for rearing young larvae. The retained viability of eggs stored in cold (32.9° F) implies the ability to have some control of when eggs will hatch in the lab. This would allow for the relase of masses of larvae and/or eggs into snakeweed pastures at strategic times.

The relatively short period of time (3-8 weeks) which the leaf beetles spent in the adult stage could be desirable from the standpoint of unwanted effects. The inconspicuousness of the leaf beetle larvae in the field and the conspicuousness of the adults may indicate that the adult stage is the dominant life form of this species.

Because the larval stage of the checkered beetle induces significant damage to snakeweed it would seem desirable to extend the larval stage of this species as long as possible. Contrary to the leaf beetle, the dominant life form of the checkered beetle in the field appeared to be the larval stage.

Developing either insect into an effective biological control of broom snakeweed may rest in the ability to mass produce them in the lab and/or to increase the rate at which they become adapted to the saponins produced by broom snakeweed. The first of these criteria has been explored superficially for the leaf beetle with encouraging results. Preliminary results on experiments with the checkered beetle indicated this insect to be very effective at killing snakeweed plants once root penetration had occurred. Both the leaf beetle and the checkered beetle have potential to be developed into an effective biological control for broom snakeweed.

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Prickly Pear Control

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I read with great interest the article by Ibarra, Martin, Cox, and Prieto on their work to control walking stick cholla cactus (*Rangelands*, 7(2) 1985). I wish to relate some of my experiences when I was starting my professional career with the USDA, Soil Conservation Service, in Vega, Texas, concerning the control of prickly pear cactus that may be of interest and use.

Back in the dustbowl days of 1937 on the Soil Conservation Demonstration Project at Vega, we were experimenting with ways to control prickly pear cactus. This area, on the Southern Great Plains, buffalo-blue grama grasslands, had a small farm pasture where prickly pear clumps were so thick that a person could step from one clump to another over much of the area. Blowing soil from cultivated fields had formed a small hummock around each cactus clump.

It was observed that there was a strip of land between the house and a neighboring cultivated field that was completely clear of cactus. The farmer told us that he had eliminated the cactus on that strip with his peg tooth harrow as he went back and forth to the cultivated field.

A small study was initiated to investigate this idea of cactus control. We decided to first cut off the cactus and level the hummocks with a railroad rail drag. Frequent checking after treatment showed, as we expected, that the cactus pads had only partially dried when rain moistened the ground and allowed the pads to root and form new plants. The farmer was asked to harrow the pasture a second time to break the roots. Careful timing of the two harrowings allowed the pads to dry out and die. As a result the pasture was almost completely free of cactus.

I suspect that a second cabling of cholla cactus will break the rooting cholla cactus pads from the ground and result in similar control. Ibarra et al. commented that rainfall the year of treatment was favorable to rooting, resulting in a tenfold increase of plants. Moving the newly rooted cholla pads and allowing them time to dry out might be feasible for cactus control even in a wet 'unfavorable' year.

Editor's Note: The author is a Life member of SRM living in Bogota, Columbia. He and his two sons have a ranch in the Llanos about 150 miles east of Bogota.