INCURSIONS INTO AUSTRALIA TO DATE, SENTINEL HIVE PROTECTIONS AND GAPS

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THIRD AUSTRALIAN BEE CONGRESS
GOLD COAST, QUEENSLAND
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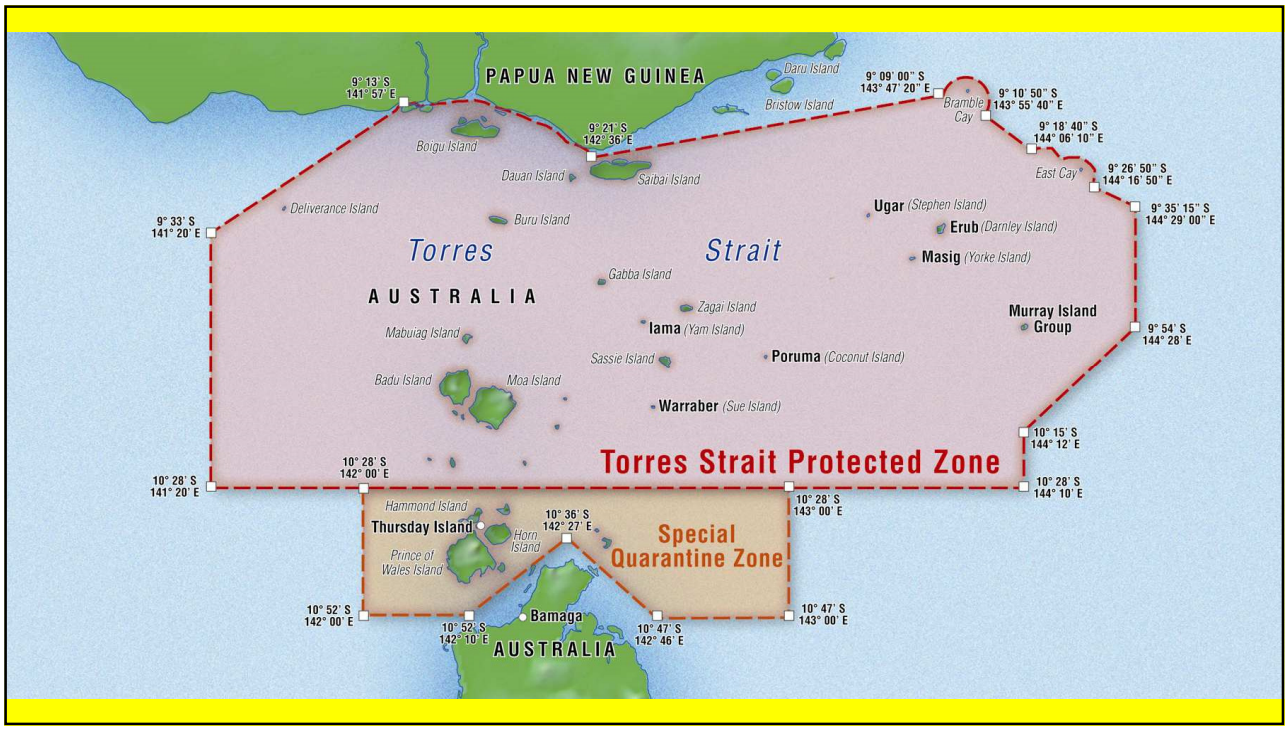
INCURSIONS AND INTERCEPTIONS

- Apis cerana Java genotype
- Apis dorsata
- Apis florea
- Apis mellifera scutellata
- Varroa jacobsoni
- Bombus terrestris
- Bombus vosnesenski

APIS CERANA TORRES STRAIT

- 1993 – migrated from Papua New Guinea onto Saibai, Boigu and Dauan Islands in the Torres Strait Protected Zone
- No attempt to eradicate as swarms would come across each wet season when the monsoon trough came through
- Became established
- 1994 *Varroa jacobsoni* found on cerana
- Has not naturally migrated further south
- Next island is Gabba which is approx. 30 kilometres away


PAPUA NEW GUINEA
9° 13' S
141° 57' E
Daru Island
9° 09' 00" S
143° 47' 20" E
Bristow Island
Bramble Cay
9° 10' 50" S
143° 55' 40" E
9° 18' 40" S
144° 06' 10" E
East Cay
9° 26' 50" S
144° 16' 50" E
Boigu Island
9° 21' S
142° 36' E
Dauan Island
Saibai Island
Deliverance Island
Buru Island
Ugar (Stephen Island)
Erub (Darnley Island)
9° 35' 15" S
144° 29' 00" E
9° 33' S
141° 20' E
Torres
Strait
Masig (Yorke Island)
Gabba Island
AUSTRALIA
Zagai Island
Murray Island
Group
Mabuiag Island
Iama (Yam Island)
9° 54' S
144° 28' E
Sassie Island
Poruma (Coconut Island)
Badu Island
Moa Island
Warraber (Sue Island)
10° 15' S
144° 12' E
Torres Strait Protected Zone
10° 28' S
142° 00' E
10° 28' S
141° 20' E
10° 28' S
143° 00' E
10° 28' S
144° 10' E
Hammond Island
Thursday Island
10° 36' S
142° 27' E
Horn Island
Special
Quarantine Zone
Prince of
Wales Island
10° 52' S
142° 00' E
Bamaga
10° 47' S
143° 00' E
10° 52' S
142° 10' E
10° 47' S
142° 46' E
AUSTRALIA

APIS CERANA – Java genotype

- 1995 - intercepted Brisbane - nest
- 1996 – intercepted Adelaide – no details
- 1998 – found in Darwin – eradicated – no VJ
- 1999 – intercepted Brisbane - swarm
- 1999 – intercepted Brisbane - nest - VJ found
- 2002 – intercepted Melbourne – swarm - VJ found
- 2002 – intercepted Brisbane – one bee

APIS CERANA CONTINUED

- 2004 – found in Cairns - swarm
- 2004 – intercepted Brisbane – nest - VJ found
- 2005 – intercepted Brisbane – nest - VJ and *Varroa underwoodi* found
- 2007 – found in Cairns – swarm? - eradication attempted and abandoned – now endemic
- 2012 – interception in Townsville – VJ found
- 2012 - interception Kurnell Sydney – swarm - VJ found

APIS CERANA CONTINUED

- 2013 – intercepted Townsville - swarm
- 2014 – intercepted Townsville - nest – VJ found
- 2014 - found on Horn Island in Torres Strait - eradicated
- 2015 – interception Brisbane – VJ found
- 2016 – found in Townsville – VJ found - eradication plan now in place for VJ.
- 2018 – incursion in Darwin – swarm – in surveillance stage – no VJ

APIS DORSATA

- 1970's – Perth – no details available
- 1999 – intercepted Sydney – on flight from Malaysia
- 2000 – intercepted Brisbane - swarm
- 2003 – intercepted on vessel off north Australia – dead bees
- 2011 – intercepted Darwin
- Dead single bees found in cargo holds at Adelaide airport in flights from Malaysia

APIS FLOREA

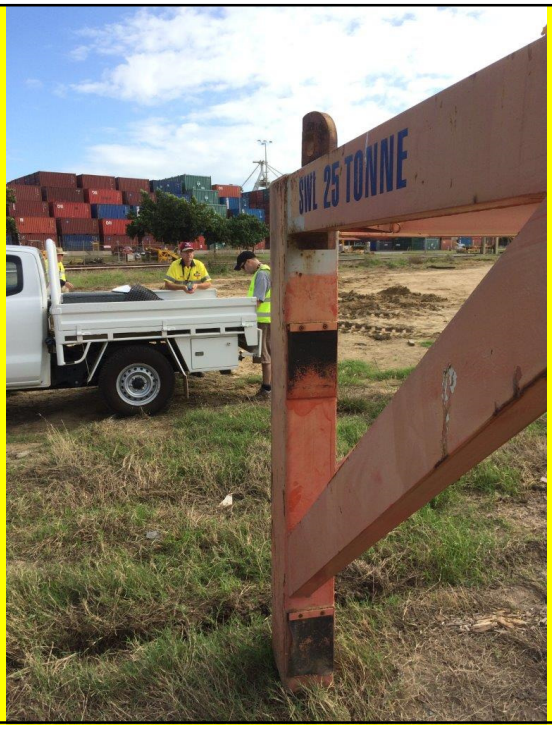
- 2011 – Brisbane – swarm
- 2015 – Melbourne - nest
- 2016 – interception Brisbane - nest

APIS MELLIFERA SCUTELLATA

- 1994 – intercepted in Freemantle – nest of live bees
- 1997 – intercepted Fremantle – abandoned nest

VARROA JACOBSONI

- *Varroa jacobsoni* was first found on Asian bees in the Torres Strait Protected Zone in 1994.
- New protocols had to be developed for the export of live bees because of this find
- *V. jacobsoni* has been found on intercepted nests and swarms
- It is the subject of an eradication program in Townsville
- To date it is not established in Australia except for the Torres Strait Protected Zone



BOMBUS TERRESTRIS

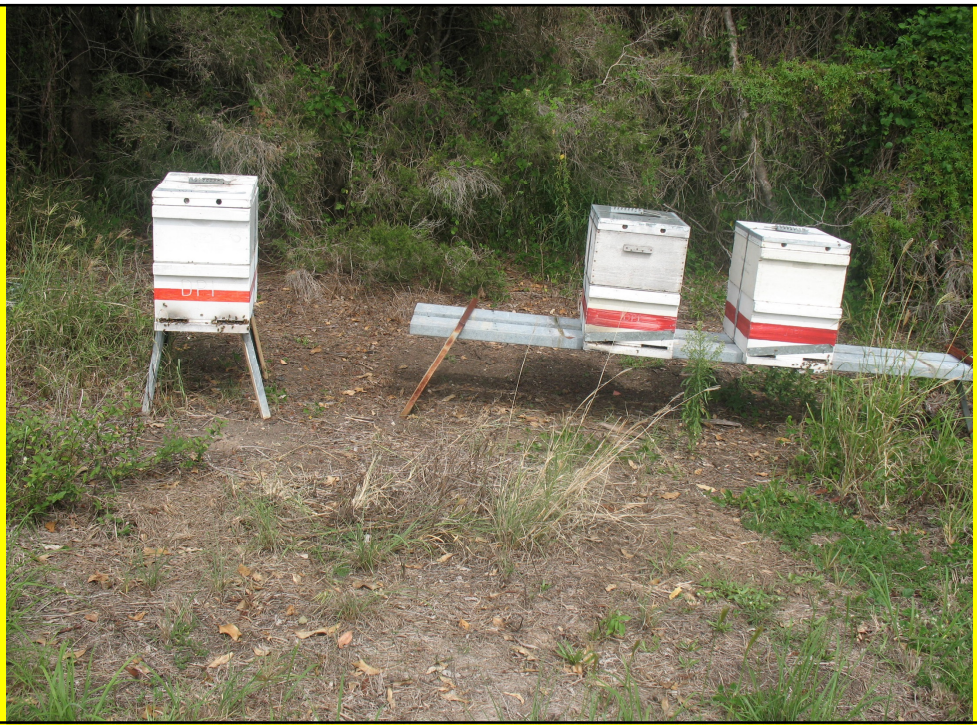
- 1992 – accidental introduction to Tasmania – now endemic to Tasmania
- 2003 queen bee found in Melbourne
- 2003 worker found in Brisbane

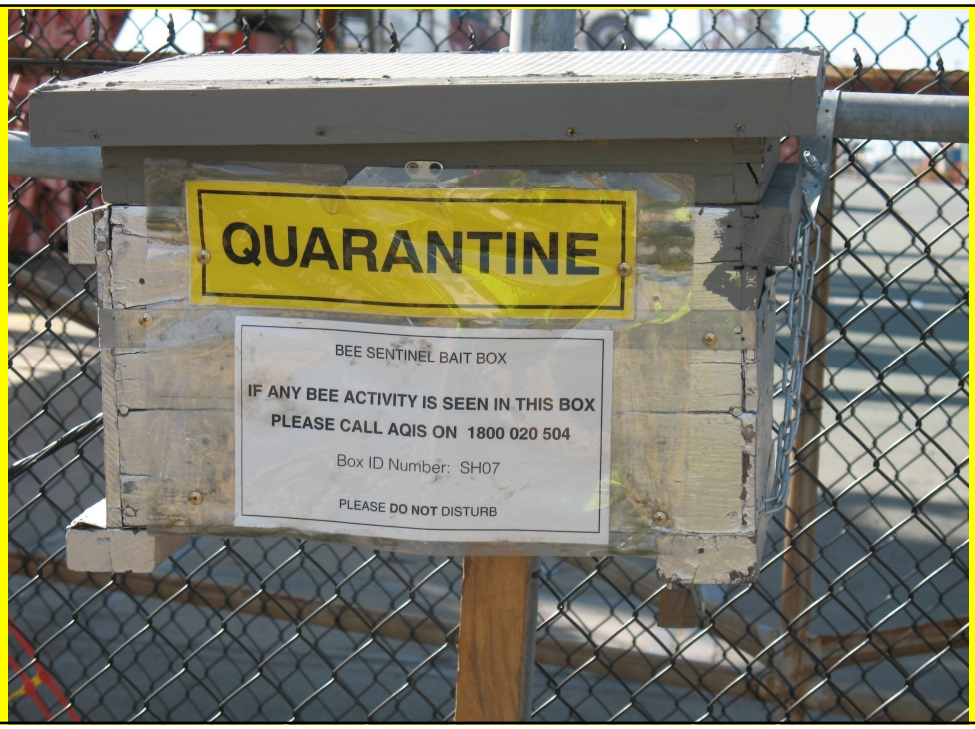
BOMBUS VOSNESENSKI

- 1997 – found Buderim Queensland – not identified till 1999 – no more found

NATIONAL SENTINEL HIVE PROGRAM

- After Darwin cerana incursion reasoned a sentinel hive program was needed
- Started in 2000 with hives established at major ports
- Hives tested every 3 months
- Later catch boxes included in the program
- Swarms at ports captured and examined for mites
- Reviewed by Pat Boland in 2005
- In 2012 management of this program transferred from Animal Health Australia to Plant Health Australia
- 2012 this program reviewed





NATIONAL BEE PEST SURVEILLANCE PROGRAM

- After a review of National Sentinel Hive Program, the National Bee Pest Surveillance Program was put in place in 2012
- The number of sentinel hives was increased
- Sentinel hives tested every 6 weeks
- Expanded to include remote surveillance catch boxes and floral sweep netting
- Sentinel hives managed by Departmental officers and beekeepers

NORTHERN AUSTRALIAN QUARANTINE STRATEGY (NAQS)

- Established in 1989 to provide early warning of exotic pests
- Covers area from Cairns in north Queensland to Broome in Western Australia – including Torres Strait
- Prior to the arrival of *Apis cerana* in Torres Strait NAQS and industry combined to train Quarantine Assistants to recognise bees

NAQS CONTINUED

- NAQS carries out surveys in Papua New Guinea and Irian Jaya to see what pests are present as this is an early warning for Australia
- During these surveys they track the progress of *Tropilaelaps clareae* in Papua New Guinea
- NAQS carries out pest awareness in northern Australia and Torres Strait

GAPS

- A limited budget
- Have carried out modelling to see which are the ports most likely to be affected
- Concentrate on high risk ports
- Possibility of incursion at low risk port
- This modelling is to be rerun
- Relies on beekeeper volunteers to look after hives
- Doing nothing is not an option

THANK YOU