DREDGING OPERATIONS HELPED HALT THE POLLUTION

The dredge was busy for six weeks removing silt to a depth of 10 feet. The picture shows the weed growth which had been choking the lake. (Photos by Ed Deschler)

Pollution doesn't have to be the victor

Gillett faculty, students have helped to restore Savage's Lake

— GILLETT

SAVAGE'S LAKE, in the center of this northern woods community, was once spring fed and crystal clear.

Its waters teemed with bluegill, bass and northern pike.

Children swam from beaches on the western shore.

Then the lake started to change.

A plywood mill dumped refuse into the clear water. A storm sewer carred the wastes from city streets and added to the pollution.

Savage's Lake was sick — sick, perhaps to death.

Its water became weed choked and took on a gray pallor. The stench of pollution drifted off the lake and fouled the air.

The fishing was virtually gone — only minnows and bullheads survived the fouling.

The story of Savage's Lake was a familiar one. The lake could probably have been written off as lost as have so many similar ponds and streams.

But the story of Savage's Lake has taken a new turn.

A research team from the Gillett High School sought the specific causes of pollution.

The group, directed by faculty biologist Charles Gruentzel, found that bacteria in decomposing the rotting vegetation and polluting debris were giving off carbon dioxide in quantities lethal to game fish.

The process was killing fish year round, but tests in late winter months showed that the decomposition had reduced the lake's oxygen level to nearly zero.

Gruentzel saw that two steps were needed to restore Savage's Lake.

First, the pollution had to be stopped.

Second, dredging was needed to remove the accumulation of muck.

The plywood mill cleaned up its area of the lake and a Gillett citizen provided funds for dredging.

A six-weeks dredging operation ended in October 1966 — but it left the lake in a state of shock.

The secchi disc — a device used to measure water clarity — was barely visible just under the water's service.

Gradually, however, the silt started to settle at the rate of about one foot a month.

But the oxygen demand was still excessive. By February of this year the oxygen supply was again depleted.

Since then, Gruentzel's crews have found, the lake has become more stable. It is still highly alkaline and hard water is more productive than soft.

Plankton life is varied and plentiful. Algae and weeds grew quickly during the summer — but they should also produce the oxygen needed during the winter.

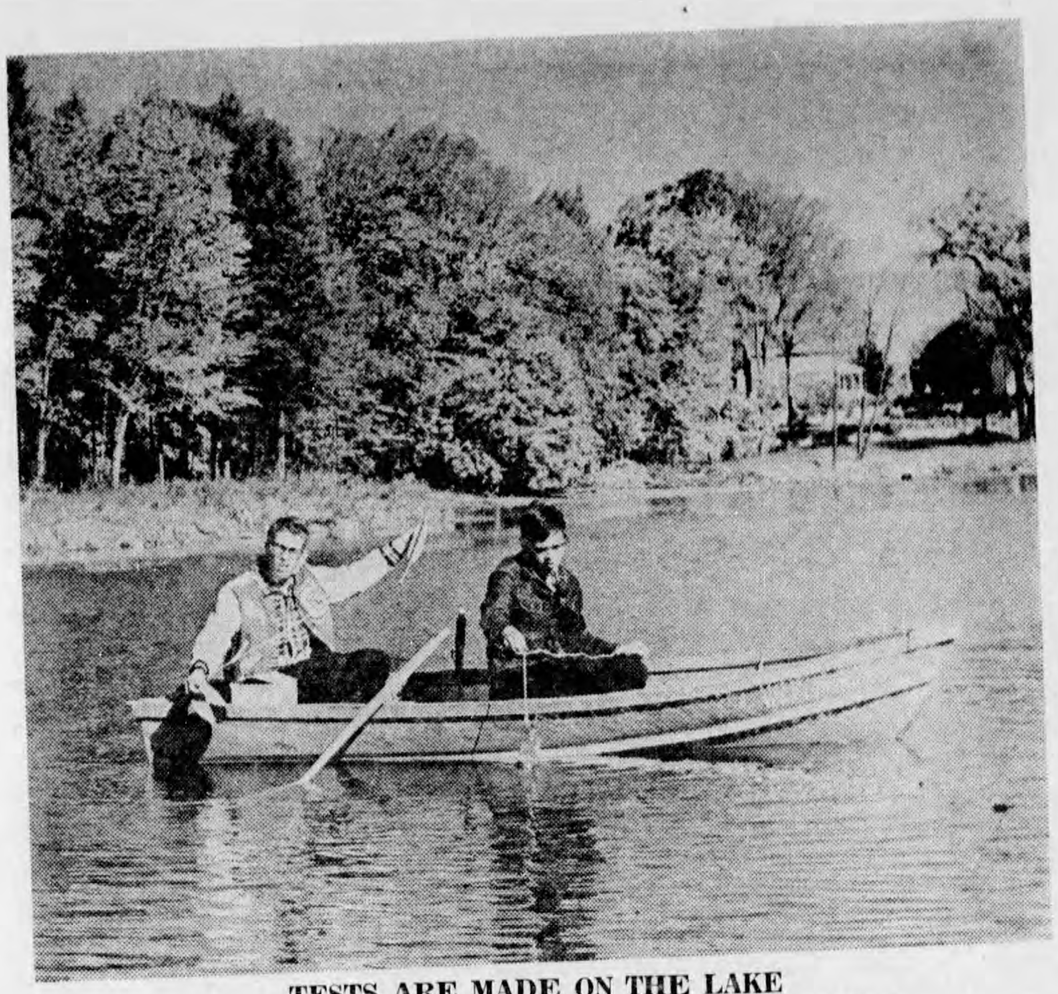
Advanced biology students continue checking processes in their unique laboratory.

They are hopeful that Savage's Lake will recover and that, someday, the fish will return to provide sport.

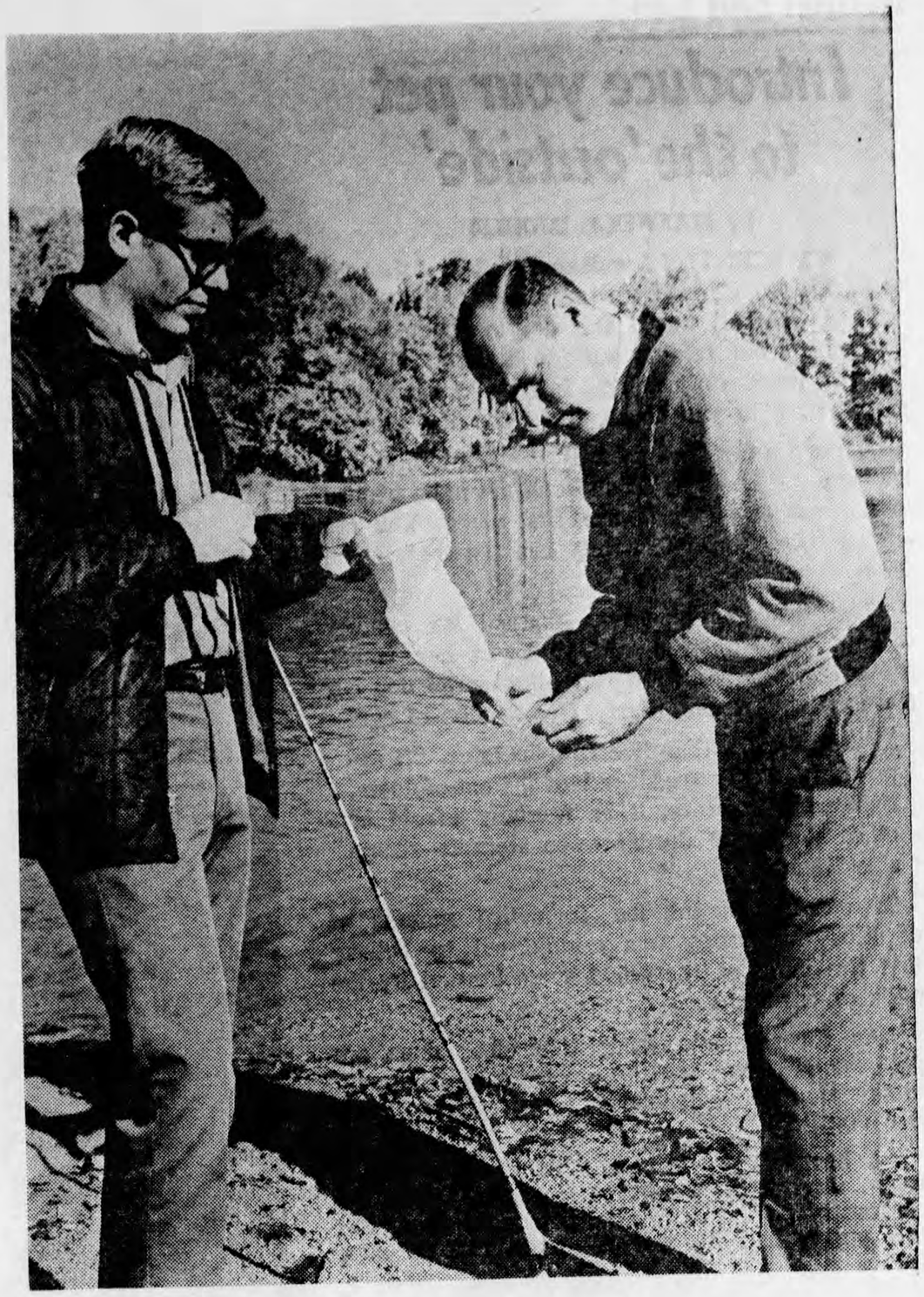
Perhaps, they hope, children will again swim from the beaches on the western shore.

THE NUMBER 142,857 contains several oddities but one of the rarest is that it becomes multiplied merely by placing the first digit after the last, since 428,571 is just three times 142,857. Only one other number under a trillion has this property, and it contains exactly the same six digits of 142,857. Just rearrange these digits, and use trial to find the right number and its multiplier. What is this number, and its multiplier?

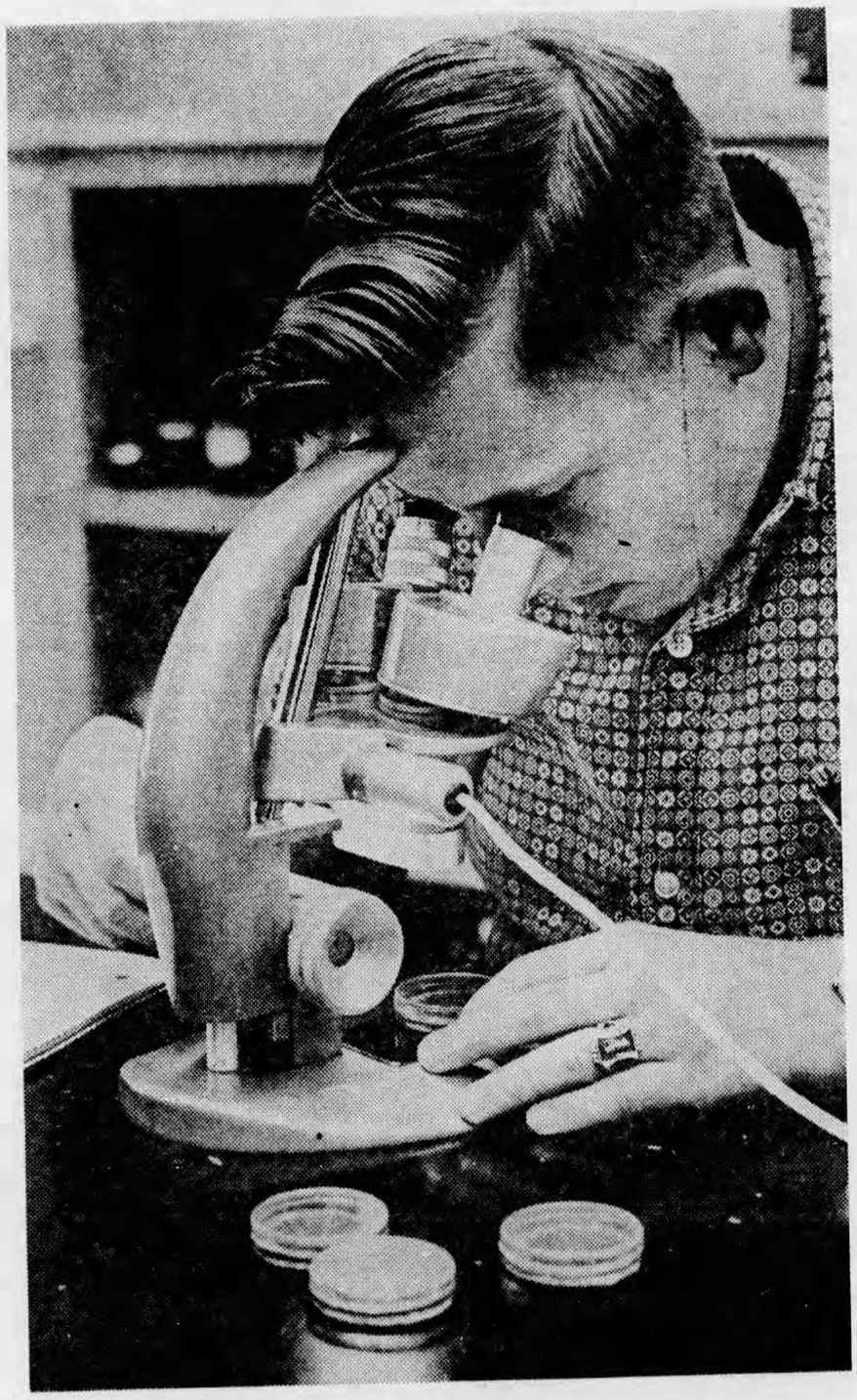
ANSWERS ON PAGE 22



TESTS ARE MADE ON THE LAKE
Students use a disc and sample bottle to check turbidity and to gather water for further tests



NETTING PLANKTON SAMPLES
Charles Gruentzel checks a plankton sample gathered by one of his students



FINAL LAB TESTING
Water samples are examined for coliform bacteria colonies in a check of water purity

SAMPLES SUBJECTED TO TESTS
Students prepare samples for oxygen tests, take alkalinity readings and temperatures