

Roaring Fork's flora and fauna control pests – naturally By James E. Guyette

t first glance, the "bio islands" at the Roaring Fork Club in Basalt, Colo., fly in the face of some of today's tidy course management standards. These undisturbed land bodies located throughout the course have a scraggly, wild look to them. The wildflowers growing within the bushy islands bloom year round and may seem more suited to the side of a highway than a well-manicured golf course.

But the 27 acres of bio islands are spread throughout the course for a reason — a good reason. They are a breeding ground and natural habitat for many species of birds and insects — critters which happen to feast on the many pests that invade the course. The bio islands and their function en-

able the maintenance staff to cut down on pesticide use.

"We're highly into integrated pest management, our pesticide use is minimal, and we intend to keep it that way," says Bob Clarkson, Roaring Fork's superintendent.

The bio islands are the brainchild of Jerome Osentowski, a permaculture consultant in Basalt, Colo., who believes in integrating plants, animals, landscapes, structures and humans into systems where the product of one element serves the needs of others.

"The idea is to maximize the diversity of the habitat by using plants that have an innate symbiotic relationship with each other, which means they can provide for their own needs," he *Continued on page 70*

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The colorful bio islands are home to the "good" bugs and birds.

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says. "As a result, everything is thriving. We're bringing the ageold protective concept of hedgerows onto the golf course."

The bio islands provide shelter, food and nesting habitats for a number of beneficial insects, frogs and small garden snakes that prey on the turf's enemies. For example, a dozen varieties of tiny, beneficial wasps help control pest insects. One of the most active, the trichogramma wasp, attacks the eggs of the cutworm moth as well as 200 other caterpillar pests. Three different types of dragon flies eat mosquitoes. Weevils munch on Plumus and Canadian thistles, while starlings devour cutworms.

The "good" bugs and birds are a welcome addition to a golf course that prides itself on a solid integrated pest management program. "We went through last summer without a pesticide application on the greens," a proud Clarkson says.

Careful consideration was given to the shrubs selected for the bio islands so they would attract desirable birds and insects, but not nuisance wildlife, Clarkson says. Twenty different native species of shrubs were selected, including gooseberries, Nanking cherries, alpine currants and native plums.

Eight thousand shrubs and 2,000 trees line the fairways, while 18 different varieties of annuals and 12 types of perennials create carpets of wildflowers. The club combined the chosen plants with existing plants and shrubs.

The bio islands are designed to provide their own fertility. The diverse plant life includes clovers, birds-foot trefoil and lupin, which provide nitrogen for the cosmos and purple coneflower. Similarly, on the shrub level, the mountain mahogany and buffaloberry provide nitrogen for surrounding shrubs.

Clarkson says the course also serves as a living laboratory for university researchers interested in examining the potential use of natural methods to control pests.

Golfers will enjoy the bio islands for several reasons, including their function and look. The bio islands also aren't a bad place for a golfer to shank a ball.

"If a golfer hits a ball into the bio islands, he or she can pull some cherries off a tree to munch on," Osentowski says.

Guyette is a free-lance writer from Cleveland.