



INVASIVE SPECIES PUBLIC AWARENESS STUDY

February 2007

Prepared for the Research Corporation of the University of Hawai'i
Coordinating Group on Alien Pest Species
By QMark Research & Polling

BACKGROUND AND METHODOLOGY

The Research Corporation of the University of Hawaii (Coordinating Group on Alien Pest Species) has contracted QMark Research & Polling to conduct a quantitative study in the form of a telephone poll among Hawaii residents.

A total of 513 interviews were conducted beginning on February 16, 2007 and ending on February 28, 2007. The sample was broken down based by population estimates with the following number of surveys on each island (362=Oahu/ 65=Big Island/ 52=Maui/ 34=Kauai).

The margin of error for a sample of this size (n=500) is +/- 4.38 percentage-points with a 95% confidence level.

The initial sample was randomly generated using QMark Research & Polling's proprietary Random Digit Dialing Software.

The data was input and compiled using SPSS.

The objectives of the survey are:

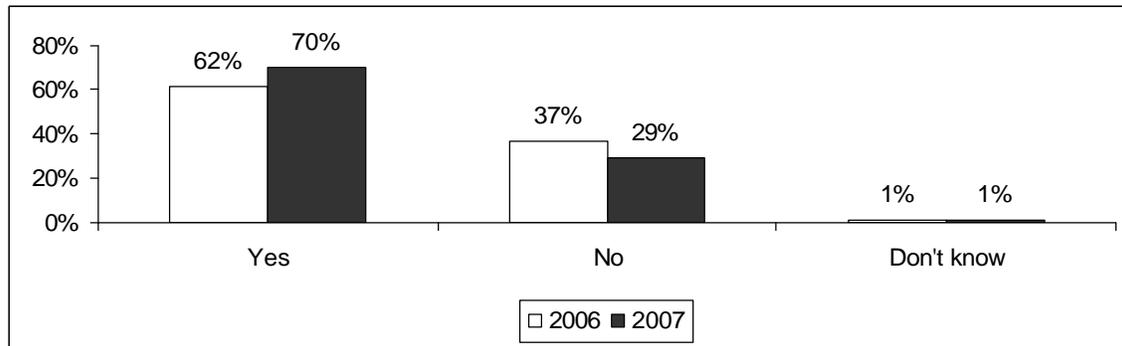
- ◆ To assess current levels of awareness of the invasive species issue
- ◆ To measure the level of concern about invasive species, both plants and animals
- ◆ To measure awareness by the public of the PEST hotline
- ◆ To gauge the public's level of support for legislation that would improve inspection of incoming cargo



SUMMARY OF FINDINGS

AIDED NAME AWARENESS

At the outset of the study research participants were asked if they were aware of the descriptive terms “alien pest species” or “invasive species.”



Overall, 70% of those polled have heard of the term(s) “alien pest species” or “invasive species” prior to taking part in the study. When the data is tracked we find awareness up eight-percentage points from the benchmark set in the previous year.

- Awareness of these terms is higher among Neighbor Island residents (79% awareness) than it is on Oahu (65% awareness).
- Among the major ethnic groups in the State, Caucasians (81% awareness) were the most likely to have heard of these terms while at the opposite end, Filipino respondents (48% awareness) were the least likely to have heard of them.
- Awareness increases as respondents become more affluent. Among those residing in households with combined incomes below \$50K/ year, awareness stand at just 56%. By comparison, awareness rises to 77% among those residing in households earning anywhere from \$50K-\$100K and tops out at 82% among those with combined household incomes that exceed \$100K/year.

GENERAL PERCEPTIONS

In this section of the research respondents were read the following statement:

Invasive species are harmful and undesirable plants, animals, insects or even microbial organisms that arrived in Hawaii as a result of human actions.

Each respondent was then asked for their perceptions regarding this issue as presented to them in the aforementioned description. They were asked to quantify their perceptions using a four-point rating scale with “it is a very serious problem” being assigned a value of four and “it is not a problem at all” being assigned a value of one. The table below



tracks the percent results as well as the mean or average score in the current study. The higher the mean score the more serious they perceive the problem to be.

	2004	2006	2007
Very serious problem	36%	43%	46%
Somewhat serious	35%	35%	32%
Not a very serious problem	16%	10%	8%
Not a problem at all	9%	3%	5%
Don't know	5%	9%	9%
MEAN	NA	NA	3.3

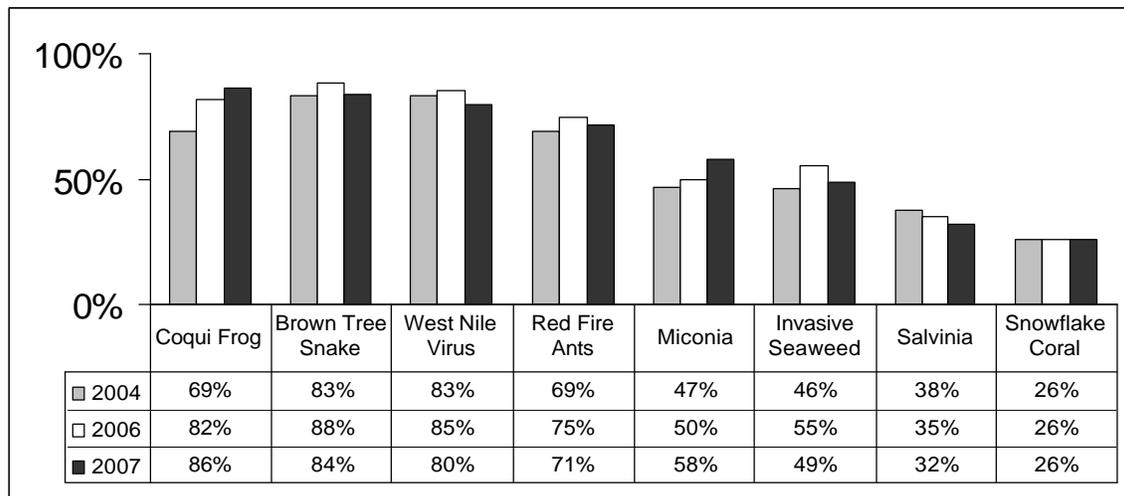
Overall, 46% of those polled agree invasive species are a very serious problem here in Hawaii. Another 32% believe it is a somewhat serious problem while 8% are of the opinion it is not a serious problem. Five percent feel invasive species are not a problem at all. These scores result in a mean or average score of 3.3 out of a possible 4.0.

When the data is tracked we find the results nearly identical to those reported in the previous year.

- Those under 35 years of age are the least likely to believe this is a serious problem here in Hawaii. Among this age group just 35% rate this as a very serious problem locally. By comparison, this number rises to 46% among those 35 to 54 and tops out at 49% among those over 55 years of age.

AIDED AWARENESS – SPECIFIC INVASIVE SPECIES

In this section of the research respondents were presented with a list of eight invasive species found locally. They were then asked if they had heard of each prior to taking part in the research.





The results shows the invasive species with the highest overall name awareness are the Coqui Frog (86%), Brown Tree Snake (84%), West Nile Virus (80%) and Red Imported Fire Ants (71%). Miconia (58%) is the only other test subject mentioned by more than 50% of the overall sample.

When the data is tracked we find awareness of the West Nile Virus dropping five-percentage points while conversely the awareness numbers for Miconia are up eight-percentage points.

- **Coqui Frog** – Awareness of the Coqui Frog is higher on the Neighbor Islands (94% awareness) than it is on Oahu (82% awareness).
- **Red Imported Fire Ants** - Awareness of Red Imported Fire Ants is higher on the Neighbor Islands (79% awareness) than it is on Oahu (67% awareness).
- **Miconia** - Awareness of Miconia is higher on the Neighbor Islands (68% awareness) than it is on Oahu (54% awareness).
- **Invasive Seaweed** - Awareness of Invasive Seaweed is higher on Oahu (51% awareness) than it is on the Neighbor Islands (42% awareness).

SOURCES OF INFORMATION

Each respondent was asked how they get their information regarding invasive species.

TOP RESPONSES	2004	2007
Newspaper	53%	63%
TV news	53%*	55%
TV programming	NA	19%
Word-of-mouth	9%	10%
Radio	10%	9%
Personal experience	5%	8%
Magazine articles	NA	8%
Websites/ The Internet	7%	7%

* Television was not broken up into two categories (News/Programming) in 2004.

The results show the two primary sources of information locally are newspapers (63%) and the television news (55%).

- Oahu residents (58%) are more likely to get information from the television news than their Neighbor Island counterparts (47%). Conversely, Neighbor Island respondents are more likely to get information regarding invasive species through word-of-mouth (18%) contact than are Oahu respondents (7%).



INVASIVE PLANTS

At the start of this section of the research respondents were read the following:

Some types of plants we may plant in our yards and gardens could spread into the native forest and damage the ecosystem.

Each respondent was then asked how strongly they agreed or disagreed with the aforementioned statement. They were asked to quantify their perceptions using a four-point rating scale with strongly agree being assigned a value of four and strongly disagree being assigned a value of one. The table below tracks the percent results as well as the mean or average score. The higher the mean score the more strongly they agree with the statement.

	2004	2006	2007
Strongly agree	39%	43%	47%
Somewhat agree	42%	40%	33%
Somewhat disagree	11%	7%	10%
Strongly disagree	5%	4%	4%
Don't know	3%	5%	6%
MEAN	NA	NA	3.3

Overall, 47% of those polled strongly agree that things they plant in their yards could in fact harm the local ecosystem. Another 33% somewhat agree with this idea while one in ten (10%) somewhat disagree with what this statement says. Four percent strongly disagree with the statement. These scores result in a mean or average score of 3.3 out of a possible 4.0.

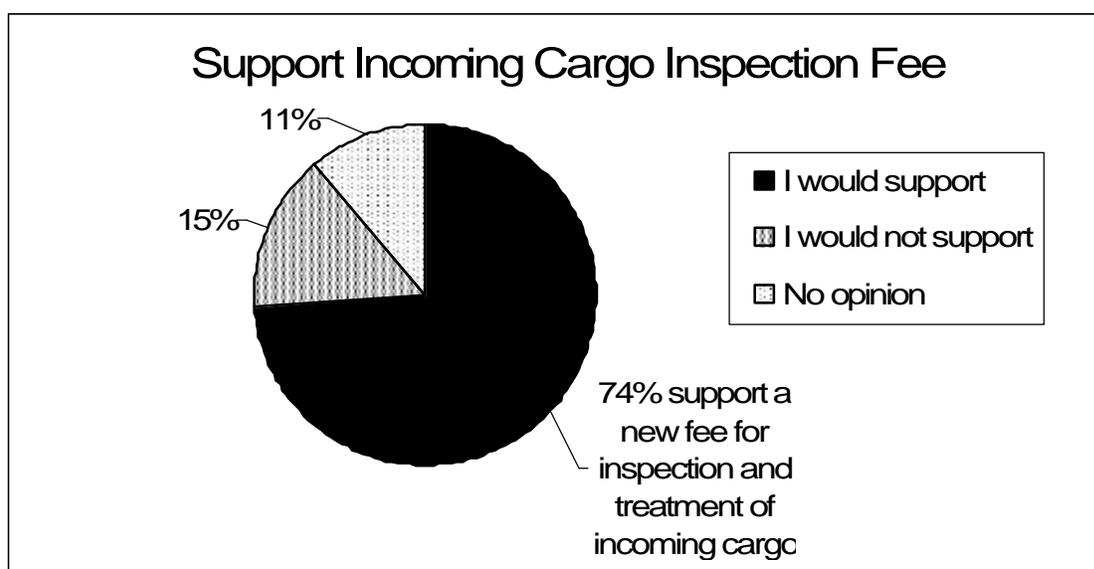
When the data is tracked we find a slight shift in the level of agreement with this statement compared to the results from the last calendar year.



CARGO FEE LAW

Each respondent was read the following:

Currently, the Hawaii Department of Agriculture is responsible for inspecting cargo and goods entering Hawaii for invasive or non-native species that might be harmful to our State's native plants and animals. There is a proposal to charge a fee for inspecting services directly to those sending cargo so that funding for inspection and quarantine services can keep up with the rising amount of cargo entering Hawaii.



Overall, three in four (74%) respondents support a law that would allow the Department of Agriculture to charge an appropriate fee for inspecting incoming cargo and for quarantine services when applicable.

Although a similar question was asked in 2006 received support from 88% of respondents, the question was reworded in 2007 to be less leading (2006 question: *Currently, the Hawaii Department of Agriculture lacks adequate funding to inspect all cargo and goods entering Hawaii for invasive species. Would you support a law that allows the Department to charge those sending cargo here an appropriate service fee if their items are found infested with pests? This fee would ensure that funds for inspection keep pace with the amount of infested cargo entering the State. Would you support such as law or not?*).

REPORTING INVASIVE SPECIES

In this section of the research respondents were presented with three specific invasive species and asked to rate the likelihood they would report it if they came into contact with

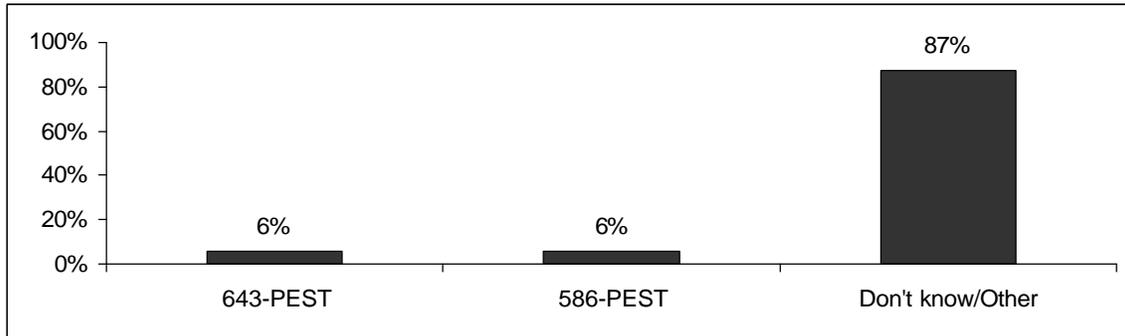


one. They were asked to quantify their perceptions using a four-point rating scale with very likely to report being assigned a value of four and very unlikely to report being assigned a value of one. The table below tracks the percent results as well as the mean or average score. The higher the mean score the greater the likelihood they would report that specific invasive species.

	2004	2006	2007
SNAKE			
Very likely	91%	83%	89%
Somewhat likely	5%	12%	7%
Not very likely	2%	4%	2%
Not at all likely	2%	1%	2%
Don't know	0%	0%	0%
MEAN	NA	NA	3.8
UNKNOWN INSECT			
Very likely	50%	47%	36%
Somewhat likely	27%	24%	25%
Not very likely	15%	18%	20%
Not at all likely	7%	6%	12%
Don't know	1%	5%	7%
MEAN	NA	NA	2.9
STINGING ANTS			
Very likely	NA	NA	46%
Somewhat likely	NA	NA	19%
Not very likely	NA	NA	19%
Not at all likely	NA	NA	11%
Don't know	NA	NA	6%
MEAN	NA	NA	3.1

Snakes continue to be the most likely of the test subjects to be reported by the general public. Eighty-nine percent of those polled say it would be very likely that they'd report a snake to authorities if they came into contact with one. The results show respondents are less likely to report an unknown insect or a stinging ant. Just 36% say they would be very likely to report an insect they are unfamiliar with. The numbers are slightly better for stinging ants where 46% say they would be very likely to report such a sighting.

When the data is tracked we find a greater likelihood of reporting snakes in the current study while the proportion who would report an unknown insect declining somewhat. Next, regardless how they responded in the previous section each respondent was asked what phone number they would call if they saw a snake.



Six percent each would phone 643-PEST or 586-PEST. The remainder could not identify a specific number to call.

Those respondents (n=448) who did not mention either of the two phone numbers in the previous section were then asked to identify whom they would call.

	2004	2006	2007
Police/ 911	27%	30%	38%
Humane Society	-	23%	21%
State Department of Agriculture	18%	18%	17%
Look in the Phone Book	2%	7%	10%
Animal Quarantine	-	4%	5%
Department of Land & Natural Resources	6%	8%	5%
Information	-	-	3%
State Department of Health	6%	4%	3%
Friends/ Family	2%	2%	2%
USDA	-	-	2%
Pest Hotline	0%	3%	2%
University of Hawaii	2%	2%	2%
Other misc. Government Agency	6%	2%	1%
The Zoo	2%	2%	1%
Fire Department	-	-	0%
Other	5%	4%	6%
Don't know	7%	14%	7%

Overall, the top four options for this segment of the sample are calling 911 (38%), calling the Humane Society (21%), calling the State Department of Health (17%) and looking for an option in the phonebook (10%).

When the data is tracked we see an increasing reliance on calling 911 as well as more people who say they would immediately look for a number in the phonebook.

- Oahu residents (42%) are more likely to call 911 than those on the N.I. (31%).



PROFILE OF RESPONDENTS

	OVERALL
PRIMARY RESIDENCE	
Own	69%
Rent	30%
PRIMARY RESIDENCE	
Single-family home	73%
Townhouse	6%
Apartment/ Condo	20%
YEARS IN HAWAII	
Less than 10 years	14%
10 but less than 20	9%
20 years or more	29%
Lifetime	47%
EDUCATION	
H.S./ GED	31%
Some College	20%
Trade/ JC/ Military	8%
College Degree	25%
Post-Graduate studies	13%
AGE	
18-34	12%
35-54	35%
55+	50%
MEAN	54.5
ETHNICITY	
Caucasian	37%
Japanese	21%
Hawaiian/ Part	15%
Filipino	8%
HOUSEHOLD INC	
Less than \$25K	10%
\$25K-\$50K	16%
\$50K-\$75K	18%
\$75K-\$100K	19%
\$100K+	14%
GENDER	
Male	43%
Female	57%

