Tamarisk Beetle Monitoring
Ouray National Wildlife Refuge

Background

Biological control of saltcedar on Ouray National Wildlife Refuge (NWR) was established in 2005 with the beetle *Diorhaba carinulata*. Beetles and larvae were collected from Delta, Utah in June 2005 and released at four sites on Ouray NWR. The four sites were in Leota, Sheppard, Johnson, and Wyasket Bottoms. Beetles and larvae were placed on platforms made of paper towels in several trees in each bottom. Release trees in each bottom ranged in number from 6 to 12. Each tree was flagged, tagged, and a GPS location and a picture taken.

Monitoring form can be found under saltcedarbeetles.xls. Results are found under SCbeetlemonitor.xls. The paper file can be found in the bottom right drawer labeled Saltcedar Beetles.

Monitoring Protocol

Each original release tree will be visited three times each year, after 2005. The visit time period is selected to coincide with peak larvae as this is the easiest time to count. Depending on the spring (how warm and quick spring arrives) the first visit should be approximately June 25 – 30. The next two visits should be adjusted accordingly based on the first visit but will be around mid-August and the first week or so of September.

At each visit, the observer will locate each release tree and search for beetles, larva, and egg masses for exactly two minutes. The larva will be counted by instar age 1-3. Damage by beetles (not counting damage by other factors) will be scored into one of four categories: no damage, some damage evident, severe damage, and complete defoliation.

At the peak of defoliation, usually early September, areas of severe to complete defoliation will be mapped using GPS. Thus acres defoliated can be tracked each year.