



**Stop Invasive forest ants – [www.littlefireants.com](http://www.littlefireants.com)**

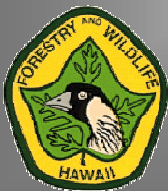


# Pacific Ant Project

## Survey Training module

Session 2: survey training

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# Invasive ant surveys – Why?

- Which ant species do we have already
- Which islands have which species
- Early detection systems –
  - Rapid response
  - Eradication more feasible

# Examples

- Maui (Hawaii) – ½ hectare Little Fire Ant
  - Detected very early
  - \$20,000 spent - eradicated
- Port Vila, Vanuatu – 2 sites Little Fire Ant
  - Detected very early
  - ?\$100,000 spent – probably eradicated
- Napier NZ – 2 sites Red Imported Fire Ant
  - Detected very early
  - Millions spent - eradicated
- Big Island (Hawaii) – maybe 25 sites Little Fire Ant
  - Detected early
  - Millions spent – not eradicated
- Tahiti French Polynesia – 20 hectares Little Fire Ant
  - Detected fairly early
  - Millions spent – not eradicated
- Cairns Aust – 30 hectares Little Fire Ant
  - Detected late
  - >8 Million spent – not eradicated
- Brisbane Aust – 25,000 hectares Red Imported Fire Ant
  - Detected VERY late
  - >\$200 million spent – not eradicated.

# Where to survey?

- Sun-loving species

- Points of entry (POI)

- Sea ports
    - Airports
    - Container sites

- Forest species

- Secondary risk sites

- Forest habitats with human activity
    - Nurseries
    - Farms

# How to survey?

- Visual searching
- Pitfall trapping
- Bait/lure survey

# Bait surveys

- Systematic
- Good for targeting particular species
- Quick and easy

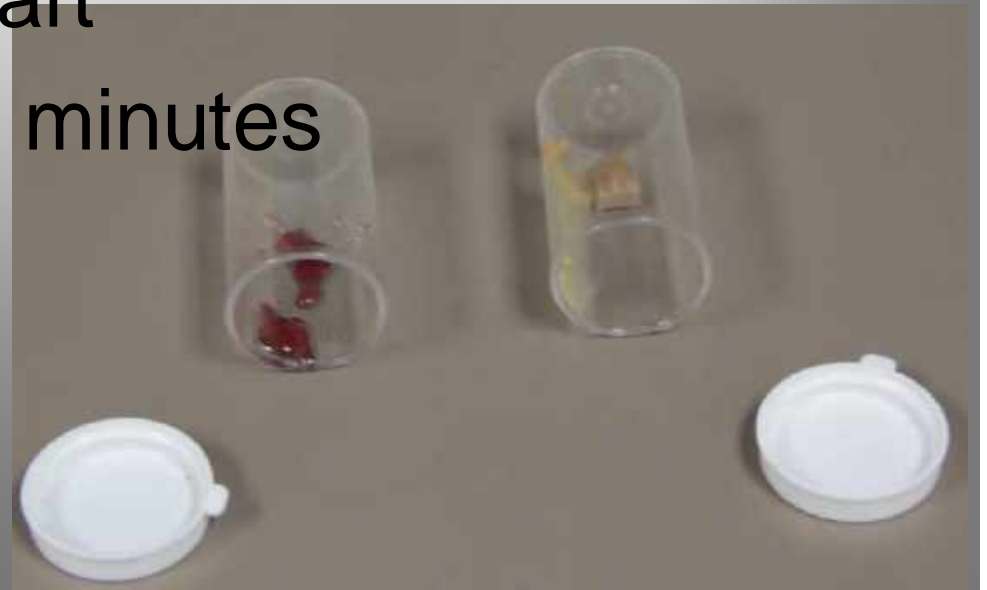
# Survey basics

- Place vials baited with attractive food and retrieve them after ants have had time to find it
- Position the vials in good “fishing” spots
- Document exact location of each vial
- Entomologist can then ID the ants in the lab
- If any new species found, entomologist can give you the location where found



# Bait vials

- 2 types
  - Sweet (jelly, palm syrup, Karo)
  - Oil/protein (peanut butter, spam or hotdog)
- Place alternately
- Around 8 metres apart
- Retrieve after 30-60 minutes



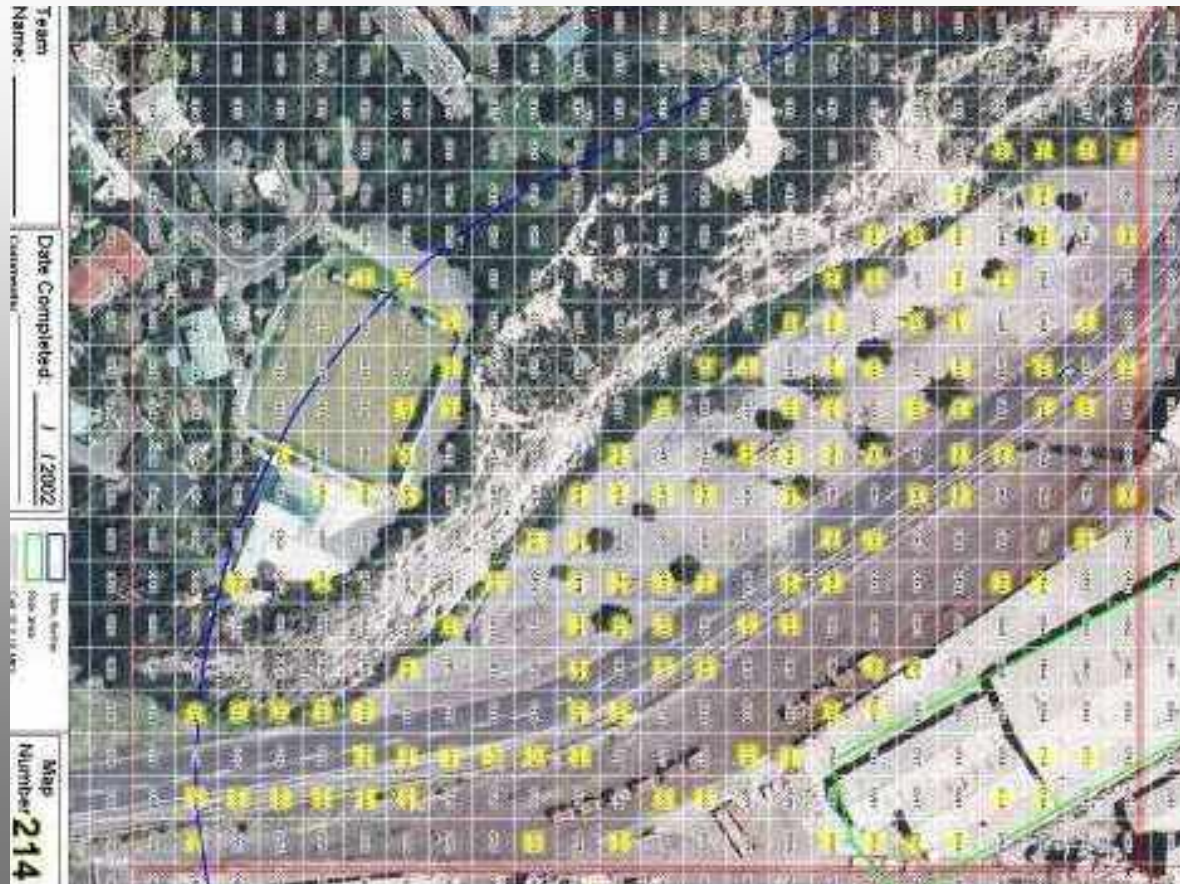
# Place in good locations

- Like going fishing, its best to put the bait near the thing you want to catch!



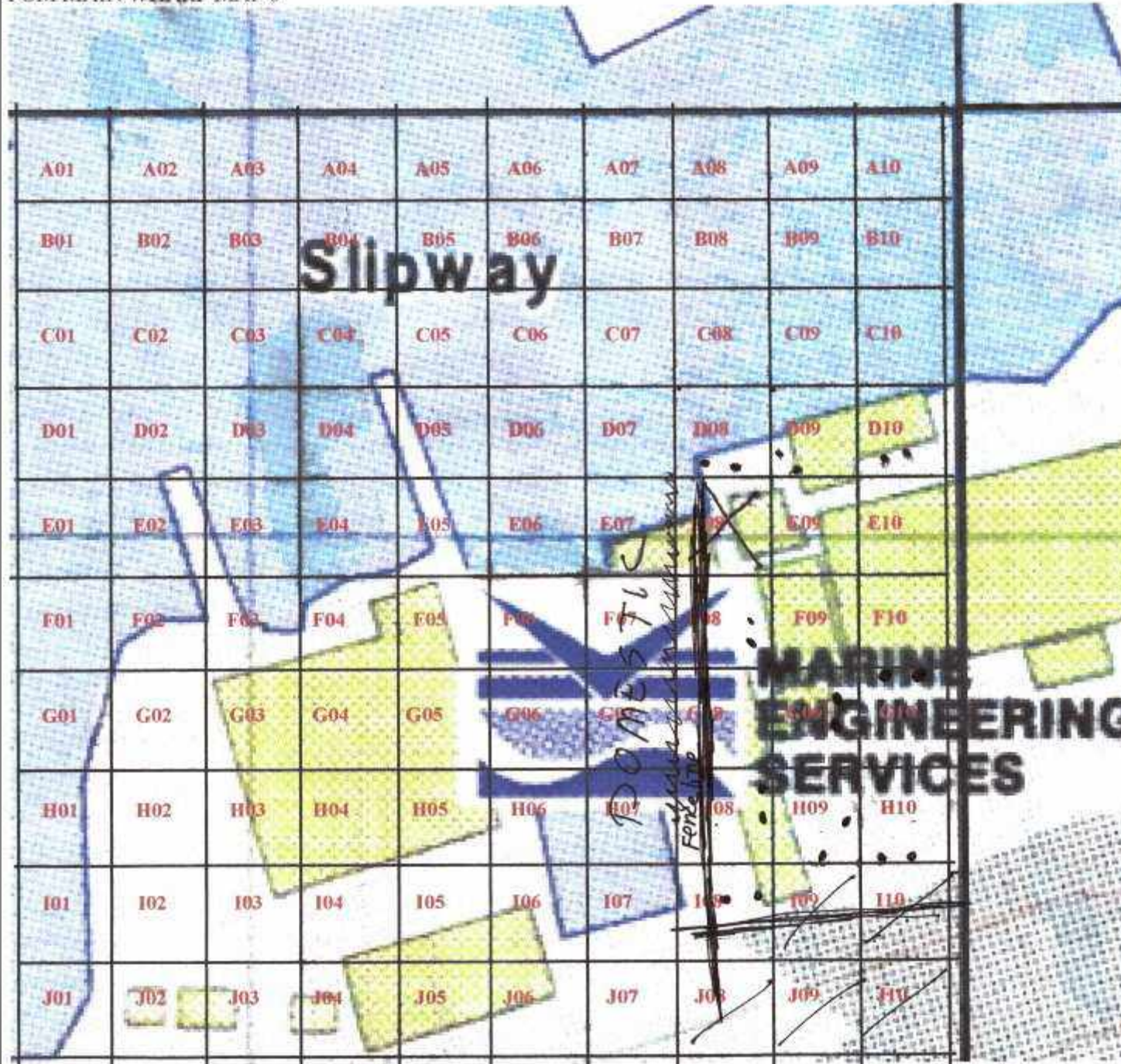
# How to record locations of each vial

- In the “olden” days...

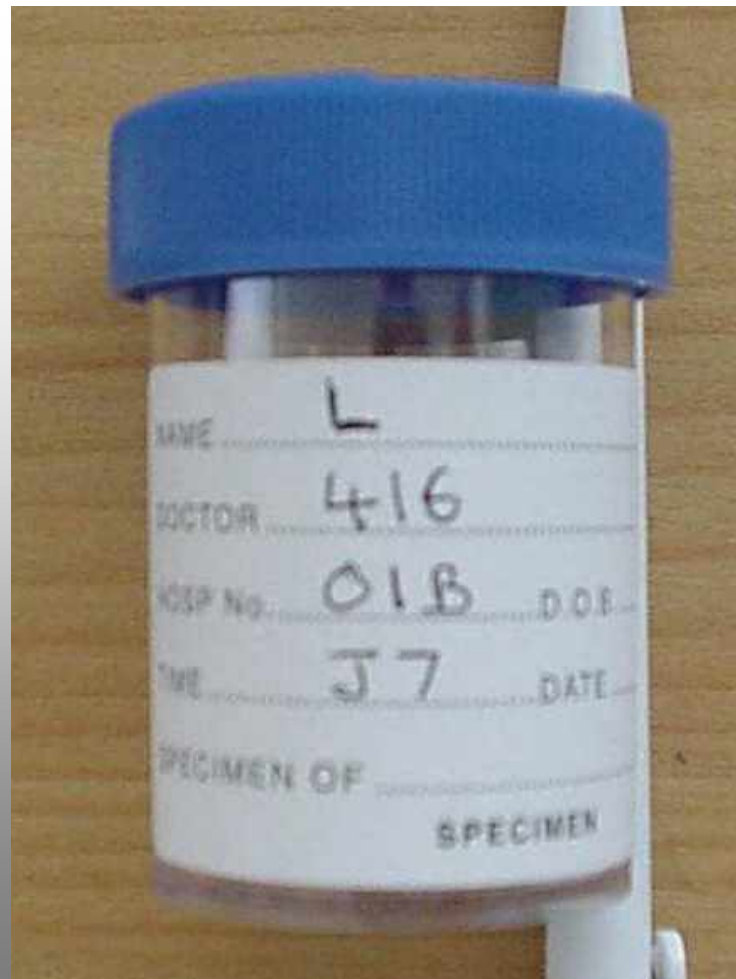




POM MAIN WHARF MAP 8



# Write information on vial



## APPENDIX 5

## Specimen Form for Pacific Island Ant Surveillance

Team : CAS, MILLER, ANTARO, SA SQUAL, AN ANDREW, MOSES				Collection Date 23 June 06	Collection location code C	Temp Range 86F	Form 1 of 3				
Port: Antenne Vela 1st 1st				Number of Samples	Map Number (Port)	Geocode East	Geocode North				
Site Address:				54	721	E	N				
Sample #	Vis or Bait ID	Time Place (24hr clock)	Time Collect (24hr clock)	Grid Ref	Hab Loc	Ant ID Init	Date	Validation	Validator	Date	
	Y Or B				<b>V</b> Veget <b>S</b> Soil <b>BS</b> Brok <b>Surf</b> Surf <b>W</b> Water <b>L</b> Light <b>B</b> Build <b>R</b> Rubh <b>Rubh</b>	Anoplolepis gracilipes Iridomyrmex anceps Linepithema humile Monomorium antarcticum Monomorium antipodum Ochetellus glaber <b>Paratrechina longicornis</b> Paratrechina vaga Pheidole megacephala Pheidole rugosula Pheidole vigilans <b>Solenopsis invicta</b> Technomyrmex albipes Tetramorium grassii Tapinoma melanocephalum <b>Solenopsis germinata</b> Monomorium sydneyense Doleromyrma darwini Cardiocondyla minutior Polyrachis sp Monomorium pharaonis Pheidole proxima	A.gr Lan L.hu M.ant M.pod O.gl <b>P.lo</b> P.va P.meg P.rug P.vig <b>S.inv</b> T.al T.gr T.me <b>S.gem</b> M.syd D.da C.mi P.sp M.pha P.pro				
01	B	0920	1020	CD51	✓						
02	Y	0921	1021	CD51	✓						
03	B	0923	1023	CE51	✓						
04	Y	0923	1023	CE51	✓						
05	B	0925	1025	CC51	B						
06	Y	0926	1026	CC51	B						
07	B	0930	1021	CB52	B						
08	Y	0930	1022	CB52	B						
09	B	0935	1022	CA52	B						
010	Y	0935	1023	CA52	B						
011	B	0936	1023	BZ53	B						
012	Y	0937	1023	BZ53	B						

# Now...

- Google Earth
- GPS
- 1 form for the entire day's work
- Easy peezy, lemon squeezy



# Google Earth





# GPS

Take waypoint at every vial placement

Record waypoint on vial

Done!



# Survey form

## PAP survey sample submission sheet

GPS number	date	
	start time	
	end time	
address		site code
TEAM MEMBERS		
	first vial	last vial
vial numbers		

SIGNED team member 1..... team member 2.....

SIGNED BY supervisor.....

Survey notes



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