

# **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 finds.



# Managing the Threat

The Department of Homeland Security, US 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

APHIS determines inspection procedures.

APHIS provides risk-related data on countries where AGM is known to exist.

CBP conducts vessel inspections.



# AGM Background

AGM is not present in  
North America.

AGM may feed on over  
600 plant species and  
can seriously affect our  
agriculture and forest  
resources.



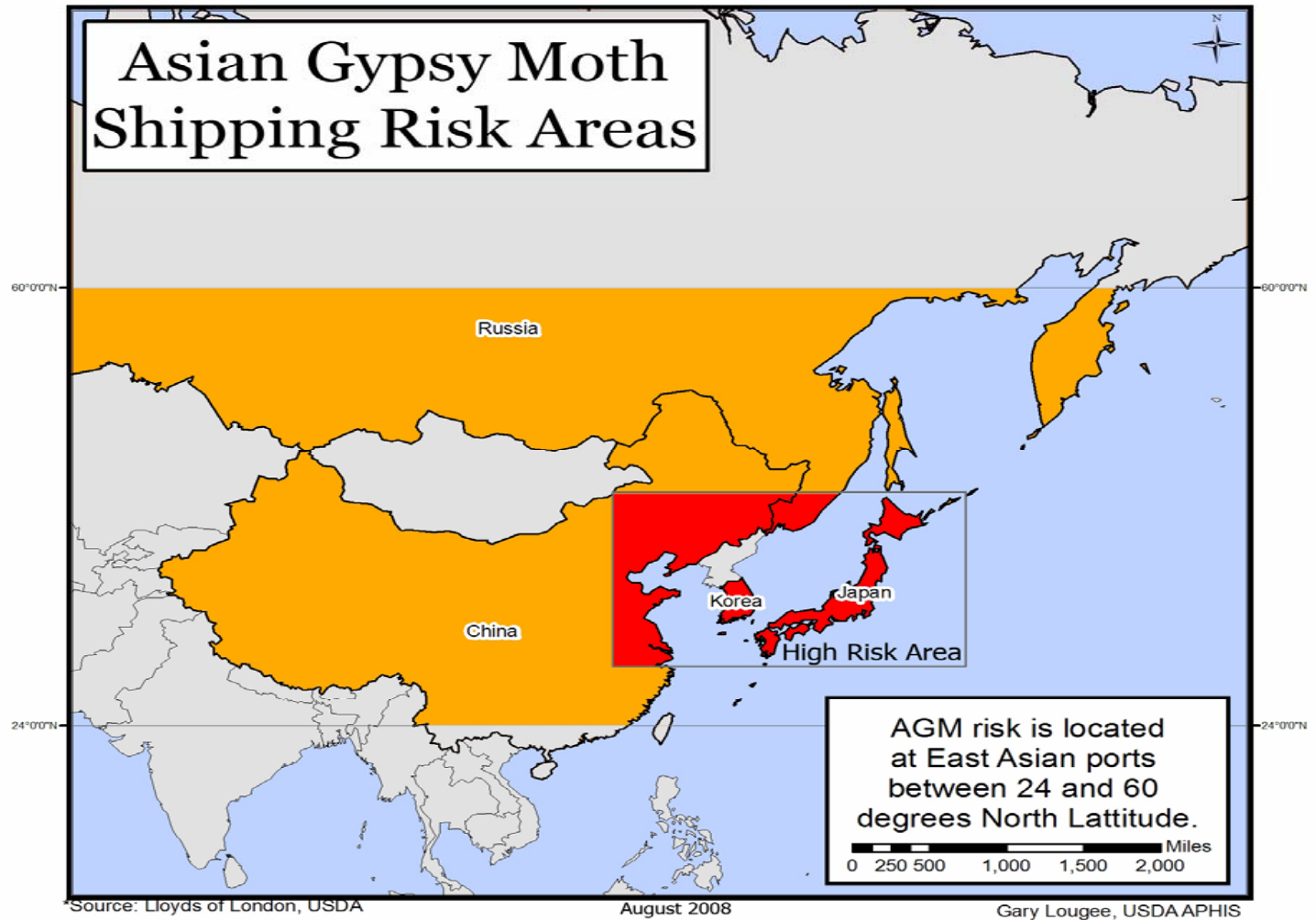
# AGM Background

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

Dense populations would cause economic and environmental damage.



# AGM Distribution



# AGM Find – Consequences

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

- Ordered into international waters
- Required to undergo treatment





# AGM Find – Consequences

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

- Re-inspected
- Refused entry



# AGM Find – Consequences

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



# AGM – Egg Masses

AGM females deposit egg masses while in specific 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

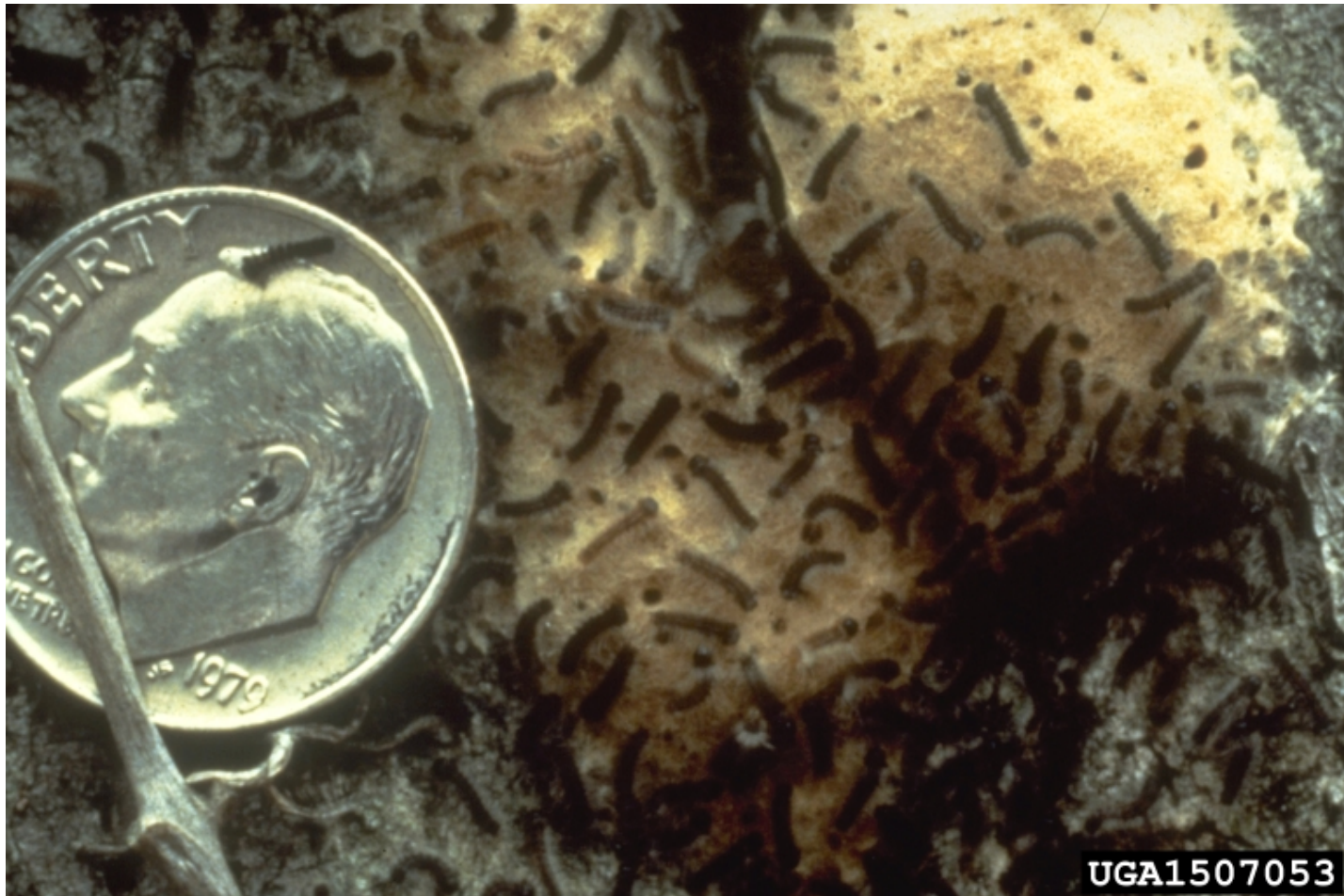


photo courtesy of: USDA Forest Service Region 8 Archive @ [www.forestryimages.org](http://www.forestryimages.org)



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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.

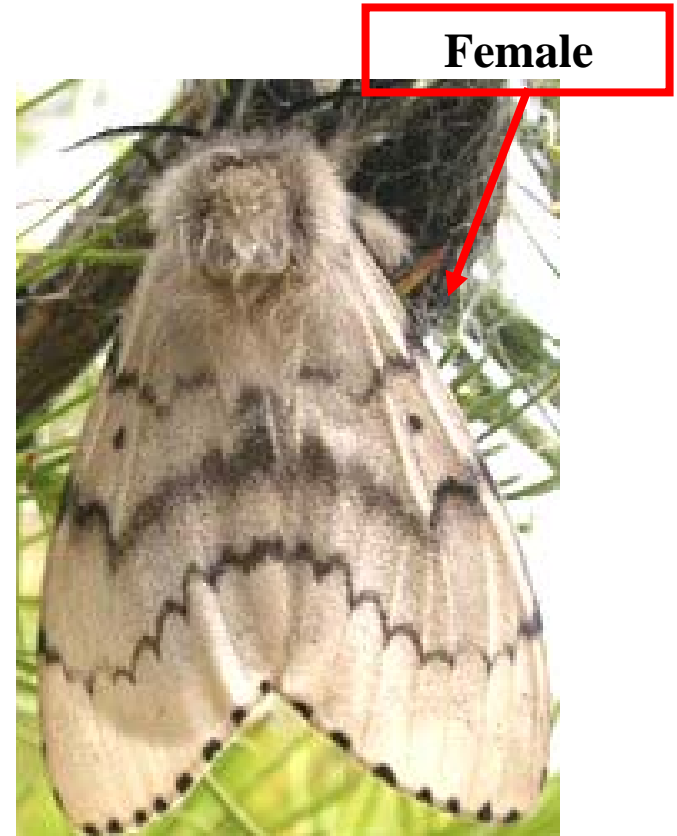


Photo: John H. Ghent, USDA Forest Service, [www.forestryimages.org](http://www.forestryimages.org)



# Vessel Operators Are Encouraged To

- Search for egg masses
- Scrape off egg masses
- Destroy egg masses





# 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
- Mirror on a stick
- Knife, paint scraper or putty knife
- Flashlight



# AGM – Inspection Equipment

Binoculars – to inspect inaccessible areas.



# AGM – Inspection Equipment

Mirror on a stick –  
to look around  
corners and under  
edges.



# AGM – Inspection Equipment

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



Photo – Courtesy of Hannes Lemme ,[www.forestryimages.org](http://www.forestryimages.org)



# 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 locations such as underneath deck edges.



# Where to Inspect

Inspect supports  
and inside areas  
leading to the  
superstructure.



# Where to Inspect

Inspect hard to reach locations.



# Where to Inspect

Inspect behind walls and doors.





# Where to Inspect

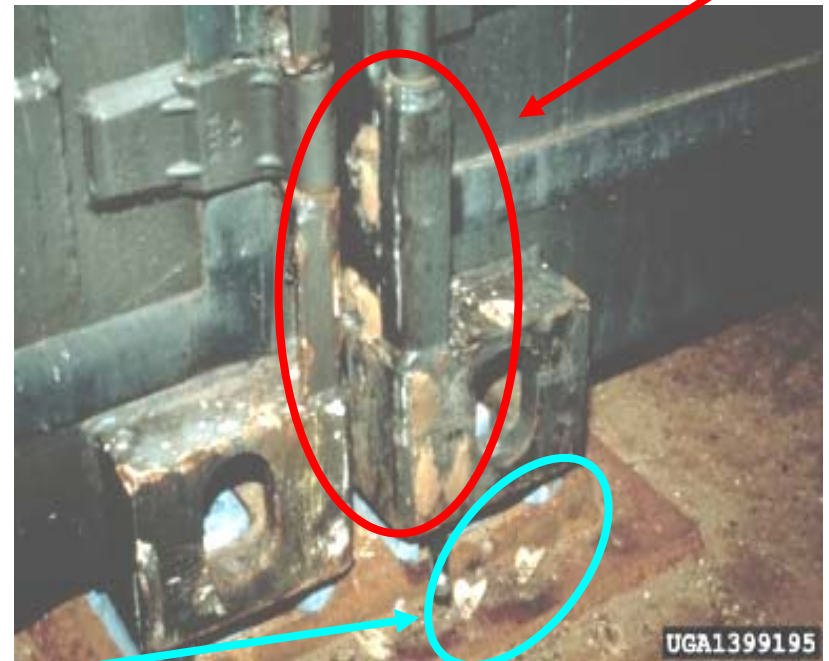
AGM egg masses may be found on lines used to moor the vessel or extra lines laying on the deck.



# 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/tool house or storage area.





# Where to Inspect

AGM egg masses may be found on the outside hull.



# Where to Inspect

AGM egg masses may be found on storage cans, barrels or garbage cans.



# 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 far east Russia and Japan during designated periods should obtain certification *prior to departure* from these countries.

(Refer to bullet #1 on the “AGM Resources” slide).



# What to Expect

Vessels calling on China and Korea do not require certification at this time. However, due to the presence of AGM in those countries, those vessels pose a risk for AGM.



# What to Expect

Vessels operators must ensure that no AGM egg masses or other AGM life stages remain on board when they arrive in the U.S.



# What to Expect

Vessels found 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 finds and remedial actions.



# What To Do

Secure certification from Japanese and Russian ports.

Vessel operators must direct ship's agents in Russia and Japan to contact the appropriate inspectional bodies.



# What To Do

Russia: inspectors of the Federal service for Veterinary and Phytosanitary Surveillance of the Russian Federation conduct the inspections.

Japan: there are presently six private commercial entities authorized to conduct the 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 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

APHIS and CBP work closely together to identify and eliminate threats to our agriculture and forest resources from the 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 vessels and/or cargo while in foreign ports.



# Conclusion

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





# Conclusion

CBP and APHIS are committed to work with the maritime industry by supporting measures 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. CBP Manual For Agriculture Clearance

[www.aphis.usda.gov/import\\_export/plants/manuals/ports/downloads/mac\\_pdf/33examining\\_carriers\\_vessels.pdf](http://www.aphis.usda.gov/import_export/plants/manuals/ports/downloads/mac_pdf/33examining_carriers_vessels.pdf)

## 2. USDA AGM Website

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



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