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*Biological Control of Tamarisk, Phase II: Diorhabda Elongata – Adults vs. Larvae*

My experiment was designed to test which life stage of the tamarisk leaf beetle, adult or larvae, would be most effective in defoliating tamarisk. It was also designed to document the overwinter survival and potential spread of beetles from the original Phase I release site used last year. After documenting the total number of vegetative branches in each of five different enclosures, I released 30 adult leaf beetles into four enclosures, leaving the fifth one for a control. After three weeks, I recorded the number of vegetative branches defoliated by the adults. I removed the adults in each enclosure, reduced egg clusters to a level necessary to achieve 30 larvae after egg hatch and replaced the screened enclosures. After three weeks, I recorded the number of vegetative branches that were not defoliated by the larvae. A second replication using this procedure was completed on different trees. In the first replication, the adults defoliated a total of 8.3% of the vegetative branches while the larvae defoliated a total of 89.5%. In the second replication, the adults defoliated a total of 18.6% of the vegetative branches, the larvae defoliated a total of 89.6%. The beetles released in Phase I survived the high altitudes and colder temperatures of our area and spread 1½ miles from the original release site. The experiment showed that the larval stage defoliated the tamarisk more effectively than the adult beetle stage.