

Biological Controls Feed 'Em or Lose 'Em

"Tansy Flea Beetle Wins Ragwort Sweepstakes at Redwood NP"

This headline article by Lorraine J. Holden, a Redwood NP biological technician, told the story (*Park Science*, Vol. 5 No. 4, pp. 10-11) of how 225,000 "tiny, golden, and deadly" beetles were quietly chewing to death the tansy ragwort that was then rampant in and around the park.

"We hope a few beetles survive," Holden wrote. The problem, like most fine-tuning, ecosystem problems, is a close call. The beetles work more slowly than do chemicals. They eat the problem up, but eventually their cupboard is bare.

Now comes a story in the Oregon State University agricultural experiment station's *Progress* (Winter/Spring 1988), suggesting that the flea beetle may have been all too successful. While the cinnabar moth and the flea beetle are munching their way to extinction, the tansy ragwort's sturdy seeds lurk in the soil. Peter McEvoy, an OSU entomology professor, reports finding 6,000 viable seeds buried in the top soil of a one-square-meter area. "And they just seemed to stay at that level," he said. "Their decline and decay is immeasurably slow." Any soil disturbance could start another epidemic.

So what is Oregon doing about it? Can you believe a tansy ragwort nursery? A field of tansy near Salem, Ore., is being used to nurture a good

population of beetles for spot inoculations in problem areas.

Eric Coombs, a biological control entomologist with the Oregon Department of Agriculture, gives the lion's share of credit for tansy control to the flea beetle. It's almost invisible unless you know what you're looking for, and gets far less attention than its larger, more colorful partner, the cinnabar moth. But "at this point," Coombs said, "the flea beetle is the real workhorse and the moth just gets most of the credit."

Meanwhile, back at the Redwoods, the tansy population within the park is at "very low level," according to Mary Hektner, the park's supervisory botanist. She reports that Del Norte County control officer Ken Collins has set out some plants as food for the beetles. The park is experimenting with its small remaining tansy population by clipping the seed heads, thus leaving some food for the beetles while denying them their former banquet.

As Holden wrote four years ago: "Biological control operates within the parameters of the environment - at nature's pace. Faith and patience are prerequisites for a successful management program. Biological control can offer a cost effective, ecologically sound, self-sustaining method for exotic plant control ... It's a methodology well worth looking into."