



Friends of Haleakalā National Park

SPRING 2016

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

HAU'OLI LĀ HĀNAU!

HALEAKALĀ SHARES CENTENNIAL ANNIVERSARY WITH THE ENTIRE NATIONAL PARK SYSTEM (AND THE FRIENDS OF HNP HAVE A BIRTHDAY TOO)

This year the Friends of Haleakalā National Park celebrates the centennial anniversaries of the national parks in Hawai‘i and of the National Park Service, along with our own 20th anniversary. In the next few pages, you’ll find several stories about the birthday, including details about events sponsored by the park and the Friends and a short history of the park service and the Hawai‘i parks. We hope you’ll join in the celebration!

JURIED EXHIBIT TOPS CELEBRATION EVENTS

An art exhibit calling for pieces celebrating Hawai‘i’s national parks, a talk-story session with a special guest who shares the park’s 1916 birth year, a birthday present of funding to protect the endangered ‘ua‘u, and a brand-new Forever stamp featuring an image of Haleakalā crater are among the ways the National Park Service and Haleakalā National Park are celebrating the Centennial.

The art exhibit, along with several related activities whose dates are yet to be determined, is the Maui Arts & Cultural Center’s first national juried exhibition, planned and executed in cooperation with Haleakalā National Park. Friends of Haleakalā National Park is a co-sponsor. Details on page 3.

A special guest, Alvin “Uncle Rex” Ornellas, was honored at park headquarters on April 23 during a Special Junior Ranger program. See page 3 for a photo of Uncle Rex, one of almost 3 million young men employed by the Civilian Conservation Corps during the 1930s’ Great Depression, with the first crew stationed at Haleakalā in 1934.

The “birthday gift” from the National Park Service has been matched by the National Fish and Wildlife Foundation for a project to restore habitat in the upper reaches of Nu‘u, on the south slope of Haleakalā. For details, see the story on page 6.

The stamp, whose date of issue was June 2, depicts the colorful cinder cones within the crater with clouds hovering in the dis-



tance and a rainbow arching from them to touch the crater floor. The photograph is the work of Kevin Ebi, who lives near Seattle, WA. He was able to capture only a single shot of this particular image during more than an hour of watching and waiting on the crater rim during a wet, cold storm. The Haleakalā image is one of 16 issued to commemorate the National Park Service Centennial.

The Maui park’s celebrations also include its annual cultural demonstration series, Hana No‘eau, (starting in mid-July) when park staff and partners will teach and share weaving, poi pounding and other cultural practices.

FHNP CELEBRATES 20TH BIRTHDAY AND NPS CENTENNIAL

In commemoration of these shared anniversaries, the Friends has partnered with the park and other agencies to offer several free public events. Here's a run-down of what's happened and what's coming up next.

On May 14, the Friends sponsored a **Photo Safari** at Hosmer's Grove and the Supply Trail, led by local wildlife photographer James Petruzzi and NPS plant biologist Jenna Fish. James coached 24 photographers with varied experience on proper camera settings and techniques for both macro and telephoto shots. Overcast weather presented challenging lighting conditions for capturing bird photos, but the misty conditions and calm winds enabled some spectacular macro plant opportunities. The group also learned about various native species while hiking along the Hosmer's Grove nature trail and the nearby Supply Trail. Look for the winning plant and animal photos from the event in our next newsletter. Mahalo to James and Jenna for sharing their expertise!

A **Twilight 'Ua'u Discovery** is scheduled for June 11. The Maui Nui Seabird Recovery Project will join the Friends at Kalahaku Overlook to observe 'ua'u (dark-rumped storm petrels) as the birds fly in from sea to their underground burrows in the crater. The petrels make wonderful noises as they wing home, and Jay Penniman will share night vision goggles so we can see the birds. For details, see our website: fhnp.org. Mahalo to Jay and Fern Duvall for their *mana'o*.

The **Hawai'i National Parks 2016 Juried Centennial Art Exhibit** (co-sponsored by the Friends) features artwork inspired by Hawai'i's nine national parks and monuments. There's still time to enter your art! See details on the next page.

On August 11, Valerie Monson will give a presentation on Kalaupapa National Historic Park. This year marks the 150th anniversary of when the first Hansen's Disease patients were exiled to the beautiful but isolated peninsula. Learn more at "**The Restoration of Family Ties**" in the Hannibal Tavares Community Center poolside multipurpose room from 7-9 pm.

In September, the Friends will help park staff host an **Employee and Volunteer Recognition Dinner**. We look forward to seeing familiar faces and honoring everyone for their service. In November (date tba), the Friends will host our final anniversary event: an **Evolution & Geology Hike**. Keep an eye online for details.

Speaking of which, find us on Twitter and Instagram at @FriendsofHALE.



Alvin "Uncle Rex" Ornellas, who was born in 1916, the same year as the park, shares his lifelong stewardship with grandnephew Jonathan Marshall (soon to join the park staff as a biological science technician), Junior Ranger Eliot Carter and HNP education specialist Malia Quiocho. Uncle Rex was a Civilian Conservation Corps worker at Haleakalā in the 1930s, when the CCC built the backcountry trails and other infrastructure. Uncle Rex was a mule driver. He came to the Haleakalā Visitor Center April 23 to accept an award for his service, plant a few silverswords, and eat birthday cake. He's still whip smart, agile and full of smiles! (We've always suspected that service work is the key to longevity.)

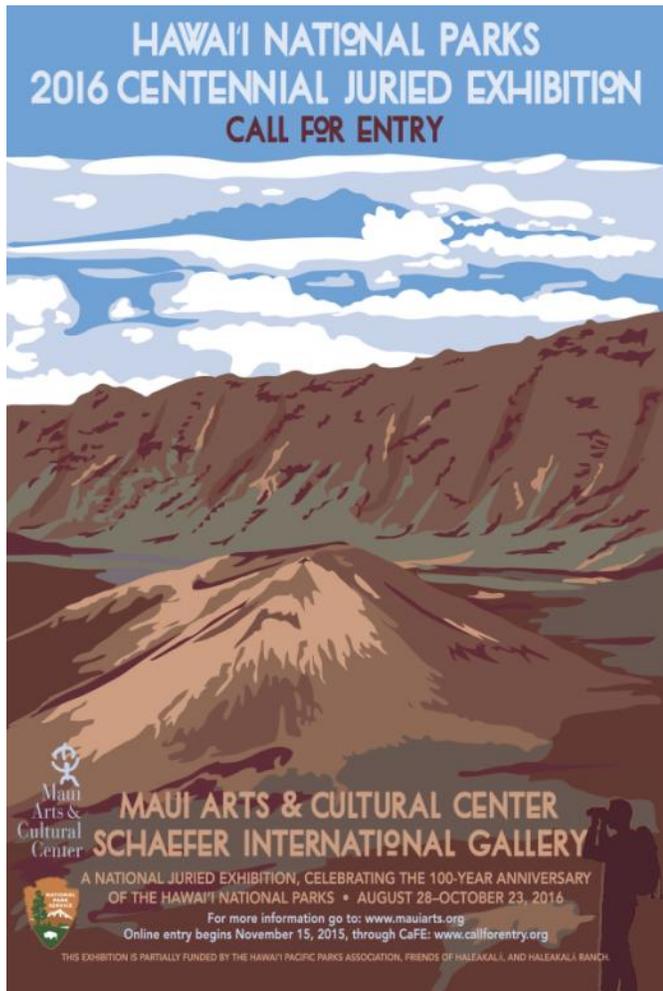
Haleakalā National Park photo

PARKS SHARE AUGUST 1916 BIRTHDAY

Haleakalā National Park and its sister park, Hawai'i Volcanoes, were born in the same month as the National Park Service—August 1916. National parks had been around for years, beginning with the creation in 1872 of the first national park in history, Yellowstone Park. But the National Park Service was not born until Aug. 25, 1916.

Hawai'i already had a national park, not quite a month old, with headquarters at Kīlauea on Hawai'i Island. Efforts to create a national park there and on Maui had been ongoing for years, led by assorted community leaders. Working with Hawai'i Delegate to Congress Prince Kūhiō Kalaniana'ole and other Hawai'i and federal officials, the park boosters met with success.

On August 1, 1916, President Woodrow Wilson signed into law a bill creating the Hawai'i National Park, with Haleakalā included. Not until July 1961 would Haleakalā separate from its sister park on the Big Island, becoming an independent entity.



ARTISTS INVITED TO ENTER WORK

Artists nationwide are invited to enter a juried exhibition celebrating the hundred-year anniversary of the national parks in Hawai‘i. The Maui Arts & Cultural Center’s Schaefer International Gallery is sponsoring the exhibit in partnership with the National Park Service. Deadline for entries is June 30, 2016.

Artists are encouraged to submit new work that conveys their personal interpretation of environmental, ecological, cultural, and political ideas. The jurors will consider a broad range of work from traditional representation to experimental in concept. This unique exhibition will highlight an appreciation for the skills and creativity of artists and the essence of Hawai‘i’s national parks.

Haleakalā National Park staff members proposed the exhibit in 2012, bringing the MACC’s attention to the centennial of both the Hawai‘i parks and the national park system, said Schaefer Gallery Director Neida Bangerter. Bangerter is working with Polly Angelakis, Chief of Interpretation and Education at Haleakalā National Park, as a consultant on the exhibition development and the history of the parks and its collections.

This is Schaefer International Gallery’s first national call to artists to submit their work for consideration by jurors. Applications will be accepted online only through CaFÉ at: www.callforentry.org. Artists are asked to create work inspired by the following Hawai‘i parks and monuments:

- Ala Kahakai National Historic Trail (Hawai‘i Island)
- Haleakalā National Park (Maui)
- Hawai‘i Volcanoes National Park (Hawai‘i Island)
- Honouliuli National Monument (O‘ahu)
- Kaloko-Honokōhau National Historical Park (Hawai‘i Island)
- Kalaupapa National Historical Park (Moloka‘i)
- Pu‘ukoholā Heiau National Historic Site (Hawai‘i Island)
- Pu‘uhonua o Hōnaunau National Historical Park (Hawai‘i Island)
- World War II Valor in the Pacific National Monument (O‘ahu, California, Alaska)

Jurors for this exhibition are James “Jay” Jensen, Curator of Contemporary Art, Honolulu Museum of Art, from O‘ahu and Nalani Kanakaole, artist, kumu hula and cultural consultant, from Hawai‘i Island.

Jensen, Curator of Contemporary Art at the Honolulu Museum of Art, has an extensive background in solo and group exhibitions of national and international artists. Kanakaole is a multifaceted artist who works as a content consultant and kumu hula with Hālau O Kekuhi as well as being the artistic director for the Edith Kanakaole Foundation. The jurors will consider two- and three-dimensional media including paintings, drawings, hand-pulled prints, fiber, photography, ceramics, glass, mixed media, jewelry, sculpture, digital computer-based media and video. Entries will be accepted from residents living in the United States.

Cash awards totaling \$2,500 will be presented to selected artists, the Jurors Choice Award for \$1,500 and two honorable mentions of \$500 each. These awards are sponsored by Haleakalā Ranch on Maui.

This exhibition is supported in part by The Hawai‘i Pacific Parks Association, Friends of Haleakalā National Park, and the Hawai‘i Park Service.

On Saturday, Oct. 1, 2016, the “Observe and Play Family Day” will offer families an opportunity to come through a guided tour of the centennial exhibit, meet the artists and engage in art-making activities.

CAN YOU HELP THE FRIENDS?

The friends are looking for:

- ☀Volunteers willing to organize and lead single-day service events and hikes in the park.
- ☀ A volunteer with experience using WordPress interested in re-designing the fhnp.org website.
- ☀A volunteer with knowledge of SQL willing to generate some maintenance and support code for FHNP databases.
- ☀A volunteer willing to help with donor services, such as accounting for donations and sending gifts and thanks.

Anyone interested in volunteering, please contact Matt at matt@fhnp.org.

In addition, our regular service trips offer volunteers a chance to enjoy the beauty of the crater and the comfort of

the cabins while doing important work to maintain the park. Before signing up for a service trip, please visit fhnp.org, create an account, then log into the account to learn more and certify your readiness for a service trip. Here's the service trip schedule for 2016. It is subject to change. The last date of each trip is the return date.

Date	Location	Leader
July 2-4	Palikū (1)	Matt
Aug. 6-8	Hōlua (2)	Christy
Sept. 3-5	Palikū (3)	Joani
Oct. 8-10	Kapalaoa	Sorin
Nov. 11-13	Hōlua	Keith
Dec. 3-5	Kapalaoa	Sorin

(1)Kaupō Gap (2)Service/Learning (3)Hike out Halemau'u

PARK SHARES DETAILS OF PINE-TREE SPRAYING PROJECT

Haleakalā National Park has begun its second year of aerial spraying to control thousands of invasive pine trees in inaccessible locations within the crater. It might seem counterintuitive to spray herbicides in a wilderness area full of rare native species—unless the wilderness area, and the species that live there, are threatened by an invasion of fast-spreading pine trees. If the pine problem were not addressed, “We anticipate that the crater would become a pine forest,” park spokesperson Polly Angelakis said.

The pine-control project aims to conserve iconic crater views and protect species that depend on native habitats. Control must occur before the pines mature and spread, displacing endemic and endangered species, changing soil chemistry and increasing the potential for wildfire.

Still, the idea of spraying herbicides within the crater raised questions in the minds of some. The Friends of Haleakalā National Park asked some of those questions, and in response the park provided details about the herbicides used and the process required to allow for their use.

First, some background. In 2007, a fire at Polipoli burned more than 600 acres of pine-forested land outside the park on the southwest slopes of Haleakalā. The fire caused mature pines to release their seeds, and kona winds spread the seeds across portions of East Maui, including Haleakalā crater. Now thousands of non-native Monterey pine, Mexican weeping pine and maritime pine grow inside the park.

The decision to spray was made after “much consideration” and careful scientific review, the park said. The targeted-herbicide-spray method was developed with researchers from the University of Hawai‘i and has been successfully used elsewhere in Hawai‘i. Before approving the project, the National Park Service completed National Environmental Policy Act and Endangered Species Act compliance.

As many as 3,500 trees will need to be treated aerially, because they are located on terrain and cliffs too steep for staff to safely access. In contrast, Angelakis said, between

1982 and 2006, only 22 pines had to be removed from the crater. Those were removed by hand-by cutting or pulling.

The majority of out-of-reach plants are found on Hanakauhi Peak, an area off trail and inaccessible. Visitors in the Hōlua area of the crater may be able to hear or see the helicopter when operations are underway, but all treatment will occur away from trails, and no closures will take place.

Following an initial pilot project in December 2014 that successfully targeted 185 pines, spraying began in September and October 2015. It was cut short because of weather issues and was not resumed because the park did not want to disturb the nesting of the endangered *nēnē*. The first round of spraying hit a total of 409 trees. With nesting season over, the park resumed spraying in late May 2016.

Spraying takes place from a tank of herbicide mixture mounted to the belly of the helicopter, through a 75-foot hose with a spray nozzle controlled by the helicopter pilot. The mixture is a combination of 93% water, 5% Roundup Custom (active ingredient glyphosate), 0.1% Milestone (active ingredient aminopyralid), and vegetable oil (1%). The oil allows the mixture to bind to and become absorbed by each pine. Considering the conditions (soil type, weather, microbial content) within the crater, the expected half-life of these chemicals is less than 30 days, the park said.

The pilot is able to turn on the spray when hovering over the target and turn it off when moving between targets. This precision spray technique reduces the potential to harm the native vegetation, the park said.

All federal projects go through a compliance review process to ensure activities are consistent with laws and regulations such as National Environmental Policy Act (NEPA), Endangered Species Act (ESA) and National Historic Preservation Act (NHPA). NEPA compliance was addressed via a Categorical Exclusion. ESA compliance involved an Informal Section 7 consultation with the U.S. Fish and *See Park, page 6*

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

ALI‘I DONORS 2015

Mahalo to these friends who donated at least \$100 in 2015. Your support of both the Adopt-a-Nēnē program and the Friends of Haleakalā National Park general fund is greatly appreciated.

Daniel Anderson Kailua, HI	James & Eleanor Lahti San Jose, CA	Terry & Cynthia Quisenberry Haiku, HI
Sarah and Michael Anderson Riverton, UT	Deborah LeHeup Council Bluffs, IA	Donald Reeser Makawao, HI
James M. Beck Philadelphia, PA	Juliana Mann Silver Spring, MD	Michael & Suzy Richardson Marana, AZ
Sheri Buller Arbor Vitae, WI	Melissa Meier	Edward Romson Kihei, HI
Evelyn Carter Lebanon, NJ	Jay & Marsha Nunes Norwood, MA	Mary Santa-Maria Wailuku, HI
Ann & Dougal Crowe Kula, HI	Pam Ogasawara Frederick, MD	Mary Spadaro Honolulu, HI
J.P. & A.P. Harris Pukalani, HI	Gail Olson-Smith Kailua, HI	Linda Tremblay Toronto Canada
Korey Kassir Oakland, CA	Susan Pepper Sound Beach, NY	Carla Trent Thousand Oakes, CA

PARK SHARES DETAILS OF SPRAYING TO REMOVE PINES

Continued from page 5

Wildlife Service. Also, because the project area is within the Wilderness Area of the park, a Wilderness Minimum Requirements Analysis was completed to evaluate and determine allowable impacts.

Here are the questions from FHNP, along with the park's answers.

Could you describe what was actually done to obtain approval?

Following Haleakala National Park Management Interdisciplinary Team review and approval, a request was submitted in the National Park Service Pesticide Use Proposal System for review. Certain activities such as use of aircraft or restricted-use pesticides trigger national-level review to ensure that the use meets the high standards of Integrated Pest Management (IPM) principals. IPM is a science-based decision-making process that guides park managers when investigating a pest. IPM principles direct managers to use the least impactful, yet safest and most effective methods to control a pest. In the case of pine trees in the crater, all trees that are safely accessible on foot are cut down or pulled. However on slopes and cliffs in the crater that are too dangerous to be reached on foot, these trees have to be controlled by other means. The decision to use an aerial treatment to control these plants was determined following much consideration.

In the pilot project, that successfully targeted 185 pines, was any other vegetation affected by the pine treatment?

With the aerial method used, non-target effects are minimal. The cliff areas where these pines remain are sparsely vegetated, with little to no native plants. Application sites are highly specific and the method employs a high level of precision. The pilot is trained in native and non-native plant identification, and avoiding impacts to native plants is a top priority. Plants are identified from above before applying herbicide, and application does not take place in the vicinity of plants that are unknown to the pilot. The pilot is also equipped with an onboard computer that shows locations of protected plants, and he avoids spraying anywhere in their vicinity.

What do you mean when you say the herbicide degraded within 30 days? Does this depend on the environment?

A mixture of two non-restricted herbicides are applied, glyphosate and aminopyralid. Soil and climate conditions affect the persistence of herbicides. Glyphosate binds tightly to the soil, which prevents it from leaching into groundwater, and primary degradation occurs by soil microbial action (Franz et al. 1997). Considering the conditions (soil type, weather, microbial content) within the crater, the expected

See Park, page 7



A hose dangles from a hovering helicopter, reaching a pine tree perched on a cliff.

Haleakala National Park photo

half-life is less than 30 days. For aminopyralid, field dissipation studies indicate a half-life of 20-32 days, again with degradation occurring by aerobic soil microbes (EPA, Aminopyralid Technical Bulletin).

In what residual concentration do the herbicides used still have an effect on native vegetation?

These herbicides are only going to be effective when in contact with the foliage of plants. Both aminopyralid and glyphosate work as synthetic hormones that disrupt activities in plants. Glyphosate stops a specific enzyme pathway, the shikimic acid pathway, which is only found in plants and some microorganisms (NPIC 2010). Aminopyralid is highly effective on only certain species and residue will not affect nearby native vegetation. Glyphosate is a generalist, but like aminopyralid, will not harm nearby vegetation with residue. Only the leaves of treated plants absorb the treatment. Migration to adjacent areas will not occur, as we do not operate in the rain or high winds.

What happens to animals that eat or handle vegetation that was treated with these herbicides?

There is no risk to fauna of Haleakalā National Park because the herbicide disrupts the shikimic acid pathway. The absence of this pathway in animals may explain its low toxicity (NPIC). The project has been reviewed by wildlife experts, including the U.S. Fish and Wildlife Service, to ensure that any potential for impacts to listed species are minimized. The label rate for pine treatment with glyphosate is 3.75 quarts per acre. Application rates in the park are exceptionally low due to the treatment of specific individuals; for phase one of the project only 0.0059 quarts per acre was used, far less than the labelled

rate allowed by the Environmental Protection Agency. The labeled rate for aminopyralid is .21 quarts per acre; and for phase one of the project only .00018 quarts per acre was used, again far below allowable rates. Both products are considered to be environmentally responsible alternatives.

References

- Aminopyralid Technical Bulletin. Dow Agrosiences. http://msdssearch.dow.com/PublishedLiteratureDAS/dh_0052/0901b80380052fe6.pdf?filepath=usag/p
- Capri, E., Vicari, A. Environmental fate and behaviour of glyphosate and its main metabolite. 2010. European Glyphosate Environmental Information Source. <http://www.egeis-toolbox.org/documents/10%20Fate%20and%20behaviour%20v3.2.pdf>
- EPA Pesticide Factsheet. Aminopyralid. 2005. http://www3.epa.gov/pesticides/chem_search/reg_actions/registration/fs_PC-005100_10-Aug-05.pdf
- Franz, J.E., M.K. Mao and J.A. Sikorski. 1997. Glyphosate: A Unique Global Herbicide. American Chemical Society. Chap. 4 pp. 65-97
- NPIC. National Pesticide Information Center. 2010. Glyphosate Pesticide Factsheet. <http://npic.orst.edu/factsheets/glyphogen.html>
- Schuetz, Jeff. 1998. Environmental Fate of Glyphosate. Environmental Monitoring and Pest Management. <http://www.cdpr.ca.gov/docs/emon/pubs/fatememo/glyphos.pdf>

PARK'S BIRTHDAY GIFTS: 'UA'U PROTECTION AND CENTENNIAL EVENTS

Haleakalā National Park received \$321,000 in January to restore habitat in the upper elevations of Nu'u on Maui for the federally endangered 'ua'u (Hawaiian petrel). Funding was provided through the National Park Service's Centennial Challenge Program and was matched with a \$518,000 seabird recovery grant from the National Fish and Wildlife Foundation. Over the past 30 years, the park has successfully protected more than 15,000 acres of 'ua'u habitat. This project proposes to protect approximately 1,450 acres of additional habitat for the endangered seabirds.

Hawai'i Pacific Parks Association has donated additional \$100,000 in cash donations ("\$100,000 for 100 years") to the six parks in Hawai'i and American Samoa served by HPPA. This is in addition to donations of \$233,000 approved last fall, and to more than \$900,000 in donated staffing. The additional funding helps support the centennial juried exhibition at the Maui Arts & Cultural Center and cultural and community programs in partnership with Haleakalā National Park.

Friends of Haleakalā National Park
P.O. Box 322
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FRIENDS OF HALEAKALĀ NATIONAL PARK

20TH ANNIVERSARY EVENTS IN 2016:

- NPS KĪPAHULU CULTURAL FESTIVAL: JULY 30
- KALAUPAPA FAMILY TIES TALK: AUGUST 11
- CENTENNIAL ART EXHIBITION: AUG.28-OCT.23

MORE INFO AT: WWW.FHNP.ORG



20
YEARS

FRIENDS OF HALEAKALA NATIONAL PARK

EVENTS SUPPORTED BY NEEF & TOYOTA