

Lakes:

A Viewpoint By Bill McClintock

Editor's Note: The recent ban on swimming in Winter Park-Maitland lakes due to high bacteria counts in the water has brought the problem of our lakes to the forefront. This is the first of a four-part series in which differing viewpoints are expressed by several authorities concerned with a prime attraction, and problem, in our area: our lakes.

Opinions will be expressed by Bill Partington, Director of the Environmental Information Center in Winter Park; Bill McClintock, superintendent of the city's Environmental Division; Dr. David Richard, head of the biology department at Rollins College; Dr. David Smith, associate professor of biology at Rollins; and Phil Sager, former aquatic weed coordinator of the Orange County Pollution Control Department. The second part will appear Tuesday.

By CAROL MOORE
Sentinel Star Staff

WINTER PARK — It may be hard to imagine the lakes in Winter Park and Maitland so choked with hydrilla as to make swimming and boating virtually unthinkable.

Yet, Bill McClintock, superintendent of Winter Park's Environmental Division, has slides to show this was the state of our lakes in the 1960s. He has been at the plant since 1970, and with his command, herbicidal treatment of water weeds was instigated.

McCLINTOCK described hydrilla as the greatest problem weed in



BILL McCLINTOCK
... Supt. of environmental division

Winter Park. Originating in India, it was imported into Miami for use in aquariums. One aquarium owner planted some in a waterway in order to have his own source. It has since spread, not only to Central Florida, but as far as Alabama, Georgia and even Iowa, he said.

"This plant is so insidious," said McClintock, "that a boat owner in Ohio using one of our lakes can unwittingly take home some of the plant still wrapped around the propeller. Even though the plant becomes dried out, it revives when put into water again."

Hydrilla can grow up to 30 feet and have a very fine root structure, making them impossible to eradicate by pulling. Moreover, the roots are impregnated with

small bulbs which get imbedded throughout the soil.

WATER HYACINTHS are another non-native plant, brought into the area by a woman "who thought they looked pretty." McClintock has slides of the canal from Lake Sue to Mead Garden, completely choked by the prodigious weed.

Chemical treatment for control of lake weeds was experimented with before 1970. But it was estimated to be effective, two gallons of herbicide would need to be applied per acre foot. Spraying every foot of Winter Park lakes would cost an impossible \$800,000 per year.

It was then mechanical harvesters with cutters on the front were tried for two years, from 1968 to 1970. Again, the cost was high, however, not only in purchasing price (\$39,000 each), but in maintenance and repairs. Moreover, the cutters could only go down five feet.

"THIS WAS like cutting grass," said McClintock. "It just made the hydrilla grow faster."

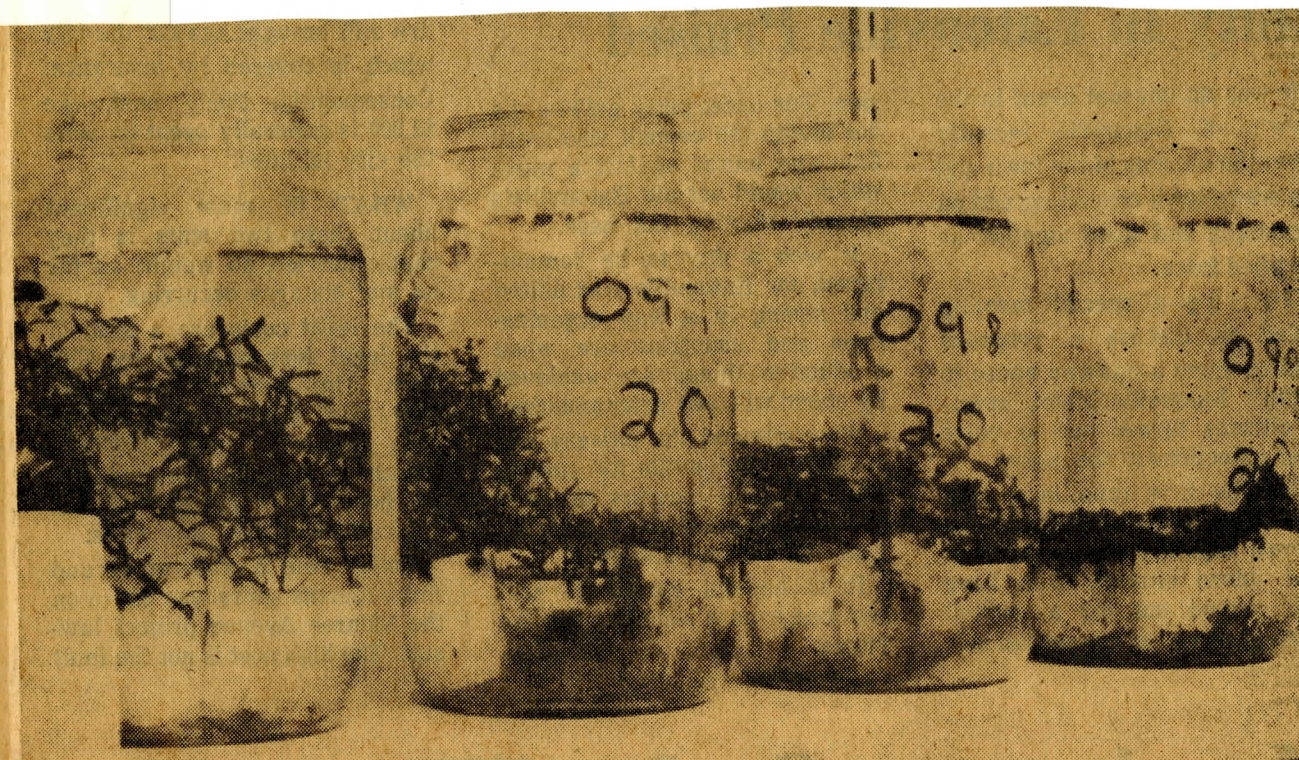
There was also a problem of disposing of the cut weeds.

"Hydrilla are 30 to 92 per cent water," said McClintock. "They were tried as cattlefeed, but it was found that if over five per cent was mixed in, the cattle started losing weight. It was no good as feed."

HE DOES recommend harvesters for skimming water hyacinths, however.

"I'm just hoping someone will buy our two," he commented. "They are sitting useless in our yard."

In the meantime, the Environmental Division was continuing its experiments with herbicidal controls. It was realized, after using fluoresceine to



(Sentinel Star Photo by Carol Moore)

HYDRILLA IN FOUR STAGES OF CONTROL

... Healthy hydrilla soon decays and sinks to bottom of lake after herbicide treatment

trace the chemicals, that the chemicals could be applied with hoses one foot off the lake bottom instead of being sprayed on the surface.

SINCE THE gravity of the chemicals was greater than water, they sank to the bottom, causing the plants to wilt. Along with this method, spot treating was initiated, using a recording fathometer to determine weed height.

Thus, by applying chemicals only in areas where weeds had reached a certain height and only on the bottom foot of the lake, cost was reduced and effectiveness was increased.

Cost is now \$50,000 per year for Winter Park's 15 lakes.

ALGAE IS easy to control, according to McClintock, by using a copper compound, which works in only a few days. Weeds are controlled by hydrothol, applied

by airboats around the edges, and by hydout, applied under docks in the form of slow-release pellets. The chemicals are applied in patterns which allow the fish to escape. Larger boats apply diquat in the rest of the water. This is harmless to fish.

"This is under strict and sole control of the Department of Natural Resource," he stressed. "A license is required to put anything into a lake."

This prevents the recurrence of a catastrophe such as the one in a Maitland lake two years ago. Residents poured in copper sulfate to kill the algae. Unaware of this, the city came along in the next few days to pour in another batch. The result was a massive fish kill.

"BUT AN amazing thing happened," said McClintock. "In one year the lake had re-established itself. A fish kill doesn't hurt a lake permanently. Sometimes it's

needed, just as some forest fires are needed to burn off the brush and allow the trees to grow."

McClintock stressed that the chemicals used are applied in very "safe" amounts. They are normally applied biannually, but more often if necessary.

"We use only two gallons of chemical for, say, three million gallons of water, supposing that the lake is 10 feet deep. That's less than 1 part per million."

McCLINTOCK'S DIVISION is now participating in an experiment by supplying Rollins College with a special strain of bacteria which has proved successful in wastewater treatment.

"Chemicals are not the ultimate agent," says McClintock. "We are still searching for a biological agent to be used in the future. But, for now, chemical treatment is the only effective means."