

Survey of Planted Elderberry on Sacramento River National Wildlife Refuge Riparian Restoration Sites for Use by Valley Elderberry Longhorn Beetles



Project Goals and Objectives



Examine 10 percent (7,600) of the planted elderberry shrubs at several Sacramento River National Wildlife Refuge units for:

- Elderberry survivorship
- Presence or absence of VELB exit holes
- Presence and absence of Argentine ants

Refuges Surveyed

Flynn Unit RM 230.5-233

Rio Vista Unit RM 215.5-218

Phelan Island Unit RM 190.5-191.5

Ord Bend Unit RM 183.7-184

Packer Unit RM 167-168

Survey Protocol



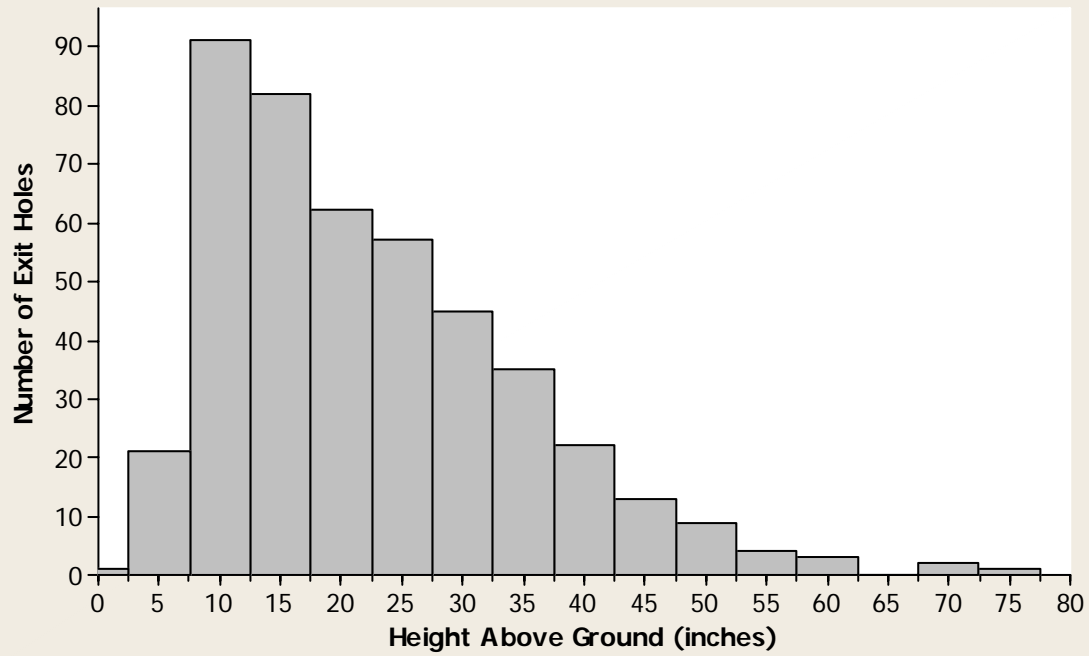
- Status
- Number of exit holes
- Stem width containing exit holes
- Distance above ground
- Hole dimensions
- Presence of ants

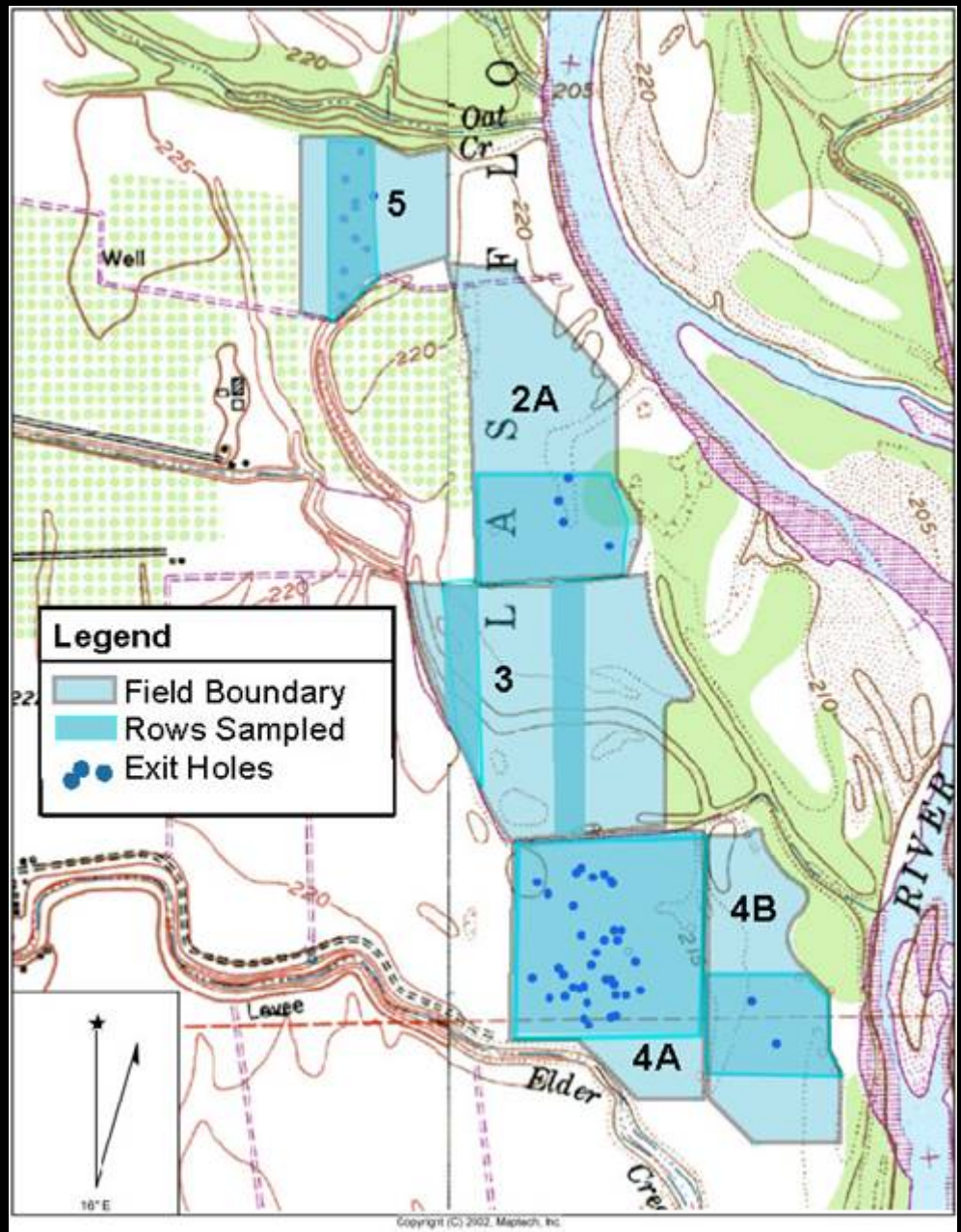
Monitoring Data



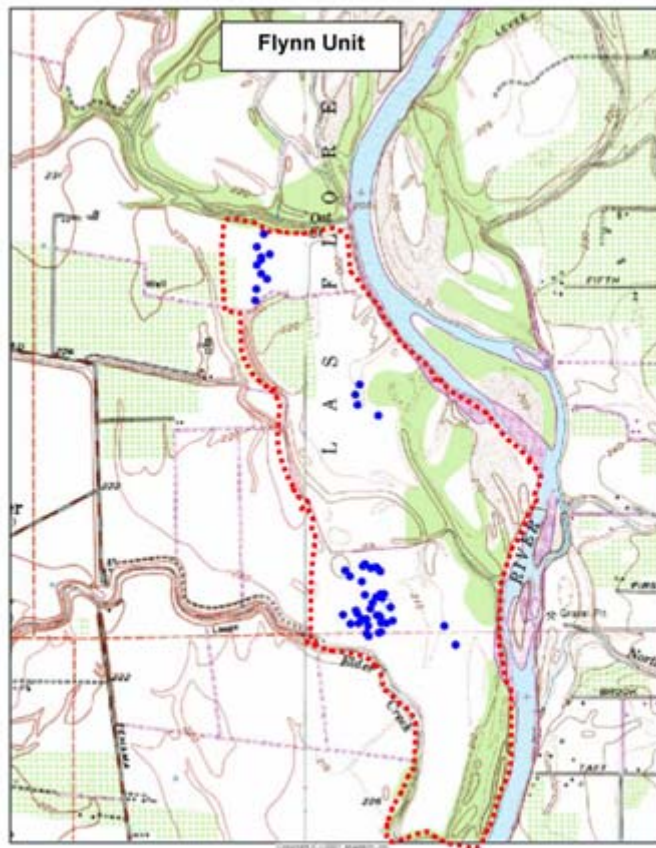
- Elderberry survivorship high with only 1% dead.
- Observed 449 exit holes in 229 shrubs.
- Argentine ants not present.

Histogram of Height Above Ground (inches)





Conclusions



- Riparian habitat restoration is effective.
- Evidence of successful colonization by VELB.

Recommendations



- Follow up examination in spring to monitor presence of new exit holes.
- Measure distance from shrubs with existing VELB exit holes to nearest source of remnant riparian vegetation containing elderberry shrubs
- Assess flooding frequency at restoration sites relative to abundance of VELB exit holes.
- Examine along tributaries to determine extent of VELB occurrence.