NEIL ABERCROMBIE
Governor

SCOTT E. ENRIGHT
Chairperson, Board of Agriculture

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

TESTIMONY OF SCOTT E. ENRIGHT
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE HOUSE COMMITTEE ON FINANCE
WEDNESDAY, FEBRUARY 26, 2014
5:00 P.M.
Conference Room 308

HOUSE BILL NO. 1931 HD1
RELATING TO AGRICULTURE

Chairperson Luke and Members of the Committee,

Thank you for the opportunity to testify on House Bill 1931 HD1. This bill would appropriate funding for research to develop new methods of preventing and treating macadamia felted coccid infestations. The Hawaii Department of Agriculture is in support of this bill and would defer to the University of Hawaii College of Tropical Agriculture and Human Resources as to the level of funding that is needed.

The macadamia nut industry is a vital part of the agricultural economy here in Hawaii. With an estimated farm value of over $35 million, macadamia nuts are one of the top five agricultural commodities for the State of Hawaii.

The macadamia felted coccid is an insipid pest that can cause severe damage to macadamia nut trees and hurt our macadamia nut industry. It is vital to develop new methods to prevent the spread of this pest and limit the damage that it will have on the macadamia nut industry.

Thank you, again, for the opportunity to testify on this measure.

UNIVERSITY OF HAWAIʻI SYSTEM
Legislative Testimony

Written Testimony Presented Before the
House Committee on Finance
Wednesday, February 26, 2014 at 5:00 pm
by
Maria Gallo, Dean
and
J. Kenneth Grace, Interim Associate Dean
College of Tropical Agriculture and Human Resources
University of Hawaiʻi at Mānoa

HB 1931 HD1 – RELATING TO AGRICULTURE

Chair Luke, Vice Chairs Nishimoto and Johanson, and members of the House Committee on Finance, thank you for this opportunity to provide testimony on HB 1931 HD1, which appropriates funds to the department of agriculture and the University of Hawaiʻi to research and develop methods for the prevention and treatment of macadamia felted coccid.

The University of Hawaiʻi supports this bill provided that its passage does not replace or adversely impact priorities as indicated in the University's Board of Regents Approved Executive Biennium Budget.

Macadamia felted coccid is a severe pest of macadamia, a crop with a $38.2 million farm value in Hawaiʻi in 2012. It was found in South Kona in February 2005, and two attempts to eradicate the insect appeared to be successful at the time. However, subsequent infestations were again found on the Big Island, indicating that the insect had already spread from the initial point of discovery or that additional introductions occurred. At this time, the coccid is distributed throughout the Big Island, although it is not yet found on other islands.

Development of new control methods and appropriate management recommendations are essential for Hawaiʻi's producers to stop this invasive pest. Horticultural and harvest methods used in Hawaiʻi and the large size of trees in our well-established orchard contribute to great difficulties in achieving effective control.

The College of Tropical Agriculture, University of Hawaiʻi at Mānoa, and the Hawaiʻi Department of Agriculture are collaborating in this endeavor, as is indicated in HB 1931 HD1, and as permitted by available funding and personnel. Timing is critical, however, and we believe that it is both appropriate and necessary for the Legislature to appropriate funds to accelerate and strengthen this pest management effort, and protect this critical segment of Hawaiʻi agriculture from the severe losses that will result from infestation and continued spread of this invasive insect pest.

The Twenty-Seventh Legislature
Regular Session of 2014

HOUSE OF REPRESENTATIVES
Committee on Finance
Rep. Sylvia Luke, Chair
Rep. Scott Y. Nishimoto, Vice Chair
Rep. Aaron Ling Johanson, Vice Chair
State Capitol, Conference Room 308
Wednesday, February 26, 2014; 5:00 p.m.

STATEMENT OF THE ILWU LOCAL 142 ON H.B. 1931, HD1
RELATING TO AGRICULTURE

The ILWU Local 142 supports H.B. 1931, HD1, which appropriates funds to the Department of Agriculture and the University of Hawaii to research and develop methods for the prevention and treatment of macadamia felted coccid.

The ILWU represents hundreds of workers in the macadamia nut industry. Our members cultivate macadamia nuts in Pahala and Keaau and work at the factory that processes the macadamia nuts for sale to residents and visitors alike. Macadamia is one of the top five crops grown in Hawaii and offers jobs, supports tourism, and promotes agriculture, which contributes to the diversification of economic activity in Hawaii.

The macadamia felted coccid causes severe damage to macadamia nut trees and, if not controlled, could devastate the industry. The insect was first found in macadamia grown in Hawaii in 2005. Earlier measures to control infestation and its effects seem to be somewhat ineffective. More research is needed.

H.B. 1931, HD1 proposes appropriations to the Department of Agriculture and the University of Hawaii to research and develop methods for the prevention and treatment of macadamia coccid infestation. We believe the funds will represent a sound investment in maintaining the viability of a valuable industry for Hawaii's economy.

The ILWU urges passage of H.B. 1931, HD1. Thank you for the opportunity to testify on this important matter.

P.O. Box 253, Kunia, Hawai'i 96759
Phone: (808) 848-2074; Fax: (808) 848-1921
e-mail info@hfbf.org; www.hfbf.org

February 26, 2014

HEARING BEFORE THE
HOUSE COMMITTEE ON FINANCE

TESTIMONY ON HB 1931, HD1
RELATING TO AGRICULTURE

Room 308
5:00 PM

Aloha Chair Luke, Vice Chair Nishimoto, Vice Chair Johanson, and Members of the Committee:

I am Christopher Manfredi, President of the Hawaii Farm Bureau Federation (HFB). Organized since 1948, the HFB is comprised of 1,832 farm family members statewide, and serves as Hawaii's voice of agriculture to protect, advocate and advance the social, economic and educational interest of our diverse agricultural community.

HFB strongly supports HB 1931, HD1 which appropriates funds to the Hawaii Department of Agriculture and the University of Hawaii to research and develop methods for the prevention and treatment of macadamia felted coccid. It also provides funds for a full time equivalent entomologist position at CTAHR.

Hawai'i is the 3rd largest producer of macadamia nuts in the world (570 farms, operating on 17,000 acres), after Australia and South Africa. Production in 2011-2012 totaled 58 million pounds; **the net farm value was $38 million**.

The macadamia felted coccid (MFC) threatens the entire macadamia nut industry in Hawaii by causing severe tree dieback and then death. Even mature trees can be killed by this small insect. If not controlled, we believe the MFC will spread and could devastate Hawaii's macadamia nut industry. We have seen what the coffee berry borer has done to the local coffee industry and we know that we can't afford to wait. We need to fund research to find economical solutions to this problem. This bill would supply the needed funding to help develop new ways to prevent and treat MFC infestations.

Hundreds of jobs are tied to macadamia farming in Hawai'i; it is a vital source of employment in Ka'u, which has among the highest unemployment rate in the state. Over 50% of Hawai'i's macadamia tree acres are located in the Ka'u district, the area hardest hit by the MFC.

Please support HB 1931 HD1.

Thank you.

FELTED COCCID

ALSO REFERRED TO AS MACADAMIA FELTED COCCID (MFC)

NEW PEST AFFECTING MACADAMIA ORCHARDS

WHAT IS THE FELTED COCCID (MFC)?

The Felted Coccid, also known as the Macadamia Felted Coccid (MFC) is a new pest causing devastation to orchards.

NEW PEST ADVISORY

The Department of Agriculture for the State of Hawaii issued a New Pest Advisory in April 2005 advising that the insect was found infesting macadamia trees in South Kona on the island of Hawaii in late February 2005.

State of Hawaii
DEPARTMENT OF AGRICULTURE

New Pest Advisory
Updated April 2005 No. 05-01

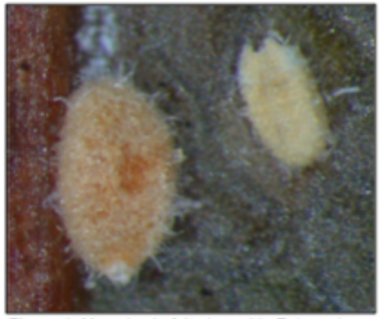


Figure 1. Macadamia felted coccid. Enlarged photo of adult female (left) and male pupa (right). Actual length of female is less than 1 mm.

Macadamia Felted Coccid

Eriococcus ironsidei Williams

[Hemiptera (Homoptera): Eriococcidae]

Patrick Conant, Dick M. Tsuda*,
Ronald A. Heu and Kenneth K. Teramoto

Introduction. An infestation of an insect believed to be the macadamia felted coccid (MFC), *Eriococcus ironsidei* Williams, was found infesting macadamia trees in South Kona on the island of Hawaii by staff of a commercial macadamia farm in late February 2005. Specimens were tentatively identified as the macadamia felted coccid by the University of Hawaii's College of Tropical Agriculture and Human Resources (CTAHR). On April 4, 2005, the identification was confirmed by D.R. Miller of the USDA Systematic Entomology Laboratory in Beltsville, Maryland.

Life History. The macadamia felted coccid is an insect belonging to the family Eriococcidae, whose members are similar to mealybugs, but having little or no wax on their bodies. It gets its name from the felt-like sacs which enclose adult females and pupal cases of males (Figure 1). Adult females do not have wings and are immobile. Adult males have wings and are gnat-like, but do not feed. Their only purpose is to locate and mate with immobile females. Mated females deposit eggs within their felted sac. After hatching, tiny crawlers move about and are able to disperse by wind or by hitchhiking on birds, people, vehicles, or farm equipment to other areas. After settling down, individuals feed by inserting their needle-like mouthparts into plant tissue and removing sap. Like other related Hemiptera (Homoptera - aphids, soft scales and whiteflies), MFC also excretes droplets of a sugary substance called honeydew which drop on lower branches.

Distribution and Hosts. The macadamia felted coccid is native to Australia. Its host plants are restricted to smooth and rough-shelled macadamia (Jones 2002). On the Big Island, infestations of the scale have been found at Honomalino in South Kona. No infestations have been reported on the other neighboring islands.

Figure 2. Macadamia felted coccid individuals on macadamia bark.

Figure 3. Macadamia felted coccid infesting macadamia nuts.

* CTAHR, University of Hawaii

http://hdoa.hawaii.gov/pi/files/2013/01/npa05-01-MFC.pdf

HISTORY

- As noted in the New Pest Advisory issued by the State of Hawaii Department of Agriculture (picture above), the Macadamia Felted Coccid (MFC) is native to Australia.
- First found in south-eastern Queensland in the 1970's and identified as a serious pest of Macadamia.
- The rough shelled macadamia is the host plant for the felted coccid.
- In 2005, infestations of felted coccid on the Big Island were found at Honomalino in South Kona, but no there were no reports of felted coccid infestations in other neighboring islands.

CHARACTERISTICS

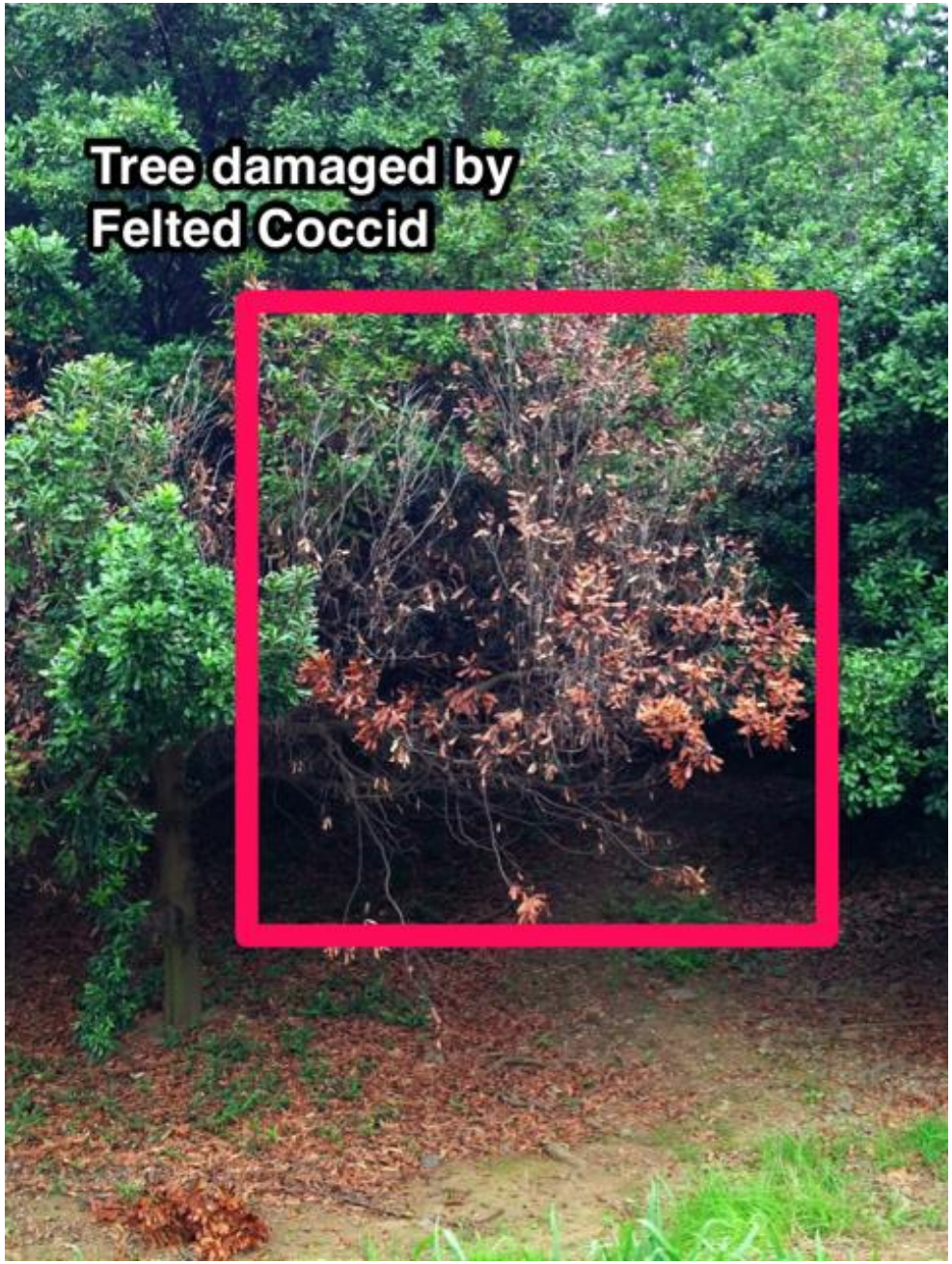
- Possess felt-like sacs (also known as scales) in which mated females deposit eggs.
- Adult females are sedentary, while adult males have wings and are gnat-like.
- Hatched crawlers are highly mobile, walking around on plants, or dispersed by wind to other plants.
- Once settled on a plant crawlers develop the typical scale over body and develop to adults producing more crawlers.
- Feed on plants by sucking plant sap from the plant.

IDENTIFICATION OF SCALES

In this picture the white spots on the leaves are the sacs of eggs left by the mated coccid females.

These will hatch into crawlers which will feed on the plant and will disburse and invest other trees.

INFESTATION & DAMAGE



IDENTIFICATION OF CRAWLERS

In this video a grower identifies Macadamia Felted Coccid (MFC) crawlers on tree leaves.

Crawlers encase themselves in their felt-like sacs (scales) and feed on the plant while maturing into adults, repeating the reproduction process and increasing infestation.

DAMAGE

At high densities, they can remove large amounts of fluid from the plant, and cause malformation of plant parts and even leaf die-back or flower drop.

VIDEO OF ORCHARD DAMAGED BY MFC

DAMAGE

Untreated the damage caused by the Felted Coccid can not only seriously damage crops, it can wipeout an entire orchard.

CONTROL

- **Felted coccid is effectively suppressed by combination of horticultural oil sprays and natural enemies.**
- **According to the HDOA, natural enemies of MFC identified at Honomalino in 2005 are 4 species of Coccinellidae (ladybird beetles) *Telsimia nitida* Chapin and *Rhyzobius forestieri* (Mulsant) (*R. ventralis* in older Australian literature) are the most common.**

RESOURCES

- **Hawaii Macadamia Nut Association -** http://hawaiimacnut.org/Uploads/hawaii_macadamia_nut_assoc_46th_conf.pdf
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RESOURCES (CONT'D)

finance1

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 25, 2014 7:44 AM
To: FINTestimony
Cc: troy@okfarmshawaii.com
Subject: Submitted testimony for HB1931 on Feb 26, 2014 17:00PM

HB1931
Submitted on: 2/25/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
TRoy Keolanui	OK FArms llc	Support	No

Comments: The future of the Hawaii Macadamia industry is at stake. The chance to move on this pest is now while it is mostly in one area of the island.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

finance1

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 25, 2014 4:59 PM
To: FINTestimony
Cc: john@olsontrust.com
Subject: Submitted testimony for HB1931 on Feb 26, 2014 17:00PM

HB1931
Submitted on: 2/25/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
John C. Cross	Edmund C. Olson Trust II	Support	Yes

Comments: Kau Farms Mgmt and the Edmund C. Olson Trust strongly support this bill. I will present oral and written testimony at the committee hearing tomorrow.

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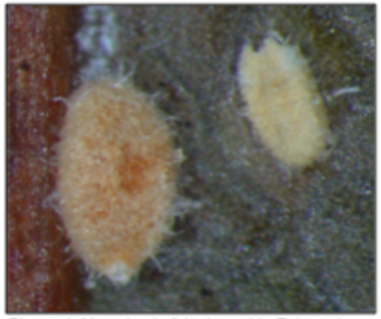

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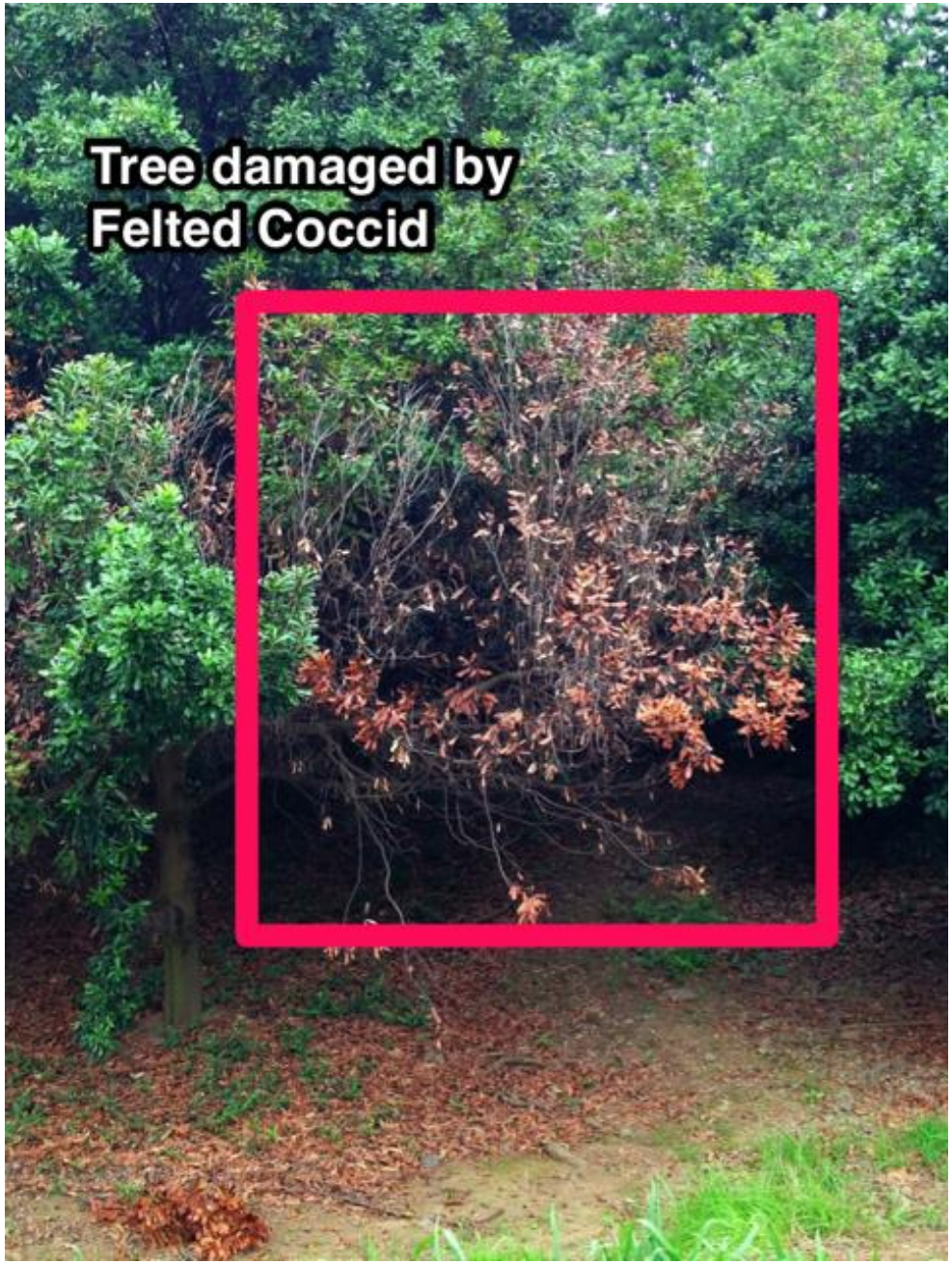

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RESOURCES (CONT'D)

HOUSE COMMITTEE ON FINANCE
February 26, 2014
5:00 PM
Room 308
Relating to Agriculture
HB 1931

Aloha Chairperson Luke, Vice Chairs Johanson and Nishimoto, and Members of the Committee,

I am Randy Cabral and I have been farming in Hawaii for over 40 years. I am the Senior Vice President of Operations for Royal Hawaiian Orchards LP. We farm 6,000 acres of macadamia on Hawai'i Island. Of these, 3,000 are in the District of Ka'u. We employ 250 full time and seasonal workers. **We strongly support this bill**.

I am testifying today to request funding to prevent a dire situation from becoming even worse. Hawai'i is the 3rd largest producer of macadamia nuts in the world (570 farms, operating on 17,000 acres), after Australia and South Africa. Production in 2011-2012 totaled 58 million pounds; the net farm value was $38 million.

The problem ---the Macadamia Felted Coccid

Already, three of our largest growers, along with many smaller growers, have found a devastating pest, the macadamia felted coccid (MFC) in their orchards. These farms produce over 80% of the state's macadamia kernels.

The strangely named pest is a small Australian insect that covers and feeds on leaves, nuts, branches, and trunks of the macadamia tree. It even thrives in drought conditions, such as those in Ka'u, and can spread easily by wind.

The MFC threatens the entire macadamia nut industry in Hawaii by causing severe tree dieback and then death. Even mature trees can be killed by this small insect. If not controlled, we believe the MFC will spread to other regions on Hawai'i Island and other islands, and devastate the macadamia nut industry. We have

seen what the coffee berry borer has done to the local coffee industry and we know that we can't afford to wait. We need to fund research to find economical solutions to this problem. This bill would supply the needed funding to help develop new ways to prevent and treat MFC infestations.

What do we know and what's been done?

Currently, very little is known about the life cycle or vulnerabilities of the pest. In its native Australia, macadamia nut growers use considerable pesticides to control the MFC, but in Hawaii, because we typically don't use insecticides, we don't have the equipment and resources to apply these types of pesticides to large, mature trees. Some pesticides seem to work but require adequate rainfall or adequate irrigation, neither of which is available.

The MFC has no significant natural predators in Hawaii as compared to Australia.

Why fund research to control the pest?

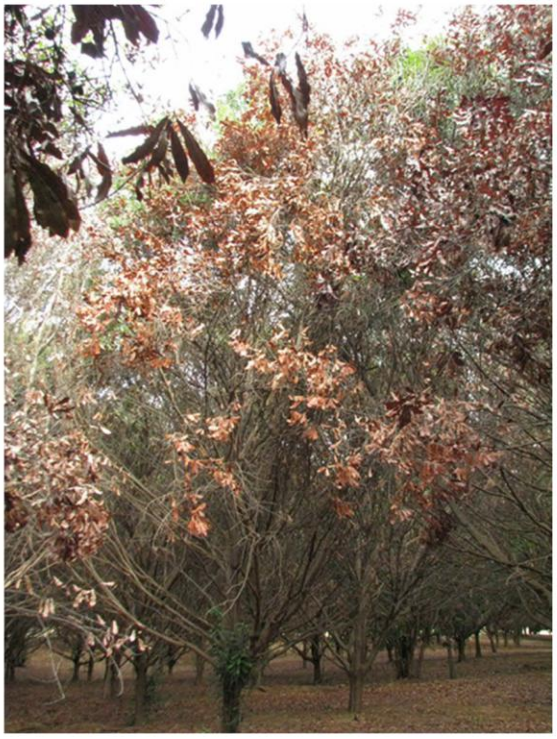
Hundreds of jobs are tied to macadamia farming in Hawai'i; it is a vital source of employment in Ka'u, which has among the highest unemployment rate in the state. Over 50% of Hawai'i's macadamia tree acres are located in the Ka'u district, the area hardest hit by the MFC.

We know there are many other demands for funding and there is a limited budget. Other pests such as the coffee berry borer have gotten more media attention and funding. But we want you to know that without intervention, we have little chance of successfully continuing macadamia farming.

The HDOA and UH CTAHR can help us by studying the MFC and figuring out sustainable and economical solutions. Growers themselves have contributed $95,000 to UH CTAHR to conduct MFC research, but more funding is needed.

Thank you for allowing me this opportunity to explain our predicament to you. I would be happy to answer any questions you might have. Please contact me if you're interested in seeing in person the devastation this pest has already caused in Ka'u (see photo examples on following pages).

MFC Damage in Ka’u Orchard



Tree infested with MFC

MFC on trunk of infested tree

Extensive MFC damage within an orchard block

688 Kinoole Street, Suite 121, Hilo, Hawaii 96720

February 25, 2014

Representative Sylvia Luke
Chair, House Committee on Finance
Hawaii State Capitol, Room 306
415 S. Beretania Street
Honolulu, HI 96813

Re: In Support of House Bill 1931 HD1

Dear Chair Luke:

I am writing to ask for your support in passing legislation to obtain funding to combat the macadamia felted coccid and am in strong support of HB 1931 HD1. The funding to thoroughly study and develop methods of combatting the macadamia felted coccid is sorely needed. We currently own and lease over 5,000 tree acres of macadamia nut orchards on Hawaii Island and are one of the largest producers of macadamias in the world. We currently employ over 250 employees.

We have experienced the effects of this invasive pest and have lost and continue to lose macadamia nut trees, which were killed as a result of the coccid. Approximately 13% of macadamia nut trees growing in Pahala are severely infected. We see this pest having the same effect on our industry as the coffee bearer beetle has had on our coffee industry and if something is not done, our industry and all the people it employs will surely suffer. In 2013, we estimate that this pest reduced our nut production by 500,000 pounds and it is only getting worse.

We have made attempts to combat this pest with pesticides and other treatments with no lasting success, and have spent over $250,000 on these ineffective measures. We have sought help from USDA, CTAHR and others, but funding issues have prevented them from assisting us. Accordingly, our company and the Ed Olson Trust have contracted with CTAHR to conduct research, which we are funding. Unfortunately we will not be able to sustain this.

Now is the time to act, as we need to control this pest before it gets even more costly to treat and pervasive. Look at what happened with the coqui frog and fire ant. On our island, the coqui has gotten to the point where it is untreatable. We would hate to see this happen with the coccid.

It is critical that this Bill gets passed, which will go a long way in developing methods of eliminating and or controlling this pest. This bill will help ensure our macadamia nut industry remains viable.

Thank you very much for all you do. Should you have any questions, I can be reached at (808) 747-8471 or email at jmiyata@rhomac.com.

Very truly yours,

Jon Y. Miyata
Vice President & Chief
Accounting Officer

HOUSE COMMITTEE ON HIGHER EDUCTION
FEB 11, 2014
Relating to Agriculture
HB 1931

Aloha Chairperson Isaac Choy, Vice Chair Linda Ichiyama, and Members of the Committee,

My name is Randy Mochizuki and I am the Crop Control Superintendant at the Royal Hawaiian Orchard in Pahala, HI. **We strongly support this bill to fund a way to protect macadamia nut farmers from a devastating invasive pest** .

The coccids were first found in our orchard in 2009 damaging a few trees. It has since spread throughout our 3,300 acres and has destroyed or damaged a substantial number of trees.

Due to the size of our trees; oil sprays which can control the pest in other orchards, are ineffective because of inadequate coverage.

Other orchards in Kau and along the Hamakua coast are also being damaged by the coccids and have been unable to find effective means of control.

If we don't find a cost effective control; it may lead to the demise of our Pahala orchard and 125 jobs. But, it may also severely impact our company as a whole and another 150 jobs.

It also has the potential of destroying other macadamia orchards in the state affecting 1,500 acres and 570 farms and a 35-38 million dollar industry.

Our company's Pahala division has spent over $100,000 on this pest since 2009. The industry has recently contributed $85,000 for research. But much more is need to not only find an immediate control, but long term control measure.

Please help us by supporting this bill.

Thank you for your consideration of my comments.

finance1

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 25, 2014 3:08 PM
To: FINTestimony
Cc: gsako@rhomac.com
Subject: Submitted testimony for HB1931 on Feb 26, 2014 17:00PM

HB1931
Submitted on: 2/25/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Glenn Sako	Royal Hawaiian Services, LP	Support	No

Comments: I have seen for myself the extensive damage that Macadamia Felted Coccid does to Macadamia Nut trees. There are over 120 employees at Royal Hawaiian Services LP in Pahala, whose livelihood depends on a strong, healthy orchard. If Macadamia Felted Coccid is not controlled, the overall health of the orchard will quickly decline to the point that 3,300 acres of Macadamia trees will not be productive. Suffering along with the employees will be the supporting service companies that sell us chemicals, herbicides, heavy equipment parts, fuel, etc.

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 25, 2014 6:59 AM
To: FINTestimony
Cc: michaelp@islandprincesshawaii.com
Subject: Submitted testimony for HB1931 on Feb 26, 2014 17:00PM

HB1931
Submitted on: 2/25/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Michael Purdy	Individual	Support	No

Comments: We are one of the largest macadamia nut growers, processrs and manufacturers of value added macadamia nut products in the U.S. We rely on our supply of Macadamia Nuts to employ more than 100 employees on the island of Oahu and Hawaii. If we lose our crop, we have no other supplier of Hawaiian Macadamia Nuts to continue our business.

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February 26, 5 PM, Conference Room 308

RE: HB 1931 Relating to Agriculture

In Support

Chair and Committee Members,

I support HB 1931, which would provide appropriations for the University of Hawaii - College of Tropical Agriculture and Human Resources for the research of Macadamia Felted Coccid (MFC). In recent years, MFC has become a serious pest of Macadamia on the island of Hawaii and has caused the decline of otherwise healthy, productive trees throughout the Ka'u region. If left unchecked, this pest could cause the decline of the entire Macadamia industry, which directly and indirectly provides jobs for innumerable Hawaii residents.

With the drought that has been affecting parts of the state for some time, crops such as Macadamia have been under water stress. This has provided conditions that are conducive to a pest outbreak. In this case, the pest was a relative newcomer to Hawaii and therefore lacked the necessary research and treatment options that would have been necessary for suppression.

Research on MFC is still in its nascency and will require many years and a lot of funding to complete. Many growers within the industry have already contributed as much funding as they could afford to initiate the research, but it has not been nearly enough.

I believe that HB 1931 will provide more of the necessary funding and assistance towards the goal of finding a viable solution to this devastating pest. Without action, the Hawaiian Macadamia industry faces a grim fate. It is up to you to decide whether ensuring the survival of one of Hawaii's main agricultural industries is a cause worth supporting.

Thank you for the opportunity to submit testimony.

Mahalo,

Bonnie Schoneberg

Research Committee Chair

Hawaii Macadamia Nut Association

finance1

From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 25, 2014 8:45 AM
To: FINTestimony
Cc: vctoribio@rhomac.com
Subject: *Submitted testimony for HB1931 on Feb 26, 2014 17:00PM*

HB1931
Submitted on: 2/25/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Volanda Collins-Toribio	Individual	Support	No

Comments:

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 25, 2014 8:03 AM
To: FINTestimony
Cc: Jerry-Allen@hawaii.rr.com
Subject: Submitted testimony for HB1931 on Feb 26, 2014 17:00PM

HB1931
Submitted on: 2/25/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Jerry Allen	Individual	Support	No

Comments: As a Macadamia Grower, I strongly support action to protect this important agricultural crop from this pest which is gaining a foothold on the Big Island. It threatens the entire industry.

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From: mailinglist@capitol.hawaii.gov
Sent: Tuesday, February 25, 2014 7:29 AM
To: FINTestimony
Cc: jamestrump@gmail.com
Subject: Submitted testimony for HB1931 on Feb 26, 2014 17:00PM

HB1931
Submitted on: 2/25/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
James Trump	Individual	Support	No

Comments: Island Harvest manages 720 acres of macadamia nut trees in North Kohala,employing an average of 16 full time orchard workers. The feltid coccid has not reached the Kohala district but if/when it does there will be a major impact on our operations and may put us out of business. New methods of prevention and treatment are key because most Kohala orchards cannot be sprayed due to the proximity to residences. Thank you in advance for your favorable consideration of this important legislation. James Trump

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HOUSE COMMITTEE ON FINANCE
February 26, 2014
5:00 pm
Room 308
Relating to Agriculture
HB 1931 HD1

Aloha Chairperson Luke, Vice Chair Nishimoto, Vice Chair Johanson and Members of the Committee,

My name is Alan Yamaguchi and I am the former (retired) Director of Research for Royal Hawaiian Orchards, L.P. **I strongly support this bill to fund a way to protect macadamia nut farmers from a devastating invasive pest** .

Since 2005, when the Macadamia Feltid Coccid was first discovered, this insect pest has established itself on more than 7,000 acres of producing macadamia trees where greater than 50% of Hawaii's in-shell macadamia nuts are grown. The insect is distributed in, but not limited to, the South Kona, Ka'u, Hilo and Hamakua districts on the Big Island and is likely expected to spread over the entire island in due time and affect the entire 15,000 acres of macadamia trees. Most, if not all, of the growers that produce macadamia nuts for the State of Hawaii are on the Big Island.

Hawaii's ideal growth environment for macadamia is, unfortunately, highly suitable for the development and distribution of MFC to all locations where macadamia is grown. Our mild temperatures and tropical climate provides an environment where multiple generations of the pest are produced annually. The insect is found on the trunks, branches, leaves, immature racemes and developing/maturing nuts. It is easily distributed by wind, transport of infested plant parts, and possibly winged animals. The primary damage to the macadamia is through the piercing/sucking mouthpart used to extract moisture and nutrients to sustain its life cycle. Heavily infested trees die while others remain weak with low nut production.

Research is needed to identify long term economical solutions to manage MFC to sustain the Hawaiian macadamia industry. This requires studies to determine to

determine short term measures that can reduce pest distribution in orchards to support current nut production levels. Additionally, research is necessary to seek longer term solutions, such as biological control or use of natural enemies, to manage MFC. The use of natural enemies would reduce the need to use pesticides. Natural enemies identified by the University of Hawaii College of Tropical Agriculture and released by the Hawaii Department of Agriculture significantly reduced the damage caused by the Southern Green Stink Bug on macadamia nuts and basically eliminated the use of pesticide to control the insect. We need to repeat this feat for MFC

Approximately 44-50 million pounds of macadamia nuts are handled or processed by about six processors, all on the Big Island annually. The two largest, MacFarms of Hawaii and Mauna Loa Macadamia Nut Corporation, are located on the east and southern parts of the Big Island and, combined, employ several hundred workers during harvest season and handle approximately 50% of the nut production on Hawaii island. Additionally, Royal Hawaiian Orchards has approximately 200 workers at their orchards located at Pahala, Keaau and Hilo. Four other processors handle the balance of the nuts produced generally in the Kona, Kohala and Hamakua regions of the Big Island.

It is anticipated that MFC will continue to spread, damage macadamia orchards and negatively impact nut production and employment in the industry if this pest is not managed. Past efforts to identify suitable control measures have had mixed results and require extensive research. Any delay will only hurt the macadamia growers, processors and marketers of Hawaii's premium macadamia nut products.

Please help the Hawaiian macadamia growers and industry by supporting this bill.

Thank you for your consideration of my comments.

Mahalo,

Alan Yamaguchi

HB1931, Relating to Agriculture:

Chair Luke, Vice Chairs Nishimoto and Johanson, and members of the House Committee on Finance, I thank you for this opportunity to provide my personal testimony in support of HB 1931, Relating to Agriculture. I strongly support this bill provided that its passage does not replace or adversely impact priorities as indicated in the University's Board of Regents Approved Executive Biennium Budget.

Macadamia felted coccid is the most serious pest of macadamia nuts cultivated in Hawaii. This insect is capable of killing trees, and can have a dramatic impact on yields if left unchecked. Losses in nut production in heavily infested trees upon which management efforts are made are severe; yield potential of trees is of course completely lost in the case of trees that succumb to the insects' impact. When this pest was initially detected in 2005, immediate efforts were made to suppress the pest in the South Kona, where it was restricted to at that time. The soil and moisture environment at the South Kona growing areas is significantly different from other areas where macadamia buts are grown, producing an environment in which effective pest control measures could relatively easily be implemented. Effective suppression protocols were developed end implemented with very good results. In some areas where this pest spread to subsequently, we were successful in eradicating early infestations in very young trees.

While biological control options and insecticide treatments are effective under certain circumstances, there are many situations where the impacts of both are reduced. Research is required to address improvement of biological and chemical control of this pest under all growing conditions; the exact origin (as potential sources of new biological control agents); interactions with macadamia felted coccids with pathogens of macadamia nut trees; and natural resistance to macadamia felted coccid in macadamia varieties. This pest is spreading extensively in macadamia growing areas of Hawaii, and immediate action is essential.

My name is Mark G Wright. I am a professor of entomology and an entomology extension specialist at UH Manoa. I have conducted extensive research on the management of macadamia felted coccid. However, today, I am providing personal testimony.
February 25, 2014.

finance1

LATE

From: mailinglist@capitol.hawaii.gov
Sent: Wednesday, February 26, 2014 11:10 AM
To: FINTestimony
Cc: ashman.janet@gmail.com
Subject: Submitted testimony for HB1931 on Feb 26, 2014 17:00PM

HB1931
Submitted on: 2/26/2014
Testimony for FIN on Feb 26, 2014 17:00PM in Conference Room 308

Submitted By	Organization	Testifier Position	Present at Hearing
Janet Ashman	Individual	Support	No

Comments: Strong support. Please appropriate funding for control of this insect that could destroy the macadamia nut industry in Hawaii. The industry has contributed but needs this additional State funding. The longer we wait to tackle this pest, the harder it will be to save the trees. Thank you.

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LATE

Edmund C. Olson Trust II
Ka'u Farms Management, LLC
O.K. Farms, LLC
P.O. Box 280
Pahala, Hawaii 96777

February 26, 2014, Finance Committee, Room 308, 5:00p.m.

To: House Finance Committee
Chair, Sylvia Luke

From: John C. Cross, Land Manager, Edmund C. Olson Trust II

RE: HB 1931, Regarding the Macadamia Felted Coccid.

Dear Chairperson Sylvia Luke, Vice Chairs Johansen, Nishimoto, and Members of the Finance Committee, My name is John C. Cross and I represent the combined interests of the Edmund C. Olson Trust II and its Macadamia Growing entities, Ka'u Farms Management and O.K. Farms LLC. We farm over 1,000 acres of macadamia nuts in Ka'u and Hilo districts of the Big Island. We have seen and unfortunately have experienced the especially devastating effects of this pest in both regions but especially so in the Ka'u region. This pest is one of most virulent, aggressive, and damaging alien pests I have seen in the 20 years since leaving the sugarcane plantations.

WE STRONGLY SUPPORT THIS BILL. The support this bill would provide to our industry is critical. Left to our abilities or maybe I should say our inability to adequately control this pest, our industry is at risk. There are hundreds of jobs at stake within our own company and thousands of jobs at stake Statewide.

Hawaii has been known to produce the highest quality macadamia kernels in the world. Furthermore it is a known tourist attraction associated closely with the State much like Kona Coffee is. What a loss it would be for our tourist industry as well as agriculture to let this pest devastate our orchards.

There is so much that we do not know about this pest and the research dollars this bill will authorize will be a big boost to finding the weaknesses this pest has, the natural predators that may exist, (to our knowledge no natural predators exist in Hawaii), to find what chemicals or growth regulators may work, what cultural practices we may need to employ to lessen the population, etc. We need research and on the ground effective help as soon as possible.

We are very willing to contribute funding of our own. We recently teamed up with Royal Hawaiian Orchards, (our neighbors in Ka'u), to fund some $95,000 to UH CTAHR to conduct MFC research, but more is needed and this bill we make sure that happens.

Thank you for listening to my testimony. I am available to answer any questions you have and share with you our ongoing attempts at control.