LINDA LINGLE
Governor

SANDRA LEE KUNIMOTO
Chairperson, Board of Agriculture

DUANE K. OKAMOTO
Deputy to the Chairperson

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512

TESTIMONY OF SANDRA LEE KUNIMOTO
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE HOUSE COMMITTEE ON FINANCE
THURSDAY, FEBRUARY 21, 2008
11:30 A.M.

HOUSE BILL NO. 3425, H.D.1
RELATING TO TARO

Chairperson Oshiro and Members of the Committee:

Thank you for the opportunity to testify on House Bill No. 3425, H.D.1. The purpose of this bill is to provide funding for statewide taro research that focuses on the apple snail problem. We support the intent of the bill; however, we have concerns about the possible adverse budgetary impact that this bill may have on the Executive Supplemental Budget request.

S.C.R. 206 requested the department to work with taro farmers and others to develop a taro security and purity research program. The findings from the discussions support initiatives by the taro industry to find solutions to pest control problems. Most taro farmers agree that the apple snail is the most serious pest threat to taro production in Hawaii.

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

TESTIMONY OF THE CHAIRPERSON OF THE BOARD OF LAND AND NATURAL RESOURCES

on House Bill 3425 House Bill 1 – RELATING TO TARO

BEFORE THE HOUSE COMMITTEE ON FINANCE

February 21, 2008

House Bill 3425 House Bill 1 provides an unspecified amount of funds for taro research, laboratory costs, and outreach for the control of the invasive apple snail to the Department of Agriculture. The Department of Land and Natural Resources (Department) acknowledges the need for control of apple snails, however has concerns with the budgetary implications this bill will have on the Executive Supplemental Budget.

Unfortunately, there are large populations of apple snails on all of the main Hawaiian Islands. The Department supports the taro growers with their efforts to control apple snails statewide and because eradication is not currently feasible, agrees that an approach to control and contain this pest is the most appropriate. The Department suggests using a coordinated approach with an agency partnership to provide integration with statewide efforts and an element of peer review and appropriate oversight and accountability.

OFFICE OF HAWAIIAN AFFAIRS
Legislative Testimony

HB3425, HD1, RELATING TO TARO
House Committee on Finance

February 21, 2008 11:30 a.m.
Room: 308

The Office of Hawaiian Affairs (OHA) **SUPPORTS** H.B. 3425, H.D. 1, **with amendments**. As currently written, H.B. 3425, H.D. 1 would appropriate a yet-to-be-determined sum of money from the state General Fund for the 2008-2009 Fiscal Year for statewide apple snail research. The Department of Agriculture would administer the funds for this research.

Apple snails - an alien, invasive species - are devastating the kalo industry in Hawaiʻi, with a recent report claiming that the snail is responsible for up to a quarter of crop losses in kalo in recent years. Kalo is a sacred plant in Hawaiian culture, regarded as the elder brother of Native Hawaiians, and poi, made from the corm of kalo, serves as the staple food of the traditional Hawaiian diet. Finding a way to control apple snails would have far reaching impacts in improving both Hawaiʻi's taro industry and the well being of Native Hawaiian culture.

We request that this bill include an amendment that would require the Department of Agriculture to consult with Native Hawaiians and taro farmers when the agency determines what apple snail research projects to fund. OHA believes that these stakeholders need to have a say in this very important discussion, particularly the taro farmers who are the ones that will be most impacted by this work. Taro farmers throughout the state have been working to find apple snail solutions, and they would be able to provide the best advice on which research projects may hold the most potential for success.

OHA requests to be a representative of the Native Hawaiian community for this project. The Hawaiʻi Revised Statutes (HRS) mandates that OHA "[s]erve as the principal

public agency in the State of Hawaii responsible for the performance, development, and coordination of programs and activities relating to native Hawaiians and Hawaiians; . . . and [t]o assess the policies and practices of other agencies impacting on native Hawaiians and Hawaiians, and conducting advocacy efforts for native Hawaiians and Hawaiians." (HRS § 10-3)

OHA urges the Committee to PASS H.B. 3425. H.D. 1, with amendments. Thank you for the opportunity to testify.

KAUA'I TARO GROWERS ASSOCIATION

Testimony of Rodney Haraguchi
President
Kauai Taro Growers Association

Committee on Finance
Rep. Marcus R. Oshiro, Chair
Rep. Marilyn B. Lee, Vice Chair

Thursday, February 21, 2008
11:30AM, Conference Room 308

Support of HB3425, HD1
Relating to Taro

Chair Marcus Oshiro, Vice Chair MarilynLee and members of the committee:

On behalf of the members of the Kauai Taro Growers Association, mahalo for the opportunity to voice our support for HB3425,HD1. Within the past ten years the number of taro farms statewide has declined from 199 to 105 as of 2006. And there is further decline from 2006 to 2008. Farmers are vulnerable to the weather, diseases, labor shortages, increased supply costs and the most devastating, the apple snail infestation.

Taro farmers have been battling the apple snail for many, many years and the snails are winning. Due to the rapid geometric increase in the snail population and the short maturity time, within a year's time one snail can increase into millions of snails. Based on the analysis already done, the farmers need an appropriation of funds to continue some of the research that has been conducted and expanded upon as well as finding a permanent solution that all farmers can apply.

Because some farmers are located on the U.S. Fish and Wildlife Refuges or areas that have added protections for endangered or threatened birds, many of the farmers are not able to utilize certain applications or utilize the Cayuga or Peking ducks that are helping other farmers. The only means for these farmers are picking up the snails by hand which increases the labor costs at the same time postponing other maintenance issues. There have been trials done by CTAHR and HARC using a papaya extract and neem solutions which looked promising, however, the costs are prohibitive for farmers on a large scale application. There could possibly be ways to subsidize these costs to eradicate the snails completely or finding ways that would allow all farmers to utilize the ducks and funding other promising alternatives.

We humbly ask for your support for the taro farmers and the survival of the taro industry.

Post Office Box 427, Hanalei, Kaua'i, Hawai'i 96714

The Nature Conservancy
Protecting nature. Preserving life.™

The Nature Conservancy of Hawai'i
923 Nu'uanu Avenue
Honolulu, Hawai'i 96817

Tel (808) 537-4508
Fax (808) 545-2019

nature.org/hawaii

Testimony of The Nature Conservancy of Hawai'i
Regarding H.B. 3425 HD 1 Relating to Taro
House Committee on Finance
Thursday, February 21, 2008, 11:30AM, Room 308

The Nature Conservancy of Hawai`i is a private non-profit conservation organization dedicated to the preservation of Hawaii's native plants, animals, and ecosystems. The Conservancy has helped to protect nearly 200,000 acres of natural lands for rare and endangered native species in Hawai`i. Today, we actively manage more than 32,000 acres in 11 nature preserves on O`ahu, Maui, Hawai`i, Moloka`i, Lāna`i, and Kaua`i and also work closely with government agencies and private landowners on cooperative land and marine management projects.

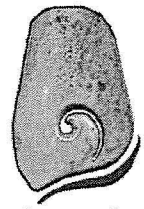
The Nature Conservancy of Hawai'i supports the use of general fund revenue to address invasive species issues, including research and control for devastating pests like apple snails.

However, we hope that the necessarily strong response to apple snails will not prevent the State and its partners from also devoting appropriate attention to other pests that have become established in Hawai'i. We hope that in addition to this bill, you will also support continued funding in the State budget for the prevention, early detection, control, research, and education programs of the Hawai'i Invasive Species Council (HISC), and the State Departments of Agriculture, Health, and Land & Natural Resources.

In order to meet needs, the Legislature has found itself in the position of shifting existing general and special funds back and forth between various invasive species and conservation programs. In Fiscal Year 2007, this practice caused layoffs in the Island Invasive Species Committees and a hiatus in the Hawai'i Invasive Species Council's research grant program. Similarly, funds to support coqui frog control and some Hawai'i Invasive Species Council activities have been diverted from the DLNR's Natural Area Reserve Fund. This is an unsustainable practice that will soon put the important Watershed Partnership and other Hawaiian forest conservation programs at risk.

TO: Representative Marcus Oshiro, Chair
House Finance Committee

FROM: Penny Levin, Executive Director
'E kūpaku ka 'āina –
The Hawai'i Land Restoration Institute



DATE: Thursday, February 21, 2008
(Submitted by email)

Aloha honorable Chair and Committee members;

I am testifying, as Executive Director of 'E kūpaku ka 'āina, in strong support of HB3425 which requests funding for farmer-based apple snail control research.

The apple snail, *Pomacea canaliculata*, has been a major pest to taro farmers for 23 years. In recent years, it has consumed 18-25 % of annual harvests and makes a significant impact on huli (taro tops) survival at planting. The snail has increased the labor required to bring a crop to harvest by an exhausting 50%.

This voracious pest is on the list of the *100 Worst Global Invasive Species*. It is a major threat in more than 18 countries worldwide. The snail has infested taro patches, wetlands, streams, estuaries, ponds, springs, ditches and reservoirs on every island except Molokai'i and Kaho'olawe. Today, there are few taro growing areas that are snail-free.

Approximately 11,000 acres of wetlands and water bodies are at risk of or already infested with the snail; **only 5% of those lands are taro farming lands** - the rest are under private, state and federal jurisdiction. This is not just a "taro farmer problem."

The snail is a known disease vector for rat lung worm and leptospirosis, making control of this pest a health concern as well. The presence of large populations of snails has been observed to draw rats and mongoose to taro patches to feed on them, a further threat of disease and to endangered waterbirds.

And yet, taro farmers appear to be the sole advocates for bringing this pest under control. Neither DLNR, nor USFWS have initiated control efforts.

Finding a cost-effective and environmentally safe apple snail control is one of the highest priority issues for growers.

Four years ago, 'E kūpaku ka 'āina began doing the ground work to make a case for more sincere involvement by state agencies and increased resources towards control efforts. We collaborated on an economic impact study, a statewide survey to find how far the snail had spread, researched everything we could find about the snail, interviewed farmers and researchers and agencies, and in 2006 produced a Statewide Strategic Control Plan for Apple Snails in Hawai'i. The plan outlines best management practices, and recommendations on

needed policy changes, management efforts, funding, partnerships, and research priorities, including the farmer-based research in HB3425. (the report is online at http://www.hear.org/articles/pdfs/applesnailcontrolplanlevin2006.pdf)

What also we found was that in 23 years, less than $400,000 had been spent on snail control efforts; primarily before 1996. Just enough to ensure failure.

Past funding for apple snail controls has gone almost exclusively to HARC and UH and has left taro farmers with no realistic or affordable solutions; and in one project may have encouraged further spread of the snail.

In 2006, we returned to state and federal agencies, working closely with the Coordinating Group on Alien Pest Species, and asked what could be done to help make the plan bear fruit? **To date, no concrete action towards this plan has taken place among state agencies, leaving taro farmers no choice but to go directly to the legislature**.

Taro farmer's have spent 23 years observing the behavior of the apple snail. Their own search for solutions have found promising alternatives based on realistic conditions. On Kaua'i, an organic cover crop rotation practice has been highly successful for one farming family. This is a practice that requires no lab testing as there are no chemical inputs, an important aspect for organic taro farmers. On Maui, taro farmers have partnered with Pacific Biodiesel in examination of an organic soil conditioner that appears to have positive effects on snail mortality.

Taro farmers have made a commitment to find alternatives and partnerships that will support future control efforts and Pacific Biodiesel has willingly offered the opportunity for taro farmers to create a self-sufficient apple snail control fund - a first for invasive species programs in the state of Hawai'i. While this fund may not fulfill its promise right away, it provides a new model for control efforts that includes partnerships with agencies, business and innovation. Most importantly, farmers become key players at the table rather than "cooperators."

Based on the above history, we respectfully request the following amendments be made to restore the true intent of the bill:

1. Last paragraph, Section 1: where is says "The purpose of this Act is to provide funding for statewide taro research that focuses specifically on ~~the apple snail problem~~." **request a change to say** "*The purpose of this Act is to provide funding for statewide taro research that focuses specifically on promising taro-farmer based apple snail control research, as recommended in the Statewide Control Plan for this species, including laboratory testing and field monitoring of the organic soil conditioner described in this Plan*."

2. Section 2: where it says "There is appropriated out of the general revenues of the State of Hawaii the sum of $ or so much thereof as maybe necessary for fiscal year 2008-2009 for statewide taro research that focuses specifically on ~~the apple snail problem~~." **request a change to read** "*There is appropriated out of the general revenues of the State of Hawaii the*

sum of $350,000 or so much thereof as may be necessary for fiscal year 2008-2009 for statewide taro research that focuses specifically on farmer-based apple snail control research and practice."

3. Section 2 last line: where it says "The sum appropriated shall be expended by the department of agriculture for the purposes of this Act." **request a change to read** *"The sum appropriated shall be expended by the department of agriculture in consultation with 'Onipa'a Nä Hui Kalo and the Office of Hawaiian Affairs, for the purposes of this Act."*

To answer specific questions regarding the budget request:

1. *Why a minimum of $350,000 for this work?*

   The primary portion of the budget on this request would fund the costs of critical laboratory tests to assess a promising organic soil compound that suggests good apple snail control properties. These tests will provide taro farmers and agencies with the information necessary to determine both efficacy and environmental safety.

   The recommended tests (EPA Endangered and Threatened Species Effects Determinations 2004), include:

   - LD50 tests on all components of the compound (half life of active ingredients)
   - Freshwater and soil degradation –bench tests (how long does it take for the compound to break down)
   - EPA approved substitute fauna impacts (to determine risk to native species).
   - Soil and water portability (how fast does the compound move through soil and water); and
   - Baseline soil and taro plant sampling and monitoring throughout (to determine soil and plant retention over time).
   - Snail mortality and field response.

   ➢ The LD50 tests alone have an estimated cost of $30-50,000

   ➢ Soil and water quality and plant monitoring $50-65,000 (over the period of one year)

   Substitute fauna impact analysis and soil/water based degradation are more costly tests that require specific parameters (and agency input) to provide an estimate.

   ➢ Quality assurance and review of lab results and lab facilities (@$150-180/hr)

   ➢ Farm/crop commitments, labor, use of equipment etc $85,000 (allows for approx. ten 1/8-1/4ac plots over the period of one year; based on farm budget data from the economic impact analysis conducted in 2004)

'E kūpaku ka 'āina also notes that in the many years that researchers (HARC/UH) have been using farmers' fields, taro plants, and labor for their own research, farmers have never been compensated for their contributions, despite the fact that after a whole year's labor the crop may have been rendered unsaleable by the research trials.

We feel strongly that taro farmers should be compensated not only for huli and crop commitments, the use of farm equipment and fuel, but also the extensive amount of time they give to growing the taro in monitoring plots.

Without these tests, we will not be able to meet taro farmers own requirements for evaluating the safety and validity of the compound – and **without proper funding we can not gather that information in a timely fashion (within 1 year)**.

- A minimum of $50,000 would be allocated toward documentation of other promising and successful snail control and prevention practices, using video, workshops, and other mechanisms to facilitate information exchange within the taro farming community.

2. *Will the work benefit taro farmers statewide?* Yes, every taro farmer with apple snail problems statewide will benefit from the results of the research.

   It is important to note, that *based on the recommendation of state agencies*, including the Department of Health, existing laws pertaining to use of plant or animal controls in freshwater bodies, *and using the precautionary principle* (that something is not safe for the field until proven so in the lab), field trials should not be conducted at new sites until evidence is available that any proposed chemical controls (whether organic or not) are environmentally safe. Given proper funding, such evidence could be available in less than one year and field trials on each island where snails are present would be the appropriate next step.

3. *Are there existing controls for the snail?* Yes, but most are inefficient, labor and time intensive or inaccessible due to costs, availability of resources, or agency limitations.

   The primary controls used today include hand picking, ducks and dry-down periods which force the snail underground. Hand picking is exhausting and never ending. Dry-downs increase weed encroachment into fields tremendously and can impact the quality of the corms. Ducks, in combination with the first two practices significantly reduce overall labor and increase snail control. However; ducks are not readily available to most farmers. In places such as Hanalei, taro farmers can not use domestic ducks due to the presence of native koloa (Hawaiian duck). Their only option is hand picking. While that may be appropriate in a quarter acre patch; it becomes a full time job, in addition to farming the taro, for larger growers. This research has the potential to address this difficult situation and assist wetland managers in reducing snail populations outside taro-growing areas.

Mahalo for this opportunity to testify. I strongly support bill HB3425.

Penny Levin, Executive Director
E kūpaku ka 'āina – The Hawai'i Land Restoration Institute

Snail Facts

- A snail matures in 2-3 months and proceeds to lay from 4,000-8,000 eggs per year for up to an estimated 5-6 years. The eggs hatch in under a month and are so tiny they almost can't be seen. It breaths both in water and on land and can hibernate for months in dry mud.

- A taro patch (10-12 months of work) with high infestations can be consumed in a matter of days. They are non-discriminatory in their consumption of vegetation but prefer taro in Hawai'i.

- The snail poses as serious human health risk. It is a vector for rat lung worm and leptospirosis. On Kauai, it is present in at least one and possibly two reservoirs. The presence of snails draws rats and mongoose who feed on them, a further threat of disease and to endangered waterbirds.

- The snails primary mode of dispersal between ahupua'a has been human transport; within an ahupua'a downhill travel and some upstream movement is self-propelled.

- Once the snail gets into fallow taro areas or adjacent wetlands, they are currently almost impossible to remove. These types of sites are a constant source of reinfestation to active taro patches and wetlands.

- The traditional Hawaiian taro varieties, many of which are so rare they could be considered endangered species, are at risk as well. Growing them in infested areas means extra work to control snails and extra risk of losing rare cultivars.

Snail Control Research Facts

An estimated 22 snail control methods have been tested in Hawai'i or overseas, including chemical and organic practices, baiting and trapping, barriers, fallow periods, temperature changes, electroshock treatment, cover crops, tillage, trenching and mounding of fields, hand-picking, biocontrol, ducks, enforcement, outreach education and pest-for-profit programs.

What has been evaluated in the last decade by agencies and farmers?

HARC Papaya extract, neem, mugwort and yucca compounds, and ferric iron. Poor or inconsistent efficacy rates, expensive application costs (neem). Unknown impacts to crop quality.

DOA Copper sulfate. Moderate efficacy; environmental concerns for taro growers. Impacted crop quality.

UH Pest-for-profit program under UH SEAGRANT. Only worked when funding was available and may have caused further spread of the snail. Unrealistic economic, consumer demand and control capability projections.

Taro farmers Ducks, dry-downs, fallow periods, traps, cover crops, tillage, barriers. Ducks are highly effective and significantly reduce labor when combined with other practices but problematic for DLNR and USFWS. Long term fallow (2-3yrs) can eliminate snails but alternate lands to continue farming are often unavailable. Cover crop rotations are highly effective.

To: Representative Marcus Oshiro, Chair
Representative Marilyn Lee, Vice Chair
And Members of the House Finance Committee

From: Wai`oli Farm
Chris Kobayashi and Demetri Rivera
Taro Farmers
Waioli, Hanalei, Kauai, Hawaii

Re: HB 3425 relating to Taro, Apple Snails, and Research
Hearing on 2-21-08 in Conference Room 308 at 11:30 am

Testimony in Support of HB 3425

Aloha Chair Oshiro, Vice Chair Lee and Members of the Committee,

Mahalo for the opportunity to send testimony in support of HB 3425, a farmer based apple snail control research.

The Apple Snail problem has been identified by taro farmers as being a major invasive pest to our industry. Currently, to our knowledge, nothing is being done to address the control of this invasive with environmentally safe applications in the water. We do use screens to catch the bigger snails. We walk our fields, row by row to check for snails and their egg masses and depending on the level of infestation, it could be a quick walk or take many hours each week. But all of this is not enough.

To give you an idea of how invasive, pervasive, persistent and dangerous the Apple Snail is, here are some facts.

- **Each female**, depending on her size or age, can lay 25-500 eggs in a cluster or mass, and approximately 1000-1200 eggs per month or 8,000-12,000 eggs per year with an 80% hatch success rate.
- The Apple Snail can reach maturity in 2 months.
- Snails can live from 2-5 years, maybe longer.
- When the eggs hatch, the Apple Snail is only about 1-2 millimeters in size, easily overlooked and transportable.
- All sizes are easily moved around with heavy rains and flooding.
- They will survive in the murkiest water as well as cool clear water and even in brackish water as well as out of water.
- They will survive with minimal moisture in the soil.
- They are able to close their operculum (its shell at the end) and burrow down in the mud or dirt and survive at least 6 months or more without water or coming up for food or air.
- The snails are omnivorous and eat vegetation and small invertebrates and are known to even cannibalize each other.
- The snails eat the taro corm, the stalk, the leaves, destroy the plants and cause economic loss to taro farmers.
- Farmers spend tremendous amount of time walking their fields to pick snails and egg masses contributing a huge part to cost of farming (a loss)

- Their broken shells are so thin and sharp, that farmers wearing tabis can get sliced from them. Cuts can be very dangerous, making farmers more prone to get Leptospirosis.
- They are known to transmit rat lungworm which is especially dangerous to humans because it ruptures vessels in the brain leading to symptoms of headache, fever, paralysis, neurological disorders and even coma or death.

E Kupaku Ka `Aina, The Hawaii Land Restoration Institute, completed a report- "Statewide Strategic Control Plan for Apple Snail in Hawaii" in which farmers were interviewed throughout the state. Both the institute and DASS confirmed that Apple Snails contribute to 18-25% of farmers' crop losses. This is huge and only drives home how hard it is to control the Apple Snail in aquatic conditions.
Without a doubt, we need to have studies done to find environmentally friendly and sound controls or better yet, eliminate the Apple Snail where possible.

The Apple Snail was brought into Hawaii through the aquarium trade. No one knew, including DOA, at the time that this snail could multiply so rapidly, spread so quickly in many of our waterways and then damage and consume taro and cause losses to the farmers.

About 15 years ago, DOA did try to help the farmers by using copper sulfate. Even though copper is toxic to the Apple Snails, sufficient studies were not done to find out at what levels the copper was actually toxic either to the soil or the taro plants. Copper is a trace mineral or micro nutrient that is needed only in minute quantities and accumulation can be toxic to plants in small amounts.

Since then there were some other research done but none have been touted as the way to control the snails. In the meantime, the snail population has continued to explode and spread. If we continue to do nothing, then those numbers will continue to grow exponentially. There are still some farming areas which still do not have the apple snails. **We can and must do all that we can NOW to protect the areas that are not infested, halt the spread, control the populations, and eliminate where and when possible. If we don't do anything now, years later we'll look back and say, "we should've done something back then in February 2008".**

E Kupaku Ka `Aina has proven itself to do a thorough Economic Study and Control Plan of Apple Snails. They have done literature searches and spent numerous hours talking to taro farmers and researchers throughout the state. Because of their close relationship with taro farmers and their ability to understand the farmers' issues, I believe that this institute will do an excellent job of conducting the experiments with Pacific Biodiesel and monitoring the fields and conducting themselves to EPA standards.

On October 8, 2007, taro farmers met with HDOA, CTAHR, Researchers, Extension Agents, Farm Bureau, OHA, HARC, and legislators to start dialogue on SCR 206, relating to the Security and Purity of Taro. Two methods of dealing with the snails were brought to the group's attention and had the general approval to proceed. The research using the biodiesel byproduct was one. The other was the use of cover crops or rotational crops to eliminate Apple Snails from taro lo`i and videotaping this practice for educational purposes. We have been using the fallow/cover crop method since 1997 and have found it to totally eliminate Apple Snails, under the right conditions, as well as have the added benefit of adding organic matter to the soil and thus building up beneficial microorganism populations. We don't know if there may be allelopathic qualities from certain cover crops which would cause the snails to die off, but we do know that it works.

This practice would need to be done after each planting of taro because of the reinfestation of snails by birds, upstream contamination and by floods as we just experienced on February 3. Planting a rotational cover crop helps to break the disease cycle, helps to enrich our soils, and provides a healthy environment for the birds and the taro and eliminates the Apple Snail. In our opinion, this is the perfect clean sustainable solution.

We have attached a picture of the snails and the kind of damage they can do. After they eat the taro, then the taro rots.

Funding of this bill is very important for the following reasons:

- Apple snails are causing huge economic cost and losses to farmers
- State agencies need to recognize that this is a problem that continues to grow and needs to be worked on immediately, not 2 years or 10 years from now.
- Because of the sensitive nature of water and the biota, it is extremely important to test the efficacy of this product as well as its safety regarding the environment.

Please support this long over due, important legislation for Apple Snail control, HB 3425, so that we farmers can spend more time farming and growing healthy foods for the people of Hawaii.

Mahalo nui.

Chris Kobayashi
P.O.Box 135
Hanalei, Kauai, Hawaii 96714

Demetri Rivera
P.O.Box 114
Kilauea, Kauai, Hawaii 96754
808-826-7836

FINtestimony

From: vivien lee [leereppun@hotmail.com]
Sent: Tuesday, February 19, 2008 10:16 PM
To: FINtestimony

To: House Finance Committee
Chair: Marcus Oshiro
Subject: HB3425
2/21/08 11:30am

We are taro farmers in Waiahole and Waihee Valleys on Oahu. We have had many opportunities to visit taro farms in all the major growing areas and are well aware of the devastating effects of apple snail infestations.I There seem to be a couple of promising lines of research with the potential to mitigate the apple snail problem, and we strongly urge this committee to fund this billl We hope that this bill will be passed along with the bill setting up a task force to discuss issues relating to taro security and protection, so that the direction of research can be influenced by farmer input.

Paul Reppun
Charles Reppun

TO: Representative Marcus Oshiro, Chair
House Finance Committee
RE: HB3425
21 February 2008

FROM: Mr. Issac Kanoa
Keana'e, Maui

IN STRONG SUPPORT

My name is Issac Kanoa and I have been a taro farmer all my life, with my father & mother & brothers & sister. We farm six acres with farmers as our neighbors all around in Keanae. We grow for leaf and corm. We have lost in 23 years over 200 ducks because of dogs.

The apple snails are like a carpet in the lo'i. One cluster of eggs is more than 200 snails.

In 30 days they grow more than a 1/4 inch in diameter. The snails in lo'i that are fallow and overgrown with grass the ducks can not get them.

Using this soil conditioner, if we found it was environmentally safe, would save us so much time and money. It would save me time/money feeding, keeping an eye on them morning to night, kids chasing the ducks and all. Trying to find a solution that would be easy for the farmers and would work is so important.

The soil conditioner would also help the farmers control the snails and be good for the plants.

I strongly support the funding of this bill

Issac a. Kanoa

H.B. NO. 3425
H.D. 1

LATE

To: House of Representatives-Finance Committee

Representative Marcus R. Oshiro
Chair

For the past three years a grassroots group of taro farmers and they're families and friends, includes many students, Hawaiian cultural specialist and experts, and safe food/anti-GMO advocates, across the state have tried to work with state legislators and state agencies to protect and insure the well being of this states most precious and priceless resource, the "KALO".

The apple snail is one the greatest thing threatening many kalo farmers across the state. As it continues to spread it has gone almost totally uncheck for the past 20 years. Very little help have come to the aid of these farmers. In the ten years that I have worked along side many of these farmers, all I have seen is lip service (excuses, egos, and selfishness) from our state agencies instead sincerely and fairly addressing the problem. While millions, $286,347,922, is being raised by the Research Corporation of the University of Hawaii to assist and support our fine UH to advance science and technology, zero, 'AOLE.

I ask this committee to fund this bill this year and continue to support it. I strongly recommend that you consult with Ms Levin as she has worked on this issue for 18 years working side by side with many farmers across the state.

I make no apologies for taking you, other state agencies and the UH to task. The future of this very unique and important plant needs a concerted effort of everyone.

In conclusion, I leave with this, I, like many of my people, was raised on poi and it ties as to family and the past. As infants no older than four to five months old we start the child on poi in an unbroken tradition of nine hundred years or more. With your support, hopefully I will share this tradition with my grandchildren.

I thank you for your time, Mahalo and Aloha E Akua.

Uncle Val Ching

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