AMERICAN BOTANICAL COUNCIL

Post Office Box 144345
Austin, Texas 78714-4345
Phone 512/926-4900
Fax 512/926-2345
Email: abc@herbalgram.org
www.herbalgram.org

HERBCLIP

FILE: Alien plants

DATE: November 23, 1998 HC 081083

RE: Alien Plants Pose Problems

Brody, Jane. Rootin' Shootin' Raiders Conquer Native Ground. *New York Times*, Tuesday, June 9, 1998, pg. B11.

"Invasive [non-native] plants are the second most serious threat, after habitat loss, to native species of plants and animals and to maintaining biological ecosystems," says Dr. John Randall, an invasive plant specialist with the Nature Conservancy and the University of California at Davis. At least 300 species of invasive plants threaten native ecosystems in the continental U.S. and Canada; in Hawaii there are "nearly as many imported invaders as native plants," according to this writer. Half the plant invaders in the U.S. were initially imported as ornamentals.

This writer explains that when some plants are introduced into congenial environments free of their natural predators, they invest energies normally used in protective chemical production into growth and reproduction. Scientists are researching biological counterattacks to bring many invasive plants under control. These controls (usually insects) must be carefully researched to assure that they too won't become destructive in their new environments.

Purple loosestrife (*Lythrum salicaria*), a Eurasian wetlands import, has replaced native and rare vegetation and reduced wildlife food and shelter nationwide. Dr. Bernd Blossey of Cornell University describes the use of a root-feeding weevil, another weevil that eats blossoms, and two leaf-feeding beetles to control the herbaceous plant in more than 1,000 wetland sites in 32 states. Dr. Blossey warns consumers not to purchase so-called infertile purple loosestrife cultivars from nurseries because they can produce viable seeds.

The melaleuca tree (*Melaeuca leucadendra*) was imported from Australia and New Guinea in the early 1900's as a low-maintenance ornamental; it was also widely planted in an attempt to "dry up" the Everglades, and now infests 1.5 million acres in Florida, presumably crowding out native plants and draining swamps. The Agricultural Research Service in Fort Lauderdale released an Australian gray weevil at 10 test sites last year; the weevil feeds

on melaleuca growing tips and forming flower buds, preventing reproduction. Eight to 10 other insects are also being studied as melaleuca controls.

Tamarisk or salt cedar (*Tamarix chinensis*) is an Asian native first introduced in the U.S. as an ornamental and erosion control and is now "the No. 1 weed in the West," according to Dr. Jack DeLoach of the Agricultural Research Service in Temple, Texas. "It has no value to native animals, it lowers the ground water table so that other plants can't reach it, it deposits layers of salt on the soil so that other plants can't grow there, it's extremely flammable, and after a fire, nothing but salt cedar can come back," he explains. An Asian foliage-eating beetle and an Israeli sap-sucking mealy bug are possible controls, although their use is on hold while the effects of salt cedar control on the nesting behavior of the endangered southwestern willow flycatcher are being studied. The bird used to nest in willows displaced by the salt cedar.

The Eurasian herbaceous plant leafy spurge (*Euphorbia* spp.) infests five million acres in 26 states. It displaces grassland plants and its milky sap gives cattle mouth sores. Thirteen insects have been imported to control it; flea beetles have been most effective, feeding on the leaves while their larvae mine the roots.

The yellow star thistle (*Centaurea calcitrapa*) is "strong enough to kill a horse" according to Dr. Juozof Balciunas, a Federal entomologist. This Mediterranean native has taken over 20 million acres of rangeland and vineyards in the West. Five insects are "beginning to make a dent" in the number of plants, although the remaining individuals just grow larger.

The Norway maple (*Acer platanoides*) is a "majestic" Eurasian native imported as an ornamental, and the most widely planted tree in this country. Unfortunately, it competes very aggressively with native trees like sugar maples and beeches. Dr. Edward Toth with the city of New York is awaiting a permit to try injecting Norway maples with an imported product called Florel, which keeps trees from setting fruit. This is an experimental use, as the product is designed to be used as a spray.

Scotch broom (*Cytisus scoparius*) is a leguminous shrub native to Europe and North Africa. The yellow-blooming plants spread aggressively through seeds and roots and thrive on poor soil, binding nitrogen from the air like other legumes. It is wide-spread in the West. A seed weevil has reduced seed production by 75 percent; another, accidentally imported beetle may further reduce production to 95 percent.

Other invasive non-natives include foxglove, vinca, periwinkle, myrtle, jasmine and bachelor buttons. Janet Marinelli of the Brooklyn Botanic Gardens urges home gardeners to try and find out whether a plant is invasive in their area before using it. "If, for example, a plant from Italy became invasive in Australia, you wouldn't want to plant it in Southern California," she explains.
—Betsy Levy

Bin #145