

## **Volunteers of Ka`ūpūlehu**

*By Yvonne Yarber Carter, Ka`ūpūlehu Outreach Coordinator*

Our kupuna la`au—or elder native plants and trees of the dryland forest are slipping away without much notice by the general public. Many are shocked to learn that less than 5% of our Hawai`i native dryland forest remain and probably less than 1% may be considered healthy. The surviving scattered remnants of these once diverse thriving forests are perilously in danger of disappearing as well. This is true of dryland forests throughout our islands, and globally these habitats suffer similarly.

A 70-acre restoration project is located on the Hawai`i Island in the lee of Hualalai mountain at Ka`ūpūlehu. It is part of the broad similar landscape of South Kohala and North Kona that today is dominated by the highly flammable fountain grass (*Pennisetum setaceum*), which is not only invading native dryland forest landscape, but covering the lava flows that only a few years ago provided natural firebreaks.

Ho`ola Ka Makana`ā is an ongoing stewardship and outreach volunteer program at Ka`ūpūlehu whose beginnings go back to the grassroots efforts of the volunteer Dryland Forest Working Group. It is also a partner, with support for outdoor learning, from `Āina Ulu, a land-based educational program of Kamehameha Schools. Today, the Hawai`i Forest Industry Association (HFIA) manages the Ka`ūpūlehu 70-acre site with valuable input and support from many other partners. The National Tropical Botanical Garden (NTBG) manages in partnership a five acre site just mauka.

Ho`ola Ka Makana`ā, “Healing the place budding up out of the lava” integrates cultural and historical education, with science, restoration and resource management. There is a growing vitality to the program—particularly with the addition of enthusiastic site manager, Wilds Brawner, who joined the team this year. Together with outreach coordinator Yvonne Yarber Carter and kokua partner Keoki Carter, they have implemented what Wilds calls the “Weed & Seed” program for the intensively managed 10 or more acres within the 70-acre fenced site. This is the area where the natural seed bank is augmented and given a chance to regenerate thanks to hand weeding by volunteers instead of the herbicide spraying required in the larger 60-acre area for invasive plant control and maintenance of a perimeter fire break.

“Weed and Seed” involves weeding out non-natives, then immediately dispersing seeds of common native shrubs and small trees from the site—a good follow-up since the soil is loosened from the pulling of weeds by their roots. We’ve seen some good examples of how native ground cover can grow thick enough to discourage reestablishment of invasive plants like fountain grass. Volunteers get to “learn while doing” about invasive species, and to distinguish them from native plants. They also learn about a variety of native species that make good groundcover for their shade and moisture retention, and some for their nitrogen fixing abilities. The seeds available on site at the time, in part determine what is dispersed, some of those used are: māmane, ilie`e, āwikiwiki, kolomona, kulu`i, `āweoweo, `ilima, nehe, `ānunu, huehue and ahu`awa.

An essential part of this program is the volunteers. Most are from formal programs with diverse educational goals. Many have an integrated learning approach. And all are willing to participate in stewardship education—to “learn while doing”—since we are not set up as a place to simply tour. Groups are scheduled by special arrangement and range from 7th grade Hawaiian cultural learning programs; summer land resource management training; high school and University classes in ecology forestry, botany, agriculture and land use; to professionals in science, land management; Hawaiian cultural disciplines, and teacher training.

This year we’ve had working groups from the Lanakila Learning Center alternative program of Hilo High, Konawaena High Environmental Science class, University of Hawai’i, Manoa dryland forest class; University of Maryland ecology students; two rounds of high school students from across the U.S. and Hawai’i, participating in a special Brown University spring program through the Kohala Center. And now, June and July brings our busiest outreach time—and perhaps the happiest time for the forest—with weekly groups from island programs such as Kamehameha Schools Ho`olauna Kona (7th and 8th graders), Hawaii Youth Conservation Corp (high school and college), and Hilo’s Summer Forest Team (intermediate and high school). It is programs like these that bring life and transformation to the forest.

Mahalo to all the partners, volunteers and rest of the site team: Heather Gallo, HFIA Executive Director; Sally Rice, HFIA Board Director; Jill Wagner, outplant propagation; Midge Casuga, firebreak & site maintenance assistance; Dr. David Burney and David Bender, NTBG. All of us at Ka`upulehu, hope that there will be a growing interest by the public and landowners to revitalize their dryland forest habitat and cherish this rich and uniquely Hawaiian legacy.

**A few electronic resources:**

HFIA dryland forest site: <http://www.hawaiiforest.org/reports/dryland.html>

Fountain grass info: <http://www.nps.gov/plants/alien/fact/pese1.htm>

Online Hawaiian dictionary to look up native plants listed: <http://wehewehe.org/>

Native plant info: <http://www2.ctahr.hawaii.edu/forestry/Data/links.html#nativeHawnTrees>

Hawaii Invasive Species Council: <http://www.hawaiiinvasivespecies.org/iscs/biisc/>

**A special mahalo to the following Ka’upulehu Dryland Forest project supporters:**

Change Happens Foundation  
Hawai’i Forest Institute  
Hawai’i Tourism Authority  
Kamehameha Schools  
US Fish and Wildlife Service

To contact HFIA directly email: [hawaii.forest@hawaiiantel.net](mailto:hawaii.forest@hawaiiantel.net)

## Photo Gallery:



Photo 1: Konawaena High environmental science students planting native seedlings at Ka`üpülehu. Photo credit: Yvonne Yarber Carter.



Photo 2: High School students from Hilo's Lanakila Learning Center tackle young invasive fountain grass at the dryland forest. Photo credit: Keoki Apokolani Carter



Photo 3: One of the many hardworking volunteer groups—still smiling after all the weeding! The Brown University and Kohala Center program for high school students throughout the U.S. who want to learn about Hawaiian ecology. Photo credit: Yvonne Yarber Carter.



Photo 4: “Weed and seed” instruction being given by HFIA’s Ka`ūpūlehu Site Manager Wilds Brawner (left) to a special high school program organized through Brown University and Kohala Center in partnership with Ka`ūpūlehu. Photo credit: Yvonne Yarber Carter.