

Reptiles and Ground Arthropods in *Tamarix* and Mixed-Native Habitats along the Virgin River

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The biological control agent (tamarisk beetle, *Diorhabda* spp.) has been used to defoliate non-native saltcedar (*Tamarix* spp.) in riparian systems throughout the Western US since 2001. The Virgin River is now the stage where *Diorhabda* is predicted to expand. *Tamarix* control, like other non-native plant control methods, has the potential to impact non-target species. Herpetofauna and small mammals can respond to changes in habitat and they forage in areas where beetles are active. The objectives of our study are to document current small vertebrate communities prior to beetle-caused defoliation in monotypic *Tamarix* and mixed-native habitats to document potential effects of biocontrol in riparian areas. During summers of 2009 and 2010, we studied amphibian, reptile, small mammal, and ground arthropod assemblages along the Virgin River prior to beetle introduction. Sites included five *Tamarix*-dominated riparian areas and five mixed native tree (*Populus*, *Salix*, and *Prosopis*)-*Tamarix* areas. We used mark-recapture methods to compare animal abundance and diversity in these habitats. Here, we present preliminary results from reptile-habitat analyses prior to beetle establishment. We captured 665 individuals representing seven species of lizards. Abundance of arthropods was greater in mixed sites. Abundance of lizards was similar in *Tamarix* and mixed sites, however species-specific abundances differed. Desert spiny lizard (*Sceloporus magister*) abundance was highest in sites with a native tree and woody debris component. Other lizard species were more likely to occur in structurally open sites, in terms of canopy and shrub cover. These results provide baseline information on the reptile community in riparian habitats prior to *Diorhabda* introduction in mixed and monotypic habitats.