



U.S. Customs and
Border Protection

Asian Gypsy Moth Inspection Program Trade Outreach



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March 2016

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 500 plant species and can negatively impact U.S. agricultural and natural resources.



Photo - Courtesy of Google Images-Asian Gypsy Moth

AGM Background

AGM can fly more than
25 miles

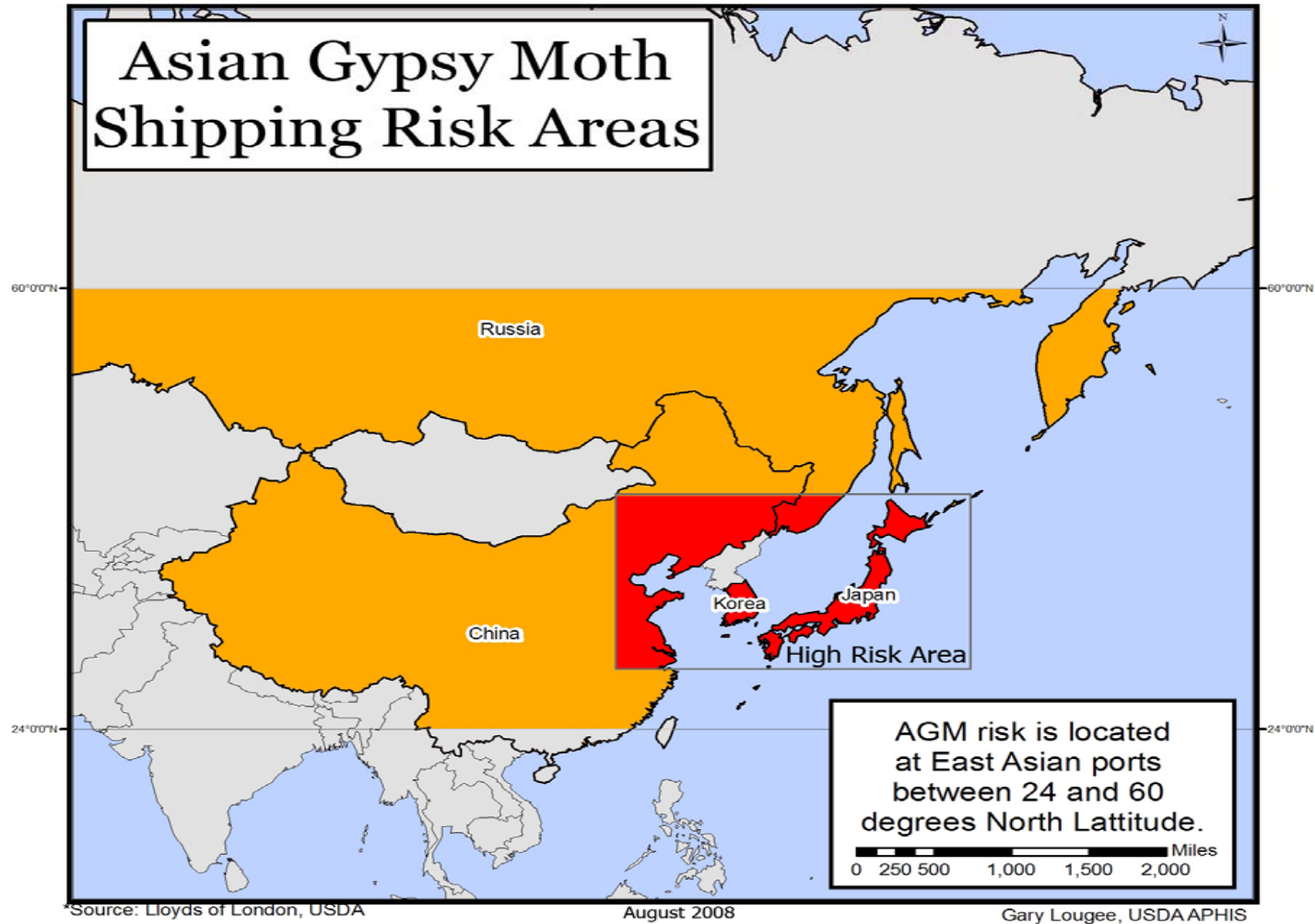
AGM infestation would
result in the defoliation
of environmentally
important species.

Dense populations would
cause economic and
environmental damage.



Photo - Courtesy of Wikipedia.org

AGM Distribution



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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.



Photo - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP



Photo - Courtesy of Sue Lane, USDA-APHIS-PPQ

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



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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.

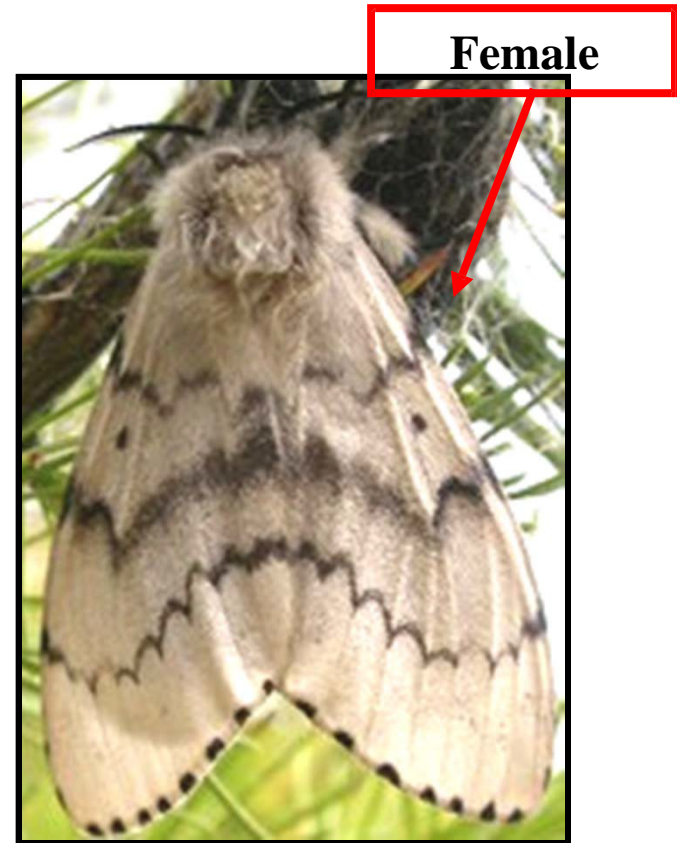


Photo – Courtesy of John H. Ghent, USDA Forest Service, www.forestryimages.org

Vessel Operators are Encouraged to

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



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP

Vessel Operators are Encouraged to

Conduct Self - inspections for AGM prior to arrival. Self-inspections:

- Increase preparedness for arrival
- Improve likelihood of freedom of movement



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP



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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



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP



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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.



Photo - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP



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AGM – Inspection Equipment

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



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP

AGM – Inspection Equipment

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



Photo - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP



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AGM – Inspection Equipment

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



*Photo - Courtesy of Dean Duval, Agriculture
Operations Manager, U.S. CBP*

AGM – Inspection Equipment

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



Photo - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP

Where to Inspect

Inspect the superstructure.

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

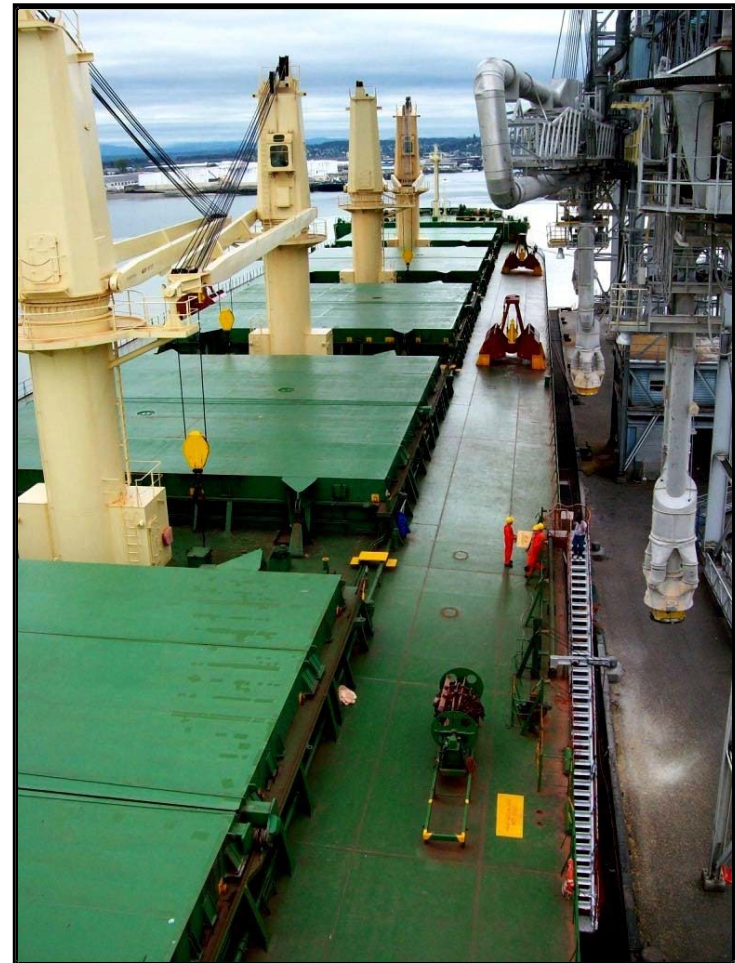


Photo - Courtesy of U.S. CBP Seattle Port of Entry

Where to Inspect

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



Photo - Courtesy of U.S. CBP Seattle Port of Entry



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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.



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP

Where to Inspect

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



Photos - Courtesy of U.S. CBP Oakland Port of Entry

Where to Inspect

Inspect hard to reach locations.



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP



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Where to Inspect

Inspect behind walls and doors.



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP



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Where to Inspect

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



Photo-Courtesy of USDA APHIS PPQ

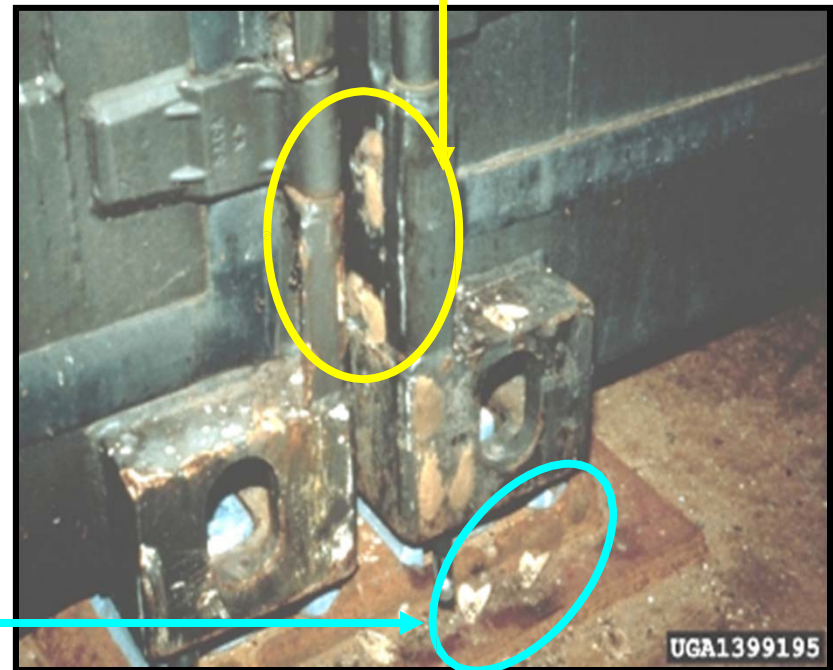


*Photo - Courtesy of Dean Duval,
Agriculture Operations Manager, U.S. CBP*

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.



Photo - Courtesy of U.S. CBP Seattle Port of Entry

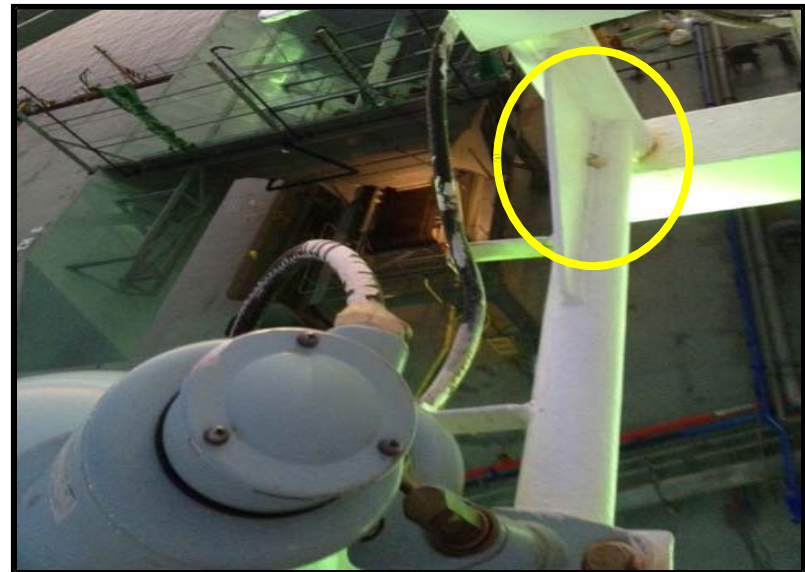


Photo - Courtesy of U.S. CBP New Orleans Port of Entry



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Where to Inspect

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

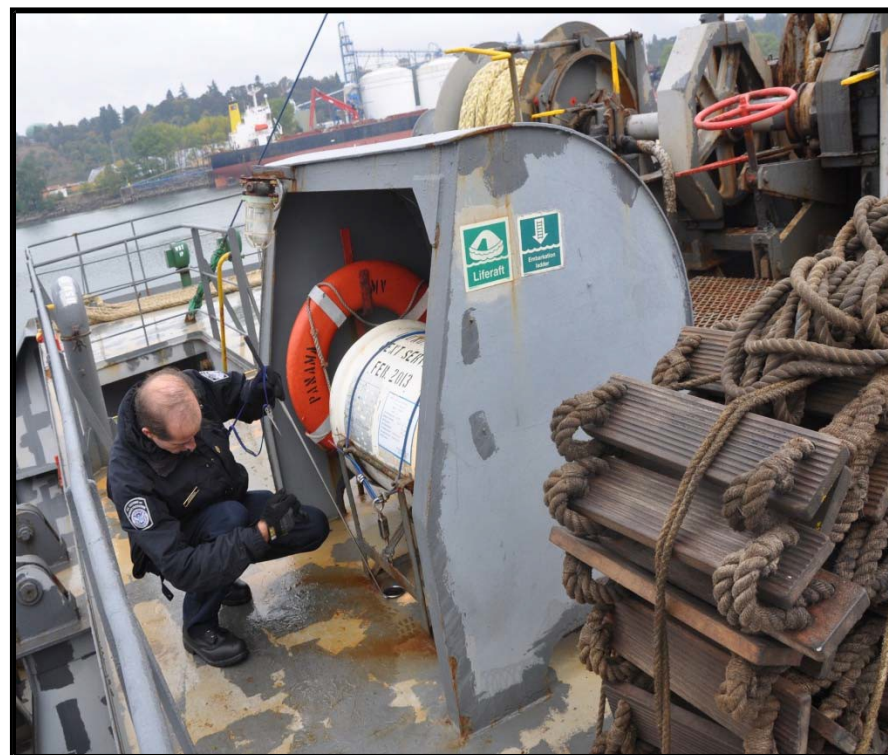


Photo - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP

Where to Inspect

AGM egg masses may be found on the outside hull.



Photo - Courtesy of U.S. CBP Long Beach Port of Entry



Photo - Courtesy of U.S. CBP Seattle Port of Entry



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Where to Inspect

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



Photo - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP

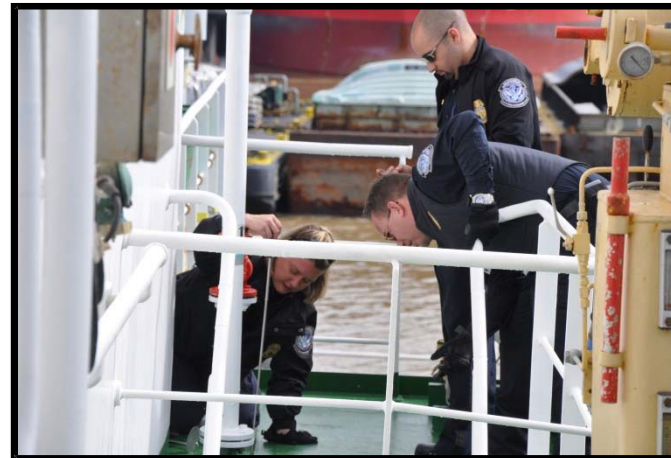


Photo - Courtesy of U.S. CBP Oakland Port of Entry

Where to Inspect

AGM egg masses may be found on anything:

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



Photos - Courtesy of Dean Duval, Agriculture Operations Manager, U.S. CBP

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 travelling to China, Japan, Korea and Russia require certification. Due to the presence of AGM in those countries, vessels travelling to 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 of introducing AGM into the United States, Canada, and Mexico.

Conclusion

CBP and APHIS are committed to assisting the maritime industry with steadfast support 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/
plantpest_info/gypsy_moth/agm-
background.shtml](http://www.aphis.usda.gov/plant_health/plantpest_info/gypsy_moth/agm-background.shtml)



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AGM Resources

2. Asian Gypsy Moth Website

www.asiangypsymoth.org

3. Canadian Food Inspection Agency AGM Website

www.inspection.gc.ca/english/plaveg/pestrava/lymdis/lymdisae.shtml

For Additional Information

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