

Plant Control



Who says field work can't be fun? Getting ready to hunt down Hedychium with the NARS crew in Kohala. (And yes, half the NARS crew in the photo are former BIISCuits!)

The BIISC plant crew works island-wide to eradicate or control the highest risk invasive plants threatening our environment, economy, and way of life. HISC funds supported a portion of costs for a five-person plant control crew, tasked with eradicating seven target species from the island of Hawaii, as well as the Program Manager, Data and GIS Analyst, and Fiscal Associate. In 2018 the Plant control crew continued its efforts to effectively control, contain, or eradicate invasive plants on public and private lands across the island of Hawaii, when agency staff and private landowners lack the means to do so. The Plant Crew followed an established action plan with clearly stated goals and standards to measure and report progress toward success. Maintaining this crew ensures their availability to assist with agency projects when needed. This work was also supported by the Hawaii Division of Forestry and Wildlife, Natural Area Reserves System, the Hawaii Army National Guard, National Fish and Wildlife Foundation, and the Hawaii Department of Agriculture.

Expected Outcomes:

- **Eradication of Pampas Grass:**

Pampas grass has been an eradication target since 2009, and with the exception of a few recalcitrants, most known plants were removed years ago. Each of 26 sites was revisited during 2018 for final checks, and a media campaign was released to solicit reports of any as-yet undetected plants. No new plants were reported, and as of September only one site remained untreated. The owners of this property had agreed, since 2016, that they

Final Report to the Hawaii Invasive Species Council

would remove the plants themselves, but had never done so, despite periodic reminders and visits. BIISC enlisted the assistance of HDOA in February of 2019, to enforce the removal of this state-listed noxious weed, and the plant has since been successfully removed and monitored for regeneration. A press release announcing the successful HISC-funded eradication is due to go out this summer.

- **Suppress 100% of Smokebush and Rubbervine sites to Phase 3 status:**

This outcome is still in progress. In 2018 BIISC surveyed 234 acres to control 177 Smokebush plants, and 517 acres to control 120 Rubbervine plants. All plants controlled took up less than ¼ acre! We are approaching the point where most cultivated and naturalized plants have been dealt with, and we just need to remove the cultivated plants protected by recalcitrant landowners.

Smokebush, at the island scale, is rated at Phase 2.2, with four sites at Phase 3 and 10 at Phase 1 or 2. (Phase 4 is the goal). Several Smokebush sites include recalcitrant landowners who will not allow access, so we are exploring the possibility of county or HDOA back-up on this unlisted weed species.

Rubbervine is getting closer—16 sites are in Phase 3 or 4, while several of the 15 sites stuck in Phase 1 or 2 include those at which a single landowner has refused the removal of a plant. When there is even a single mature plant known within the search area, we cannot say that it has progressed beyond Phase 2. BIISC is looking into County or HDOA assistance with 7 recalcitrant landowners associated with this species as well.

- **Complete the delimiting surveys of three species:**

The BIISC Plant Crew was especially forbearing this year, as we asked them to repeat ground surveys over the same difficult terrain multiple times, collecting the research needed to develop a more efficient, UAV-assisted method to delineate the boundaries of an eradication target. Delimiting surveys were completed for *Rubus seiboldii*, *Buddleia madagascariensis*, and *Cotoneaster pannosus*. Though the boundaries could change with new detections of mature plants, future efforts are expected to continue within these now clearly-defined boundaries, making it easier to estimate future human resources and costs to achieve eradication.

- **Continue sporadic control of *Photinia davidii* at Hakalau NWR as funding allows:**

Applications to USFWS for *Photinia* funding were not successful, and ROD has become an overriding operational and phytosanitary concern for the refuge. This project is effectively on hold indefinitely.

- **Provide ongoing support for Community Engagement programs:**

BIISC Field Crew members all participate in our hands-on community training days, staff info booths at community events, assist with workshops and educational activities for students, assist with getting participants in Youth Conservation Corp and other internship programs trained in field work, attend public hearings related to invasive species issues, and occasionally march in parades.



BIISC Field Crew members prepare for the annual Pahoehoe Christmas Parade, one of the few times they get showered with thanks for their hard work!

- **Other efforts and accomplishments:**

In addition to making steady progress on eradication targets, the BIISC Plant Crew continued to provide field support to conservation partners, funded by grants and service contracts from those partners. In 2018 BIISC field crews removed pyrogenic fountain grass and smothering toilet-brush ginger from Natural Area Reserves; suppressed miconia, alstonia, and little fire ants on training areas for the Hawaii Army National Guard; assisted with arthropod surveys on the Mauna Kea Summit; planted 500 native plants at Pu`u Wa`a Wa`a; hosted a Youth Conservation Corp team; and controlled gorse in outlying areas on Mauna Loa with the Three Mountain Alliance and NARS. The plant crew's efforts on eradication targets were additionally funded by the Hawaii Department of Agriculture.