

# **Asian Gypsy Moth Inspection Program For The Maritime Industry**

**Created by**

**U.S. Department of Homeland Security**

**Customs and Border Protection**

**In Cooperation With**

**U.S. Department of Agriculture**

**Animal and Plant Health Inspection Service**



**U.S. Customs and  
Border Protection**



# Objectives

1. Review the challenges of the introduction and spread of the Asian Gypsy Moth (AGM).
2. Identify the consequences of AGM discoveries on vessels.
3. Provide guidance to vessel operators on recognition and response to AGM interceptions.



# Managing the Threat

The Department of Homeland Security, U.S. Customs and Border Protection (CBP) and the Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) coordinate efforts to prevent the introduction of harmful insect pests.



# Managing the Threat

- CBP conducts vessel inspections.
- CBP targets vessels by risk-based priority.
- APHIS provides risk-related data on countries where AGM is known to exist.
- APHIS determines inspection procedures.

# AGM Background

AGM is not present in North America.

AGM may feed on over 600 plant species and can negatively impact U.S. agricultural and natural resources.



# AGM Background

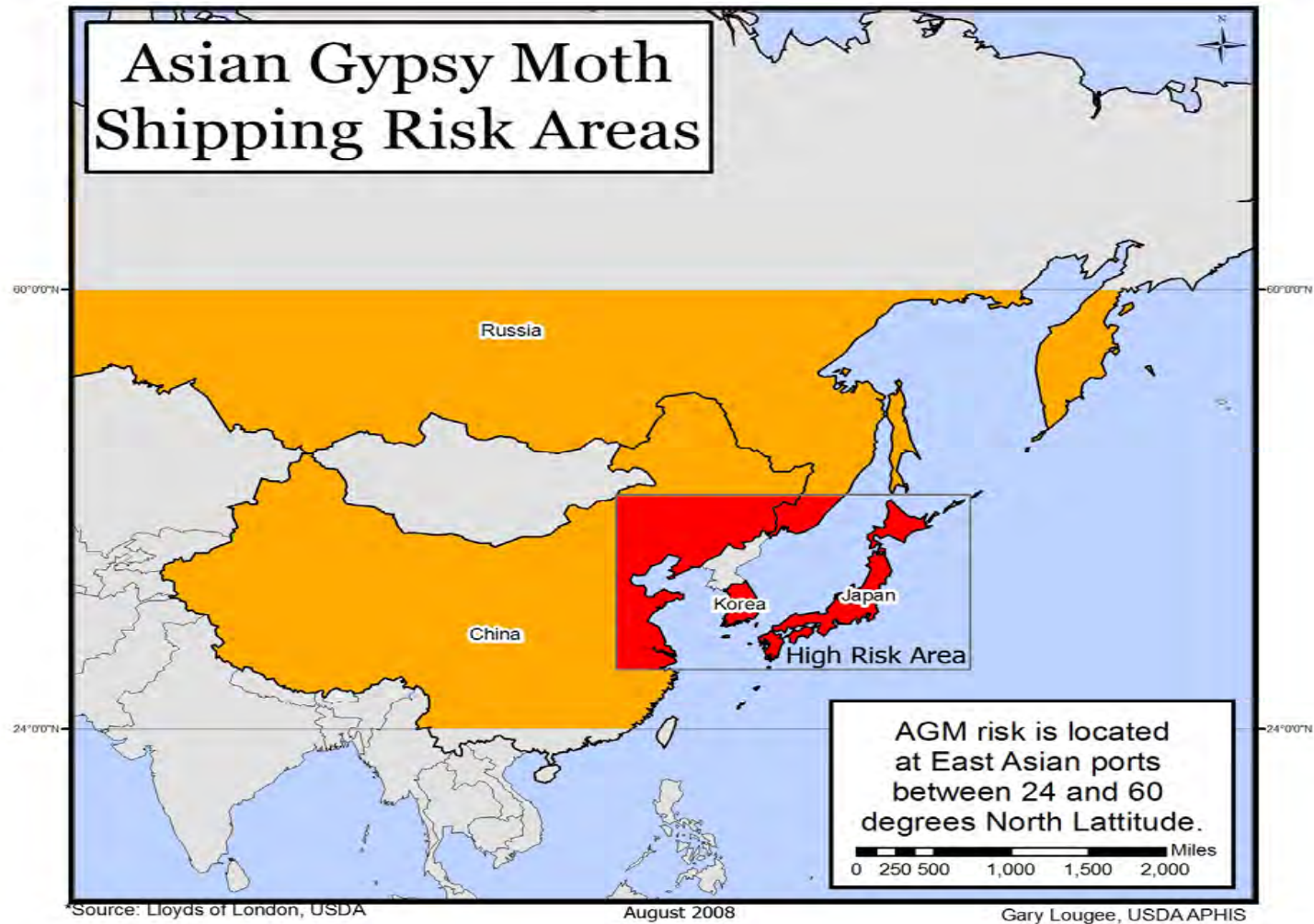
AGM can fly more than  
25 miles

AGM infestation would  
result in the defoliation  
of environmentally  
important species.

Dense populations would  
cause economic and  
environmental damage.



# AGM Distribution



# AGM Interception – Consequences

Any AGM detection on a vessel may require the vessel be:

- Ordered out of port and into international waters
- Required to undergo treatment



# AGM Interception – Consequences

Any AGM detection on a vessel may require that the vessel be:

- Re-inspected
- Refused entry



# AGM Interception – Consequences

These circumstances may be minimized by adherence to strict sanitation standards involving the removal and destruction of all AGM egg masses prior to a vessel's arrival in the United States.



# AGM – Egg Masses

AGM females are known to deposit egg masses while in specific eastern Asia foreign ports between May and October.

Egg masses are the most likely life stage to be found on a vessel.



# AGM – Egg Masses

**Egg masses** are velvety in texture and range in color from light tan to dark brown.



# AGM – Larvae

**Larvae or Caterpillars** normally hatch from eggs in early spring and are about 1.6 mm in length. They disperse by blowing on silk strands.



Photo – Courtesy of Steven Katovich, USDA Forest Service

# AGM – Larvae



photo courtesy of: USDA Forest Service Region 8 Archive @ [www.forestryimages.org](http://www.forestryimages.org)



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# AGM – Adult Moths

Both sexes fly. The males are grayish brown. Females are larger, whitish in color, with prominent black marks on the wings.

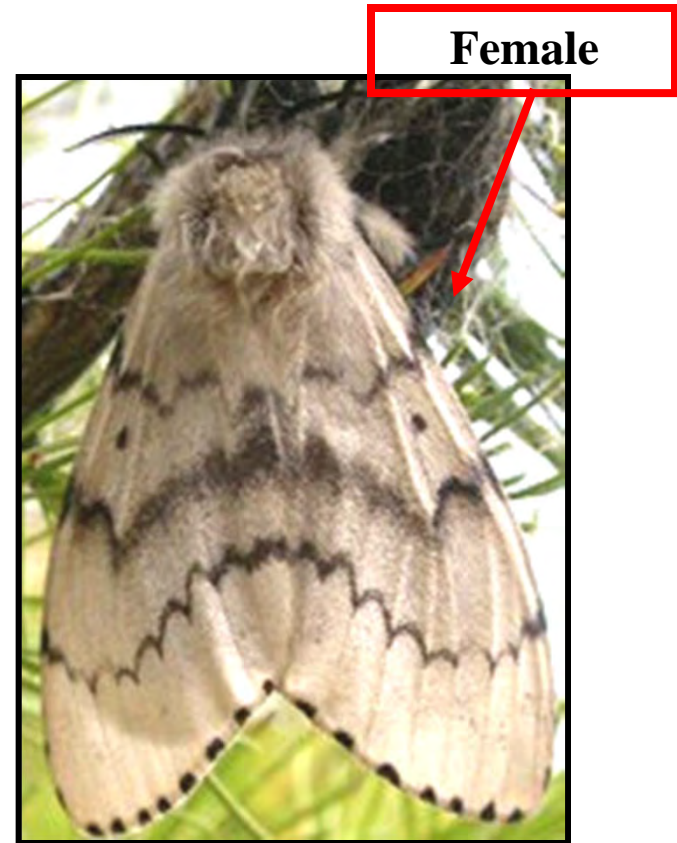


Photo: John H. Ghent, USDA Forest Service, [www.forestryimages.org](http://www.forestryimages.org)

# Vessel Operators Are Encouraged To

- Search for egg masses
- Collect egg masses
- Destroy egg masses





# Vessel Operators Are Encouraged To

- Conduct Self Inspections for AGM prior to arrival
- Self Inspections:
  - Increase preparedness for arrival
  - Improves likelihood of freedom of movement



# Vessel Operators Are Encouraged To

- Self Inspections:
  - Both the U.S. and Canada request self-inspections
  - Likely reduces AGM presence
  - Prevents denial of entry
  - Avoids costly schedule and operational delays



# Vessel Operators Are Encouraged To

Destroy egg masses by:

1. Placing egg masses in alcohol;
2. Boiling the egg masses in water; or
3. Incinerating the egg masses.



# Vessel Operators Are Encouraged To

Destroy egg masses as noted.

AGM egg masses *should never* be discarded by throwing overboard as there have been instances where egg masses have floated to shore and continue to develop, hatch, and spread.



# AGM – Inspection Equipment

- Binoculars
- Extendable/collapsible mirrors
- Knife, paint scraper or putty knife
- Flashlight
- Golden Spray Pest Oil



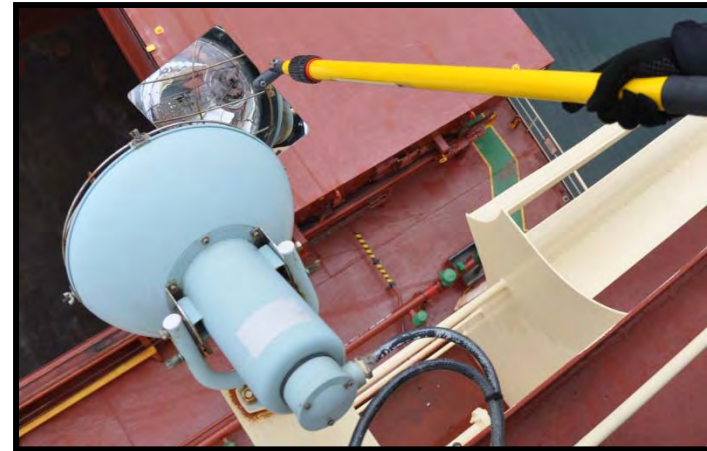
# AGM – Inspection Equipment

## Binoculars – to inspect inaccessible areas.



# AGM – Inspection Equipment

Extendable mirror—  
to look around  
corners and over  
or under edges.



# AGM – Inspection Equipment

Knife, paint scraper or putty knife – to scrape the egg masses from the structure.





# AGM – Inspection Equipment

Flashlight – Enhances ocular perception and increases ability to detect AGM and other organisms.



# AGM – Inspection Equipment

Golden Spray Pest Oil  
– treats areas where  
suspect AGM are  
found, and prevents  
microscopic AGM  
organisms from any  
development.



# Where to Inspect

Inspect the  
superstructure.

Perform a “walk-around” visual inspection of containers on the deck.



# Where to Inspect

Inspect areas exposed to bright lights. Female AGM tend to lay eggs near light sources.



# Where to Inspect

Moths also tend to shelter their eggs from the elements.

Inspect sheltered areas such as deck edges and open doorways leading to shelter.



# Where to Inspect

Inspect cables and supports both in front of, and behind areas leading to the superstructure.



# Where to Inspect

Inspect hard to reach locations.



# Where to Inspect

Inspect behind walls and doors.





# Where to Inspect

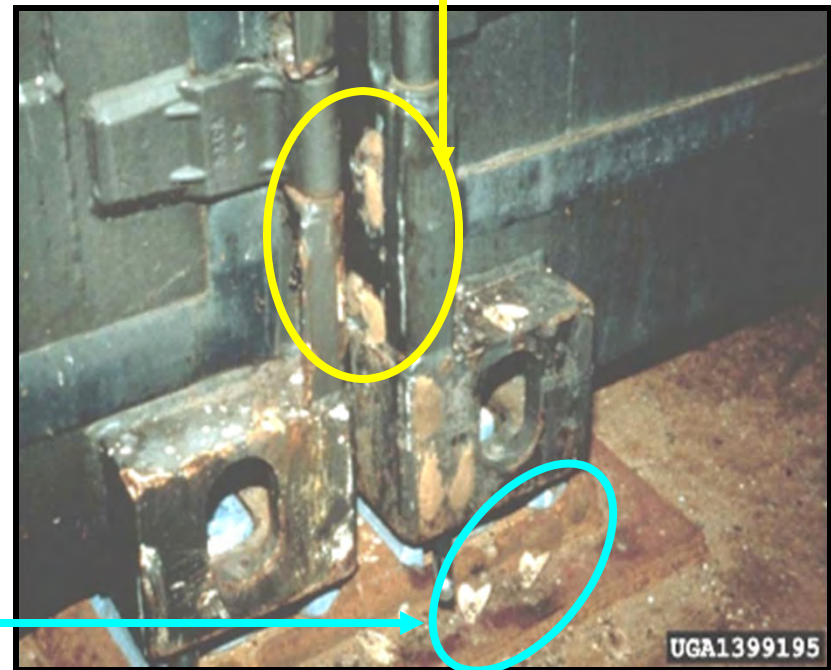
AGM egg masses may be found on lines used to moor the vessel or extra lines laying on the deck.



# Where to Inspect

AGM egg masses may be found on containers stored on the deck. Other life stages may also be found.

Egg Masses

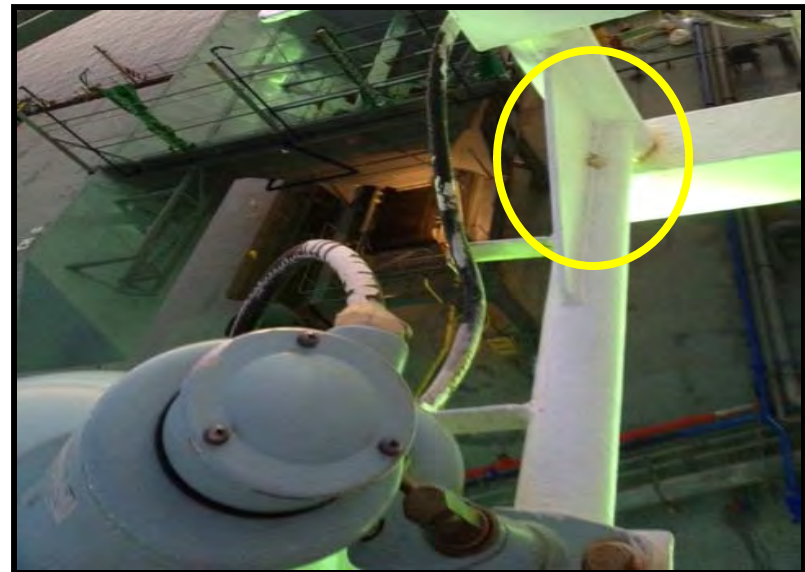


Adult Females

Photo – Courtesy of Manfred Mielke, USDA Forest Service

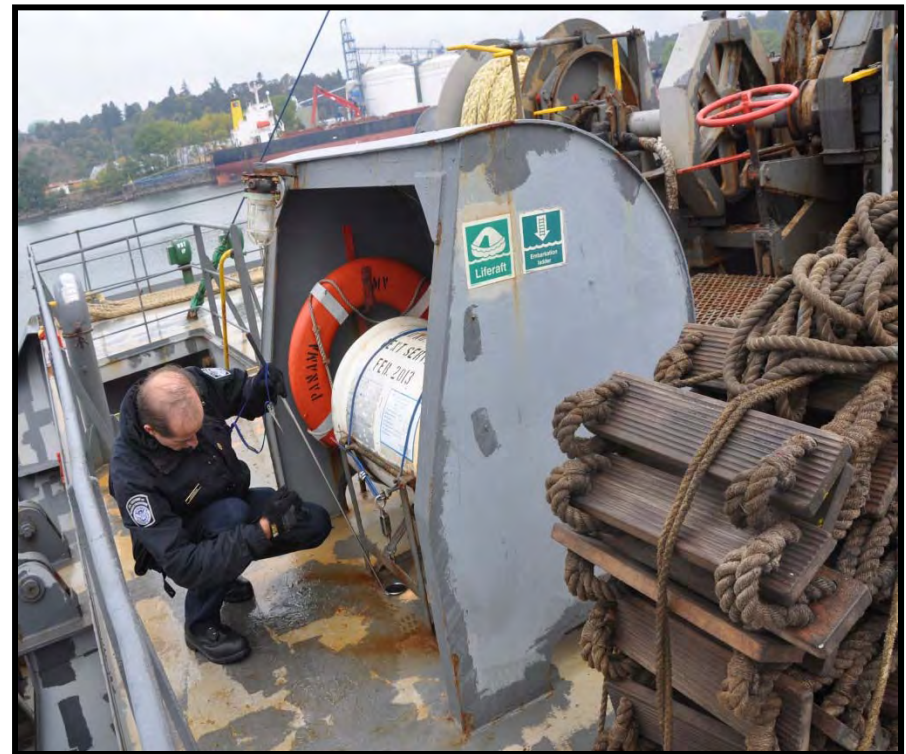
# Where to Inspect

AGM egg masses may be found on safety rails and supports.



# Where to Inspect

AGM egg masses may be found inside a wheel-house, underneath pallets, small storage containers, and inside accessory storage lockers.



# Where to Inspect

AGM egg masses may be found on the outside hull.



A cleaning company was needed to assist to remove excess egg masses



# Where to Inspect

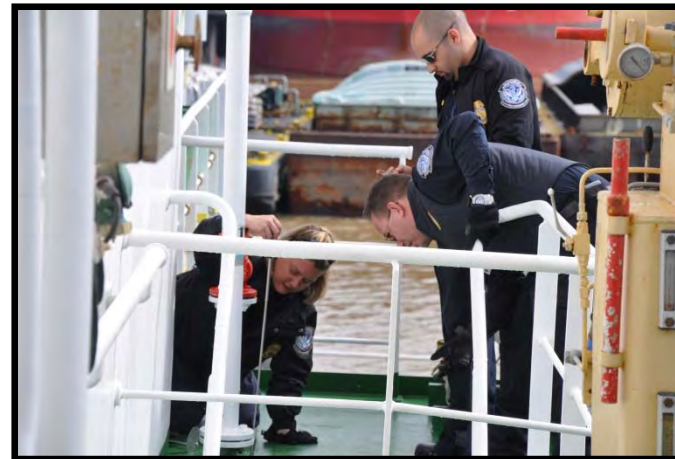
AGM egg masses may be found on barrels, garbage cans, ladders, tables and inside vessel gear boxes.



# Where to Inspect

AGM egg masses may be found on anything:

- Cargo hold framing
- Air intake vents
- Vessel smoke stacks
- Equipment



# What to Expect

Vessels arriving from both foreign and coastwise ports are subject to inspection by CBP.





# What to Expect

Vessels arriving from China, Japan, Korea, and far east Russia during designated periods should obtain certification *prior to departure* from these countries.



# What to Expect

Vessels calling on China, Japan, Korea and Russia require certification. Due to the presence of AGM in those countries, vessels calling these ports during certain months pose a risk for AGM.



# What to Expect

Vessel operators must ensure that no AGM egg masses or other AGM life stages are present when they arrive in the U.S.



# What to Expect

Vessels found to be infested with AGM will not be authorized to load or unload cargo until free from all life stages of AGM and may be denied access to U.S. ports.



# What to Expect

The United States, Canada and Mexico routinely collaborate on the AGM issue including discussions on trends, AGM interceptions and remedial actions.



# What To Do

Secure certification from Chinese, Japanese, Korean, and far east Russian ports.

Vessel operators must direct vessel agents in China, Japan, Korea, and Russia to contact the appropriate inspectional bodies.

# What To Do

China: China Certification & Inspection Group (CCIC) conducts AGM inspections

Japan: Authorized entities currently conduct AGM inspections

Korea: International Plant Quarantine Accreditation Board (IPAB) conducts AGM inspections

Russia: Federal inspectors conduct AGM certification inspections.

# What To Do

Perform a thorough visual inspection *prior to overseas departure.*

Perform a thorough visual inspection for AGM *prior to arrival in the U.S.*

Scrape off, collect and properly destroy all AGM egg masses.



# What **NOT** To Do

Do not paint over the AGM egg masses.

Do not use high pressure water to remove AGM egg masses.

Do not throw AGM egg masses overboard.



# Conclusion

CBP and APHIS work closely together to identify and eliminate threats to U.S. agricultural and forestry resources from an accidental or intentional introduction of harmful insect pests.



# Conclusion

The Asian Gypsy Moth is a highly destructive forest pest which can enter the United States by laying eggs on ocean carriers and/or cargo while in foreign ports.



# Conclusion

Ships that have transited ports in China, Japan, Korea and far east Russia pose a risk to introduce AGM into the United States, Canada and Mexico.



# Conclusion

CBP and APHIS are committed to assisting with steadfast support to the maritime industry by detailing the processes, and providing instruction that will reduce AGM risk.



# Conclusion

CBP and APHIS seek the cooperation of the maritime industry to:

- Pre-inspect vessels for AGM prior to departure from foreign ports, and
- Remove and properly dispose of any AGM egg masses prior to arrival.



# AGM Resources

## 1. USDA AGM Website

[www.aphis.usda.gov/plant\\_health/plantpestinfo/gypsy\\_moth/agm-background.shtml](http://www.aphis.usda.gov/plant_health/plantpestinfo/gypsy_moth/agm-background.shtml)



# AGM Resources

## 3. Asian Gypsy Moth Website

[www.asiangypsymoth.org](http://www.asiangypsymoth.org)

## 4. Canadian Food Inspection Agency AGM Website

[www.inspection.gc.ca/english/plaveg/pestrava/lymdis/lymdisae.shtml](http://www.inspection.gc.ca/english/plaveg/pestrava/lymdis/lymdisae.shtml)





# For Additional Information

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