



Friends of Haleakalā National Park

SPRING 2014

P.O. Box 322 ☼ Makawao, HI ☼ 96768 ☼ www.fhnp.org

PARK EXPERIENCE GROWS YOUNG CONSERVATIONISTS



‘Imi Ka Lama interns in the backcountry area of the park, where they assisted the park’s Vegetation Management program in weed control. *Haleakalā National Park Photos*

Haleakalā National Park is setting out “stepping stones” in the form of internships and workshops designed to interest young people in conservation and guide them toward careers in the field. “We’re trying to grow our future conservation professionals,” said the park’s internship coordinator, Kuhea Asiu; even those who choose different paths will do so with a better environmental ethic. “They’ll really understand their *kuleana* (responsibility) to the land and sea.” Hundreds of other youngsters will benefit indirectly from workshops that help teachers use environmental concepts.

All of the “steppingstones”—four teacher workshops and three internships this year—look as much like fun as work.

The first two teacher workshops were held in February and April, with two more planned for August (and still open for registration). The August workshops are in partnership with the Maui Invasive Species Committee and will focus on several of

Maui’s worst invasives. “We want to elevate awareness amongst educators so they’re comfortable teaching about the environment,” Asiu said. Teachers can adapt what they learn to whatever subject matter they teach and reach far more students than the park ever could, she said.

The internships provide hands-on experience for Hawai’i students from grade 6 through post college. More than 100 young people have completed these internships since the first ones in 2011, gaining skills and knowledge through activities like guided hikes, native plant propagation, invasive weed control, plant identification and outdoor safety education. The older the group, the longer the internship period and the more difficult and exciting the activities become. All interns must be able and prepared to work outdoors at elevations between 7,000 and 10,000 feet in varying weather conditions. At the college level, participants also must be willing and able to be trained in helicopter safety, hike on uneven terrain with a 50-pound backpack plus tools and camp in remote areas with no facilities, varying weather conditions and (gasp!) no cell phone reception.

The three internship programs are:

- ☼ Kupukupu ‘Āina, a weeklong spring-break experience for a dozen students in grades 6-8.
- ☼ Pōhai Maile, held in June, a three-week program designed for a dozen high school students.
- ☼ ‘Imi Ka Lama, field-based opportunities for about seven college-age students in an eight-week summer program for those who have an interest in pursuing a career in natural resources conservation and/



Intern Jesse Felts measures a silversword.

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YOUNG INTERNS LEARN, GROW AT PARK

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or the park service. This program is run in partnership with Kupu Hawai‘i, an educational organization that provides internships and engages volunteers to encourage youthful environmental stewardship.

All three internships educate students about the National Park System and its mission and programs to protect natural and historical resources. Interns explore career prospects and gain a well-rounded look at conservation issues. They work alongside park professionals in various programs, such as interpretation, resource management and facilities management. Interns in the younger groups, with varying degrees of ex-

perience in the outdoors, often learn from each other as well as park staff and various partners in environmental work. And parents can follow their children’s internship adventures via photos posted every day on Facebook.

The park also has hosted three year-long interns. Jesse Felts will finish up his one-year internship in August. He assists UH-Manoa Researcher Dr. Paul Krushelnycky in a study to determine the effect of climate change on silverswords and shares what he is learning through presentations. Serena Kaldi started with the high school program, then went from her one-year internship to working as a contractor assisting Asiu with internship programs. Her position is funded by the private grantmaker Hau‘oli Mau Loa Foundation, which also helps pay for Jesse’s internship and will help fund the programs for next year.

Other supporters include a long-standing partner, Hawai‘i Pacific Parks Association, which runs the park’s bookstores. Kupu Hawai‘i helps organize the longer-term internships. “People really like these programs,” Asiu said.

—Jill Engledow



Haleakalā National Park photos. From top to bottom:



☀ Pōhai Maile interns get their hands dirty in the *lo‘i kalo* at the Kapahu Living Farm during an overnight trip to the Kīpahulu district of the park.

☀ ‘Imi ka Lama intern Malia Santos records data in the park greenhouse.

☀ Kupukupu ‘Āina interns learn about the work of the park’s Visitor/Resources Protection Rangers, who handle law enforcement matters as well as search and rescue.

For more information on internships and teacher workshops, see the park’s Facebook page (<https://www.facebook.com/pages/Haleakala-National-Park/348662787511>) or call Kuhea Asiu at 572-4452.

VOLUNTEER REFLECTS ON JOYS OF FIRST-TIME SERVICE TRIP

By Linda Tesar-Amimoto

For almost a year I had received the notices of service trips into the Haleakalā Crater from the Friends of Haleakalā National Park and contemplated going.

Finally, I steeled up my courage and emailed in my willingness to help. Matt Wordeman quickly acknowledged my request and with patience helped me find out where to get the information to organize myself and carpool to our meeting point.

Now, I could never be mistaken for a hiker or a nature geek by my appearance, yet I do have a thirst for knowing more about the land, the flora and the fauna, and a deep appreciation for the beauty that can be found only off the beaten path. Observing the other eleven volunteers, I found myself comparing my preparedness, imagined strength and ability to help. It was nice to see an almost even blend of ages and gender. As we prepared our packs, gathered up our walking poles and set off, I felt that I could do this! By the end of the trip I hoped that I had done enough for the gifts I had received.

The hike to Palikū was highly challenging yet equally as rewarding. The scenery was beyond description, and words cannot do enough justice to the awe inspired by the amazing colors of the shifting sands, the pu'u, the distant sky and clouds.

The silversword plants, close to the hiking trail, were in various stages of bloom, entrancing one to stop and stare in amazement or take a photo to show to friends. The endemic plants, bushes and trees were so delicate, thriving on seemingly no water, yet blooming with lovely flowers of yellow and white. As the day drew to a close, and the sun's rays lengthened, nēnē flew overhead in their customary pairs, honking a warning to us that the night was soon to fall.

Working for the FHNP was such a small repayment, in my humble opinion, for the gift of coming along on such a wonderful journey. Within the schedule of work, tailored to each of our abilities, there was time to take a small hike to explore further on our own or with others. Sharing the exploring, working on our assigned projects and eating together bonded us, and we all made new friends.

Being in that beautiful space working to help the land gave us a shared feeling of deep gratitude for just being there; being alive. At night, cutting vegetables together to feed our dozen volunteers, pitching in to make a fire in the wood-burning stove or even stirring the pot of dinner gave a sense of belonging to a special community. The meals also were

so delicious after a day of hard work and filling our eyes with such glorious scenery. Going to bed with sore feet or legs was an inconvenience, yet we knew that in this too, we were not alone.

The morning of our last day we prepared to return to civilization, and comments were heard about ice cream bars, beers to be enjoyed and the hot showers that awaited us. Even though we all spoke of what we missed by days without hot running water and electricity, there was an undertone of excitement about what we were soon to see on our way out Kaupō Gap.

From the 'ōhi'a forest area we hiked down deep gulches on each side of us, with the high cliffs of Palikū on our left. The mists blown from down below cooled our sweaty brows and lit our smiles as we came into the old koa forest shade. Delicate flowers, deep-green grasses

See Volunteer, page 9



Linda Tesar-Amimoto (front) crosses the crater with hiking buddy Jihong Larson.
Matt Wordeman photo

HALEAKALĀ NATIONAL PARK SERVICE TRIPS FOR 2014

Spaces remain for additional participants in our new kind of service trip, a “car camping” trip to Kīpahulu. Participants will need to bring their own tents and cutlery. The FHNP will supply a stove, pots and utensils for community dinners, and of course a chore list that could include weeding, cleaning, or any of a number of jobs our volunteers complete to help keep our national park in top shape.

Here’s the schedule for remaining 2014 trips:

Date	Location	Leader
Jul 4-6	Palikū	Elizabeth
	Service/Learning	
Aug 16-18	Hōlua	Christy
Aug 30-Sep 1	Palikū	Matt
	Service/Learning	
Sep 13-15	Kīpahulu	Elizabeth
Oct 11-13	Kapalaoa	Joani
Nov 8-10	Hōlua	Matt
Dec 6-8	Kapalaoa	Elizabeth

This schedule is subject to change. Please contact the trip leader to confirm dates, cabins and mission. The last date of each trip is the return date.

Participants will backpack into the crater to a cabin or campsite and back (except for the Kīpahulu trip, for which participants will drive to the campsite). Depending upon the trip, the group will perform one of a number of tasks ranging from cabin maintenance to native planting to invasive species removal. An Interpretive Park Ranger will be along on the Service/Learning trips.

Before signing up for a service trip, please go to the FHNP website at www.fhnp.org, create an account, then log into the account to learn more about the trips and certify your readiness for a service trip. For more information and to make reservations to join a trip, call the appropriate trip leader:

Matt (808)876-1673, matt@fhnp.org
 Elizabeth (808)264-4757, beth@fhnp.org
 Joani (808)669-8385
 Keith (808)264-5429, keith@fhnp.org
 Christy christy@fhnp.org



MAUI DREAMERS SAW A ROAD IN THE MOUNTAIN’S FUTURE

A century ago, Mauians who toiled up the slopes of Haleakalā knew there was a reward at the summit worth striving for: the great valley we call the crater. But they also knew it was too tough a trip for most people. Enamored of the idea that easier visits to the summit would build tourism, the community talked for years of a road to (and through?) the crater, and perhaps a hotel somewhere near the top. We can be thankful that not all these dreams came true, but the highway completed in 1935 has indeed brought millions to appreciate the beauty of Maui’s mountain. Here are three excerpts from *The Maui News*, collected for the book *Haleakalā: A History of the Maui Mountain*, by Jill Engledow.

August 31, 1912—Engineer Harvey, who is well-known on Maui, and who ranks very high as a civil engineer, has expressed the opinion that for a sum of \$300,000, a road could be built to Haleakala, through the crater, out through the gap, and down to the coast. Such a scheme would do a tremendous amount of good for Maui, and Haleakala would become the world’s biggest attraction. The road as suggested by Harvey would enable people to make a most interesting trip. Tourists could auto from Lahaina to Wailuku,

visit Iao Valley, call at Kahului and Puunene and then make the trip up to and through Haleakala and down to Hana, where a steamer could be taken.

November 16, 1912—Now that the road to Haleakala is to be constructed, the next thing will be a big hotel on the summit. There is no doubt that money will be found to put the project through, and then will Maui become famous all over the world.

An up-to-date hotel on Haleakala would pay from the day it is opened, and tourists from all over the United States and Europe would flock to the hostelry.

October 10, 1914—A rest house on Haleakala is a good thing for those who are athletic enough to reach it. But Maui can never realize properly on her most valuable assets until the mountain climber can do his climbing while seated comfortably in the tonneau of a high-powered motor car. Worth Aiken, the original Haleakala booster, despairs of living to see this day; but the probabilities are that if Mr. Aiken lives another five years he will see this very thing. And it would not be at all surprising should he live to see an electric railroad handling the traffic to the summit. This will come sometime. How soon, depends entirely upon the growth of tourist travel to these Islands.

SUPPORT THE FRIENDS OF HALEAKALĀ NATIONAL PARK

Who we are ...

We are a nonprofit organization dedicated to assisting Haleakalā National Park achieve the purposes and goals for which it was established: To preserve Haleakalā's unique eco-systems, scenic character and associated native Hawaiian cultural and spiritual resources so as to leave them unimpaired for the enjoyment of future generations.

What we do ...

- ◆ Facilitate volunteerism to accomplish projects recommended by park staff.
- ◆ Monitor actions and activities that could impact Haleakalā National Park.
- ◆ Urge responsible use of the park by the public.
- ◆ Provide financial assistance for the benefit of the park by soliciting funds from the general public.
- ◆ Promote programs such as Adopt-a-Nēnē to generate funds that will enhance the protection and preservation of the endangered natural resources of the park.
- ◆ Implement programs and activities that increase public awareness and appreciation of the park and its highly diverse geological and biological resources.

What you can do ...

- ◆ **Become** a Friend of Haleakalā National Park



- ◆ **Adopt-a-Nēnē** – an unusual gift idea.
- ◆ **Volunteer** in the park
- ◆ **Sign up** for Service Projects.
- ◆ **Serve** on the Board of Directors or Advisory Board of the Friends

The Adopt-a-Nēnē Program ...

was developed as a fun and educational way for you to become a part of the projects that are being conducted in Haleakalā National Park. The nēnē is an endemic bird on the Federal List of Endangered Species. By adopting a nēnē, you will be helping us protect not only the nēnē, but all endangered species and their important habitat in the park.

- ◆ **REGULAR** Supporters receive “adoption papers” that include information about your nēnē, an adoption certificate and a nēnē postcard.
- ◆ **MĀLAMA** Supporters receive a postcard pack and all gifts given to Regular supporters.
- ◆ **ALI** Supporters receive an exclusive matted nēnē photo and all gifts given to Regular supporters. They will have their names displayed at the park.
- ◆ **ALI NUI** Supporter receive an exclusive matted nēnē photo, a special certificate for display and all gifts given to Regular supporters. They will also have their names displayed in the park.

Yes! I want to **become a Friend of Haleakalā N.P.** Enclosed is my tax deductible contribution:

\$15 \$25 \$50 \$100 \$500 \$ Other _____

Yes! I want to **Adopt A Nēnē.** Enclosed is my tax deductible contribution:

\$20 Student/Senior \$30 Regular \$50 Mālama \$100 Ali'i \$200+ Ali'i Nui

Send me no gifts please, I want my entire contribution to protect endangered species

Name(s) _____

Address _____

Phone _____ e-mail _____

Make checks payable (in U.S. dollars) to:

Friends of Haleakalā National Park, Inc. Send to P.O. Box 322, Makawao, HI 96768

You can also donate on-line using your credit card at www.fhnp.org

Thank you, 2013 Ali'i Donors

Sheri Buller
Arbor Vitae, WI

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Maui, HI

HALEAKALĀ HIGHWAY CLEANUP IS QUICK-AND-EASY SERVICE TRIP

Our next Haleakalā Highway cleanup is set for a Saturday morning, August 2. Highway cleanups are short and easy Friends of Haleakalā National Park service projects, and all are welcome.

You might have noticed the “this section of the highway” sign just two miles below the entrance to the Park with FHNP as the designated organization. We usually park a car near there, and drive up to the entrance where we leave the other car or cars, then work our way down.

This section of the mountain road is usually pretty clean, but it can have some interesting things like camping gear that has fallen out of vehicles and, of course, beer cans. And this is the “ride to the sun” so we also find empty energy bar packets and papers scattered by careless bike riders. Usually though, the cleanup is quick and efficient, and the more the merrier, so please consider joining us.

FHNP provides the trash bags. You should bring gloves, water and snacks. Long sleeves and pants are suggested. A bright colored shirt or safety vest is recommended. Remember the sun is strong, so put on sunscreen and a hat. We start early and try to carpool up, so if you are interested please call Mary at 987-2388 for details.

FREE PARK PASSES FOR ACTIVE MILITARY

If you know anyone currently serving in the U.S. military, please help spread the word that they and their dependents can pick up a free annual pass at any national park that charges an entrance fee. In Hawai‘i, that includes Haleakalā National Park and, on Hawai‘i Island, Hawai‘i Volcanoes National Park and Pu‘uhonua o Honaunau National Historical Park.

RARE GERANIUM SURVIVES, THRIVES WITH SPECIAL CARE

By Patti Welton
Botanist

The spectacular evolution and uniqueness of the Hawaiian flora is well known, from the iconic Haleakalā silversword to the extreme diversity and stunning speciation of the native Hawaiian lobelioids, or bell-flowers. But the seldom-seen red-flowered geranium (*Geranium arboreum*, *nohoanu*, *hinahina*) is underappreciated except by botanists, conservationists and a NASA scientist.

This very rare plant is the only bird-pollinated geranium in the world, apparently adapting with the diversity of Honeycreepers with a variety of curved bills. The name *nohoanu* is literally translated as “cold dwelling” or “living in the mist,” which explains its distribution in the inversion layer.

Found only on northern and western slopes of Haleakalā between 5,000 and 7,200 feet, this species provides nectar and habitat to native birds and insects. This geranium was first collected on Haleakalā in 1841 by Charles Pickering and William Brackenridge of the U.S. Exploring Expedition, also known as the Wilkes Expedition. In 1911, there was one collection below 2,000 feet near Luala’ilua Hills on the south slope, but its known range now is restricted to The Nature Conservancy (TNC) Lands in Waikamoi and to Kula Forest Reserve around Polipoli State Park.

In 1992, when the U.S. Fish and Wildlife Service (USFWS) published the Final Rule listing this species as Endangered, there were thought to be close to 300 individuals, with the majority being at Polipoli State Park. The threats listed in that Rule were encroachment and competition from invasive species, including alien grasses, trees and feral animals, and that limited gene pool could depress the reproductive vigor. But the greatest threat of all was the small number of individual plants, increasing the potential for extinction from catastrophic random events such as fire.

Counting individuals of this species is problematic due to its growth habit. It is a long-lived sprawling prostrate shrub which roots at the nodes. Mat-forming alien grasses can smother much of the plant at these nodes, making it difficult to distinguish one plant from the next. There were thought to be 12 occurrences total-



The only bird-pollinated geranium in the world (*Geranium arboreum*, *nohoanu*, *hinahina*)

ing 158 individuals when the USFWS designated critical habitat for this species in 2003. Critical habitat is a specific term within the U.S. Endangered Species Act which legally designates a habitat area essential to the conservation of a listed species. Between 2000 and 2004, staff at Haleakalā National Park collected cuttings from many of the occurrences for a rare plant-stabilization project. Replicates of the original cuttings were outplanted in the park, recording the genetic origin, and kept in the park nursery as “living collections.”

Flowers are often seen on wild individual plants, but seeds and seedlings are rarely observed. Most of the occurrences outside Polipoli State Park had only one or a few individuals. Native bird populations were also depleted at these locations. In Polipoli State Park, non-native pine pollen was observed on the flower’s receptive parts, completely covering the

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Showing off dense clusters of a single founder of *Geranium arboreum* Haleakalā National Park photos

RARE GERANIUM SURVIVES, THRIVES

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Fruit of the *Geranium* developing after being visited by pollinators
Haleakalā National Park photo

stigma and hindering any fertilization by its own pollen and subsequent seed development. In the NPS nursery, the pollen-bearing stamens have been observed to mature before the stigma, therefore promoting cross-pollination.

When seeds do develop, they are dispersed when the carpel bodies (fruit) dry and recurve upward on ripening ejecting seeds with an “explosive dehiscence.” A seedling was found in the NPS nursery under a bench 20 m from the nursery collection. A retired NASA scientist once visited the park and specifically requested to see this species. He said he had studied the cellular pattern of drying seed capsules to observe its tensile strength, hoping to borrow this feature when designing rocket engines.

In January 2007, a devastating fire destroyed most of the Polipoli population. Soon after that, the plants in the drier open locations on ranchlands and in the shrublands of TNC’s Waikamoi Preserve were observed to be declining. In 2010, the healthiest wild individuals hanging on were in the wetter shady areas of Haleakalā National Park and in Waikamoi Preserve.

The state’s Plant Extinction Program (PEP) recognized that there were fewer than 50 individuals of this geranium remaining in the world in the wild. Together with park staff, PEP

staff increased systematic searches and monitoring of known individuals. In 2011, an enclosure was built around a wild population of three individuals in a gulch on Haleakalā Ranch.

Some of the geraniums from our early cutting collections are now gone in the wild. Fortunately replicates from these “founders” are still genetically represented in our successful outplantings and thriving in the park nursery. Because cuttings are a suitable method of propagation, the park is partnering with PEP, TNC and the state to have all known “founders” as “living collections” at the park and the state Olinda nursery facilities to represent the genetic diversity of this species.

Initially, plantings from a variety of founders were mixed in at each outplanting location. These were successful. Obtaining cuttings of certain genetic origin is not possible, though, because now these plants are intertwining. When wild founders were going locally extinct, park staff worked on strategies, designing outplanting sites to enable long-term propagule collection with known genetic origin without causing damage to the habitat and resources. Staff do this by planting replicates of one founder in dense clusters at each site. This insures that cuttings can be obtained in the future, and the genetic source will be certain. It was thought that these dense clusters would improve seed set also by promoting pollinator interactions.

Presently, these outplanted geraniums are flowering prolifically and are attracting native pollinators, which can’t happen in nursery facilities. Already, the native yellow-faced bee (*Hyleus*), and the native bird *’amakihi* have been observed on these flowers. Monitoring the outplanted geraniums also shows more mature fruit development and even dried fruit capsules dehisced “explosively,” dispersing the precious seeds in the park.

◆To see this geranium, *nohoanu*, take the Haleakalā National Park guided Waikamoi Hike, offered every Thursday starting at 8:45 a.m. Call 572-4459 to reserve a spot. Spaces fill up fast.

REPORT SHOWS PARK’S ECONOMIC IMPACT

Haleakalā National Park attracted 1,094,668 visitors in 2012, generating \$64.4 million in spending and supporting 736 jobs, according to an economic report released earlier this year by the National Park Service. “National park tourism is a significant driver in the national economy—returning \$10 for every \$1 invested in the National Park Service—and it’s a big factor in our local economy as well,” said Superintendent Natalie Gates. According to the report, 39 percent of visitor spending supports jobs in restaurants, grocery and convenience stores; 27 percent supports hotels and bed & breakfasts; and 20 percent supports other amusement and recreational businesses.

VOLUNTEER REFLECTS ON SERVICE TRIP

Continued from page 3

and lichen attested to the water garnered from the thick mist.

The steep hike down the jeep road of Kaupō Ranch was arduous and slippery, yet the alluring view of the unusually calm Pacific Ocean and the sight of Mauna Kea on the “Big Island” kept drawing our eyes off the path. Looking in the other direction, the coastline of jagged lava with waves crashing and splashing upward in big spumes was another incredible sight to enjoy when we stopped to rest.

Soon enough we had made it down to the waiting van and loaded our gear inside. We drove down to Kaupō Store sore and tired, yet feeling a sense of accomplishment. There we laughed and enjoyed our hard-earned beer or ice-



Service trip volunteers pause for a Palikū portrait, and Linda (standing at right) puts on a funny face. Apparently service trips are not all work!



Happy hikers bask in the sun on the Kaupō Trail.
Matt Wordeman photos

cream bar and then climbed into the van to head back along the coast, back to civilization and everyday lives.

As we rode home, laughter and conversation abounded, yet at times we each fell silent, remembering the beauty and feeling of being in the crater. Separating was a mixture of mentally returning to civilization, being strangers again, saying goodbye to new-found friends and knowing that the moment was soon to be over. Each of us took with us a deep appreciation for the land we had come to love and know in a deeper way by volunteering.

Doing a service trip for the Friends of Haleakalā is something that money cannot buy and an experience of a lifetime. I know it is something that I will never forget, and the love of the land will stay with me, as well as deep gratitude to Matt, the fellow volunteers and FHNP for making this opportunity available for a non-hiker such as me.

KEEP UP WITH THE FRIENDS OF HALEAKALĀ NATIONAL PARK

Join us on Facebook for updates on service trips, talks and events, and to stay in touch with other “Friends.” You’ll find us at <http://www.facebook.com/groups/113998833864/>

And don’t forget to check out our website, www.fhnp.org, for more in-depth information about our organization and the many ways we work to support Haleakalā National Park. Sign up for an FHNP account to receive timely e-mail messages from the Friends of Haleakalā.

If you prefer to help save the cost of printing and postage by receiving this newsletter electronically, please e-mail matt@fhnp.org and let us know.

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NĒNĒ FAMILY PHOTO BY MATT WORDEMAN