

# An old fish tale bears retelling

Superfish has been a super solution at three courses for Florida's Jones

What could be more natural than to use nature to control nature?

Dan Jones, a voracious reader who happened upon an article on a voracious fish, has proved that nature's way is sometimes best. His "Superfish solution" to horrible weed problems in lakes at golf courses he has worked at over the years bears retelling, since so many golf course superintendents are newcomers and since pesticide use has come under attack so strongly.

A former president of the Florida Turfgrass Association and South Florida Golf Course Superintendents Association and the superintendent at Banyan Golf Club in West Palm Beach, Fla., since 1980, the 53-year-old Jones has earned a reputation as a progressive groundskeeper — an innovator at tackling problems on the golf course.

But perhaps his stiffest test came when he took a post as superintendent at the County Club of Aventura in Miami in June 1975. Investigating the two golf courses, he found weed-choked lakes on the verge of death.

Yet 120 days later "our lakes went from eyesores to aesthetic gems," Jones said.

The solution was the white amur fish, a fast-growing native of Asia that has an insatiable appetite for vegetation and which Jones had used to control weeds while superintendent at the Dorado Beach Hotel golf course complex in Puerto Rico.

The white amur is legend in China, where it has long been used to help control



Dan Jones

weeds in paddy fields. Originating from the Amur River region of Siberia, it can grow up to 6 feet, weigh about 100 pounds and, while growing, eat three to five times its weight each day.

In one study in Arkansas, a batch of white amur ate a lake filled with the "superweed" hydrilla clean in six months — attesting to why some scientists have come to call it "Superfish."

It didn't even take six months in Jones' case.

Jones says the lakes at Aventura were one-fourth covered with marine niad and hydrilla, a swarming plant that has been almost indestructible while choking fish and hampering boats. Filamentous algae worked as a cohesive, holding the vegetation together, and the banks of the lakes were covered with torpedo grass 6 to 10 feet out.

Jones reports that the fish first devoured the algae, within a week.

They then attacked the marine niad and hydrilla, annihilating them in 45 days.

The real test was next: the torpedo grass. After four months, the Superfish had eliminated 60 percent of the torpedo grass

**'A tremendous amount of pesticides are being pumped into our waterways in Florida.'**  
— Dan Jones

and, as the fish grew larger each day, they ate more, making the pesty weed disappear all the more quickly.

When Jones joined Banyan Golf Club, he says, its seven lakes which cover 40 acres were "completely clogged to 8 feet out from the bank with Southern niad and hydrilla. Golfers lost balls consistently; the lakes were an eyesore and a mess."

He went to his old standby, the Superfish, and within a year the waters were completely clear.

A side benefit to the experiment was that Jones' groundskeeping crews could feed grass clippings to the fish, eliminating the need to cart the clippings away.

Jones said the white amur and the triploid white amur — a hybrid variety bred to be sterile and thus be legal in some states that outlawed the fish — can live anywhere in the United States, "unless the lake freezes solid."

Jones said it takes about 55 fish per acre to keep ponds clean, although since the triploid is "not as voracious" more of that variety may be needed.

The state of Florida wrestled for several years with how to legally treat the white amur. It first made them illegal, thinking that the fish endangered the duck population by eating the duckweed.

But it has since made the Superfish legal.

In fact, it was environmental concerns that prodded Jones to use the fish in the first place.

"A tremendous amount of pesticides are being pumped into our waterways in Florida," he said.

"The Department of Natural Resources once dumped a huge amount of diquat into one lake to kill the hydrilla.

"That's the kind of thing being put in our waterways ... and we don't know what it's doing to our children.

"I can understand being cautious, but the one good thing you bring in, they outlaw."

The white amur has only reproduced in its native Asia and its hybrid cousin is sterile.

So, Jones said, because of attrition and (in Florida at least) alligators that eat the tasty fish, golf course superintendents using them have to replenish their waters every four or five years.

The fish has certainly been a trick up the sleeve of Jones, a Florida native who started groundskeeping in 1965 at Fountain Valley in St. Croix, U.S. Virgin Islands.

Jones moved on to Dorado Beach Hotel in 1970 and Aventura in 1975 before being appointed superintendent at Banyan Golf Club in 1980.

Jones is retiring at the end of the year after 13 years as editor of Florida GCSA's Florida Green magazine, which has won the Chapter Newsletter Editor's Contest of the Golf Course Superintendents Association of America since its inception a dozen years ago and won the National Golf Foundation's Harry Eckhoff Award honoring excellence in golf journalism in 1984 and 1985.

But, though retired from the magazine, his legacy will remain — both on the green and in the water.

## On the Green

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### More states accepting white amur

J.M. Malone & Son Enterprises in Lonoke, Ark., which has been farming the (diploid) white amur fish since 1972 and which first bred the sterile triploid white amur, has been working to legalize the fish in states around the country.

President Jim Malone reports that 11 states allow the diploid white amur and 20 allow the triploid and will grant permission through a state agency for people to import the triploids. The other 19 states outlaw both varieties, although several are expected to allow importation starting Jan. 1.

Malone said the diploid white amur is allowed in Alabama, Arkansas, Colorado (on the eastern slope), Hawaii, Iowa, Kansas, Mississippi (which prefers triploids), Missouri, Oklahoma, Tennessee, and South Dakota (which allows it on a research basis).

The states allowing triploid white amurs to be imported by are Arizona, California, Colorado (on

the western slope), Delaware, Florida, Georgia, Idaho, Illinois, Kentucky, Nebraska, Nevada, New Mexico, North Carolina, Ohio, Oregon (on a permit-research basis), South Carolina, Virginia, Washington (on a permit-research basis), West Virginia and Wyoming.

Malone said he expects that on Jan. 1 Indiana, Massachusetts, New York, Pennsylvania and Vermont "will come on line," and all the Northeast will allow the fish in the next year or two.

Pennsylvania, New York and Indiana officials have been researching the white amur for years and Malone has heard that those states will authorize the fish soon.

Meanwhile, Texas A&M University will stock some white amur in a research project before the state legislature will approve the fish.

Superintendents wishing to import the white amur should contact their state Department of Fish and Game.