THE HISTORY AND HYDROGRAPHY OF LAKE RIPLEY

(JEFFERSON COUNTY, WISCONSIN)

WAYLAND J. CHASE AND LOWELL E. NOLAND *

I. HISTORY

Lake Ripley lies about one-half mile east of Cambridge, Wisconsin, on the western edge of Jefferson county. Today the nearest railroad is the Chicago and Northwestern, about four and one-half miles away, with London as the nearest station of that road. In 1895 a railroad track of standard guage was built from London to Cambridge, within about one-half mile of Lake Ripley; and, until 1916, when this railroad enterprise was given up for lack of business, it facilitated access to this lake region from Milwaukee, Chicago and connected points. Now that automobiles rival the steam railroads as agencies of transportation, it is worthy of mention that the concrete state highway 12 passes parallel with the south shore lines of the lake at a distance often less than one-eighth of a mile, and within full view of it. State highway 41 also runs not far from the southeast end of the lake, affording the best views obtainable of the one and one-half miles of beautiful water.

The charms of this body of water very early made a strong appeal to mankind. On its shores Indians of the Pottawatomi and Winnebago tribes built their villages and hunted the abundant game of early days, and in and on its waters they found a rich supply of fish and waterfowl. The presence of these aborigines in this section is attested by abundant and varied evidences, one sort of which is the group of Indian effigy mounds, which crown the hills close to the shore at the northeast curve of the lake. These are

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*The senior author prepared that part of the manuscript dealing with the history and general description of the lake, while the junior author wrote the section on hydrography and prepared the plate. Both authors had a part in the work of sounding the lake.
believed to be the work of remote ancestors of those Winnebagoes whom the first white settlers found in this region.

In the settlement of the southern section of Wisconsin between 1830 and 1840 the fertile high-lying land around the lake early attracted pioneers, prominent among whom was a Scotchman, George Dow, who took up a considerable holding of land near the lake. Because of him for a time the name given by some to this body of water and to the first group of settlements close to it was Lake Dow. But in point of fact before his arrival the lake had already been given the name it now bears, for on the land-map of this region made October 1, 1836 for the federal government under the direction of Robert H. Lytle, Surveyor-General, it is marked Ripley Lake. In the surveyors' data on the margin of the same plat it is referred to as Ripley's Lake, and in the notebook of the deputy-surveyors, from which the land map was made, their little sketch of the lake is marked Ripley's Lake. It is evident, therefore, that the lake was named for someone called Ripley. Who this individual was no evidence points out. Three deputy-surveyors, one linesman and one marker made this survey between 1834 and 1836 and their names are appended to the record, but the first, middle and last name of no one of them is Ripley. Apparently, too, at the time the lake received its name no white man had yet settled on its shores, for it was the practice of the government surveyors in those territorial days to indicate on their sketch of the shore line of a lake, about which they were surveying, the locations of the white settlers who had habitations near it. None are indicated on this sketch of Ripley's Lake. So it seems not to have been named for a first settler.

According to tradition this lake years ago was connected by a thoroughfare with a smaller and much more shallow and more reedy lake situated to the south and called Red Cedar Lake. This former connection no longer functions, though the configuration of the country between the two lakes reveals signs of its early significance.

Besides the settlers of Scotch origin there came others at about the same time, representatives of that western
migration from New England which brought so influen-
tial an element into Wisconsin’s earliest population. The
decade between 1840 and 1850 saw the entrance into Wis-
consin of settlers of both Norwegian and German stock,
some of whom took up claims to land along this lake shore.
The descendants of a few of these earliest pioneers still
possess farm land along the lake, but for the most part
the shore property has passed out of the hands of farmers,
and is occupied by hotels and summer cottages. Indeed
the hotels are mostly of the cottage type, each consisting
of a group of buildings comprising a dining room struc-
ture and small separate lodges.

In 1846 the Reverend William Cargen, a clergyman of
the Presbyterian church, recently arrived from Scotland,
made his home on the west shore of the lake, and this
became the center of the religious group which accepted
him as its pastor. Later the church of this denomination
was built on the very edge of the nearby town of Cam-
bridge, and the burying ground at the older site on the
shore of the lake has become the cemetery for the people
of Cambridge and vicinity.

In 1848 Christian Willerup, a Danish Clergyman of the
Methodist Episcopal denomination, organized among the
citizens of Cambridge and vicinity the first Norwegian
Methodist church in America, and indeed in the world.
A substantial stone building for their worship was erected
in Cambridge, and land on the lake shore was acquired
for camp meeting purposes. This tract was named “Will-
erup Park,” and is now supplied with buildings for the
accommodation of many who attend the summer religious
meetings held there.

Between Willerup Park and the cemetery is the con-
siderable frontage upon the lake, which the village of Cam-
bidge has acquired and is developing as a public park.
Further along the shore toward the south a tract of land
with lake frontage accessible from highway 12 has been
devoted by its owner to the uses of a tourist camp.

2. GENERAL DESCRIPTION OF THE LAKE

For almost the entire shore line the lake is girt by hills
and ridges thirty to forty feet high. The principal ex-
ception to this is on the southeast, where through a marsh area. A little stream with many windings meanders its way and makes its rather slight contribution to the waters of the lake. Another is on the northwest side where, through a small brook-like outlet, the surplus waters flow into the Koshkonong River. Very much of the shore line is sandy, gravelly or pebbly, and a number of springs are to be found in its length. The water is uniformly clean and clear.

Pioneer records tell of the grandeur of the timber that flourished on the high shores of the lake, and survivors of this primeval growth still stand in the form of majestic burr oaks, white oaks, basswood, hickory, and elms. Willows and red cedars add variety, and two tamarack swamps fringe portions of the southeast shore.

This lake has long had renown for its abundance of fish life. The broad and extensive bay at the east is surrounded by a wide belt of lily pads, and at many points is fringed with rushes. It is shallow enough throughout to be the home of many subaqueous plants. In consequence both this and a smaller bay of like sort at the south shore have constituted safe coverts for fish fry, very many of which in these watery jungles are able to grow to maturity and lustiness.

Of game fishes the great northern pike, popularly known as the pickerel, the wall-eyed pike, the large mouth black bass, and calico or silver bass are probably native to it. At any rate they have long been found there. Coarse fish, like bluegills, sunfish, catfish and yellow perch are plentiful, especially the first named, which attain large size in these waters. Garpike and dogfish, together with huge snapping turtles and their leather-back relatives, thrive there also. It is believed that some German carp have worked their way up the outlet from Koshkonong River, but as yet their number seems small.

The waterfowl that live upon the lake are various. Gulls, terns, kingfishers, several varieties of bittern and heron, mud hens, rails, and several varieties of ducks spend the summer season upon it. Occasionally an osprey or two come to it; and loons, geese and ducks in their migra-
tory flights visit it in spring and fall, the last in great numbers.

As is often the case where a body of water has more than ordinary depths, local belief has been that this lake, if not bottomless, was at least a hundred or more feet in depth; but the sounding line has found no depth greater than 47 feet and 10 inches.

3. HYDROGRAPHY

Lake Ripley is located in Jefferson county, Wisconsin, in the town of Oakland, range 6 north, and 13 east of the 4th principal meridian. Meridian 89° 00’ touches the lake on the west, and parallel 43° 00’ runs through the center of the lake. According to a Wisconsin Geological Survey map, the surface is 836 feet, i. e., 254.7 meters, above sea level.

The lake is 1.43 miles or 2.31 kilometers long. Its main axis lies in a northwest-southeast line. The maximum breadth, taken at right angles to the main axis, is 0.82 miles or 1.32 kilometers. The single inlet enters the lake at the extreme southeast end, and the outlet is located at the northwest extremity. The maximum length, accordingly, lies between inlet and outlet. Both the inflowing and outflowing streams are small. The creek which serves as the outlet leads into the Koshkonong River, which empties into Lake Koshkonong, a dilated portion of the Rock River. Lake Ripley, therefore, belongs to the Mississippi drainage area.

Except for the Island and Inlet Bay, the outline of the lake is fairly regular. The shore line measures 4.13 miles or 6.67 kilometers. Calculation of the shore development gives the figure 1.37. By shore development is meant the actual length of the shore line divided by the circumference of a circle whose area equals that of the lake. The shore development accordingly is a measure of the regularity or irregularity of the shore line.

The surface area of the lake is 0.723 square miles, or 462.7 acres. Expressed in metric units this gives 1.872 square kilometers, or 187.2 hectares.

The shores of Inlet Bay and South Bay are low and weedy.
A tamarack swamp lies between the two bays and between the Island and the mainland on the south. Another tamarack swamp lies to the south of Inlet Bay. The north side of the Island is a cutting shore. Except for a small, low-lying, swamp area of a few acres on the shore at the base of the bar, there is little swampy ground on the west shore of the lake from the tourist camp to the ice-house. Gentle cutting is evident on the shores near the tourist camp, in front of Willerup Park, and beside the cemetery, where the land rises somewhat more abruptly from the water than at other points on the west shore. A rich growth of submerged aquatic vegetation covers the bottom of Inlet Bay, and of South Bay, extending northward from the latter over the shallow waters of the bar. The remainder of the west shore and much of the north shore is sandy, with only a moderate development of submerged vegetation. At Ingleside on the east, the shore is steep and cutting. Moderate cutting is observable along the whole eastern shore, as far south as Cargen's Point, especially marked, however, near Cedar Lodge.

The survey for the accompanying map of the lake was made in winter over the ice by the triangulation method, using an open sight alidade, and sighting from two points in the middle of the lake and one on the north shore of the Island. The distance between the two points in the middle of the lake was 900 feet, measured in a straight line, using a 75 foot steel tape. Forty-four easily recognizable objects (bushes, boat landings, etc.) on the shore at fairly uniform distances from each other were used as sighting points. After preparing a first draft from the field map thus obtained, a tour of the shore line was made to determine minor curvatures, and make slight corrections where the objects used as sighting points were not exactly on the shore line. The sighting station on the north shore of the Island was used to complete the map of the bay and to serve as a check on the other two sighting stations. As an additional check the distance between two sighting points on the shore was actually measured off with the steel tape. The distance shown on the map was 1980 feet. The actual distance was found to be about ten feet less.

To ascertain the depth of the lake in its various parts
241 soundings were made. Eighteen of this number were made through the ice in the area north of the Island. The remainder were made from a boat on quiet days in summer in the following way: starting at one of the original sighting points on the shore the boat was rowed in a straight line toward another original sighting point on the opposite shore. At each twenty-five strokes a sounding was taken. In this way the soundings could be plotted at equidistant points along a straight line connecting the two sighting points on the map. The trips across the lake from point to point were so planned that the soundings were fairly uniformly distributed over the total area of the lake. The sounding line used was a braided mason cord, soaked, before being used, in a mixture of paraffin oil and melted paraffin. The length of the line was checked against a 75 foot steel tape each day it was used, and appropriate corrections were made in soundings taken when the line did not check exactly with the tape.

The maximum depth found was 47 feet 10 inches, or 14.6 meters. The mean depth (volume of the lake divided by its surface area) is 19 feet, or 5.8 meters. The ratio Dm/Dmx (mean depth divided by maximum depth) is 0.397.

The total volume of the lake is 14.17 million cubic yards, or 10.83 million cubic meters. The volume development figure is 1.19, i.e., the lake holds 1.19 times as much water as could be contained in a cone having a base with an area equal to that of the lake, and a depth equivalent to the maximum depth of the lake.

The mean slope of the bottom was found to be 1°49″, or 3.2 per cent. The maximum slope lies between the five and eight meter lines (about 20 feet depth), where it equals 4°16″, or 7.5 per cent.

In the accompanying tables will be found summaries of the hydrographic measurements made for the lake.

In conclusion the authors wish to express their gratitude to Professor Chancey Juday and Dr. E. A. Birge, of the Wisconsin Geological and Natural History Survey, for the many helpful suggestions in the hydrographic part of this work, and for the use of the instruments employed to measure up the map for area, volume and length of con-
tour lines. The formulae used in the calculations were
taken from Professor Juday's book, cited below.

BIBLIOGRAPHY


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