



**Australian Government**

**Australian Quarantine  
and Inspection Service**

# **Quarantine and invasive ants: a shared responsibility**

Presented by Mary Finlay-Doney

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**DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY**

# Structure

## Overview – Australian Quarantine and Inspection Service (AQIS)

### Scientific programs

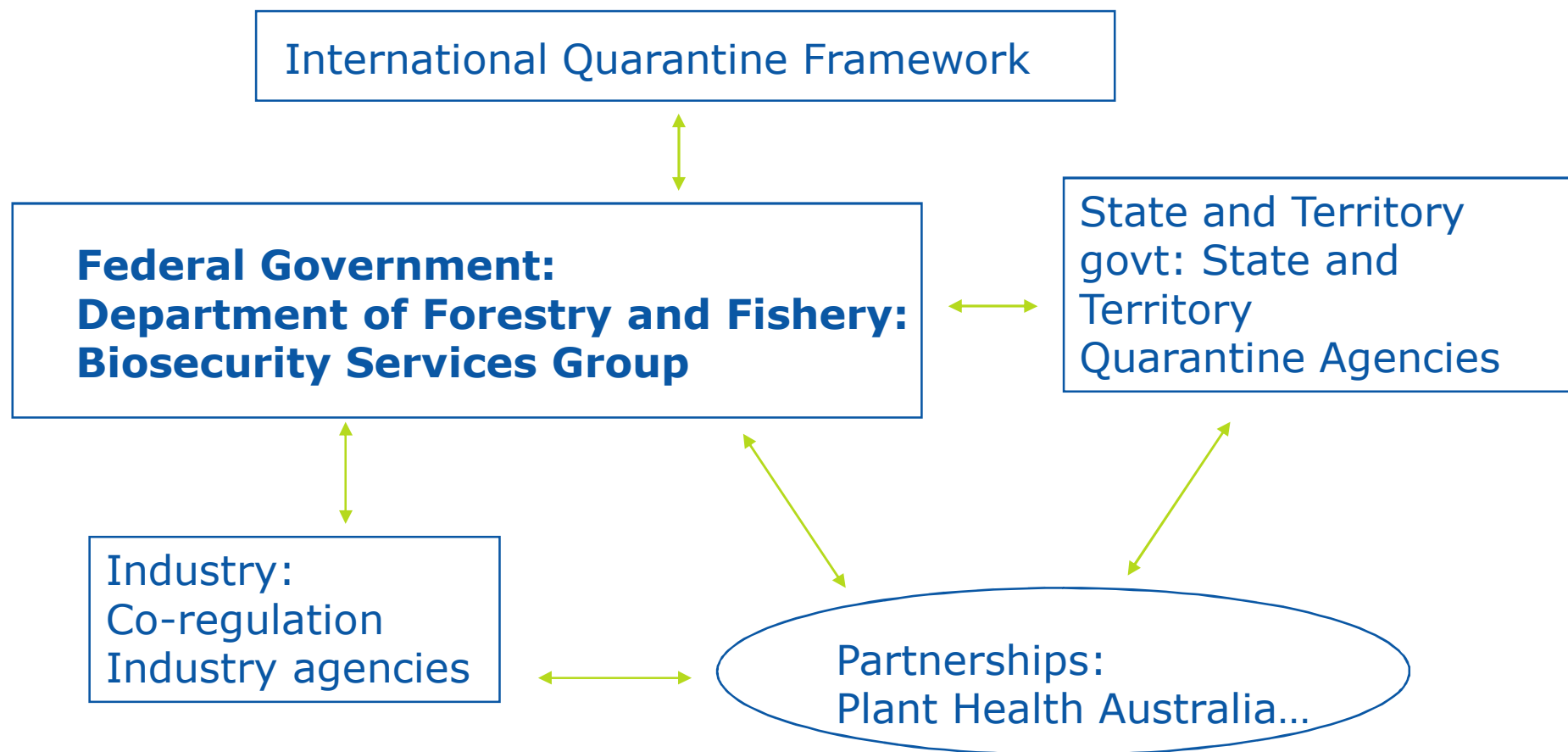
- Operational Science
- Northern Australian Quarantine Strategy

### Strategies to intercept and monitor invasive ants

# Unique situation



# Australian quarantine framework



# Australian quarantine

## Import volumes and quarantine interceptions

Program area	Approximate annual import volume (2008-2009)
Airports	12.5 M international passengers & crew screened
Seaports	10, 400 international vessels inspected
Mail	135 M items screened
Seacargo	1.2 M cargo containers inspected
Aircargo	260, 000 containers screened

Nationally, approximately 19,000 insect identifications per annum.

# Quarantine pathways

Operational Science ★

Northern Australian Quarantine ~



# Quarantine risk

Increased emphasis on ants since discovery of red imported fire ant (*Solenopsis invicta*) in Brisbane in January 2001

The image is a screenshot of a news article from the Courier Mail website. The article is titled "Fire ants 'a threat to southeast Queensland lifestyle'" and is dated March 31, 2010. The article discusses the impact of fire ants on the region's food and holiday industries. It mentions that despite \$215 million in eradication programs, fire ants have claimed territory in an arc from Logan City to the Gold Coast. The article also notes that authorities now concede a new and even more expensive long-term campaign might be needed to stop them threatening lifestyles. The article is written by Brian Williams and has 67 comments.

**Fire ants 'a threat to southeast Queensland lifestyle'**  
by Brian Williams | March 31, 2010 12:00AM | 67 comments

**THE decade-long fire ant war may be lost, with the nasty pests now on the verge of raiding the southeast's food bowl and holiday playgrounds.**

Despite \$215 million being poured into eradication programs nationally, fire ants have claimed territory in an arc from Logan City, between Brisbane and the Gold Coast, to near Grandchester, about 80km west of where the first outbreak was found at the Port of Brisbane in 2001.

Authorities now concede a new and even more expensive long-term campaign might be needed to stop them threatening our lifestyles.

**Fire ant alert after big wet in southeast Queensland**  
by Brian Williams | The Courier-Mail | March 16, 2010 7:41PM | 14 comments

**WET weather has caused a large outbreak of stinging fire ants in southeast Queensland, with colonies found in the Logan, Ipswich, Springfield, Underwood and Rochedale areas.**

Fire ants were poisoned at the Park Ridge State Primary School yesterday after they were found by an alert groundsman.

About 65,000 colonies were found when the outbreak was first detected in 2001 and last year this was down to about 500 but wiping out the world's worst pest invader is proving difficult.

# Recent detections

Yellow crazy ants, *Anoplolepis gracilipes*:

- Northern Territory, Brisbane, Townsville, Cairns, Yamba
- declared a notifiable pest & under eradication control

Electric ant, *Wasmannia auropunctata*

- Cairns

Ginger ant *Solenopsis geminata*

- Brisbane

Argentine ant *Linepithema humile*

- Brisbane

All detections are  
treated by state  
agencies e.g. DPI,  
CSIRO



# Tramp ant interceptions: 2005-2010

Specimen	Common name	No. of intercepts
<i>Anoplolepis gracilipes</i>	yellow crazy ant	116
<i>Camponotus modoc</i>	carpenter ants	9
<i>Camponotus pennsylvanicus</i>	carpenter ants	5
<i>Linepithema humile</i>	Argentine ant	76
<i>Monomorium destructor</i>	Singapore ant	174
<i>Monomorium pharaonsis</i>	pharaoh ant	256
<i>Paratrechina longicornis</i>	hairy ant	343
<i>Pheidole megacephala</i>	big headed ant/coastal brown ant	115
<i>Solenopsis geminata</i>	ginger ant/tropical fire ant	43
<i>Solenopsis invicta</i>	red imported fire ant	5
<i>Wasmannia auropunctata</i>	little fire ant	6

# Tramp ant interceptions: 2005-2010

- ***Anoplolepis gracilipes***

- ex Fiji, Indonesia & PNG (mainly). Primarily as hitchhikers on shipping containers.

- ***Camponotus modoc* & *C. pennsylvanicus***

- ex Canada & USA in rough sawn coniferous timber & dunnage.

# Tramp ant interceptions: 2005-2010

- ***Solenopsis geminata***

- ex various SE Asian countries from a range of goods such as timber, food stuffs, personal effects.

- ***Solenopsis invicta***

- ex USA (Texas) in containers, pallets, machinery parts.

- ***Wasmannia auropunctata***

- ex PNG & Solomon Islands in plant products

# Commonly intercepted ants

The most commonly intercepted genera include:

- ✓ ***Monomorium***
- ✓ ***Tapinoma***
- ✓ ***Paratrechina***
- ✓ ***Pheidole***
- ✓ ***Iridomyrmex***
- ✓ ***Tetramorium***
- ✓ ***Camponotus***
- ✓ ***Linepithema***
- ✓ ***Anoplolepis***



# Pathways – high risk cargo

Ant interceptions usually result from:

- shipping containers
- timber - rough sawn & dunnage
- personal effects
- machinery
- perishables
- stockfeed
- stored products



# Pathways – high risk countries

Significant ant interceptions usually originate from:

- New Caledonia
- Solomon Islands
- SE Asia (e.g. Thailand, Indonesia, Vietnam)
- PNG
- USA

**Risk return approach**

# Managing risk

- Enhanced on arrival import conditions  
e.g. specific work instruction for machinery inspections
  - containerised?
  - used?
  - level of quarantine risk material?
- Treatments
  - cleaning
  - fumigation
  - re-export





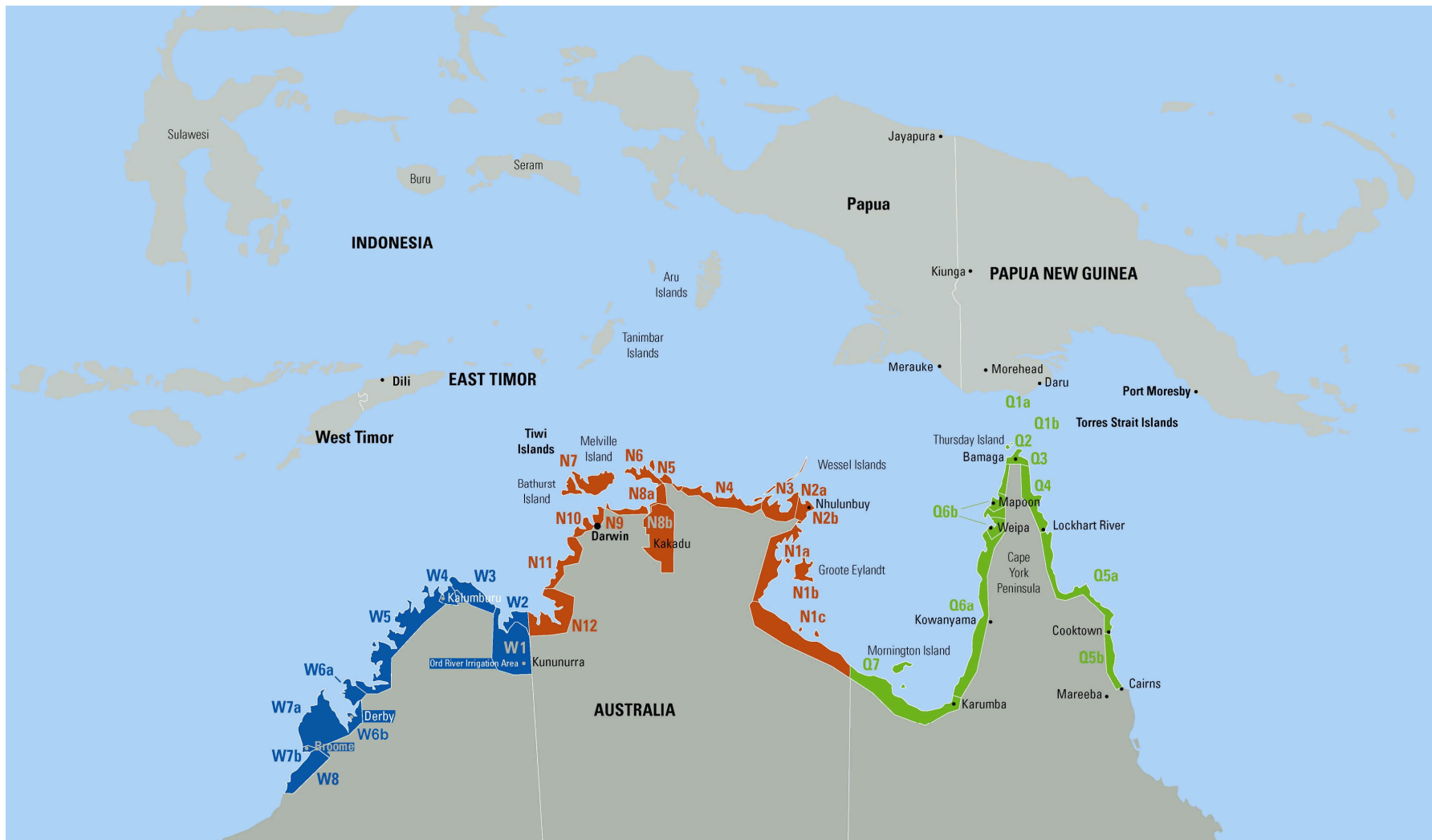
# Managing risk

- mandatory fumigation of high risk goods
- quarantine officer - vigilance and education
- preclearance – keeping the risk offshore





# Northern Australian Quarantine Strategy



# Northern Australian Quarantine Strategy

Provides early warning through:

- surveillance and monitoring for new pests within northern Australia
- quarantine capacity building in indigenous communities
- increasing quarantine public awareness



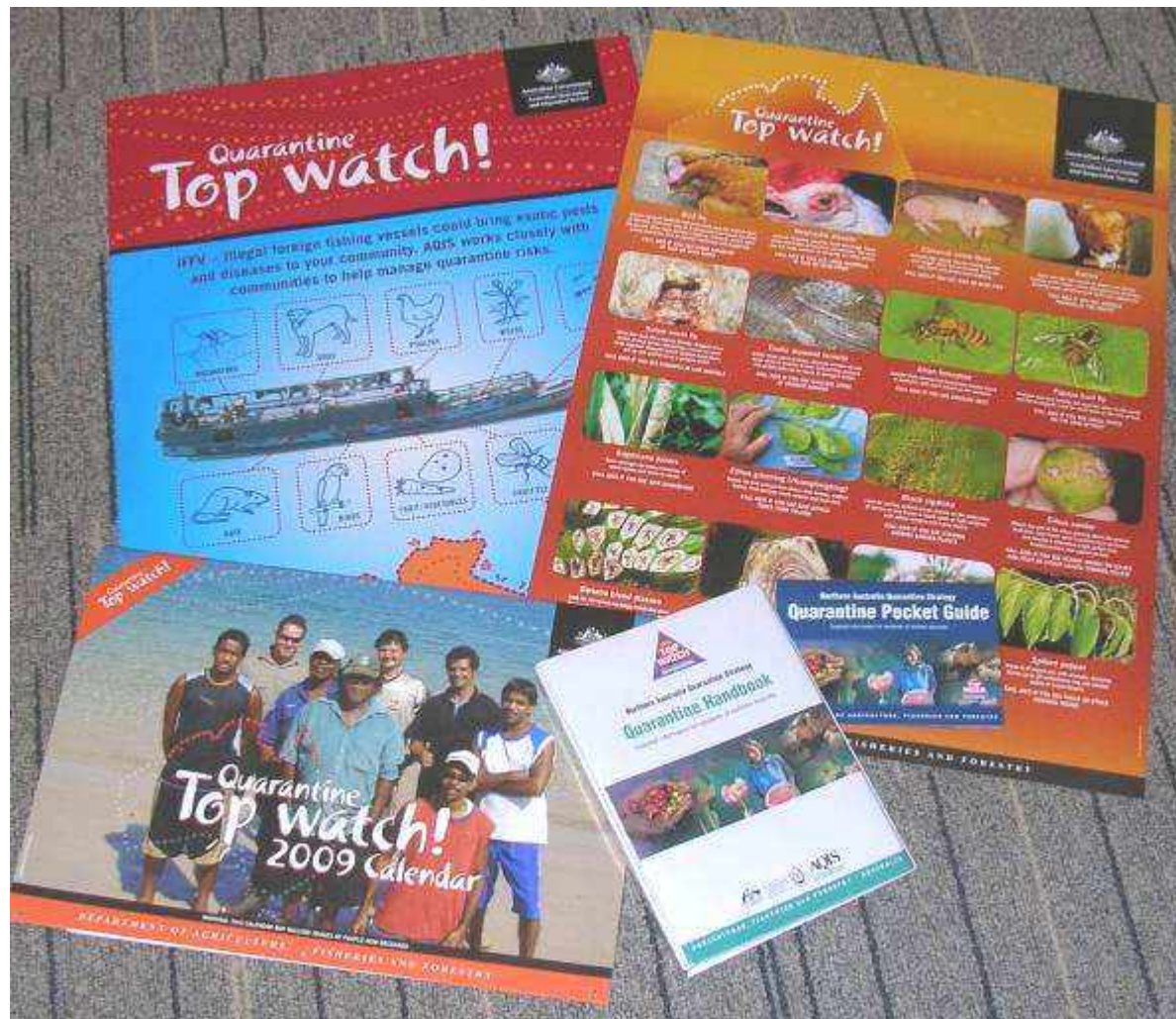
# Public Awareness

- most effective means of covering the entire coastline
- enlist help from locals with an interest in plants and animals

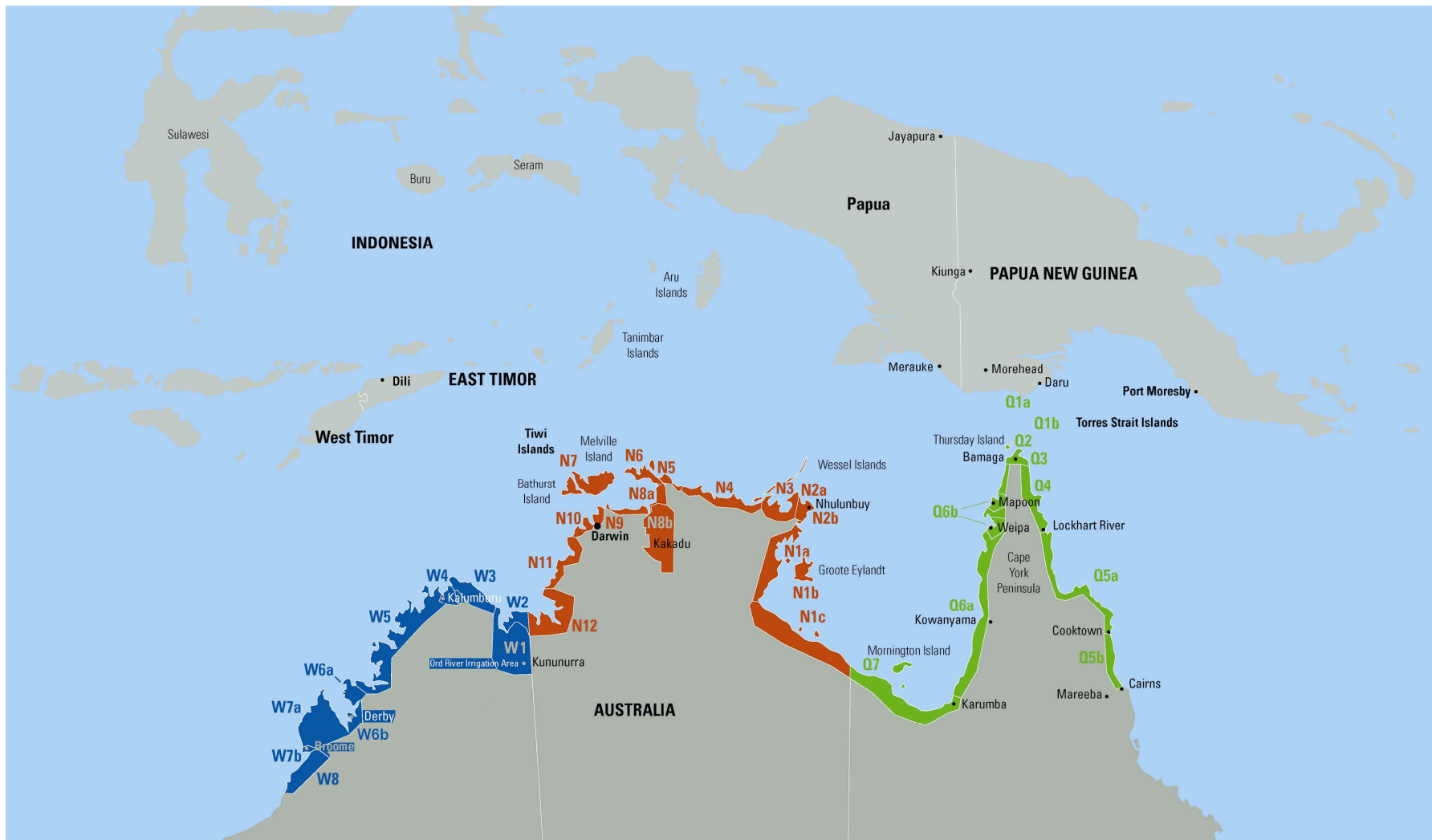




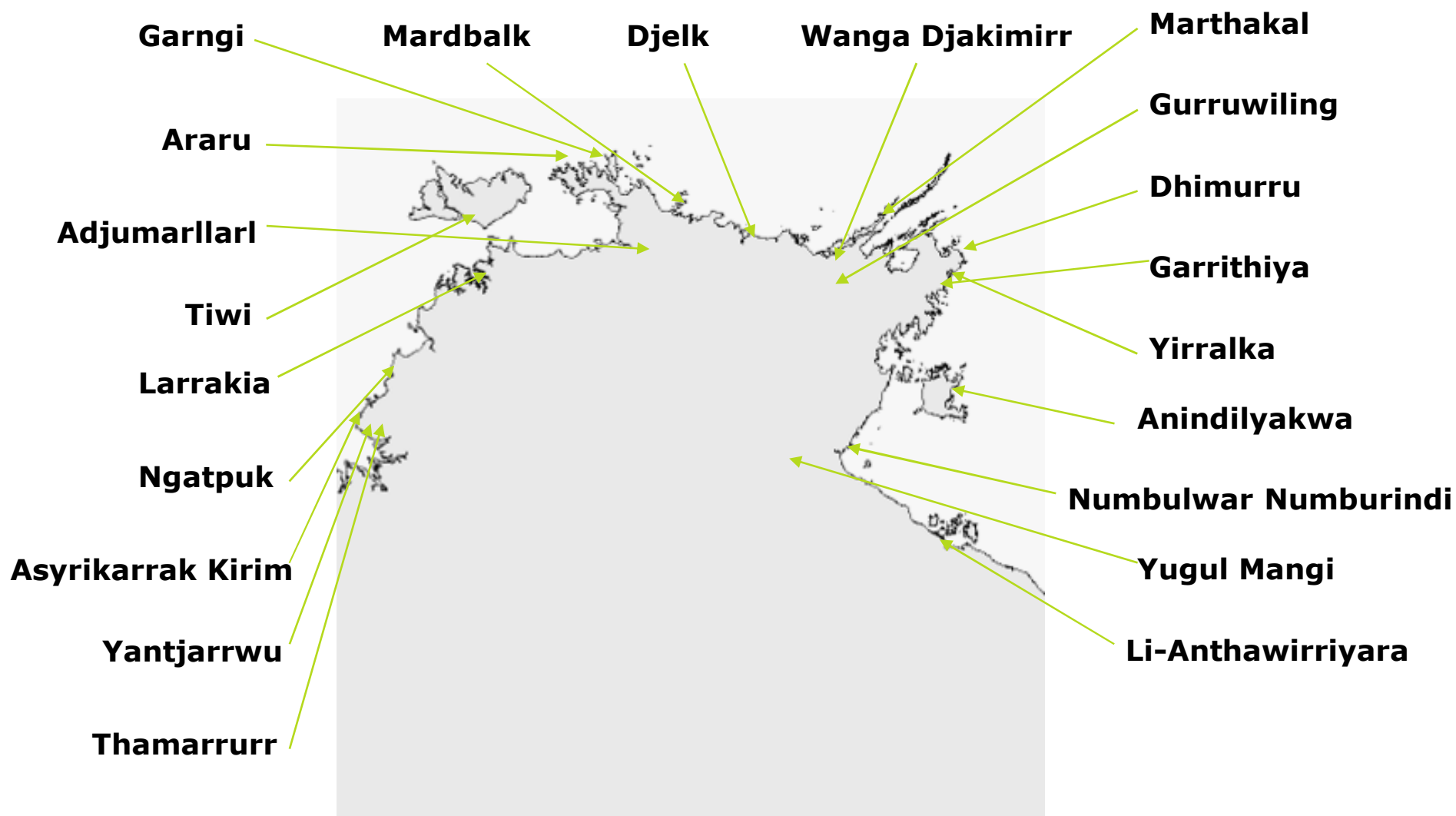
# Community engagement - publications



# Northern Australian Quarantine Strategy

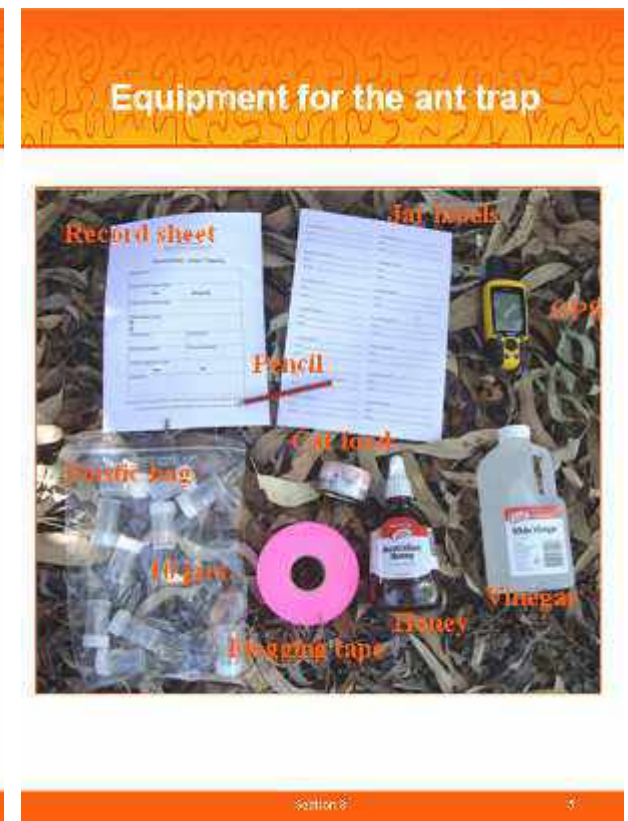
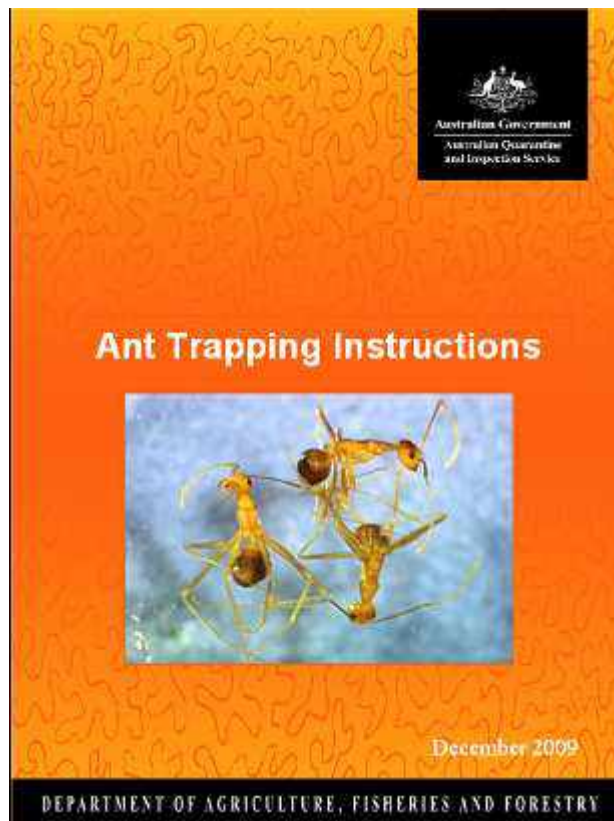


# Northern Territory Ranger Groups





# Ranger ant trapping



# Summary of 2009-2010 ranger activity

Species	Times trapped	Number of ranger groups
<i>Iridomyrmex anceps</i> group	32	12
<i>Iridomyrmex mattiroides</i> group	21	13
<i>Iridomyrmex pallidus</i> group	10	7
<i>Iridomyrmex reburrus</i>	10	16
<i>Iridomyrmex sanguineus</i>	34	16
<i>Melophorus</i> sp.	17	7
<i>Monomorium laeve</i> group	13	7
<i>Monomorium nigricornis</i> group	30	12
<i>Paratrechina longicornis</i>	15	7



# Notable detections

- *Solenopsis geminata* –Anindilyakwa, Marthakal and Thamarrurr (first detection)
- *Anoplolepis gracilipes* – Dhimurru (sugar and meat baits)



### Indigenous ant-trapping program yields results

By Rae Carver

Marthakal Rangers at Galiwin'ku, Elcho Island, Anindilyakwa Rangers at Anjanjulu, and Thamarrurr Rangers at Wadaye have been the first to discover ginger ants (*Solenopsis geminata*) in their communities, while carrying out surveillance for AQIS.

Ginger ants are a serious environmental and agricultural pest and of considerable human health concern as they have a nasty sting, an aggressive attitude and a liking for households. This species is closely related to the red imported fire ant, *Solenopsis invicta*, which is currently under eradication in Brisbane.


Native to tropical America, but widespread throughout the tropics including Asia and the Pacific, the ginger ant has been present in Darwin for many years.

It is also known to be in Katherine and the Tiwi Islands and was eradicated from Kakadu a few years ago. These are the first sightings of the ant in these more remote regions.

AQIS pays the ranger groups to do surveillance and monitoring around their communities. This enhances the possibility of detecting any exotic pests that may have established in remote areas. AQIS's concerns are for new invaders from overseas but an additional benefit from the collaboration is that it can also bring to light harmful pest species on the move.

With early detection, it is often possible to eradicate pests before they become too firmly established and widespread. Plotting all the trapping sites where

none of the ants were found provides useful data as to its likely spread in a community and aids eradication efforts.

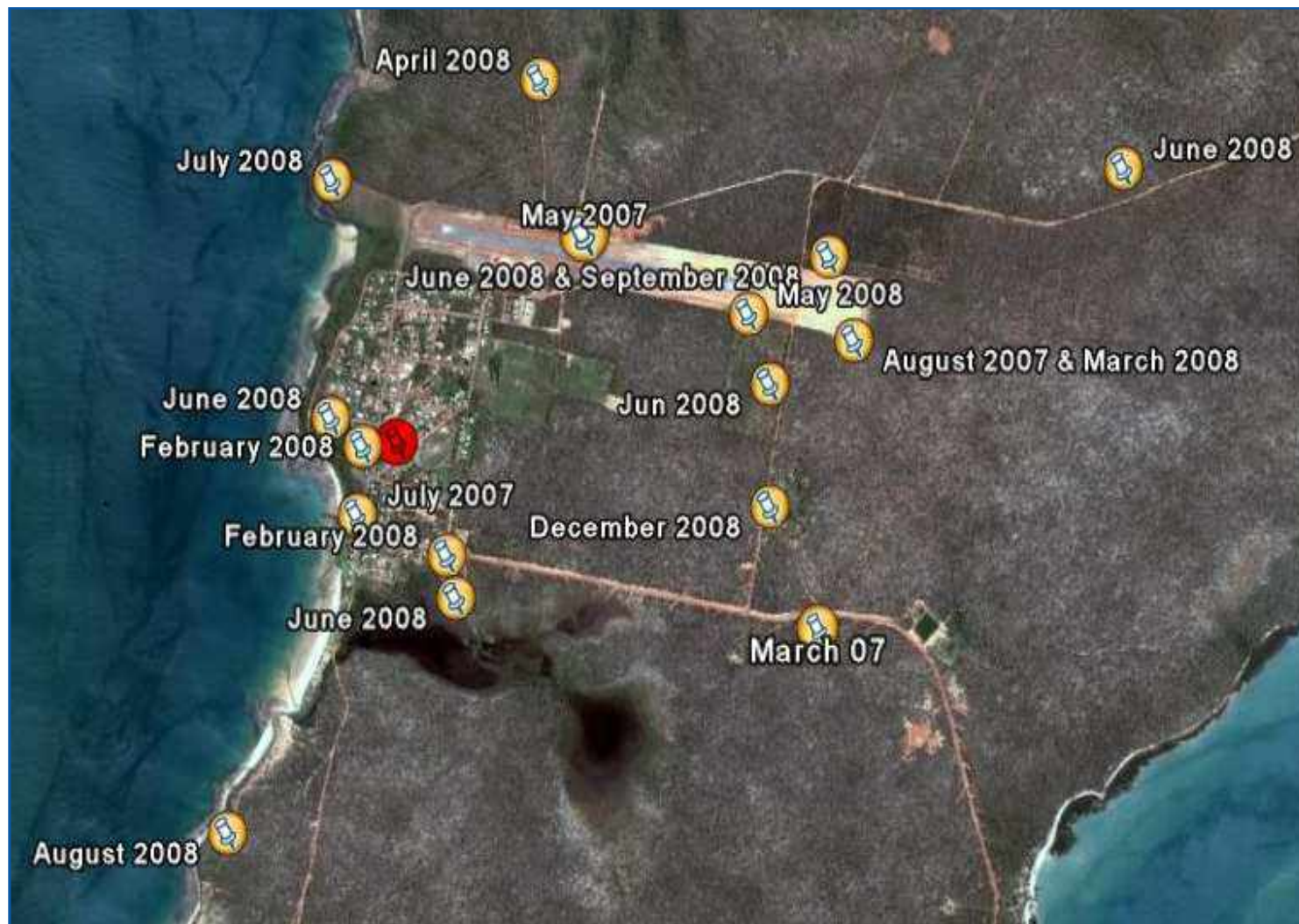


Marthakal Rangers, Timmy Nalunggal and Tim Thakale, set out baits for sugar ants at Wadaye.

AQIS Bulletin, April / May 2009



# Notable detections





# Current program

- ants associated with foreign fishing vessel landing sites
- trials in north east Arnhem land to determine the most effective way to trap *Anoplolepis gracilipes*



# Ants and Australian quarantine

- AQIS monitors exotic ants through
  - traditional quarantine pathways
  - targeted surveillance
  - community engagement

