

**Title:** C61211 KISC Early Detection and Control

**Organization:** KRCP/Garden Island Resource Conservation & Development Inc.

**Award:** \$21,649; PO #Z10121963

Ailanthus Altima: 2 on .5 acres

Buddleia madagascarensis: 1472 on 37 acres.

Budasi: 893 on 37.7 acres

Juncus effuses: 634 on 47 acres

Lepsco (New Zealand Tea): 121 on 6 acres

Ligsin (Privet): 12,998 on 44.7 acres

Pichie (Hawkweed): 118 on 6.64 acres

Setpal (Palmgrass): 818 on 39.8 acres

**Tree of Heaven** - Our latest two searches for Tree of Heaven found none. During the first quarter, only 2 were found in the area. This one may be close to eradication.

**Privet**-We concentrated on known hotspots of previously mapped mature privets and feel we don't need to spend a lot of time transecting in nearby areas where there's not many or none. The known hotspots were compiled by Mapu O'Sullivan (DOFAW/NARS) from our data base of previous work; there were 23 previous sites that had over 1,000 privet. We re-visited and transected 13 of these sites during this grant period.

**Juncus effusus:** With the awesome help of KISC botanist Kelsey Brock, we did a pretty thorough cleanup of the new Juncus effusus on the entire Pihea/Alakai trail corridors; that will definitely need follow-up because there were lots of seeding ones. We also had found some near Kilohana at the very end of Alakai trail, tracked 3 miles from what appears to be the original site of infestation. We are very grateful to the botanist who first spotted this new pest. Depending on the length of time of the seedbank, this one could be well under control with another year or two of funding.

**Buddleia asiatica:** In addition to roadsides in the Park, we treated a bunch of Buddleia asiatica in valleys near Waialae Cabin that had been left from several years previously due to running out of herbicide then, and the surprising thing was that there were very few seedlings and saplings.

**Hawkweed:** it's lately been a drought in the somewhat leeward area where it was found so none seem to be popping up; however, as soon as the fall rains come it will need follow-up since it has a long-term seed bank.

**Palmgrass:** one area (Kauhau) where it had been found had very few during our searches in the first quarter. At the main area in Kawaikoi quite a lot were found but most were immature and we did a pretty thorough sweep of the entire area with a large crew including Sherri Paul of DOFAW.

The really problematic weed on the list is **Buddleia madagascarensis**. Our main method has been foliar spray with 10% roundup, but it generally kills back only the exact area that's sprayed

and doesn't translocate through the plant well. It does however provide some access to the vine trunks for cut surface treatment with garlon in subsequent passes. We have been re-evaluating our methods and have done a couple trials with new methods which haven't had great results. We did an IPM trial with 100% roundup, but after 2 months not much dieback has been evident on the budmad that's high in the tree. A foliar spray with escort rather than roundup appeared a bit more promising on a short finite bush, but more trials are needed on vines that go high into trees. One might even consider Dr. Leary's paint ball gun approach because of how the vine climbs into tall trees and blankets the whole canopy with vines that can't be reached from the ground to be sprayed. However, most of the locations of this weed are near cabins in a very heavily used area of Koke'e State Park, so this might not be so feasible. We're thinking of trying a basal bark spray with garlon for the multitude of stems that go up high in the trees. Previous Imazapyr trials did not yield good results either. Estimated timeline for "eradication" with current resources and methods would be many many years.