

# The St. Johns River Hyacinth Story

by

CAPTAIN NOAH J. TILGHMAN

Palatka, Florida

Presented to the

HYACINTH CONTROL SOCIETY July 8, 1963

Reared on the banks of the St. Johns River and, as a boy, my father owned the first gasoline motor boats, about 1895. The year 1912 I started entertaining out of state visitors, black bass fishing and have continued to this date. For more than thirty years living on a boat, or boathouse, I feel qualified to give you this report on Water Hyacinth.

At the turn of this Century, about 1900, the people became alarmed over quantities of hyacinth obstructing navigation of boats. This usually occurred during the summer months when the growth was heavy and the river current would pack them around drawbridges, which were built of piling placed close enough to prevent their passage with the current down stream. The first attempt for relief was a spraying operation of chemicals to kill the plant. Cattle feeding along the banks were dying from chemical treated hyacinth, and spraying hyacinth was stopped.

For a number of years the only relief was to use a powerful steamboat at times when the condition occurred, to push hyacinth through the drawbridge where current could take them on their way to the ocean. This was a clean operation, because hyacinth roots collect and live on impurities, mud and silt which were removed from the stream. I can not recall a time since river water was so clear.

Later attempts were made to destroy the plant with a series of saws extending over the side of boats. A conveyor was tried dumping hyacinth in piles on the water, resulting in a rotting procedure, all of which the U.S. Engineers claimed too costly and slow. I could not approve this operation, because of the results of rotting vegetation, an aid to water pollution.

The war came on, an air-base for training flyers established at Jacksonville and they required smooth water surface for landing. Hyacinth Fences were built at many points on the river to prevent drifting to this area and the ocean. This caused some trouble until September high winds and high water blew many of them back in the swamps, and the first frost in November killed them to the roots, we would have no hyacinth problems until the following summer.

During this period of more than forty years the water was clean. Fish of all kinds were plentiful. Commercial fishing was wide open with seines harvesting a crop of fish valued at one to two million dollars annually.

Chemical spraying of hyacinth with 2-4D started in 1946. At hearings by the U. S. Corps of Engineers I protested the act of hyacinth extermination, which would be harmful to our fish population and detrimental to good water conditions, which was not considered. At times spraying over large areas of hyacinth caused a condition of rotting vegetation, the results of which that particular area was infected with midges, commonly called blind mosquitoes, which take their flight from water at sunset, and at dawn, and are unbearable for living conditions. The presence of these midges created a problem for health authorities, their lighting on valuable property, and even plant life along the river banks caused much destruction.

Four years ago I realized we would have no shoreline fishing ground, when all the green vegetation is destroyed. With the aid of our Sportsman's Club, our Chamber of Com-

merce we appealed to the Florida Game & Fresh Water Fish Commission and the U. S. Fish & Wildlife Service at a joint meeting, the U.S. Corps of Army Engineers, and our Washington Congressional Representatives. The reply from U. S. Engineers: "Public Law 85-500, 85th Congress we face a requirement that water hyacinth and other aquatic nuisances be eradicated. Thus it appears that we cannot carry out the mandate of Congress and at the same time allow part of the hyacinth to remain in the St. Johns River for their contended beneficial effect on bass fishing."

The original Act in 1946 was a Hyacinth Control Program. The U. S. Fish & Wildlife and the Florida Game & Fresh Water Fish Commission approved the 2-4D, stating it does not kill fish. I can state with authority all fish leave an area the minute hyacinth are sprayed. These waters are dead so far as fish are concerned until a new crop of green vegetation takes the place.

It has been my custom in the movement of Noah's Ark to select fishing grounds over this more than 100-mile area to stand on the deck and watch for the best clean water and shore line conditions entertaining out of state guests, for which I feel responsible for their success in black bass fishing. On many occasions our fishing boats along a shore line would be ordered away from even a small growth of hyacinth in an effort to spray every hyacinth seed. Our guests would plead for consideration, we are paying a big price to Florida for this privilege, and were refused. So our Sport Fishing operation is out of business for the desired Extermination or Eradication, which the Engineers now concede is impossible.

It is my opinion when the final book is written on this subject, water hyacinth will be valued a great asset to our water resources. Water pollution is the one great problem of our nation today. I fear we have become alarmed too late. We are cautioned and alarmed that we have got to quit using our streams and waterways as a common dumping ground. But how do we treat and improve our present polluted waters?

A lot of valuable information was recorded in our last Hyacinth Control meeting. With a review of this and my personal experience I can tell you *HYACINTH is the most valuable of all aquatic plant life, and will aid in water purification.* We cannot do without green growing plant life in our streams or waters. It is nature's way of providing a good life for man, and must not be destroyed.

Hyacinth will not grow without sunshine. Its roots are like a sponge, a catch-all for mud silt, and if you doubt this go to a body of water with a mud bottom, take a handful of hyacinth, shake it on the dry ground and you will see filth fall from its roots. The only other ingredient in hyacinth is sunshine, man's most valued product for good health. With our present shortage of hyacinth there was never a time these waters were as filthy with mud. The least little wind in reasonably shallow water makes it plain to see this rotten condition.

The answer to this is easy. I have heard it said many times when man finds a useful purpose for hyacinth, and harvest them from the water our troubles will be solved. I have long advocated the use of a Harvesting Machine, loading the boat with hyacinth, take them to shore where they should be dumped. There is no question in my mind, they would be used as mulch around orange trees.

I have reports from our Agricultural Experiment Service in Gainesville; "Hyacinth used for mulch to conserve soil moisture rates relatively high, as most plants contain about 1- to 1.5 percent compared to 2 percent of the ash was K20.

in hyacinth." At our last meeting it was reported quote: "Hyacinth grown in clear water has little chemical value, grown in highly polluted water rates high in chemicals. It would pay to plant hyacinth at our sewage fluent disposal plants and harvest same for their chemical value, and to improve water pollution conditions."

It was most interesting to see the moving pictures of Mr. Wm. E. Wunderlich, and his experience of hyacinth control with a harvesting machine in Louisiana canals. I am certain this harvester would be ideal for large waters, like the St. Johns River, controlling excess acreage of hyacinth, that would correct our navigational problem.

For shallow lakes, which are many, most of which have boat launching ramps the use of a small harvester on a barge, similar to the Army Duck. This barge or boat hull built as large as could be moved on our highway, in comparison to the largest Highway Trucks, and possibly a spare barge for loading hyacinth, would do the same operation.

Hyacinth around the shoreline of any lake or stream is an asset and should not be destroyed. Valuable trees along the river banks in most parts have been uprooted falling to the ground, for the want of protecting the roots from washing waves, underwashing the roots. The St. Johns River has suffered great damage of Bank Erosion caused from the act of trying to ERADICATE HYACINTH.

The Act of Mechanical Harvesting Hyacinth will provide improvements over spraying with four benefits. (1) Prevent bank or shore erosion. (2) Aid in water purification, correcting stream pollution. (3) Promote fish propagation, with food and cover, and reducing water temperature in summer months. (4) Provide a source of farm aid with a mulch in our sandy unimproved soil.

The U. S. Corps of Engineers are responsible, or obligated only to keep navigable streams open for movements of boats. The Jacksonville Engineers contend hyacinth grow and breed so prolifically that it is impossible to control them if a nucleus is left along the banks, and spraying is cheaper than a mechanical operation.

It appears from the moving picture demonstration at our last meeting the Mechanical Harvester used by the New Orleans Engineers is more efficient and capable, doing a better job at less cost for a Hyacinth Control Program. The Florida Game & Fresh Water Fish Commission agree the presence of vegetation is necessary for the propagation of fish. The more vegetation (of a harvesting variety) we can grow in our streams, the more we will benefit from water pollution.

Floridians take a lot of pride in our homes, our lawns which are usually green, and require mowing once a week. We go to expense to preserve our forests from fires, and provide green fresh cut grass along our highways. We build gardens to attract out of state visitors then we permit and pay large sums for destroying our beautiful waterways, that are now becoming unclean, unsightly and unhealthy.

I urge you to use every effort to correct this method of destroying Nature.

## Insurance Coverages Applicable to Hyacinth Control Programs

by

J. B. JOHNSON, JR.

*Sales Representative Automobile and Casualty Lines*

It is a pleasure to be here with you today and I am complimented to have been asked to participate in this program. I

hope that what I have to say on my assigned subject will be of benefit to you. Please bear in mind that I speak to you solely from an insurance point of view and that my chemical knowledge is limited to the latest do-it-yourself edition on how to get rid of crab grass. May I add that I hope I am more successful with this talk than with the crab grass.

The subject of Hyacinth Control is relatively new to the insurance industry and this is most likely brought about by the limited areas where this problem exists. For example, the Southern Department of Fireman's Fund has had only one request for coverage relating to this type of risk. Essentially, insurance is a formal social device for the substitution of certainty for uncertainty through the pooling of hazards, and since we do not have any experience with aquatic weed control, we cannot have a firm position.

Before we go into the coverage pertaining to Hyacinth Control, I must advise you that we are not a market for this type of business and it is necessary that any risk be submitted solely on its own merit. This is not to say that this is a prohibitive class of business but rather a class that must be engineered to determine the type of operation we are insuring. We want to know the chemical makeup of the herbicide, how it is applied—by hand, machine sprayer or airplane spraying. Is the area to be sprayed contiguous with fruit groves, vegetable gardens, cereal and grass type crops or bird sanctuaries.

Tests have shown that some commonly used herbicides markedly inhibit reproduction of Mallard ducks and other fowl and produce bad flavor scores lower than standard where the farmer instituted a weed control program.

Because of the unusual hazards involved in the use of herbicides, it will not be a simple matter to secure adequate insurance protection. Much will depend on you—experience in the care and use and willingness to cooperate with insurance company engineers.

The greater than usual hazards involve occupational disease to employees from toxic or injurious chemical gases or fumes:

General Liability—fire hazard—toxic or injurious chemical gases or fumes, food damage.

And now we shall discuss the coverages applicable to your society. There are several types of insurance but we classify our writings into two groups—first party coverage and third party coverage. Damage to your owned property by specified perils is first party whereas damage by you or as a result of your operations is third party. In your operation, third party liability is of the greatest importance; therefore, I want to emphasize the legal liability needs. A value can be established for property but not a law suit.

To provide you with the broadest form of protection, I recommend the Comprehensive Liability Policy. This policy is as the name implies—all comprehensive with certain coverages mandatory and others optional. The coverage is two fold—Bodily Injury and Property Damage.

### COVERAGE A—BODILY INJURY LIABILITY

Payment on behalf of the insured of all sums which the insured shall become legally obligated to pay as damages because of bodily injury, sickness or disease, including death at any time resulting therefrom, sustained by any person, caused by accident (note accident) and arising out of the ownership, maintenance or use of premises and all operations.

### COVERAGE B—PROPERTY DAMAGE LIABILITY

Payment on behalf of the insured of all sums which the insured shall become legally obligated to pay as damages because of injury to or destruction of property, including the loss of use thereof, caused by accident and arising out of the ownership, maintenance or use of premises and all operations.

This coverage applies while you are performing your oper-