

Kia‘i Nā Moku O Maui Nui

“Guarding the Islands of Maui County”

Fall 2006

Newsletter of the Maui Invasive Species Committee

The Perils of Pampas Grass

“I wondered how these plants got here—no one walked up to plant them. Yet here were over 100 plants, thousands of miles from their South American home.”



By Lissa Fox
MISC Field Worker

Pete and I peered through the clouds towards the back of ‘Īao Valley. Sure enough, the little patch of sunshine we had been looking for broke through the layer of white.

He swung the helicopter and its 30 foot spray line towards the far back wall. All morning we’d skirted the clouds above the West Maui Mountains; we were both done with clouds for the day. The morning had been successful. We’d

found our target, but that was only the start. I pointed out the landslide on the 1,500 foot cliff to Pete.

“They’re along the ridge, just above the slide.”

“Oh yeah, I see ‘em.” He headed to the cliff. Our target was obvious as we got closer. Pampas grass, ten feet tall and waving a gigantic purplish-white plume, is easy to pick out—when it’s flowering. A few months

See Pampas on page 5

Welcome to the launch
of Maui Invasive Species
Committee’s first newsletter!

Also in this issue:

- Bob Flint & the Kokomo Frog Squad
- Reflections on Lāna ‘i
- Introducing the comic strip: MISCommunication

Partners Pulling Together

The National Park Service - a Key MISC Partner

By Steve Anderson

Haleakalā National Park, National Resource Program Manager

The natural resources of Haleakalā National Park are among the richest and most ecologically intact within the protection of the U.S. National Park system. Fencing, feral animal removal, and strategic alien plant and predator control has resulted in a spectacular recovery of native Hawaiian plants and animals. Thirteen endangered plants and five endangered birds are harbored on park lands, along with dozens of

See Partners on page 10





Message from the Manager

The Hawai'i Noxious Weed List

By Teya Penniman
MISC Manager

“Pampas grass provides a good example of how MISC’s work fits into Hawai’i’s regulatory framework.”

Aloha and welcome to MISC’s first newsletter! We hope it will explain both the “how” and the “why” of what MISC is doing to protect Maui from invasive species. Our first edition focuses on our efforts to control pampas grass. Pampas grass provides a good example of how MISC’s work fits into Hawai’i’s regulatory framework. MISC has no enforcement authority, which means we rely on the cooperation of private landowners to control invasive plants on their property. The Hawai’i Noxious Weed List can help or hinder us when we ask for permission.

What is a Noxious Weed List? Some governments only allow the importation of new plant species if the importer can show that the introduction won’t be harmful. This is referred to as a “white list” approach. In contrast, most plants are permitted into Hawai’i after inspection unless they are officially listed as “noxious weeds” by the Hawai’i Department of Agriculture (HDOA). This is known as a “black list” approach. A plant must meet specific criteria related to its reproduction, growth, potential detrimental effects, and distribution or spread in order to be declared noxious. It’s important to realize that the vast majority of plants found in our homes and yards are not invasive and will never be considered “noxious.”

One problem with the black list approach is that years can pass before we understand that a particular plant is a bad actor, by which time the species may have become widely established. Case in point: pampas grass. In Hawai’i, there are two different species of pampas – *Cortaderia jubata* and *Cortaderia selloana*. *C. selloana* may be even more invasive than *C. jubata* (see New Science column on page 6) and has recently been documented to be reproductive on Maui. Unfortunately, only *C. jubata* is designated as a noxious weed in Hawai’i.

Designation as a noxious weed can help sway a landowner into letting us control plants on their property, but the Noxious Weed List can also work against us. We sometimes encounter landowners who say, “If it’s not a noxious weed, you can’t control it.” We have had this response when trying to control the *selloana* type of pampas grass. A single person saying “No” can thwart years of progress as plants on one property produce seeds that blow in the wind, disperse for miles, and cause *pilikia* for their neighbors, for rangelands and other important conservation lands. Another problem with the black list approach is that we might know that a species is problematic, but it can take a long time for it to be declared noxious. The Hawai’i Noxious Weed list hasn’t been updated for over fourteen years.

Should Hawai’i move to a “white list” approach? That is a question that state agencies and the legislature may want to address in future years. Even if the black list approach has limitations, it is still an important tool. Status as a noxious weed means that one of several state agencies can ask a landowner to remove the plant or get a court order requiring the landowner to do so. So why don’t we just declare the *selloana* pampas grass a noxious weed? MISC is working with other island-based Invasive Species Committees and the HDOA to do just that. We want to add *C. selloana* and other MISC targets to Hawai’i’s Noxious Weed list. We are working to make sure that the species we want added meet all of the criteria set out under HDOA’s rules.

What can you do to help? It’s simple. Understand that MISC only targets a very limited number of species known to be a serious problem. Allow MISC crews onto your property to control our target plants, even if it’s one that produces beautiful showy white plumes. Finally, become informed about the options available to us as a community to protect our shores from invasive species. *Mahalo nui loa.*

Staff Spotlight

Adeaptability: MISC's Senior Field Supervisor - the Model of Flexibility

By Shannon Wianecki

MISC Outreach & Education Liaison

When Mike Ade began working at MISC in 2001, headquarters were at the old Maui High School at Hāmākua Poko. He supervised MISC's entire field crew—four workers tasked with island-wide invasive species control. Since then, MISC operations have more than quadrupled: expanding, contracting, relocating, diversifying and growing some more. Our trusty Field Crew Supervisor has seen it all, and has helped MISC stay focused on the day-to-day challenges of combating invasive species.

Adaptability is the key to Ade's success. Three months after his arrival, the crew unexpectedly grew; a temporary Emergency Environmental Workforce (EEW) was assigned to miconia detail in Hāna. Ade had less than two weeks to organize trucks and gear for 21 new workers. To supervise the effort, he camped out at Wai'anapanapa State Park (closed at the time, due to a dengue fever outbreak) for the next six months. Despite rough terrain and often inclement weather, he and his crew set out armed with machetes, herbicide squirt bottles, and Global Positioning System (GPS) units, to rid the Hāna rainforest of miconia.



Ade's work requires keeping the big picture in mind. He actively supervises the survey and control of multiple target species, helicopter operations, data collection, and crew training. A former arborist, he leads top-notch lessons in chainsaw etiquette. He coordinates work with three field crews and numerous partner agencies

on Maui, Moloka'i, Lāna'i, and Kaho'olawe. And then there's the weather. The work calendar says "pampas aerial survey" but West Maui is blowing 40 mph and socked in...Ade quickly dispatches the crew to sunny Kihei for work on ivy gourd instead.



"We're evolving so much," he says of MISC. "We've really gotten some talented people. We've become better at what we do."

Ade added to his talents during a recent trip to Guam. During a three-week intensive training he learned to capture and handle brown tree snakes, potential threats to the Hawaiian landscape. He practiced "morphing"—stretching the snake to record its measurements. "Instructors showed how the snakes can recoil up on themselves and bite you," he says. For one lesson, the instructors dropped a meter-long snake on the floor and said not to let it get away. Late night hunts were educational but grueling. "By the third hour, everything looks like a snake." The trip was "100% fun," he says, but also sobering. "There were no birds on Guam, only a few sparrows and doves." The dense invasive snake population led to the extinction of nearly all of Guam's native birds—a fate he hopes to prevent here on Maui.

Ade's prior experience was with cultivating, not killing plants. On the East Coast, he worked as a landscaper and raised ornamental waterfowl. In Vermont, he was Middlebury College's resident arborist for 14 years. He moved to O'ahu in 2000 and became fascinated with native Hawaiian plants while working at the Waimea Arboretum. Just how did this benevolent horticulturalist become a serial plant killer? When the arboretum went bankrupt, Ade looked for another university position and found MISC, a University of Hawai'i project. In addition to the long hours he puts in, it's fair to accuse Ade of taking work home; when MISC relocated to Pi'iholo in 2004, he moved also. On weekends he can be seen on the tractor, sculpting the landscape surrounding the MISC baseyard. "It's all good," Ade often says in response to yet another challenging work assignment. The same could be said of MISC's senior field supervisor.

Acting Locally

The Legendary Bob Flint and the Kokomo Frog Squad

By Adam Radford

MISC Vertebrate Operations Field Supervisor

As MISC's Vertebrate Field Supervisor, I like to believe that our staff is dedicated, persistent and creative in our efforts to control our target species. However, when I met Bob Flint—a local landowner struggling to rid his property of a noisy pest—I realized that he was one of those rare individuals whose determination may rival our own. My first conversation regarding coqui frogs with Flint was about control methods. Flint explained that he had started out with a pellet gun (which means he must be a pretty good shot) and moved on to researching flame-throwers on the internet. I remember feeling that by comparison our control methods left something to be desired.

“Flint’s commitment is nothing short of amazing considering that he resides in the heart of the largest coqui frog infestation on Maui.”

Flint and his wife, Sunny Jordan, reside on a beautiful parcel of land in Māliko Gulch. As relaxing as their home is during the day, by night it is bombarded by a chorus of coqui frogs. During a mark and recapture study near the Flint home, University of Utah researchers caught more coqui frogs in less time than they had anywhere else in the state! Flint recalls the night he heard the first coqui in 1998. “We thought it was a bird or something. When we figured out that it was a frog, it was too late. We had heard the same noise on an adjoining property, but didn’t realize it would eventually affect us.”

Since that fateful night, Flint has become something of a legend in his community. Like the *menehune*, Flint works diligently throughout the night. “I typically work on the frogs at least two nights a week when the conditions are right,” Flint says. In addition to spraying citric acid or hand capturing frogs on his property, Flint regularly responds to calls from neighbors and friends asking for his assistance and input. “Bob even got a very loud coqui out of the window frame right next to our bedroom” says Liz Janes-Brown, another impacted community member.



“He was pretty amazing.”

Flint, along with his neighbors, has been instrumental in the development of the Kokomo Frog Squad, a community-driven program that began in the spring of 2004. The Frog Squad has regularly met with MISC staff to form control strategies for several infested properties, distributed information in their community, reported on the status of coqui frogs in the area to MISC, and solicited for funding and assistance with control.

Flint’s commitment is nothing short of amazing considering that he resides in the heart of the largest coqui frog infestation on Maui. When asked if he feels that the battle is winnable, Flint replied that “MISC has been instrumental in stopping the spread of coqui frogs. However, the most diligent and persistent efforts will really only suppress an infestation of this size and density. Without the development of isolation mechanisms that keep the frogs off, or on a property where you could focus your efforts, I do not believe that you will be able to eradicate them. Bio-controls or other control methods may also work if they are ever approved.”

With the addition of three temporary staff to work on the Māliko Gulch infestation, MISC hopes to help Flint and the community accomplish our shared objective of removing coqui frogs from the area. “I would like to see the development of a coqui eradicator sponsorship program” says Flint. “Hopefully that would help private residents purchase the necessary materials for control efforts and experimental methods development.”

Who knows what the future holds for Bob Flint, but with a little luck, money, and the ongoing efforts of his neighbors, MISC and all involved stakeholders hope he will have many quiet nights to come.

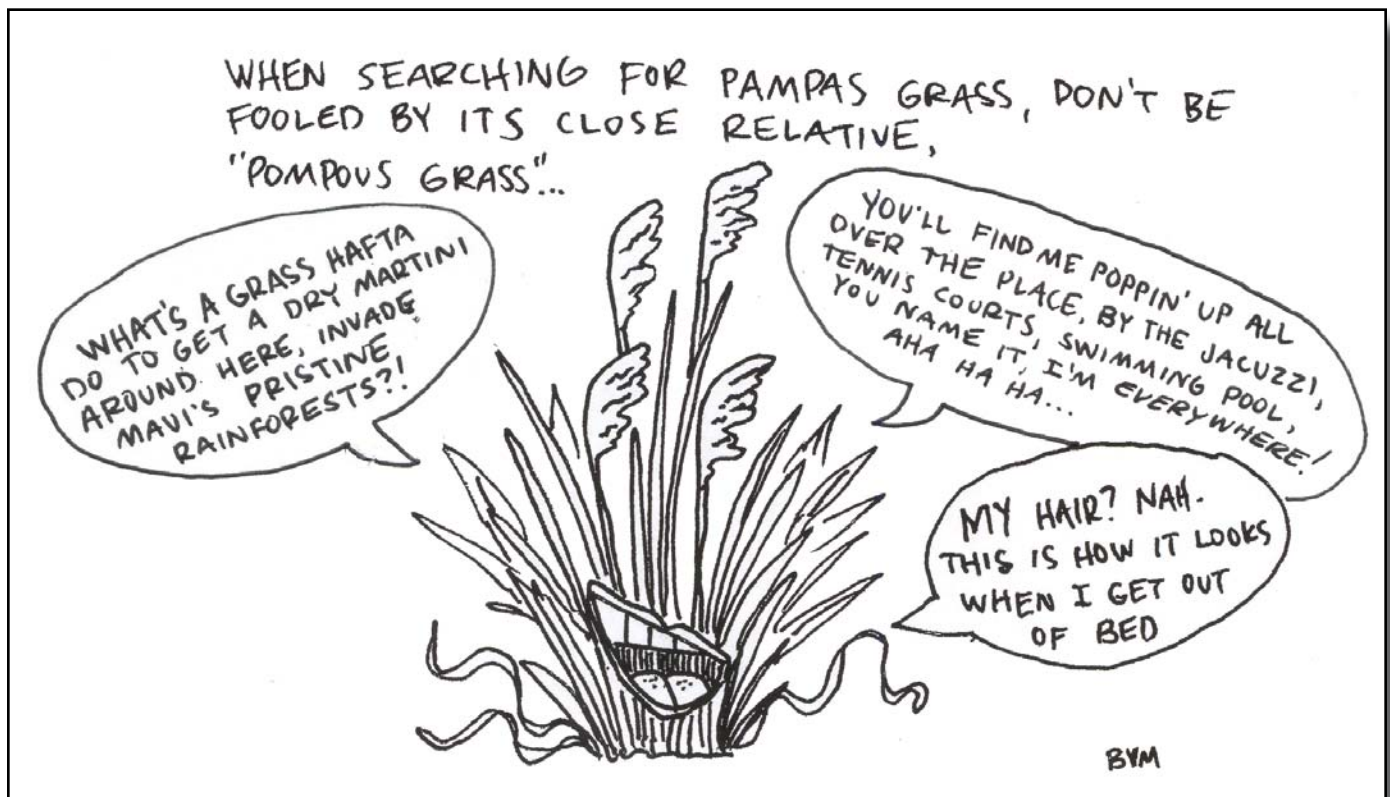
Pampas continued from page 1

earlier the yellowish green pampas blades were barely distinguishable from the native sedges. On careful inspection we could see the tell-tale curly dead leaves along the base of the pampas plant.

Pete hovered above each plant, skillfully swinging the sprayball into place so that when he chose to release the herbicide, it hit nothing but the gigantic pampas. I recorded the number of plants and position on my GPS unit. I thought in awe about what we were doing and where we were. Calling the ridge steep was an understatement; it was a razorback. There wasn't space wide enough to put one foot in front of the other, let alone land a helicopter. I wondered how these plants got here—no one walked up to plant them. Yet here were over 100 plants, thousands of miles from their South American home. Given the chance, they would completely cover this ridge, overwhelming the native sedges and *ōhi'a* that I was admiring now. The landslide's disturbed soil provided just enough space for a pampas seed blown here to grab hold and grow. I watched the flower heads wave wildly in the 40 mph winds. Where exactly the seed had come from I could not know for sure. As Pete adjusted the helicopter into the wind I looked towards Wailuku and the Central Valley, almost five miles away. Biologists estimate that pampas seeds can be carried twenty miles by the wind.



A tour helicopter passed just off to our right, over the wall from Ukumehame to 'Īao. The pilot radioed to ask what we were doing. It was a tour pilot that first reported the West Maui pampas population to MISC. Perhaps he or his passengers were from California, where pampas grass has become such a problem and recognized the threat it posed to Maui's unique ecosystems. Luckily, the pilot knew whom to contact. With a small crew and a big island, we need all the help we can get!



New Science

Research reveals *C. selloana* a greater ecological threat than *C. jubata*.

by Lloyd Loope, PhD
USGS-BRD, Research Scientist

New research suggests that the South American pampas grass, *Cortaderia selloana*, may ultimately pose an equivalent or even greater threat to Maui's ecosystems as compared to its close relative, *Cortaderia jubata*.

In the mid-1980s, the conventional botanical wisdom was that Hawai'i had only female plants of *C. selloana*, and that this attractive and benign species never set viable seed. In comparison, *C. jubata*, an asexual species (that produces abundant viable seeds without both sexes) was known to be an aggressive invader in coastal California. The two species, *C. selloana* and *C. jubata* are extremely similar, but there are precise botanical mini-characters to distinguish them consistently. *C. jubata* was added to the Hawai'i Noxious Weed List in 1992, based on documentation of its well-known damaging characteristics in California. When MISC formed and chose its targets in 1998, *C. jubata* was deemed a necessary target, second only to *Miconia calvescens* in its habitat-modifying ability, but there was a lot of discussion about the non-feasibility of targeting just one of the two pampas grass species because of their striking similarity. Our early approach to landowners was that there were two species – one invasive and one innocuous. For over a decade this approach was rational, based on current conventional wisdom and scientific literature.

See New Science on next page



Stopping Grass by

Brought to Hawai'i to decorate residential landscapes, South American pampas grass (*Cortaderia* spp.) quickly jumped the fence. Each pampas plume holds an average of 100,000 seeds that are designed to spread far and wide in the wind. Seeds can land and take root anywhere, from coastal sand dunes to dense rainforest.

Pampas is already a huge problem in California, Australia and New Zealand. This vegetative King Kong tramples high-value native habitats and is a costly pest in ranchlands. Shaggy masses of razor-sharp leaves create impenetrable thickets. Dry leaves provide fuel for wildfires. On Maui, MISC has controlled nearly 15,000 pampas plants in residential and wilderness areas to date. Removal of pampas plants requires almost heroic efforts, both on the ground and in the air.

By Land

MISC field workers pound the pavement and cover vast wildland acres in search of pampas, looking for the telltale slender leaves and waving flower plumes. Pampas plumes may be feather-soft, but the leaves are sharp and serrated. Before reaching in to clip and bag the plumes, field workers pull on long sleeves, pants, and gloves—necessary protection against the leaves and centipedes hiding in leaf litter. Small plants are pulled by hand or pick axe. Roots are removed from the soil to prevent re-growth.

Mature pampas plants often tower to 10 feet; their root-balls weigh half a ton. These massive grasses must be yanked out with chains hitched to a powerful truck or sprayed. Once a flowering pampas has been removed, the crew routinely checks the surrounding area for emerging seedlings. Finding hundreds of *keiki* pampas on nearby properties is not uncommon.

Pampas Land and Air



Windborne pampas seeds don't respect borders. Rogue plants have been found clinging to the cindery cliff walls in Haleakalā crater, where they threaten to oust natives like *āhinahina* and *kupaoa*. Unfortunately, the national park is prime habitat for pampas invasion. Its alpine climate closely resembles pampas' natural home, the Andean grassland, or *pampa*. Dedicated workers scour the slopes of Haleakalā to stop pampas before it takes over.

By Air

Pampas finds its way to places that can't be reached on foot. Growing on steep mountain ridges, plants are located and controlled with the help of skilled helicopter pilots. Helicopter work requires substantial training, safety equipment, and—most importantly—good weather. Clouded, socked-in conditions regularly limit flights over East and West Maui, some of the rainiest spots on earth.

“On Maui, MISC has controlled nearly 15,000 pampas plants in residential and wilderness areas to date.”

Field crews are sometimes dropped by helicopter into remote areas, where they search under the tree canopy for plants that can't be seen from the air. Crew members establish remote camps or carry emergency camping gear in the event that bad weather prevents the helicopter from retrieving them. While these wilderness operations are physically and mentally demanding, crew members find them exciting. Not only do they witness pristine habitats filled with native plants and birds, they also have the satisfaction of knowing they're safeguarding these areas from the

encroachment of
invasive
species.



Help Stop the Spread:

Call MISC if you see pampas on your property or in the wild.

- Allow MISC to control pampas on your property.
- Never import or plant pampas grass.
- Don't buy pampas seeds or products containing pampas seeds.
- Support legislation that prevents the introduction of new invasive species.
- Learn more: visit www.hear.org

New Science continued from page 6

Understanding of the innocuous nature of *C. selloana* has since changed. In 2001, John Lambrinos, who completed his Ph.D. thesis at UCLA on alien *Cortaderia* in California published an article in the Journal of Ecology entitled, “The expansion history of a sexual and asexual species of *Cortaderia* in California, USA.” Lambrinos discovered from herbarium specimens that both species were introduced to California in the mid-1800s and that the invasiveness of sexual *C. selloana* has increased over time, apparently through evolution in California over the past century plus. *C. selloana* is now more invasive and damaging to California ecosystems than *C. jubata*. Literature from New Zealand, Australia, and South Africa is consistent regarding the aggressive invasiveness of *C. selloana*. There is an excellent opportunity to eradicate *C. selloana* before it becomes aggressively invasive on Maui, but that will require strong public support.

Note: If anyone desires more detailed information, I recommend reading the Lambrinos 2001 paper. If you're interested,

Island-hopping: Lānaʻi

MISC's kuleana includes all of Maui Nui. On Lānaʻi, MISC's primary focus is on fountain grass and early detection of other invaders that are not yet widespread.

The MISC Experience on Lānaʻi

By Elisse Deleissegues
MISC Field Worker

At 3:30 a.m., it's dark, and already my mind is spinning. Did I pack everything I need? Am I forgetting to pick anybody up on my way to work? Where is my headlamp? Thus begins another quarterly trip to Lānaʻi to battle *Pennisetum setaceum*, an invasive species otherwise known as fountain grass.

Fountain grass covers hundreds of thousands of acres on the Island of Hawaiʻi, creating monotypic grasslands that choke out native plants and create severe fire hazards. On Lānaʻi, the largest known population of fountain grass occupies a 4-acre island on the Experience at Kōʻele golf course. Random populations have been found miles away in Kānepuʻu, a protected natural area. Unfortunately, Kānepuʻu is an ideal habitat for fountain grass. The windblown, open slopes, heavily disturbed by axis deer and Mouflon sheep, provide perfect conditions for seeds to naturalize quickly.

Before each Lānaʻi trip, the MISC crew loads equipment, personal gear, and coolers into trucks at the Piʻiholo baseyard. By five a.m., the caravan is off to the Lahaina boat harbor. After a beautiful early morning ferry ride, we are greeted by Bryan Plunkett, the Lānaʻi Company Conservation Manager, with a truck for our gear and directions to our week's lodgings. Exactly where we'll be housed is always a surprise, as Plunkett notifies the Lānaʻi Company of our impending visit and they in turn notify him of available housing, which they contribute free of charge. Plunkett not only arranges transportation, supplies, and housing for our crew, he provides supplemental manpower in the field.

“Unfortunately, Kānepuʻu is an ideal habitat for fountain grass. The windblown, open slopes, heavily disturbed by axis deer and Mouflon sheep, provide perfect conditions for seeds to naturalize quickly.”



The Experience at Kōʻele truly lives up to its name as we disappear in the undergrowth that is the barrier between holes 10 and 11. Outside are manicured lawns, water hazards with gently flowing waterfalls, and the occasional 'auku'u (Hawaiian black-crowned night heron). Inside, groves of tangled, thorny lantana with trunks as large as a grown man's thigh shelter large, flowering fountain grass plants. We fight our way in to reach the grass, remove its flowers, clear away the rubbish, and treat the exposed plant.

After conquering the golf course, we load up our gear and make our way to the outskirts of town. Once there, we take a moment to appreciate the majesty of the dramatic free-standing rock sculptures, miles of vast emptiness broken only by small shrubs, and colorful swaths of windswept soil. Armed with hand-picks, extra water and sunscreen, we begin to "sweep" the wilderness. We search for plants, walking abreast with GPS units recording the outer edges of the sweep line. There is no shade to protect us from the beating sun or the steady winds. At lunch, everyone gathers at the most protected place to be found to talk story about the sheep skull that was seen, the incredible rock tower leaning at an impossible angle, or the herd of deer that leapt up just in front of them.

Once a year the entire MISC staff—the plant crew, vertebrate crew, Hāna miconia crew, Molokaʻi crew, and office staff—unites to tackle the Lānaʻi fountain grass population. We converge on the ferry in a whirlwind of activity; the unsuspecting other patrons stand back, eyes wide, taking in the spectacle. Plunkett is joined by a fleet of trucks greeting us at the harbor. Wally and Derwin (DLNR), Mike, and Gary (Lānaʻi Co.) each donate time and vehicles to transport staff, equipment, and supplies—often to several work sites daily. This grand undertaking allows us to cover a massive area at Kānepuʻu that would take the plant crew several visits to complete alone. We also use this as a rare opportunity to gather together. We caravan to the Mānele Bay beach camping area (the sole area that can accommodate all of us), where a city of tents

promptly appears. In the evening, the cooks among us prepare *ʻono* grinds. In the past, Auntie Nani Watanabe has dropped by to share her knowledge of the island's Hawaiian legends, pineapple industry, and future plans.

On the ferry back to Maui, we are exhausted but exhilarated. We discuss the changes in the fountain grass population that we have noticed over time: there are fewer plants on the golf course than before; we've covered acres of ground and haven't found any new major populations at Kānepuʻu. By the time we reach Lahaina and unload our gear (again), there are another hundred stories to tell, another thousand photographs, and another set of memories.



http://www.dort.usgs.gov/resources/education/bts/images/from_Torn/campphoto.jpg

MISCellaneous Files

Yikes! Are there snakes in Hawaiʻi?

Dear MISC,

This morning I found what looks like a tiny snake near my garbage can. It's about six inches long, dark grey and moves really fast. At first I thought it was a worm, but it's really shiny and has a forked tongue just like a snake! Just looking at it gave me the jitters, so I had my husband capture it. Now we have it in a container. Correct me if I'm wrong, but I thought that snakes don't normally live in the islands. What should we do? Please help!

Sincerely,
Snake-a-phobic

Hello Mrs. Snake-a-phobic,

It must have been quite a scare to start your day off with such an unusual creature. You did the right thing by contacting MISC. Many people will be surprised to know that there is one kind of snake on land in Hawaiʻi—but before you get startled—this particular snake is harmless.

It sounds like you have come across a Brahminy blind snake, known in the scientific world as *Ramphotyphlops braminus*. This exotic species is from Southeast Asia and was introduced to Hawaiʻi in potting soil. It is now widely established on all of the main islands and often found in leaf litter, soil and under flower pots.

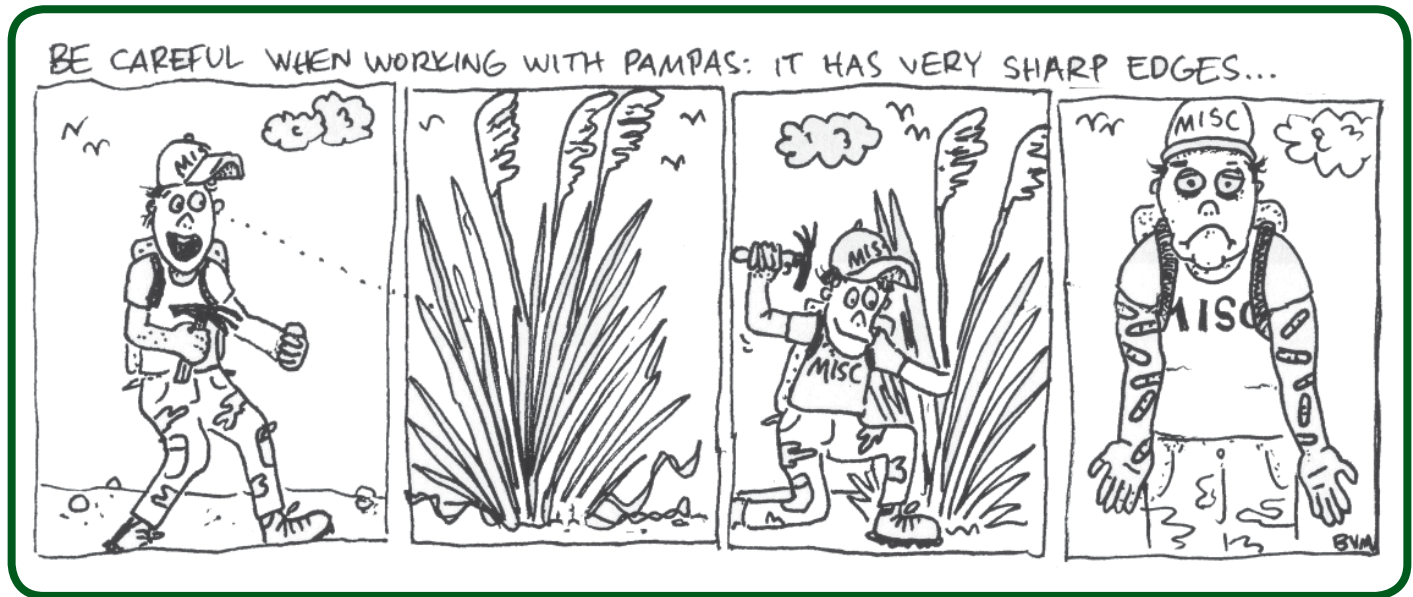
Here are some interesting facts for you: this small snake normally lives a completely hidden life under the soil

surface or leaf litter. It is very, very slender and is considered “blind” because scales cover its tiny eyes. Also, we can guarantee that it is a female. This is the only snake species known to reproduce asexually (no need for any of those males!) through a process called parthenogenesis. This means that one snake is capable of laying unfertilized eggs which develop and hatch into other virtual female clones! No wonder MISC receives so many calls about this creature!

Confusing blind snakes with earthworms is easy because they are similar in size and thickness. Earthworms however, have rings completely around their body, are stretchy, and do not have a patent-leather type of shine like the blind snake. Adult blind snakes range from two to seven inches long. They are usually black, brown or grey. It's hard to distinguish their heads from their tails – unless they stick out the forked tongue which is typical of snakes!

Your snake is harmless and your husband can release it. Unlike other snakes, Brahminy blind snakes do not pose a great threat to our islands but if you ever come across any other type of snake, call 911 immediately! Except for the blind snake, ANY SNAKE in Hawaiʻi is an EMERGENCY!! Mahalo for your awareness and interest! We would always rather hear from the public about any snake, identify what you have seen, and not miss any chances to stop other snakes from getting away.

Thanks for the inquiry!
Dr. MISCellaneous



Partners continued from page 1

other rare plants and an abundance of endemic insects. Scores of ecosystem modifying non-native species threaten to invade park habitats, potentially reversing this recovery. Years of experience have taught us that to be successful in achieving our National Park mandate to preserve native ecosystems, early detection and control of invasive species is essential. Preventing invasive species introduction into Hawai'i would be the best scenario; failing that, controlling pests and preventing their spread into prime natural areas is the conservation goal.

Recognizing that no single agency or landowner can successfully fight invasive species, Haleakalā National Park became one of the proud and founding partners of the Maui Invasive Species Committee. In 1999, MISC became a cooperatively-funded field operation. National Park Service (NPS) staff mentored the new coordinator and trained the crew in ground and aerial control operations. Interviews (brain dumps) were conducted with local experts and the collective knowledge of invasion histories was captured in a central Geographic Information System for use in developing strategies and tracking the new effort's progress. NPS staff continues to work with MISC partners strategically on target selection, aerial and ground control, and technology development. The NPS is instrumental in obtaining, matching, and leveraging cooperative funding for the control of target species selected by the committee.

Examples of selected targets include pampas grass, a 2+ meter tall grass that could transform the colorful

Haleakalā crater, only home of the threatened Haleakalā silversword, into an alien *pampa* or grassland. Mullein—all but eradicated from Maui—would also out-compete the silversword. If allowed to spread, fountain grass could turn much of Haleakalā into a wildfire hazard—as has become the fate of thousands of acres on the Island of Hawai'i. Miconia, feared as the “green cancer,” would transform arguably the best remaining Hawaiian rainforest, the only home of two critically endangered forest birds, the Maui parrotbill and *‘ākohekohe*, into the green and purple monoculture that has become the fate of the forests in Tahiti. These ecosystem displacing super-weeds have been excluded from park lands through the cooperative efforts of MISC partners.

Invasive animals are perhaps an even more imminent threat. Escaped from the illegal pet trade, the veiled chameleon is considered by island biologists to have the potential for decimating native bird populations as the brown tree snake has done on Guam. The coqui frog with its loud, piercing nocturnal call and a huge appetite for insects not only threatens restful nights and real estate prices, but also Maui's highly evolved endemic insect fauna. MISC partners use early detection - rapid response or, in more advanced invasions, create invader-free buffer zones around critical native habitats. Through partnerships, MISC has thus far been effective in preventing the wholesale invasion of Haleakalā National Park. The challenge of combating invasive species is extreme, with new species arriving on the islands daily. Without the cooperative efforts of MISC partners, the prime conservation areas of Maui Nui will be lost.

WE'RE LOOKING FOR A FEW GOOD STUDENT VOLUNTEERS TO HELP PROTECT MAUI FROM INVASIVE SPECIES!

Pull alien pine trees in Haleakalā National Park
Catch coqui frogs

Control one of Maui's worst weeds: Miconia

INTERESTED? Contact Shannon at 573-MISC or hoikeinfo@yahoo.com



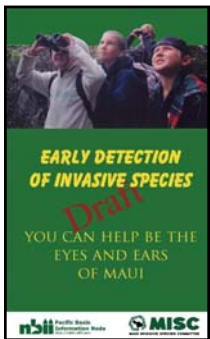
Would your environmental class or hiking club enjoy teaming up with MISC? Call today to schedule a trip. Most trips occur on Saturdays from 8 a.m. to 2 p.m. Coqui frog trips are from 5 to 9 p.m. Limited to 12 students (ages 14+). Supervising adults are encouraged. Special arrangements can be made with advance notice.

News in Education

Early Detection Program Coming Soon!

What do *you* do when you stumble upon an unusual plant or animal that appears to be out of place...possibly *invasive*? Who ya gonna call?

MISC and its partners are developing an early detection program to help people answer these questions. Program participants will learn how to identify invasive characteristics, spot target species in the field, and properly report their locations. A free field guide, how-to workshop, and on-line reporting tool will be available soon.



Early detection and rapid response are key elements in reducing the spread of invasive species. With your help, we can increase the eyes and ears searching for new, unwanted pests. This will help minimize the impact of invasive species on our environment, economy and quality of life.

If you have a group that is interested in the early detection program, contact MISC Public Relations & Education Specialist, Joylynn Paman, at 573-6472 or at miscpr@hawaii.edu.



Nominations for the Fourth Annual Mālama i ka 'Āina Award Due October 27, 2006

MISC, the Maui Association of Landscape Professionals and the County of Maui will honor a landscaping business or individual for their exceptional work in protecting Maui County from invasive species.

Eligibility

Businesses or individuals are eligible if they:

- Advise clients on what to plant
- Design landscapes
- Install plants for property owners
- Grow, import, or sell plants

Application and Deadline Information:

- If you know someone who qualifies, please submit a nomination to MISC. Applications are available online at www.mauiisc.org or call 573-MISC.
- Completed applications can be faxed to 573-6475, mailed to P.O. Box 983, Makawao, HI 96768 or e-mailed to miscpr@hawaii.edu.

Award Announcement:

The winning business or individual will be announced on November 11, 2006 at the Maui Association of Landscape Professionals' Lawn and Garden Fair at the Maui Tropical Plantation.



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*Working to protect Maui Nui from invasive species that threaten
our environment, livelihoods and quality of life.*

MISC Partners

Haleakalā National Park

Hawai'i Department of Agriculture

Hawai'i Dept. of Land and Natural Resources

Maui County Department of Water Supply

Maui County Office of Economic Development

Maui Land & Pineapple Co.

Pacific Islands Exotic Plant Management Team

The Nature Conservancy of Hawai'i

University of Hawai'i -
Pacific Cooperative Studies Unit

US Fish and Wildlife Service

USDA Forest Service

US Geological Survey - Biological Resources Div.

USDA Tri-Isle Resource Conservation
and Development Council, Inc.

We hope you enjoy the first newsletter of the Maui Invasive Species Committee. You have received it because you are a valuable community member and can help keep Maui Nui safe from invasive species.

If you would prefer to receive this newsletter electronically, e-mail us!



P.O. Box 983
Makawao, Hawai'i 96768
808-573-MISC (6472)

miscpr@hawaii.edu
www.mauiisc.org