

US Army Corps of Engineers and Alcoa Foundation - Gum Springs Plant Partner to Control Aquatic Vegetation on Lakes Ouachita and DeGray



Johnny Cantrell, Biologist, Rick Dwyer, Acting DeGray Lake Park Manager and Park Ranger, Brian Westfall, accept a \$10,000 grant check from Alcoa Community Relations Specialist, Debra Sorrells, to help control Hydrilla on Lakes Ouachita and DeGray.



Hydrilla Infestation on DeGray Lake



Pakistani Fly (*Hydrellia pakistanae*)

Partners: Alcoa Primary Metals – Gum Springs Plant and US Army Corps of Engineers, DeGray Lake, Arkansas

Lake: DeGray Lake, Arkansas

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Partnership Type: Grant Award Partnership

Story: Often referred to as the “perfect aquatic weed”, Hydrilla is a fast growing, aquatic nuisance that is quickly becoming a serious problem in many lakes in the Southern United States. Hydrilla was discovered in Arkansas in the summer of 2001 at Lake Ouachita. The area of coverage in Lake Ouachita by 2003 had reached 10,000 acres. In the summer of 2002, Hydrilla was discovered in two areas on DeGray Lake. Without some means of control, Hydrilla threatens the welfare of both Vicksburg District Corps of Engineers impoundments. In clear lakes such as DeGray and Ouachita, Hydrilla can grow as deep as thirty feet, creating an impenetrable wall of subsurface vegetation during late spring and early summer. Biological control offers a proven, cost effective method to generally suppress Hydrilla; the Pakistani Fly (*Hydrellia pakistanae*), also known as the Asian Hydrilla Leaf Miner, can offer such control. These are small flies that are about 2mm in length. They resemble small gnats that are often seen near small ponds and other aquatic systems. The adult fly can usually be seen resting on floating hydrilla and appear to hop along the water surface instead of flying. Pakistani Flies are host-specific feeders, and lay their eggs on Hydrilla. Although the female flies lay only one egg at a time, each female can lay up to several hundred eggs. In 3 to 4 days, depending on the temperature, the eggs hatch and the larvae enter the water in search of Hydrilla. This is where the damage is done. The larvae eat the leaves of the Hydrilla destroying 9 to 12 during the 3 larval stages. In the third stage the larvae pierce and feed on the stem, destroying the stem and developing into a pupae stage. Six to 15 days later an air bubble forms around the emerging adults and they float to the surface. Once they reach the surface, the bubble bursts and the fly begins to feed in preparation for the egg laying process.



On 02 December 2004, the DeGray Lake Field Office received an ALCOA grant check totaling **\$10,000.00** from ALCOA Primary Metals in Gum Springs, Arkansas. The ALCOA Grant was awarded to help control Hydrilla infestation in Lakes Ouachita and DeGray. In an attempt to propagate Pakistani Flies, a second nursery pond will be constructed beginning in April 2005 on DeGray Lake project lands. The DeGray Lake Field Office submitted the Hydrilla control proposal in the annual ALCOA grant assistance program.

CE POC: Jody Dvorak, Park Manager

Submitted By: Brian C. Westfall, Park Ranger