

PROGRESS REPORT

to

Hawai`i Invasive Species Council

from

UNIVERSITY OF HAWAII

Office of Research Services
2440 Campus Road, Box 368
Honolulu, HI 96822

**Pacific Cooperative Studies Unit
University of Hawai`i at Mānoa**

Hawai`i Ant Lab Core Funding FY16

Final report, Feb 1, 2017

SUMMARY

The Hawai`i Ant Lab is a project of the Pacific Cooperative Studies Unit (PCSU), University of Hawai`i. This report outlines achievements for the 2016 calendar year and include activities conducted under account 4502375 (Supplemental funds \$14,436) and 4502119 (HAL core funds \$229,029).

General measures of effectiveness (metrics)

The table below summarizes the general metrics for 2016.

	1 Jan to 31 March 2016	1 April to 30 June 2016	1 July to 30 Sept 2016	1 Oct to 31 Dec 2016	Total
public calls and emails	127	119	311	277	834
public walk-ins	83	59	167	119	428
public ant samples	117	133	240	191	681
website visits	1707	2209	2278	2914	9108
interaction at presentations	289	440	315	295	1339
Ant management clinic participants	45	55	57	41	198
	2378	3045	3388	3857	12668

Specific deliverables (prevention, response and extension)

Process up to 700 enquiries from members of the public (telephone, email and walk-in combined)

A total of 1,262 enquiries were received during the reporting period – 834 telephone calls or emails and 428 in-office visits or letters from members of the public.

Identify up to 300 ant samples submitted by the public

Members of the public submitted 681 ant samples for identification. No records of the total number of survey vials deployed by HAL staff were recorded.

Maintain website, content and discussion group on an “as-needed” basis

The littlefireants.com website was updated and maintained throughout 2016. A total of 9,108 visits were made to one or more pages of the website. Correcting for a “bounce rate¹” of 11.69% resulted in an actual visitation of 8,042 users that viewed two or more pages of the website.

Develop additional fact sheets, update existing fact sheets

A new gel-bait fact sheet was developed during the reporting period. This combined several earlier fact sheets based on the HAL gel matrix and one of several actives.

Continue to collaborate with ISCs and related stakeholder agencies

During 2016, HAL staff continued to work closely with stakeholder agencies including Hawai'i Department of Agriculture, County of Hawai'i, Maui, Kauai, Big Island and Oahu ISCs

Engage up to 1500 people through outreach and extension activities

A total of 1,339 persons attended or interacted with HAL outreach staff during this reporting period.

Conduct 11 ant management training sessions

Eleven ant management training days were delivered to 198 participants.

Conduct up to 20 condensed ant training classes

A total of 13 classes were delivered, primarily to support the County of Hawai'i resident voucher program.

Conduct 4 monitoring surveys for infestations in Mililani and Waimanalo (Oahu)

A total of six full surveys have been conducted (three at Waimanalo and three at Mililani). Several partial surveys have also been conducted. The program at Mililani Mauka appears to have been effective. The last treatment was conducted in May 2015 and no LFA have been detected in five surveys subsequent to that time. The current standard for eradication is three

¹ “Bounce rate” is the percentage of site visits where the user only views a single page without any further interaction.

years negative post-treatment monitoring which indicates eradication may be declared as early as May 2018.

The Waimanalo site is more complex and two small hotspots have been detected since treatments ceased. These hotspots (both tall trees) continue to receive treatment while the remainder of the site continues to receive post-treatment monitoring.

Apply 6 treatments to infestations at Nahiku and Huelo (Maui)

Nine treatments were applied to both Huelo and Nahiku during 2016 (see table below). One property in Huelo was not treated in accordance with this schedule due to a lack of access. Additionally, a new infestation on Maui (Waihee) was treated seven times.

Month	Huelo	Nahiku	Waihee
January			
February			
April			
May			
June			
August			
September			
October			
December			

Conduct 3 monitoring/treatment surveys at Kalihiwai (Kauai)

During the reporting period, three monitoring surveys (January, May, September) and three spot treatments were conducted at the Kalihiwai site. One small hotspot remains and the remainder of the site is ant-free

**Conduct 4 monitoring surveys at Kona airport and Kawaihae sea port
Conduct 8 monitoring surveys at Hilo sea port and Hilo airport**

Monitoring surveys at points of entry were conducted throughout 2016. The table below summarizes both surveys and treatments at these facilities.

location	Cumulative surveys	Cumulative treatments
Hilo sea port	4	6
Hilo air cargo	3	3
Hilo air terminal	4	5
Hilo greenwaste	3	0
Kona airport	4	2
Waikoloa greenwaste	4	0

Kawaihae sea port	1	0
total	23	17

Specific deliverables (applied research)

Identify alternative quarantine procedures for infested nursery plants

Several products were tested against LFA in potted plants including: Sevin®, Decathlon® and Orange Guard®. Results are yet to be prepared as a report and an application for a special local need permit is pending.

Little Fire Ant Foraging dynamics and nutrient flows

The key methodology (ELIZA) has been tested in collaboration with researchers at USDA in Arizona. Further use of this method to answer foraging dynamics and nutrient flows have not been completed due to other program demands deemed a higher priority (new eradication projects on Maui). These deliverables will be addressed in 2017.

Parity between field and in-vitro results

Comparison of responses between laboratory colonies and non captive colonies have been completed. A scientific paper for publication in a major journal has been prepared and is awaiting a final revision before submission.

Regional involvement

HAL staff continue to be involved in regional invasive species bodies (Cas Vanderwoude as subject matter specialist in the Pacific Invasives Partnership and Heather Forester in the Pacific Invasives Learning Network). Additionally, a regional plan for managing invasive ants is in an advanced draft stage..

