



Klamath weed beetle on Klamath weed.

Biological Control Of Klamath Weed In Yosemite NP

Once again, Yosemite NP is a biological battleground.

In May and June, 1981, some 15,000 *Chrysolina quadrigemina* beetles were released at five affected sites in Yosemite NP to control biologically the exotic Klamath weed (*Hypericum perforatum*). This biological control program, in keeping with the Services tight restrictions on introduction of exotic species and being carried out in cooperation with the California Department of Food and Agriculture, should continue until the beetles have eliminated all known infestations of Klamath weed.

The weed, also known as St. John's wort, is native to Europe. It showed up in California in the early 1900s and was identified in Yosemite in the 1940s. Since then, various eradication programs have been mounted. The first two attempts, hand eradication and chemical spraying, were ineffective; the third, biological control, was successful.

In 1951, 9,800 *Chrysolina* beetles were released at six locations in Yosemite, and within 10 years the beetles had virtually eliminated the Klamath weed. Apparent demise of the beetle in recent years resulted in reinvasion by the weed, which rapidly took over roadsides and meadows. Klamath weed's presence constitutes undesirable alteration of the natural scene because of its ability to choke out native vegetations. In addition, it can cause skin irritation in humans and blisters in animals that eat it.

Klamath weed has an extremely high reproductive capacity. It quickly spreads from one favorable site to another and establishes dense colonies throughout each site. *Chrysolina* beetles feed specifically on Klamath weed, and they are so selective that they actually differentiate between the unwanted exotic and two closely related native plants.

If for any reason the *Chrysolina* beetle should fail this time to knock the weed "out of the park," two pinch hitters are available — a root crown beetle and a gall midge. These two organisms also are known for their ability to target and control Klamath weed, and park management is considering their introduction should supplemental actions become necessary.