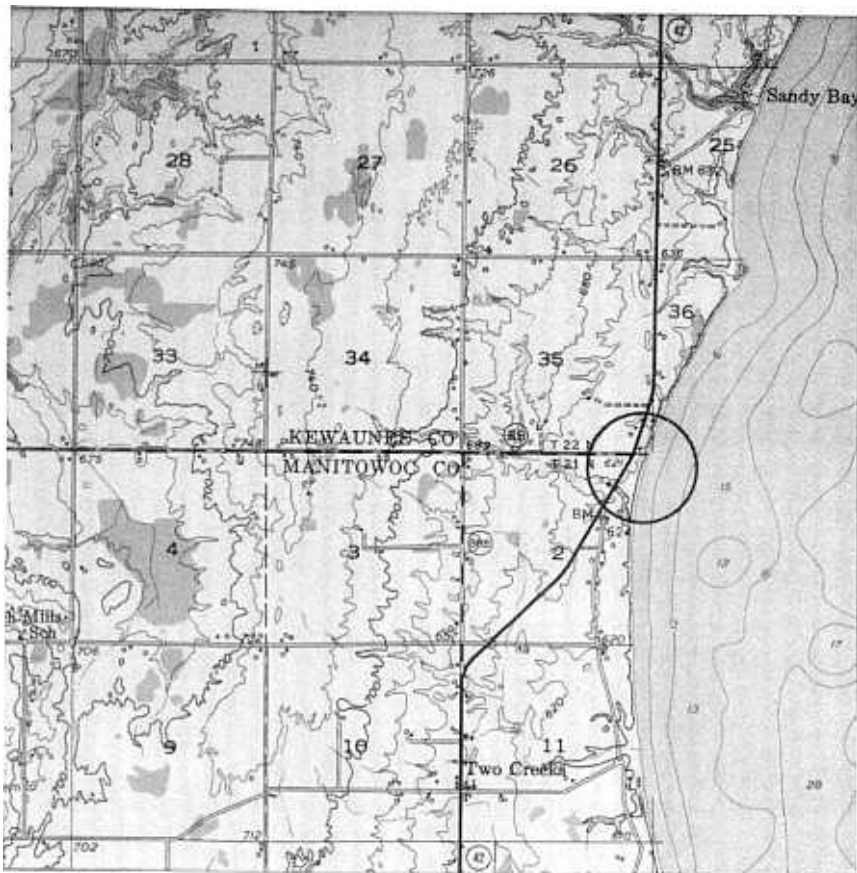


Title: Two Creeks Forest Bed

Location: SE Corner, Sec. 35, T. 22 N., R. 24 E., Kewaunee 15' Quadrangle, Manitowoc County Line. Park at entrance of field to east of Hwy. 42 at intersection with C.T.H. BB. Walk across field to edge of lake.



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Description: The following units are present here (from lowest to highest, thus oldest to youngest) but you may have to walk the shore to the south to see all of the units. The oldest recorded event here is ice advance and deposition of a compact pink to grey till. This is present just above beach level and may be covered with slumped debris. Ice retreated and lake sediments (sand and some interbedded silts and clays) were deposited directly over the till. Water level then dropped, evidently after ice had retreated north of the straits of Mackinac, and a spruce forest grew on the land surface. You can find logs (mainly spruce although Tamarack and Birch have been found), and forest litter containing twigs, cones, needles and air breathing and gill-breathing snails. Similar modern day environments exist in northern Wisconsin, Michigan, Minnesota, and parts of Canada.

Lake levels then rose again, killing the trees and depositing more sand and interbedded silts and clays. The ice which blocked the Lake Michigan outlet, causing the water to rise, then advanced over the area depositing the upper red, clayey till. This till is equivalent to the Two Rivers Till (see description of type locality).

This is a good example of a rapidly eroding shoreline. During high water of the early 1970's the bluff retreated more than 20 feet. All of the sand and finer materials are eroded away by waves and carried by long-shore drift to areas of deposition like Point Beach (see description). Only coarser materials are present on the beach during most of the year.

Significance: The existence of buried forest material in this area has been recognized since the 1800's. This locality is an important one because the radiocarbon dated logs (11,800 years before present, Broecker and Farrand, 1963) provide an absolute date on late-glacial sequences in the Lake Michigan Basin.

One other C¹⁴ date is recorded on a bryophyte (moss) bed in the northern part of the southern peninsula of Michigan. Evenson (et al., 1976) review the literature and the controversy about the significance of this site. It is now believed (Evenson, et al., 1976) that the Twocreekan interval is one of many retreat phases separated by minor advances. A time-distance diagram is shown below.

References: Alden, 1918; Black, 1971, 1974 and many given therein; Thwaites, and Bertrand, 1957.