



Hunting time!

Ken Glassey

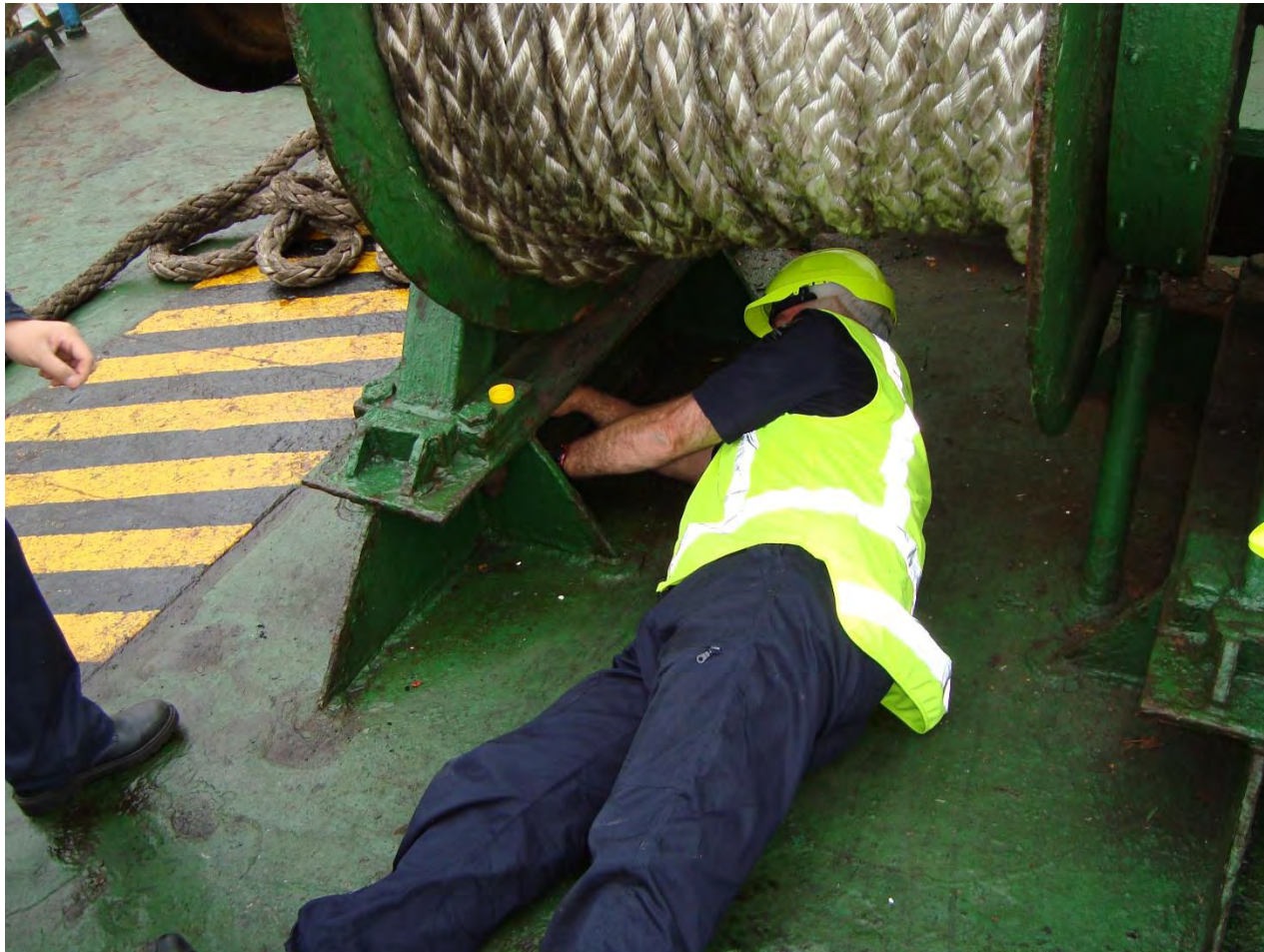
Ministry for Primary Industries, New Zealand

Growing and Protecting New Zealand



www.mpi.govt.nz

Getting down & dirty



Vital Statistics

- 2,500 vessel arrivals/year
- Includes 700 to 800 yacht visits
- 171 ships previously visited Japan
- 383 previously visited Korea or China
- 8 full AGM Inspections in 2014 ex Russia
- 7 full AGM inspections in 2015 so far
- 431 AGM increased surveillance inspections for the 2014
- 330 AGM increased surveillance inspections for 2015 so far.

Current risk rating

Risk area	AGM risk period	Valid Certificate of Freedom	Type of AGM inspection		
			<u>Full</u>	<u>Increased surveillance</u>	<u>Surveillance</u>
Russian Far East(S of 60°N W of 147°E)	18 July-16 September	No	✓		
		Yes			✓
North Japan	1 July-30 September	No		✓	
West Japan	25 June-15 September	No		✓	
East Japan	20 June-20 August	No		✓	
South Japan	1 June-10 August	No		✓	
Far south Japan	25 May-30 June	No		✓	
Korea	1 June-30 September	No		✓	
China (north of 31°15'N)	1 June-30 September	No		✓	



Inspection with mirrors



Inspection

- Full AGM inspection 3 teams of 2 people up to 6hrs
- Enhanced surveillance 2 or 3 inspectors check the obvious probable egg places on ship

Found it!



AGM finds

Origin	Host	Vessel	Number	Date
CHINA	Vessel	Ocean Star	4 egg masses	25/11/2014
CHINA	Vessel			28/10/2014
CHINA	Vessel			15/10/2013
JAPAN	Vessel	Cap Campbell	3 egg masses	4/10/2013
UNKNOWN	Vessel	Amine Bulker	1 egg mass	25/09/2012
JAPAN	Vessel - car carrier	Hoegh Xiamen	18 egg mass	31/08/2012
JAPAN	New Car Parts			22/08/2012
UNKNOWN	vessel	Choko Maru		15/01/2012
unknown	Vessel	Alam Senang		6/09/2011
JAPAN	New Car Parts			3/11/2010



Certificate of Freedom from Gypsy Moth

This is to certify that the vessel _____

Voyage _____ has been inspected by the Ministry for Primary Industries for evidence of Gypsy Moth *Lymantria dispar* while in New Zealand waters.

No Gypsy Moth at any stage of development was detected at the time of issue of this certificate. This certificate is evidence the craft is now considered low risk for conveying Gypsy Moth.

This certificate remains valid until such time as the above named craft enters into a declared "high risk" port.

This certificate does not affect in any manner the powers of the Ministry for Primary Industries under the Biosecurity Act 1993.

Inspector

Signature

Name (Please print)

Time and Date of Issue:

Location

Stamp

8 AGM egg masses on the underside of container in March, 2015 from California USA



Nights in Ngagoya 2014

- Large numbers of AGM in 2014, larger than for previous years.
- Inspections of used cars in Japan found 102 vehicles with egg masses in 2014 and 88 so far 2015.
- NZ imports some 120,000 used vehicles/year 90% inspected in Japan by companies & audited by MPI
- Changing to require all to be cleaned and inspected in Japan.



Infested van at NZ port



AGM Interception on van, March 12, 2015

- Hatching egg mass, *Lymantria dispar*
- Egg masses & pupae: 13 on underside and up to 20/wheel
- Live spiders and carpenter ants also found



Vehicle inspection



Heat treatment unit

- Cargo with AGM and other insects heat treated
- Large enough to fit a full size truck
- Heated to 60C for 10 mins for <3,000kg and 60C for 20mins for >3,000kg measured in the coldest location in the vehicle



Heat treatment unit



AGM trapping surveillance

Commenced 1993 –response to ships from Russian Far East

- Over 1500 traps spaced in grid pattern approx 7km circle from ports for the summer
- 196 suspect moth submissions 2014/15
- One AGM captured – Hamilton 2003, eradication successful aerial spraying
- Now funded by a levy on containers & vehicles (user pays) <\$1 each
- *Orgyia thyelina* (white spotted Tussock) & *Orgyia anartoides* (painted apple) successfully eradicated



Diagnostic tools

- MPI funded development of molecular diagnostic tools specifically for Lymantrid moths. Armstrong *et al.* (2003) evaluated 151 egg masses intercepted during 2000-2002,
- 82% of samples as *L. dispar*, confirming it is currently the Lymantrid most likely to reach New Zealand.
- This tool is currently being expanded to include more Australasian and Asian/Japanese Lymantrid moths.

Combining of other species in trapping programme



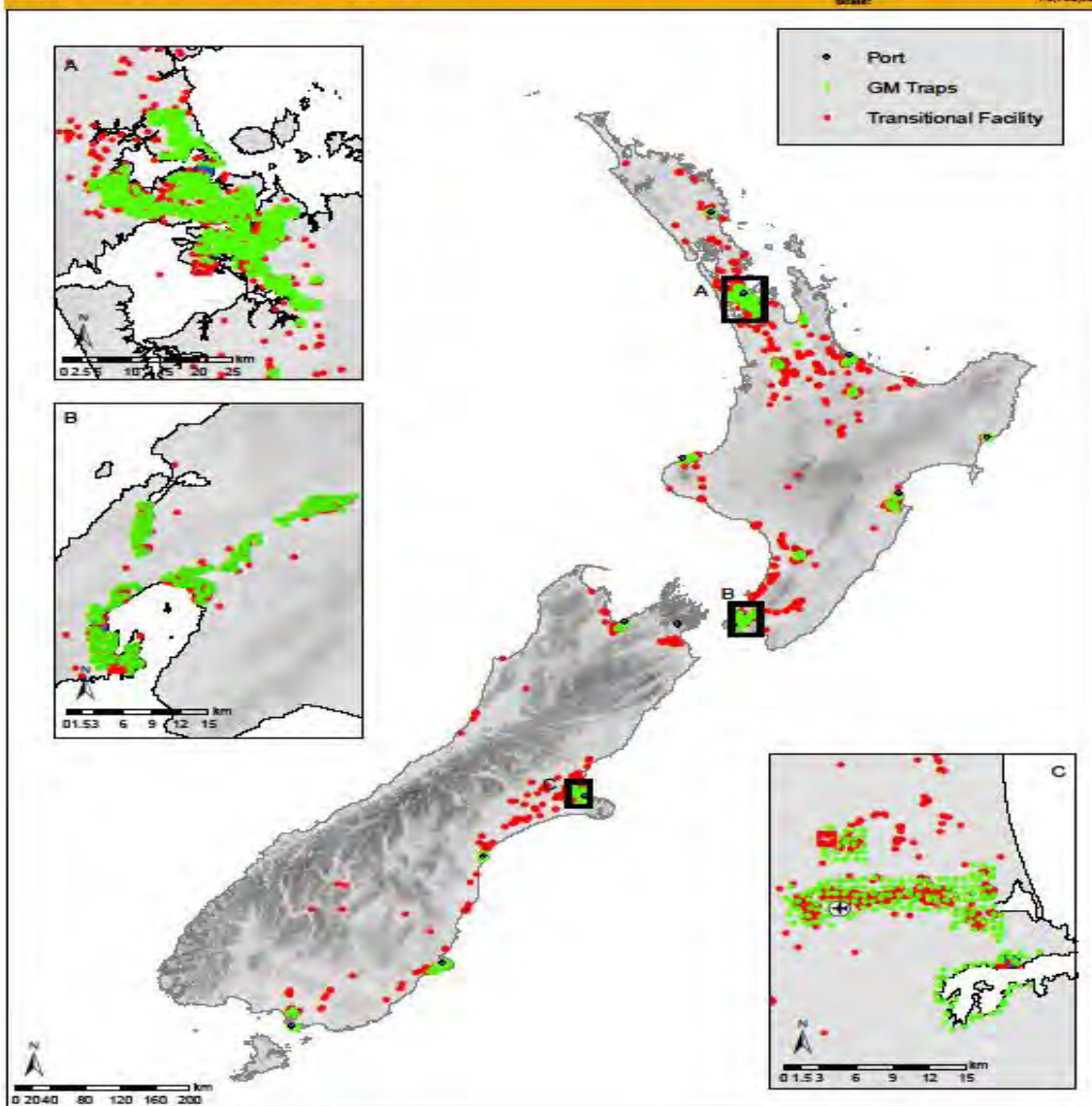
MPI has under taken research to test AGM lures with other high risk species such as fall web worm, pine shoot moth, pine processionary moth and nun moth.

Date: NZ202000
Projection: NZTM
Data sources:

Gypsy moth surveillance programme

Project name: Gypsy moth surveillance
Folder name: 0010 Gypsy moth
File name: GM_20120420.mxd
Published name: GM_20120420.pdf
Date drawn: 20/04/2013
Scale: 1:8,700,000

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NEW ZEALAND. IT'S OUR PLACE TO PROTECT.



Other Risks on Vessels

- MPI has been very concerned about the brown marmorated stink bug (BMSB) *Halyomorpha haly* for some time
- A serious pest with a bigger impact than fruit fly
- In December 2014 many BMSB were found in RORO ships arriving in NZ
- Vehicles and machinery from the USA now require pre-shipment treatment

IF YOU FIND ONE OF THESE ON THE SHIP



CATCH IT. KILL IT. REPORT IT.

If you find one of these in or on cargo cover it.

Crew – please report the find to the master

Master – please report the find to the quarantine authorities at the destination.

Exotic pests like the brown marmorated stink bug are a threat to the economy and environment for many countries.



Questions?

