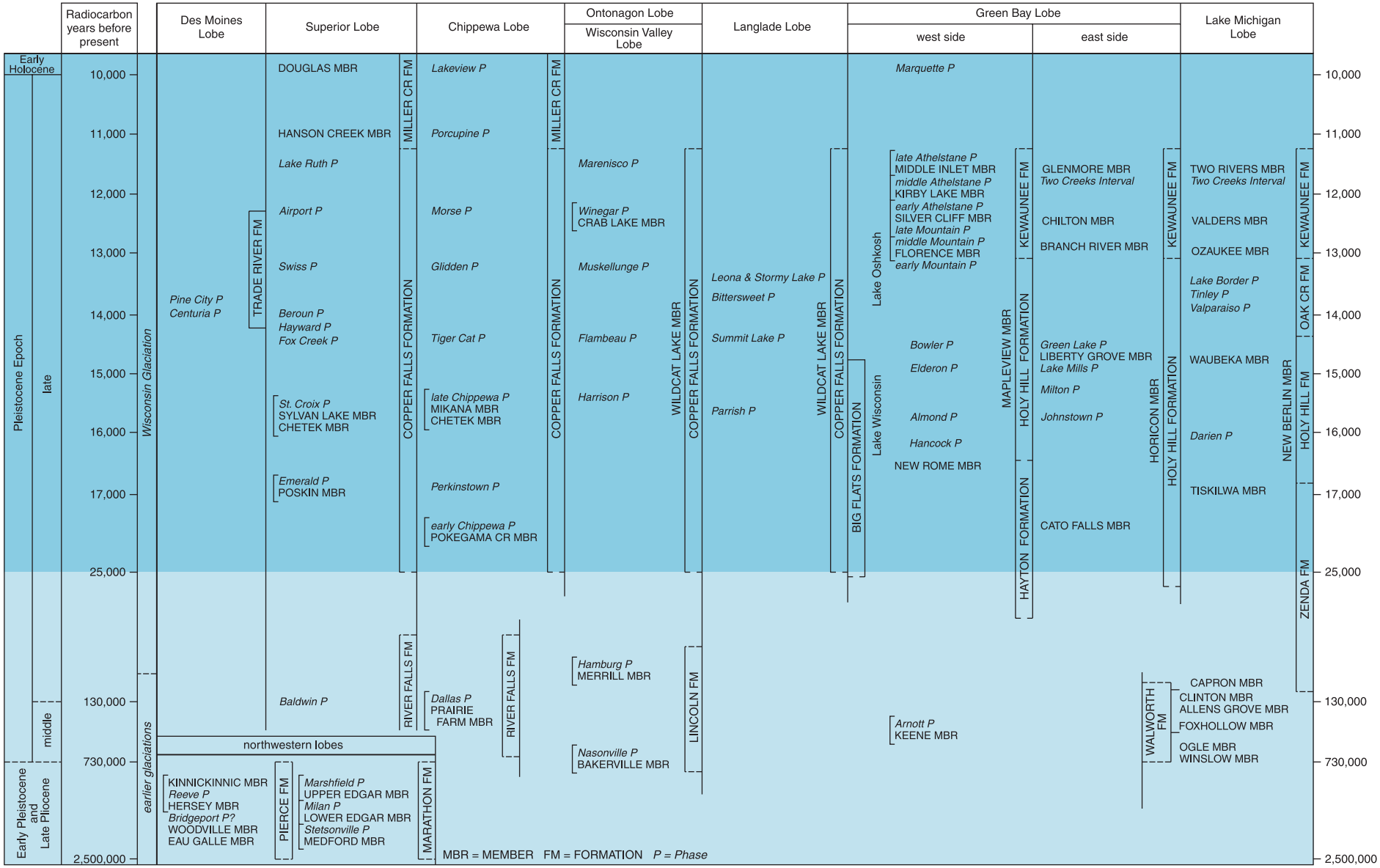

Figure 3. Correlation of Ice Age events and lithostratigraphic units in different parts of Wisconsin. The events are shown in italics, and the lithostratigraphic units (members and formations) are shown in upper-case letters. A lithostratigraphic unit is a layer of geologic material having a characteristic lithology and a specific position within a sequence of units. Most lithostratigraphic units referred to in this figure contain till (glacial sediment) and meltwater-stream sediment and some glacial-lake sediment. The vertical axis represents time; the time scale is irregular before 17,000 years before present. When a specific event was responsible for a specific lithostratigraphic unit, the event is bracketed with the lithostratigraphic unit. Lobes are shown in figure 4.

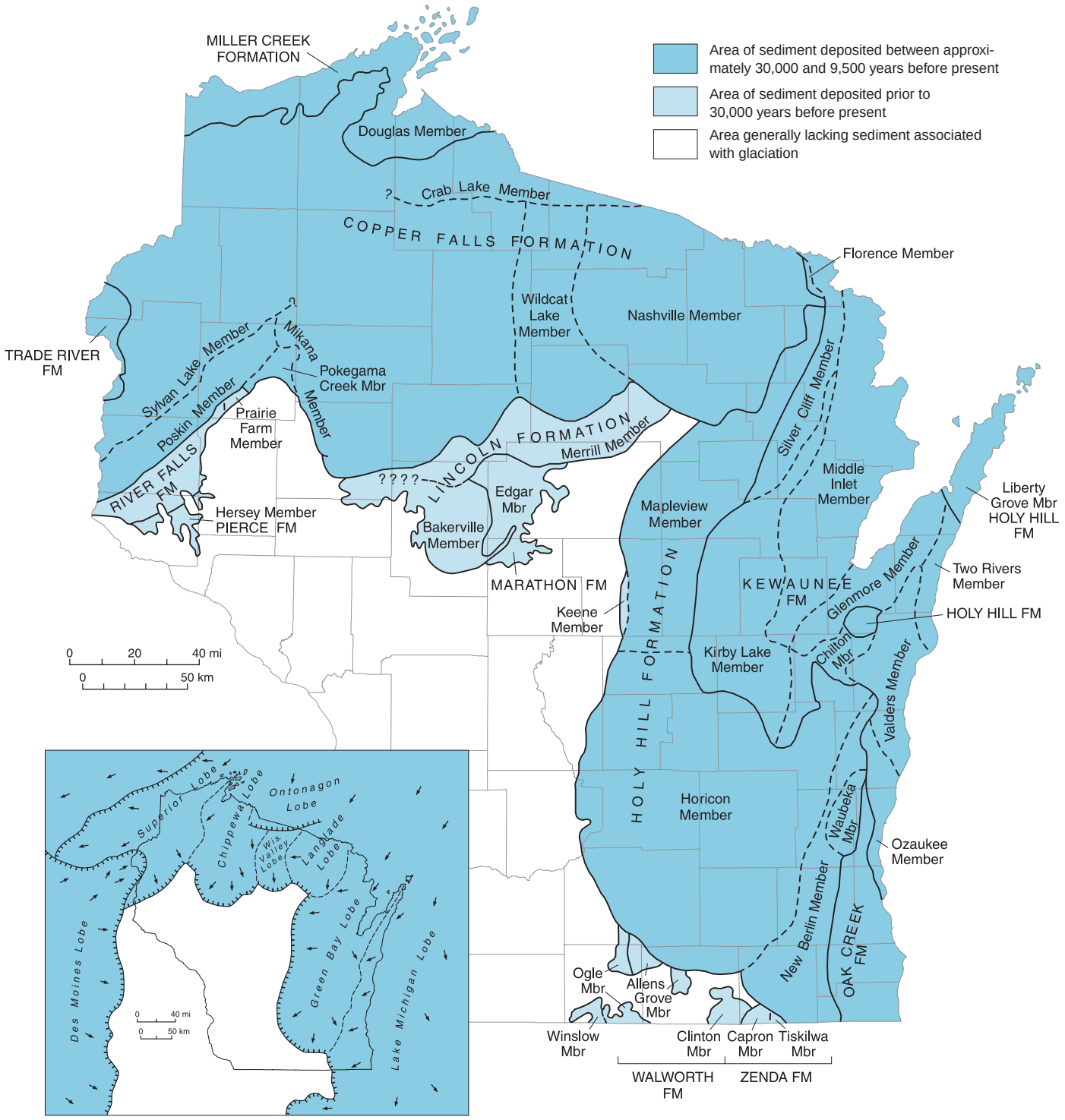

Figure 4. Lobes of the Laurentide Ice Sheet in Wisconsin during the Wisconsin Glaciation. The arrows indicate the direction of ice movement, which was influenced by topography. Lowlands, such as the Great Lakes basins, channeled the ice to form the lobes shown here.

For additional information, see Wisconsin Geological and Natural History Survey Miscellaneous Paper 84-1 and Information Circular 62.

Figure 5. Distribution of Pleistocene lithostratigraphic units in Wisconsin. Formations are separated by solid lines, and members are separated by dashed lines.

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