

& CONSULTANTS

- Date: . 15 October 2002
- Time: 1345
- Place: Guilford Lake, Hamlet of Guilford, New York
- Max. Depth: 3⁰
- Visibility: 3 foot to zero .
- Water Temp: Approximately 60°F /50' F
- Objective: Assess lake vegetation and debris, taking note of burdocks and conditions that effect the presence of same.

Known Facts

2. I have over 30 years experience in the sport, commercial, and professional aspects of diving. I began this activity in 1968, receiving myflrst certification in 1969. I have ten years experience as a law enforcement officer during which time I made a number of dives for several police departments in the course of my duties regarding underwater crime scenes and drownings. I currently operate a commercial diving company, being a certified scuba instructor and certified deep sea diver trained and experienced in the field of industrial / commercial diving. Since September 1995 I have made numerous dives in Guilford Lake, &J of which are logged. These dives were performed in all seasons including under solid ice and I have observed the various seasonal lake bottom and ambient water conditions.
3. In the course of my diving in Guilford Lake I have observed the commonly recognized spiny spheres referred to as burdocks laying partially exposed on the bottom silt in shallow water. On one occasion as my diving buddy, Tony Mangini, and I exited the water he brought to my attention that he had several burdock spheres stuck to the velcro portion of the pocket flap of his buoyancy control vest. Tony Mangini passed away in April 1999.
4. Guilford Lake is a body of fresh water with a surface area of about 110 acres. A concrete dam is at the southeast comer of the lake and just to the north of this is a boat ramp and swimming area. County Road 35 runs along the south edge of the lake and several hundred feet of this shore is public access, including a fishing access at the east end. The area immediately south of the lake and adjacent to County Road 35 is wooded with small trees and brush.
4. The lake is bordered with residences beginning at the sest end of the south shore, continuing along the sest shore and the west part of the north shore. The northeast comer is a swamp, bordered by forest and the east shore is a field adjacent to the aforementioned swimming area.

5. The maximum depth of Guilford Lake is 84 " according to sonar depth finders at a small place at a southern portion of a 65' deep "bowl" found at the east portion of the lake.
6. The Hamlet of Guilford has a water intake assembly in about 9' of water placed next to County Road 35 near the west end of the fishing access parking area.
7. In shallow water at the edges the bottom can be discerned as rocky and as the depth increases it quickly gives way to silt and mud. The mud is over 15' deep in many places. The bottom slants most steeply from County Road 35, North, down into the bottom of the "bowl."
8. The lake is fed by two small streams, one at the northwest corner and one at the southwest corner, in addition to numerous springs.
9. I have frequently observed gentle currents running primarily from West to East along the south shore and occasionally East to West.
10. From May into November, (varying slightly from year to year depending on the weather) much of the shoreline in Guilford Lake produces thick aquatic weeds growing on the bottom from a depth of about 15' to about 3'.
11. Animals of various kinds have easy access to Guilford Lake.
12. Most winters see the surface of Guilford Lake frozen over and windy conditions occasionally move snow, dry vegetation and debris along the ice.

Introduction

In late spring or early summer, 2002 I was contacted by a woman, who would not leave her full name, regarding my experience diving in Guilford Lake and my fees for taking on a survey of a portion of that lake in regard to a fatal incident that spring. I was given a telephone number for an attorney, Fred Neroni, and made contact with him. The question needing answering was whether or not there was likelihood of burdocks being in the lake and whether or not I had seen them. It was not determined until some weeks later whether or not my services would actually be applied. By Fall, 2002 we were able to set a date for a dive to examine the conditions in Guilford Lake and to search for burdocks in the lake.

On Tuesday, 15 October 2002 at about 1335 hrs. I entered Guilford Lake with scuba gear to begin my 66th and 67th logged dives in Guilford Lake. A fresh assessment of bottom conditions, aquatic vegetation and debris would facilitate my explaining the presence of burdocks in that lake and perhaps I might find some.

The area I chose for this work was on the south shore at the west portion of the shore accessible by the public. There is a small dock at the shoreline here and it was from this dock I entered the water. I remained East of a tree fallen into the lake near the Black property and set up a line controlled, buoy marked, search area. I made this search area about 250 feet long, roughly parallel to County Road 35, in about 15' of water. Swimming the line from East to West to East, repeatedly moving the anchor points South as I reached them, enabled me to examine the bottom and remain within this specific search area.

I made two separate dives for this effort. The first began at about 1345 hrs. and was 78 minutes in duration. The second began at about 1527 hrs. and was 44 minutes in duration. I took over thirty photographs with slide film in the course of these dives. On Monday, 21 October, I sent the film in to be developed and mounted. At the time of this writing I am waiting to learn if the poor visibility and suspended particles in the water ruined my shots. I expect to know by Monday, 04 November.

At approximately 1600 hrs, I began to gather the equipment from the lake for packing and transport. I left the lake at about 1645 hrs.

Observations

The visibility in Guilford Lake at the time of this dive was only 3'. There were suspended particles that have a tendency to reflect back light and interfere with taking photographs. The weeds were thick and three kinds were the most obvious. One, a long multi-stemmed plant over 10' long, the leaves of which resemble fine spruce needles, light green in color; another, a broad leaved, long stemmed plant also 10' or more in length, brownish green in color; and a thick short darker green weed that only grows about 3" high. Very little of the bottom was exposed between the weed masses down to about 18 feet. Here they quickly thin out and by the time one reaches 22' deep there are almost no weeds at all.

The long stemmed plants leaned to the east in the slight current.

Numerous old tree trunks, junk: such as lumber, tires, cement blocks, etc., discarded or lost over the years also lay about on the bottom. One old row boat lay between the weeds in about 8' of water.

The leaves were beginning to come off the trees and the recently fallen leaves were the only ones to be readily seen and these lay on top of the weeds or on the mud if the water was deep enough to be beyond the weed beds. Leaves fallen last year or early in the summer break down fast enough to be part of the bottom muck by this time of year.

Other forms of vegetation that don't break down so fast, as well as various articles would be under the weed beds and not readily seen.

I have observed in Guilford Lake, after the water temperature has dropped and the sun moves lower in the sky these weeds begin to die off. After the ice cover is on, the weeds die fast as the water is at maximum cold and much of the sunlight is blocked. In the late fall and winter the fallen tree leaves can still be seen although they are decomposing rapidly. The water weed stems and leaves have dissolved and cannot be distinguished from the muck.

By spring, before the new weed beds begin, most of the vegetation has nearly all decomposed so the bottom and objects on the bottom can be seen. These objects include plant parts that had blown onto the ice during the winter and were deposited into the lake when the ice went out.

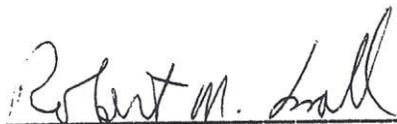
Animals may be another source of undecomposed plant parts found in the lake in the spring before the aquatic weeds cover them, as some types are readily caught in fur and are more easily dislodged when wet. I have seen deer swim, even in very cold water. I have seen and photographed scat in Guilford Lake suggestive of flocks of ducks or geese as well as mammals whose diets are such that their droppings tend to retain their shape and mass longer than duck or geese droppings.

I don't know to what extent bird feathers are subject to burdock adherence. However, I am aware that most, if not all, fur bearing animals entering the water have the potential of introducing plant parts, burdocks being one of the most likely to be carried due to their aptitude for that type of transport.

Most of us who spend any time outdoors in the winter have noticed that besides trees, burdocks are one of the last plants to be seen above the snow. Their leaves have long since gone, but their stems hold aloft with tenacity those aggravating spiny balls that catch on clothing and in the coats of domestic and wild animals. Burdocks are moved in clumps or singularly depending on circumstances and the mode of transport. These plant parts are moved about by animals and Wind in winter about as much as any naturally occurring inanimate object I know.

Either of the two aforementioned streams that feed Guilford Lake, if flowing enough can move plant parts into the lake. The current in the lake, while slight, can move objects over some horizontal distance. That includes objects that are slowly descending, such as plant parts absorbing moisture.

It would be of no surprise to find burdocks in any northern lake, especially in the spring of the year, their spiny surfaces, even while water logged, still able to grasp certain surfaces as did the burdocks some years ago that Tony Mangini and I saw clinging to the velcro of his **Be** vest after one of our dives in Guilford Lake.



Robert M. Small



Date