TED CENTER (K8665-1)

Fast-growing *Salvinia molesta* formed a dense mat nearly a foot thick in this east Texas farm pond.

Reunion With Weevils Could Sink a Water Weed

South American weevils might help stop the spread of salvinia, an invasive water weed also native to that continent. The *Cyrtobagous salviniae* weevils might reduce the need for chemical controls against salvinia in warm-weather areas of the United States. They have done just that in some other countries plagued by the weed, including Australia, South Africa, and India. Last summer, scientists with ARS and the Texas Parks and Wildlife Department released hundreds of the tiny black weevils in a salvinia-infested pond, lake, and reservoir near Jasper, Texas.

Leaves of the weed, *Salvinia molesta*, can form mats that crowd out native plants and ruin water bodies for fish and wildlife. The mats can also interfere with flood control, irrigation, fishing, swimming, boating, and water skiing. Unchecked, salvinia can double its extent in a few days.

The weevils reproduce quickly—about every 3 weeks—and mainly attack the plant's buds. Scientists will monitor the weevils to determine if they can adapt to the climate—a crucial factor in gauging their potential as a natural weed-eater. *Ted D. Center, USDA-ARS Aquatic Weed Control Research Laboratory, Ft. Lauderdale, Florida; phone (954) 475-0541, ext. 103, e-mail tcenter@ars.usda.gov.*

New Mosquito Trap

Mosquitoes and other biting insects are being lured into a new trap that kills them without using pesticide. ARS scientists developed and field-tested the trap under a cooperative research and development agreement with BioSensory Insect Control Corp., of Willimantic, Connecticut.

The Dragonfly trap attracts the insects with a patented blend of carbon dioxide, heat, and octenol—all natural chemical cues mosquitoes use to find a blood meal. But when mosquitoes or other biting insects enter the trap intent on a human snack, an electronic pulse kills them and they fall into a removable tray. Conventional bug-zapping traps splatter bug bits every which way. The attractants are registered with the U.S. Environmental Protection Agency for controlling mosquitoes and other biting insects. *Daniel L. Kline, USDA-ARS Center for Medical, Agricultural, and Veterinary Entomology, Gainesville, Florida; phone (352) 374-5933, e-mail dkline@gainesville.usda.ufl.edu.*

Biotech Blooms for the Floral Industry

Disease-resistant lilies, gladioli, and other cut flowers may be available to commercial growers in a few years. Using biotechnology, ARS scientists are trying to produce what conventional breeding hasn't: commercial cultivars that resist viruses that threaten the $15 billion U.S. floriculture industry.

An example is cucumber mosaic virus, spread by aphids while they suck the plants' sap. Insecticide is an available option, but it can be costly or harm flower-friendly bugs. As an alternative, the ARS research team genetically engineered 30 lines of gladiolus with built-in defenses. About 250 of the yellow- and pink-flowered plants grow in a greenhouse. Scientists have intentionally challenged the plants with virus to find out whether their new genes can foil it. The virus can cause streaking of petals, leaf spots, and other unsightly symptoms.

The test plants are the first gladioli to be engineered using a gene gun, a device that fires bits of antiviral DNA into cultures of gladiolus cells. Scientists coaxed the cells to develop into whole plants. The new genes include two viral coat proteins and an enzyme.

If the gene-engineering approach proves reliable and effective, commercial growers could develop the plants into new commercial varieties. *Kathryn Kamo, USDA-ARS Floral and Nursery Crops Research Unit, Beltsville, Maryland; phone (301) 504-5350, e-mail kkamo@asrr.arsusda.gov.*