Kia'i Moku
guarding the island

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A Publication of the Kauai Invasive Species Committee

WHAT'S INSIDE?

Mongoose Captured

Find out more on Page 10

RAT LUNGWORM DISEASE

By Kathryn Fiedler, UH College of Tropical Agriculture and Human Resources

Though the parasite causing rat lungworm disease has been established in the Hawaii Islands for quite some time, the 2017 coverage of the disease is leaving many of our Kauai residents questioning the safety of our local produce. The following information is a summary of the disease, and more information can be obtained from the Hawaii Department of Health.

Rat lungworm disease, medically named angiostrongyliasis, is a disease that affects the brain and spinal cord. It is caused by a parasitic nematode (roundworm parasite) called *Angiostrongylus cantonensis*, whose adult form is only found in rodents. The infected rodents can pass immature forms of the worm via feces to slugs, snails, freshwater shrimp, land crabs, and frogs. These intermediate hosts can be infected if they ingest the immature parasite. All slugs and snails found in Hawaii can be potential carriers, though at very low rates. Humans can only be infected by ingesting the parasite if they eat raw or under-cooked infected intermediate hosts. It is not spread from person-to-person.

"Prevention is the best way to defend yourself and your family..."

The symptoms of rat lungworm disease vary among people, ranging from no symptoms to extreme severity. The infection causes a form of meningitis, including headache, neck stiffness, tingling or painful skin, low-grade fever, nausea, and vomiting. On average, symptoms initiate 1-3 weeks after exposure to the immature parasite. Though there is a high level of variability among cases, symptoms can last 2-8 weeks. Because the symptoms are vague and not diagnostic for the disease, patients must be diagnosed using a polymerase chain reaction (PCR) test performed by the State Laboratories Division. Testing is done on cerebrospinal fluid or other tissues the parasite is known to infect.

There is no specific treatment for rat lungworm disease, though the pain can be treated with steroids. Unfortunately, anti-parasitic drugs are not effective or recommended. Humans are a terminal host for the parasite, so it will eventually die and stop causing symptoms.

Prevention is the best way to defend yourself and family against rat lungworm. Do not eat any raw or under-cooked snails or slugs, and if you do handle these organisms, be sure to wear gloves or wash your hands thoroughly. Inspection of fresh produce is critical to prevention. Leafy greens are popular food for slugs and snails, so extra diligence is required. The parasite is easily killed in boiling temperatures, so greens and other fresh produce can become safe after 3-5 minutes of cooking. If you find slugs or snails present on produce meant to be eaten raw, be sure to wash the produce thoroughly with potable water, though it is suggested that produce eaten fresh with the organisms present should not be consumed if that is an option.

To keep your home, landscaping, and garden safe, it is highly recommended to eliminate snails, slugs, and rats found on your property. There are many options to control these organisms, including organic and conventional products. Information on exact products labeled for slug, snail, and rat control can be found on the Hawaii Department of Agriculture website. It is important that you follow all labels and use products properly.

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KISC funders and partners

A & B Properties
Coordinating Group of Alien Pest Species
County of Kauai
DLNR - Division of Aquatic Resources
DLNR - Division of Forestry and Wildlife
DLNR - State Parks
Garden Island Resource Conservation and Development
Grove Farm
Hawaii Ant Lab
Hawaii Department of Agriculture
Hawaii Department of Transportation
Hawaii Invasive Species Council
Hui o Laka/Kokee Museum
Invasive Species Committees
Kauai Albatross Network
Kauai Conservation Alliance
Kauai Department of Water
Kauai Farm Bureau
Kauai Native Plant Society
Kauai Westside Watershed Council
Kokee Resource Conservation Program
Kukuiula Development, Inc.
National Tropical Botanical Garden
Pacific Cooperative Studies Unit
Pacific Missile Range Facility
Private citizens
Plant Pono
Research Corporation of the University of Hawaii
Sea Grant
The Nature Conservancy Hawaii
University of Hawaii College of Tropical Agriculture and Human Resources
US Fish and Wildlife Service
USDA Forest Service
USDA Natural Resource Conservation Service
USDA-APHIS-PPQ
USDA-APHIS-WS

Ho‘omanawanui

(be patient and work with what you have)

Bill Lucey
Project Manager

Aloha,

The Kauai conservation world is diverse. We have county, state and federal governments, private foundations, non-profits, businesses, cooperatives, university programs and professors, as well as citizens of all kinds working towards a sustainable future for the island. The tasks are as numerous as they are different and there are not enough resources and people to address everything that needs to get done. We need to help each other along the path towards a vibrant future composed of a stable economy, renewable energy, productive agriculture, restored native ecosystems and the removal of invasive species that upset the island's balance.

To increase efficiency of existing programs, one of the key roles of the Kauai Invasive Species Committee is to "Fill in the Gaps". We are mostly known for early detection and rapid response of pests like little fire ants, coqui frogs and mongoose, but we also assist other groups and agencies working towards common goals.

An example of bringing various interests together to get things done is the Rose-ringed parakeet. This particular bird has been around for the past 60 years or so. This species is a "slow invader", meaning it wasn't much of a problem for many years until populations expanded and the birds evolved to take advantage of their new home.

No one was really sure who was jurisdictionally responsible for handling the parakeet problem so, for the last decade, the private sector has employed various techniques to deter the parakeets from predating on crops, defecating on cars and in swimming pools while the birds move deeper into the native forest. The effort has been costly, not part of a coordinated island-wide plan and is appears to be moving the problem around without a solution in sight.

Under Nadine Nakumura's leadership, and coordination through the Governor's liaison office's Carrice Gardner, the Rose-ringed parakeet working group chaired by KISC began an education campaign with support from DLNR, The Hawaii Farm Bureau, CTAHR and HDOA. The result was ample press coverage which in turn produced positive testimony during session leading to passage of the bill. Though the final funding amount was low, we are working with our partners to increase this seed money which will hire the services of the USDA-APHIS National Wildlife Research Center in Hilo to author a comprehensive plan to deal with the parakeets. Part of the plan will entail experimenting with a variety of control and deterrence techniques to understand the best methods for Kauai. When the island works together to fill in gaps with collective energy – we can solve our problems.

I also want to take this opportunity to thank all of our partners and let everyone know I will be transitioning to a new job on the East Coast. I'll be returning to my roots after 30 years of walk-about and will be advocating for clean water and fisheries in Long Island Sound. It has been an excellent three years heading up the KISC program and we have all made great strides further into the world of science-driven invasive species management.

Much Aloha,

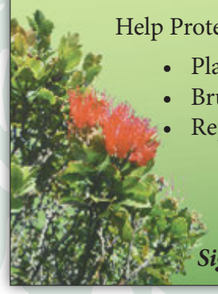
HB 655 Bill signing with the Governor, the Kauai delegation, Kauai Mayor, county council member and business community leaders representing agriculture and lodging. We offer many thanks to Nadine Nakamura for leading the legislative effort to pass the rose-ringed parakeet bill. We also thank Derek Kawakami and Thomas Kaiakapu for forming the original working group in 2014 to begin addressing the problem.

KISC Strategic Action Plan

The updated 2017-2022 KISC Strategic Action Plan is complete! We would like to thank all the contributors and commenters.

The plan can be viewed at:
www.kauaiisc.org/resources/kisc-reports/

Are you a Guardian of the Garden Isle?



Help Protect the Forest:

- Plant native gardens
- Brush off gear after hiking
- Report KISC target species
- Volunteer
- Stay informed

Become a Guardian today and get your membership card & free gift!

Sign up today at www.kauaiisc.org/guardian

KISC's Plant Early Detection Program

By Kelsey Brock, KISC Botanist

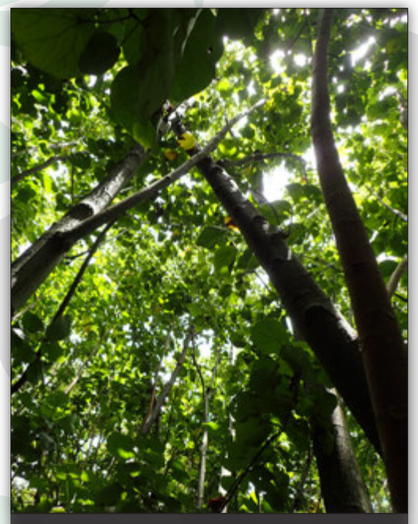
Kauai is home to thousands of alien plants and although most are harmless, others have the ability to damage native ecosystems, food production and culture. KISC was founded on the concept of "early detection" when it formed to control the invasive plant miconia (Miconia calvescens) in 2001, As KISC grew, it initiated an island-wide Plant Early Detection Program with the specific purpose of identifying and eradicating invasive plants that are limited in distribution before they have a chance to spread (aka "Early Detection species"). KISC accomplishes this by surveying all roads, neighborhoods, hiking trails, nurseries and botanical gardens where we can gain access.

Spanish bayonet (Yucca aloifolia) colonizing steep coastal areas on the north shore

Detailed field notes are taken to describe newly naturalized species (species forming a self-sustaining population outside of cultivation) and rigorous taxonomic work is necessary to accurately identify species. Surveys of the entire island were previously conducted in 2007 and 2010, and now the third round that started in 2015 is wrapping up. This two year effort has identified:

- Over 65 Early Detection species
- Four species naturalization records new to the state
- Over 35 species naturalization records new to Kauai
- Over ten "adventive" species producing viable saplings that may become naturalized in the future
- Over 20 invasive plant species spread primarily by people

Now that most of the field data has been recorded, these data will be reported on and reviewed by KISC's committee by the end of the 2017. The 65 Early Detection species will undergo a thorough assessment of potential impacts and eradication feasibility in order to prioritize which species should become KISC targets and which may require partner support. The numerous naturalization and adventive records exemplify the incredible diversity of alien plants and their unique behaviors in Kauai and the need to monitor their spread. Identification of invasive plants that are primarily spread by people allows KISC to team up with nurseries, landscapers and the community to halt the spread of certain species before they form a dominant part of Kauai's vegetation.



A nearly pure stand of melochia (Melochia umbellata) with some hau (Hibiscus tiliaceaus) in the foreground

Support the

PONO

ENDORSEMENT PROGRAM

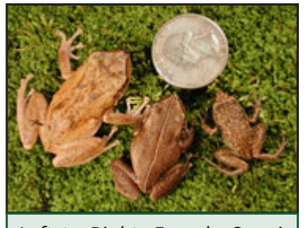
Together we can protect the forest from our backyards

Learn more at www.kauaiisc.org/pono

Coqui Update

Since arriving in Hawaii around 1988, coqui frogs (*Eleutherodactylus coqui*) had established populations on four major islands. On Kauai, a large infestation of approximately 21 acres was first discovered in Lawai Valley in 1999. Through the cooperation of the County of Kauai, HDOA, private landowners and KISC; and after years of laborious work, the site was finally deemed eradicated in 2012. As of this printing, there are no known populations of coqui on Kauai. However, we do have occurrences of coqui arriving on island, most likely from plants or planting material that has been shipped from an infested area. Although caution is taken and inspection protocols are used, young froglets or eggs can hitchhike their way from an infested site to your doorstep. So take the time to carefully inspect all parts of your newly purchased plants- leaves, stems, roots, containers, packing material- looking for froglets and/or eggs (they resemble gecko eggs). If you have questions about anything you find, contact KISC or HDOA and we will respond appropriately.

From May 2016 until present, KISC has received 12 reports from the public of the possible presence of coqui frogs on Kauai. Of the 12 reports, 5 were confirmed, and a total of six coqui were captured. There is another small frog (*E. planirostris*), known as a Greenhouse Frog, that has been mistaken for coqui. This frog is naturalized here and although it does make a cricket-like noise, it is not nearly as loud as the two tone whistle of the coqui frog. Check out our website to view pictures and information on coqui, as well as our other targets. www.kauaiisc.org



Left to Right: Female Coqui, Male Coqui, Greenhouse frog. Photo Credit: CTAHR

5 THINGS YOU CAN DO TO REDUCE THE SPREAD OF RAPID 'ŌHI'A DEATH

1 DON'T MOVE 'ŌHI'A WOOD

Don't move 'ōhi'a wood, firewood or posts, especially from an area known to have ROD. If you don't know where the wood is from, don't move it.

2 DON'T TRANSPORT 'ŌHI'A INTER-ISLAND

Comply with the new quarantine rule to help prevent ROD from spreading. Don't move 'ōhi'a plants, wood, or other 'ōhi'a plant parts inter-island without a permit.

3 CLEAN YOUR TOOLS

Use only proven cleaning methods—other methods have been tested and they don't kill the fungus. Tools used for cutting 'ōhi'a trees (especially infected ones) should be cleaned with 70% rubbing alcohol or 10% bleach (if using bleach be sure to oil afterwards to prevent corrosion).

4 CLEAN YOUR GEAR

Clean your shoes, gear and clothing. Decontaminate shoes by dipping the soles in 10% bleach or 70% rubbing alcohol. Other gear can be sprayed with the same proven cleaning solutions. Wash clothing in hot water with detergent.

5 WASH YOUR VEHICLE

Wash the tires and undercarriage of your vehicles with detergent, especially after traveling from an area with ROD and/or if you have traveled off-road.

Congratulations Serina Marchi!

2017 HISAW Business Leader

Serina Marchi, of Seascapes Nursery, was recognized at the 2017 **Hawaii Invasive Species Awareness Week Award Ceremony** as the **Business Leader** for her efforts to minimize the introduction and spread of invasive species.

Serina is the Owner of Kauai Seascapes Nursery on the North Shore of Kauai. Seascapes Nursery is a family owned business operating on Kauai for over 30 years and is one of the largest nurseries on the island. Serina has shown a very strong interest in helping to minimize the spread and introduction of invasive species by supporting Kauai Invasive Species Committee's (KISC) Pono Endorsement Program. In April 2016, Seascapes Nursery became one of the first nurseries to become endorsed. When choosing the best management practices for her business to follow, Serina has gone above and beyond the minimum requirements to become Pono Endorsed. She not only chose to immediately discontinue the sale of the Pono Endorsement Program "Black List" plants, but also the "Phase Out" list plants". Her actions during 2016, and continued dedication to reducing the introduction and spread of invasive species will help to minimize future impacts of invasive species on Kauai.

Albizia in Hawaii

By John-Carl Watson, HISC planner

Native to Papua New Guinea, Indonesia, and the Solomon Islands, albizia (*Falcataria moluccana*) is a fast growing tropical tree that was introduced to Hawaii in 1917 by Joseph Rock as an ornamental and for reforestation purposes. Approximately 140,000 albizia were planted in forestry areas throughout the state during the non-native tree forestry planting efforts in the early 20th century. This effort was prior to our understanding of how non-native and invasive plants impact our environment, and at the time albizia was valued for its rapid growth. Albizia is nitrogen fixing which allows it to thrive in nutrient deficient soils and become established in relatively intact native ecosystems. It produces large quantities of seeds, which are encased in light papery pods and can easily be dispersed over large distances. Albizia is also one of the fastest growing trees on Earth, and is capable of growing up to 15ft per year and easily attaining a height of over 35m or 100ft. The rapid growth rate of this species produces a massive number of trunks and limbs that are structurally weak and brittle in nature. Large trees are prone to "sudden limb shear" or "sudden branch drop." This phenomenon is defined as the sudden failure and collapse of live branches with no sign of physical weakness, and without apparent cause. Arborists certified in risk assessment confirm that the natural state of an albizia is the brittle, breakage-prone structure and that, regardless of current size, any albizia within 250 feet of a structure should be considered a hazard. The term "hazard tree" applies to trees that pose a threat to roads, structures, power lines, or human health because of their close proximity to human structures. The Hawaii-Pacific Weed Risk Assessment (HPWRA) scores albizia at eight (8) and is categorized as highly invasive.

Albizia can grow up to 15ft per year. The most cost effective method of control is to pull up seedlings before they get too big.

Fortunately, there are aspects of albizia biology that make large-scale control and management actions feasible. First, seedlings are shade sensitive and mass germination events require that the canopy be open enough to allow ample light to penetrate to the understory layer. Secondly, there are a variety of effective methods such as girdling, ring-barking, or incision point application with low-doses of effective herbicide that can be employed to control both seedlings and mature trees.

Albizia easily colonize roadsides and can become hazardous in just a few years.

The most effective way to combat the spread of albizia is to control the seedlings. However, due to their rapid growth rate there is approximately a one-year window in which seedlings can be manually pulled and easily controlled. After this first year trees can be up to 15 feet tall, and will need to be cut down or treated in place. When considering a management method for populations of larger albizia, it is very important to assess each tree to see if it poses a hazard to infrastructure or property. Hazard trees should never be treated and left standing. It is highly recommended that a certified arborist be used when removing large albizia trees.

Currently, the Hawaii Invasive Species Council (HISC) is developing a strategic plan to address albizia statewide. The purpose of this strategic plan is to provide large-scale objectives and a framework to minimize the impacts of albizia on the environment, human health, and infrastructure by:

- Describing statewide impacts of albizia
- Summarizing available control methods
- Recommending directions for future research on detection and control methodologies
- Supporting and encouraging the development of island or site-specific management plans
- Identifying priorities for HISC funding to support research, detection, and control efforts

For more information on albizia control in Hawaii, visit the Big Island Invasive Species Committee webpage at: www.biisc.org/albizia/.

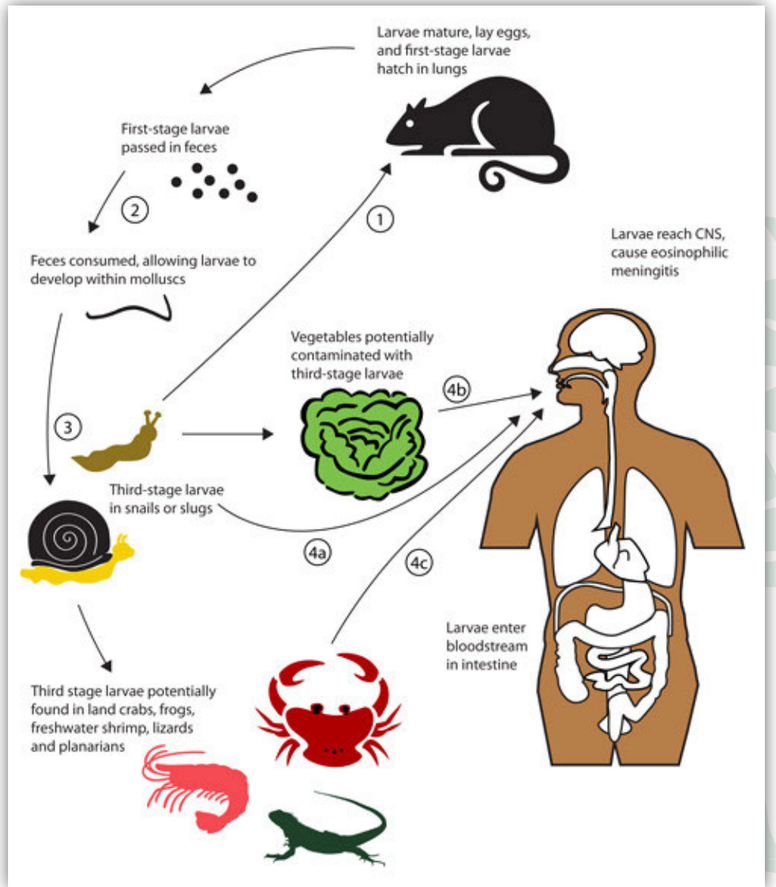
Congratulations Kawika Winter!

2017 HISAW Kauai County's MVP

Kawika Winter, Limahuli Garden and Preserve, National Tropical Botanical Garden, was recognized at the 2017 **Hawaii Invasive Species Awareness Week Award Ceremony** as the **Kauai County's MVP** for his efforts to preserve and protect priority watershed on Kauai with his work in biocultural conservation.

As the Director of Limahuli Botanical Garden and Preserve, Kawika has played a crucial role in the protection and preservation of over 1000 acres of priority watershed area on the north shore of Kauai. In addition, Kawika aims to create a model of a functioning, 21st-century ahupua`a. This model focuses on a mountain-to-sea resource management strategy and includes both modern and traditional techniques. By incorporating landscape scale invasive species control efforts, native plant restoration, sustainable fisheries practices, and community engagement into his management practices, Kawika has demonstrated a lasting dedication to protecting and restoring key resources on the Island of Kauai.

Rat lungworm continued from page 1



http://entnemdept.ufl.edu/creatures/nematode/rat_lungworm.htm

There have not been any cases of rat lungworm disease caused by the parasite on Kauai. The chance of infection is incredibly low, though we still encourage all residents to follow good agricultural and food safety practices that are beneficial at preventing a variety of illnesses. University of Hawaii CTAHR and the Hawaii Department of Health are working together to help our residents understand the threats and make informed decisions to keep everyone healthy. For more information visit the Hawaii Department of Health, Hawaii Department of Agriculture, and CDC websites. If there are serious questions about your health, please contact and medical professional.

"Figure: Potential routes of infection of the human central nervous system (CNS) by the rat lungworm, Angiostrongylus cantonensis. Note that the normal life cycle involves (1) consumption of molluscs by rats, then (2) excretion of nematodes in rat feces, which are then (3) consumed by molluscs. Human infection can occur when uncooked infected molluscs are eaten (4a) or, more rarely, when uncooked contaminated paratenic (transport) hosts (4C) or vegetable matter (4b) is consumed. Adapted from Wang et al. (2008)."

http://entnemdept.ufl.edu/creatures/nematode/rat_lungworm.htm

Little Fire Ant Update

The only known population of Little Fire Ants (LFA) on Kauai has been greatly reduced through the efforts of Hawaii Ant Lab (HAL), HDOA, KISC, and the landscape crews that work daily in the area. In January 2017, surveys detected two hot spots within the original infestation area. After treatment efforts were completed in the area, follow-up surveys came up negative for LFA. HAL, HDOA, and KISC will continue to monitor the area. We urge the public to inspect plants or planting material that they import to the island. To find more information about LFA please see www.kauaiisc.org/little-fire-ant

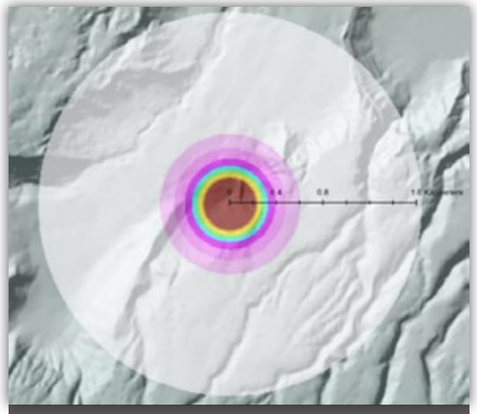
MAHALO NUI !

Salvinia molesta Update

KISC has entered into a partnership with the Division of Aquatic Resources (DAR) to inventory the extent of *Salvinia molesta* on Kauai. Some may remember the Salvinia infestation of Lake Wilson on Oahu which threatened the drinking water supply by overwhelming the lake with the tiny invasive fern. Eradication costs were around one million dollars. A working group was formed last year in response to the Kilauea Neighborhood Association concerns that Salvinia was creating dense vegetative mats in the lower Kilauea River. With Kauai's lakes in mind, information was collected to understand the extent of Salvinia infestation on rivers across Kauai. Initial observations suggested that Salvinia occurs in at least four windward rivers and likely more. In order to rapidly test rivers for the presence of Salvinia, the working group decided to use Environmental DNA (eDNA). This process uses water samples to detect the absence or presence of the species from bits of DNA flowing out of the river. Once all the infested rivers are identified a management plan will determine feasibility of eradicating Salvinia from Kauai and prioritize eradication efforts on a river by river basis. Thanks to DAR for setting up the eDNA program and KISC looks forward to collaborating on future control work.

Miconia Update

CTAHR Helps Shape KISC Miconia Management



Impact of one adult tree is 850 hectares with 99% of the seedlings occurring in the colored circles
(figure adapted from Leary et al. (2017) Final HISC Report)

A recent report to HISC from CTAHR extensionist James Leary utilized what is called "Kernel Density Dispersal" to reanalyze the potential risk of missing a single adult miconia and analyze how much effort KISC needs to employ in order to eradicate this invader. The data utilized aerial control points to determine the potentially infested area and places a 1.6 km circle around each adult location. The findings show the need for a large increase in aerial surveillance to ensure detection of the last 1% of potential adults. If this last percentage point is missed and one tree escapes notice, the infestation area increases by another 850 hectares. An analogy would be spot fires hopping from a core wildfire and starting another blaze far from the original fire line. The time-scale to eradicate miconia from Kauai is estimated at 43 years. Models suggest that 158,000 acres of Kauai's windward forests could become dominated by this one invasive tree which will lead to increased erosion and runoff, mobilization of bacteria and other diseases into our waterways and severe loss of wildlife habitat. KISC is seeking funding for FY18 to increase aerial surveillance seven-fold in order to get ahead of the invasion curve. Some of this surveillance will involve ground crews deploying UAV flights near access points with the remote areas remaining under helicopter operations.

Mongoose Update

Airline personnel efforts leads to capture!

By Pat Gmelin, Mongoose Project Leader

On October 11, 2016, Hawaii Department of Agriculture on Kauai received a report of a mongoose running out of a shipment of bread from Oahu at the Aloha Air Cargo at the Lihue Airport. Craig Kaneshige and other HDOA staff, as well as, KISC field workers responded to the report as airline personnel cornered and monitored the animal. The mongoose was lured into a live cage trap at around 8am. 10 live traps were set around the cargo bay where the capture occurred, but no other animals were captured after 1 week. This marks the third live mongoose capture on Kauai. The other two occurred in 2012 and only a couple of miles away.

Mongoose captured on October 11, 2016. From Right: Craig Kaneshige (HDOA), Clyde Ragasa (HDOA), Eric-John Garcia (HDOA), & Nathan Lagundino (KISC).

The USDA has recently developed a genetic database from tissue samples of mongooses from multiple locations on each of the islands of Oahu, Molokai, Maui, and Big Island. The objective is to track the origins of new invaders and help promote biosecurity across all of the Hawaiian Islands. Based on this new genetic analysis, the two mongooses captured in 2012 were determined to originate from Oahu.

The beginning of the island-wide survey: mongoose tracking tunnels ready for deployment.

2017 also marks the beginning of KISC's island wide mongoose population survey. We have partnered with the USFWS and developed a Strategic Operation Plan (SOP) for early detection and rapid response. This includes using small tracking tunnels with bait and an ink pad to record the footprints of animals in the area. These tunnels were placed along all roadways and in a grid pattern at pre-determined high risk areas. 500 meter spacing of these tracking tunnels was used according to mongoose home range studies. KISC field crew set about 300 tunnels around Kauai. We found many tracks of cats, rats, and mice, but no mongoose prints. The plan is to repeat this survey quarterly for one year to determine if Kauai has an incipient population of mongooses. If a mongoose is detected, KISC will work with the DLNR and the HDOA on a rapid response using traps, tracking tunnels, and trail cameras.

Congratulations Shawn Baliaris!

Shawn Baliaris was recognized at the 2017 **Hawaii Invasive Species Awareness Week Award Ceremony** for the **Hottest Pest Report** for his efforts relating to reporting and stopping the spread of mongoose on Kauai. As a proactive community member, Shawn promptly reported sighting a Mongoose on Kauai to the Hawaii Department of Agriculture (HDOA). His diligent action allowed for rapid response from the appropriate agencies, and clearly highlights the usefulness of the 643-PEST reporting system, and how the community can personally take actions to protect Hawaii from invasive species. Congratulations and Mahalo Shawn!

2017 HISAW Hottest Pest Report

Name that Invasive

Can you name each of the invasive species featured in the pictures below?

Pictures by Mugs.

Answers: Top Left - Albezia (Falcataria moluccana), Middle Left - Faisa Kava (Piper auritum), Left Bottom -Jackson's Chameleon (Chamaeleo jacksonii), Top Right - Calliandra (Calliandra haematocephala), Bottom Right - Solvinia (Salvinia molesta)

a hui hou!

Allan Rietow has been an active member of the KISC committee since the formation of KISC in 2001. Mahalo Allan for all your hard work and dedication to KISC!

Kathryn Fiedler has been an active partner to KISC while holding the Kauai Jr. Extension Agent position at CTAHR and more recently the KISC Chair Elect. Kathryn has advised KISC and Kauai Community Members on Rose-Ringed Parakeets, Rat Lungworm, Toxoplasmosis, Rapid Ohia Death, and many others. Mahalo Kathryn and good luck in Cambodia!

Aloha kākou !

KISC Executive Committee

The KISC Executive committee was formed at the 2014 KISC annual meeting. Welcome to our team, we look forward to developing KISC's future together!

KISC Committee Chair
Tim Flynn, NTBG

Past KISC Chair
Adam Williams, DOFAW

KISC Chair Elect
JC Watson, HISC

Kia'i Moku - Guarding the Island

is the official newsletter of the Kauai Invasive Species Committee.

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Photos: Mugs Kaneholani or KISC unless noted

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The Kauai Invasive Species Committee (KISC) is a voluntary partnership of government, private and non-profit organizations, and concerned individuals working to prevent, control, or eliminate the most threatening invasive plant and animal species in order to preserve Kauai's native biodiversity and minimize adverse ecological, economic and social impacts. KISC is a project of the Pacific Cooperative Studies Unit and Garden Island Resource & Conservation Development, Inc.

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