

Loss Prevention 10 May, 2023

Flighted Spongy Moth Complex (FSMC) / Asian Gypsy Moth (AGM) 2023



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Due to the Flighted Spongy Moth Complex/Asian Gypsy Moth's destructive nature, particularly in countries where the pest is not indigenous, the following countries have specific procedures in place to prevent FSMC/AGM from entering their fragile eco system:

- Argentina
- Australia
- Canada
- Chile
- New Zealand
- United States

Details can be found below.

Introduction

The FSMC/AGM, including *Lymantria dispar asiatica*, *Lymantria dispar japonica*, *Lymantria albescens*, *Lymantria umbrosa*, *Lymantria postalba*) is a highly destructive forest pest that feeds on both deciduous and coniferous trees.

The voracious appetite of FSMC/AGM larvae (caterpillars) coupled with the ability of the female moth to travel significant distances (as much as 20 nautical miles) can cause widespread defoliation leaving trees weakened and susceptible to disease and other pests.

FSMC/AGM is found primarily in Asia or Russia with a high risk of their egg infestation of vessels calling at ports in Korea, Northern China (north of Shanghai; ports north of latitude 31°15'N), and in particular the Russian Far East and Japan during the flight season of the female moth.

FSMC/AGM Flight Season

The main concern to countries attempting to prevent the introduction of the FSMC/AGM are vessels that have called at ports in an FSMC/AGM High Risk Area during the “flight season”.

The specific timing of the “flight season” differs from country to country:

Argentina

Flighted Spongy Moth Complex/Asian Gypsy Moth Endemic Area (For ports located between 60°N and 20°N)	Female Flight Season
Russian Far East (Zarubino, Vostochny, Nakhodka, Vladivostok, Kozmino, Slavyanka, Nevelsk, Kholmsk, Korsakov, Vanino, Petropavlovsk-Kamchatskiy)	15 June to 15 October
China (All Ports north of 20°N, including Yangpu (19° 43'N) and Macun (19° 58'N) ports located on Hainan Island)	1 June to 30 September
Korea (Ulsan, Pohang, Mokpo, Yeosu, Gunsan, Gwangyang, Hadong, Samcheonpo, Boryeong, Daesan, Taeon, Donghae-Mukho, Okgye, Hosan, Busan, Jinhae, Masan, Tongyeong, Jangseongpo, Okpo, Gohyeon, Incheon, Pyeongtaek- Dangjin)	1 June to 30 September
Northern Japan (Hokkaido, Aomori, Iwate, Miyagi and Fukushima Prefectures)	15 June to 15 October
Western Japan (Akita, Yamagata, Niigata, Toyama and Ishikawa Prefectures)	1 June to 30 September
Eastern Japan (Fukui, Ibaraki, Chiba, Tokyo, Kanagawa, Shizuoka, Aichi and Mie Prefectures)	1 June to 30 September
Southern Japan (Wakayama, Osaka, Kyoto, Hyogo, Tottori, Shimane, Okayama, Hiroshima, Yamaguchi, Kagawa, Tokushima, Ehime, Kochi, Fukuoka, Oita, Saga, Nagasaki, Miyazaki, Kumamoto and Kagoshima Prefectures)	15 May to 31 August
Far South Japan (Okinawa)	25 May to 30 June

Australia

Flighted Spongy Moth Complex/Asian Gypsy Moth Endemic Area Russian Far East	Female Flight Season
(Ports between 40°N and 60°N and west of 147 °E)	1 July to 30 September

Chile

Flighted Spongy Moth Complex/Asian Gypsy Moth Endemic Area (For ports located between 60°N and 20°N)	Female Flight Season
Russian Far East	1 July to 30 September
China (Ports north of 20°N)	1 June to 30 September
North Korea	1 June to 30 September
Republic of Korea	1 June to 30 September
Northern Japan (Hokkaido, Aomori, Iwate, Miyagi and Fukushima Prefectures)	1 July to 30 September
Western Japan (Akita, Yamagata, Niigata, Toyama and Ishikawa Prefectures)	25 June to 15 September
Eastern Japan (Fukui, Ibaraki, Chiba, Tokyo, Kanagawa, Shizuoka, Aichi and Mie Prefectures)	20 June to 20 August
Southern Japan (Wakayama, Osaka, Kyoto, Hyogo, Tottori, Shimane, Okayama, Hiroshima, Yamaguchi, Kagawa, Tokushima, Ehime, Kochi, Fukuoka, Oita, Saga, Nagasaki, Miyazaki, Kumamoto and Kagoshima Prefectures)	1 June to 10 August
Far South Japan (Okinawa)	25 May to 30 June

New Zealand

Flighted Spongy Moth Complex/Asian Gypsy Moth Endemic Area	Female Flight Season
Russian Far East (South of 60°N and west of 147°, excluding ports in the Kamchatka Peninsula)	15 June to 15 October
China (North of 31°15'N)	1 June to 30 September
Republic of Korea (All ports)	1 June to 30 September
Northern Japan (Hokkaido, Aomori, Iwate, Miyagi and Fukushima, Akita, Yamagata Prefectures)	15 June to 15 October
Central Japan	1 June to September 30
(Niigata, Toyama, Ishikawa, Fukui, Ibaraki, Chiba, Tokyo, Kanagawa, Shizuoka, Aichi, Mie Prefectures)	
Southern Japan (Wakayama, Osaka, Kyoto, Hyogo, Tottori, Shimane, Okayama, Hiroshima, Yamaguchi, Kagawa, Tokushima, Ehime, Kochi, Fukuoka, Oita, Saga, Nagasaki, Miyazaki, Kumamoto and Kagoshima Prefectures)	15 May to 31 August
Far South Japan (Okinawa)	25 May to 30 June

United States & Canada

Flighted Spongy Moth Complex/Asian Gypsy Moth Endemic Area	Female Flight Season
Russian Far East (Kozmino, Nakhodka, Ol'ga, Plastun, Pos'yet, Russkiy Island, Slavyanka, Vanino, Vladivostok, Vostochny and Zarubino)	15 June to 15 October
Northern China (Including all ports on or North of 31°15'N)	1 June to 30 September
Republic of Korea (All ports)	1 June to 30 September
Northern Japan (Hokkaido, Aomori, Iwate, Miyagi, Yamagata, Akita and Fukushima Prefectures)	15 June to 15 October
Western Japan (Niigata, Toyama and Ishikawa Prefectures)	1 June to 30 September
Eastern Japan (Fukui, Ibaraki, Chiba, Tokyo, Kanagawa, Shizuoka, Aichi and Mie Prefectures)	1 June to 30 September
Southern Japan (Wakayama, Osaka, Kyoto, Hyogo, Tottori, Shimane, Okayama, Hiroshima, Yamaguchi, Kagawa, Tokushima, Ehime, Kochi, Fukuoka, Oita, Saga, Nagasaki, Miyazaki, Kumamoto and Kagoshima Prefectures)	15 May to 31 August
Far South Japan (Okinawa)	25 May to 30 June

Flighted Spongy Moth Complex/Asian Gypsy Moth Characteristics



Male FSMC/AGMs are greyish brown with a wingspan of 30 to 40 mm. Females are whitish / pale yellow in colour with prominent black marks on the wings and are larger than the male with a wingspan of 40 to 70 mm.

It is unlikely that live FSMC/AGMs will be encountered by vessels in transit. It is more likely that egg masses will be found.

Female FSMC/AGMs are active flyers and are attracted to bright lights, therefore their eggs may be found in the vicinity of exterior lights and floodlights on vessels. If powerful shore lights are directed towards the vessel, the eggs may be found all over the ship and its cargo. Where safe and practicable to do so, external lights on vessels should be switched off.

FSMC/AGM's eggs are velvety in texture and range in colour from light tan to dark brown. A typical egg mass will contain between 500 and 1000 eggs and measure approximately 20 mm by 40 mm. The eggs are particularly hardy and resistant to changes of temperature and moisture. They are normally deposited in sheltered locations, for example, under canvas covers, around light fixtures and underneath framing arrangements such as hatch coamings and the underside of bridge wings. Egg masses have also been found on mooring lines, on the outside of shipping containers and on vehicles, for example in wheel arches.



The larvae normally hatch in early spring, and this is therefore considered the high-risk period in countries that wish to stop this species becoming established. Consequently, vessels that call in Asia or Russia during the flight season, and then subsequently arrive in port during the hatching period, are of particular concern.

The peak period for egg hatching is in the morning; the dispersing larvae move towards vertical structures, climb rapidly to a high point, and are then widely dispersed on silken strands by the wind until they find suitable host trees to feed on, a process known as "Ballooning".

Inspections

The inspection of vessels for the presence of egg masses, their removal and disposal are the principal tools in preventing FSMC/AGM becoming established in new regions.

Some destination countries require vessels that have called in high risk countries during the flight season to be inspected and certified free of FSMC/AGM by a nominated authority immediately prior to departure.

If no signs of FSMC/AGM infestation are found, the nominated authority will issue the vessel with certification stating that it is free of FSMC/AGMs; depending on the issuing authority the certificate may be a "Certificate of Inspection of Freedom from the Flighted Spongy Moth Complex/Asian Gypsy Moth" or a "Phytosanitary Certificate".

If multiple ports in the same country or a number of ports in different countries within the high-risk area are visited during the flight seasons, the official inspection should be undertaken immediately prior to departure from the last port in the high-risk area during the applicable flight season.

Regardless of any requirement for an official inspection, to mitigate the risk of infestation when calling at ports in the high-risk area during the FSMC/AGM flight season, vessels are advised to:

- Carry out a thorough visual inspection of the accommodation superstructure, decks, deck machinery, holds, cargo and cargo gear immediately prior to departure. Binoculars can be used to inspect difficult to reach areas of the vessel's superstructure, such as the underside of bridge wings. Similarly, a small mirror attached to a stick may be used to inspect areas that are difficult to see, for example, behind pipework next to the hatch coaming.
- Carry out another thorough visual inspection while on passage to the destination port.
- Scrape off any egg masses that are found. Do not paint over them as this will not kill them. Do not remove them using high pressure water guns as some eggs may be washed over the side and immersion in saltwater does not kill them; there have been cases of AGM eggs floating to shore and continuing to develop and hatch.
- Prior to arrival destroy any egg masses that have been scraped off. Eggs may be destroyed by placing them in alcohol, boiling them in water, freezing them or by incineration.
- Record details of all visual inspections and the removal and disposal of AGM eggs in the vessel's deck logbook.

Country Specific Requirements

When proceeding to any of the following countries after having visited the high-risk area during the female flight season, the specific requirements of the destination should be followed:

Argentina

The Argentinian National Service for Health and Agrifood Quality (SENASA) have finalised approval and issuance of a resolution that established national FSMC/AGM control measures.

SENASA has changed their female “flight season” to be more in line with USA and Canada requirements. Details of which can be found as per Resolution [No 533-2022](#) from SENASA. The process will be the same as per the previous year when North America changed their flight season, it is assumed that the first year of the implementation will be a transition from their old to their new program. Regarding specific requirements and documentation need when entering Argentina during the flight season is in [Circular 35/2020](#) and [40/2021](#).

Australia

The latest Department of Agriculture and Water Resources requirements are detailed in the below Industry Advice Notice:

277-2022 – Commencement of Asian Gypsy Moth Vessel Assessment and Inspection Arrangements. (Reviewed on 22nd December 2022)

All relevant vessels will be sent an FSMC/AGM questionnaire through the Maritime Arrivals Reporting System (**MARS**), as part of their Pre-Arrival Reporting (**PAR**) process.

Chile

The Requirements are set out in **Resolution 4412/2013 – Phytosanitary Requirements for Vessels Arriving from Areas with Flighted Spongy Moth Complex/Asian Gypsy Moth Presence**, as amended by **Resolution No.8870/2015 – Modified Phytosanitary Requirements for Vessels Arriving from Areas with Asian Gypsy Moth Presence**. Further information can be found on **2 SAG posters**.

It should be noted that the 2015 amendment appears to make the FSMC/AGM requirements apply to all of China north of 20°N (not north of 31°15'N, as per the requirements of other countries with measures in place to stop the introduction of the FSMC/AGM).

The Club has seen this interpretation of the requirements by the Chilean SAG (Agriculture and Livestock Service), with a vessel which had called at a port in southern China during the flight season being required to produce a phytosanitary certificate.

New Zealand

The Authorities have changed their policy regarding the regulated areas now they are more inline with the requirements for the USA and Canada. They have changed combined the Western & Eastern regions of Japan under a new section called Central Japan with the new flight dates. However, a couple of the Japan prefectures have been moved into other categories (Norther Japan) and will possibly have different flight dates. Further details can be found on the [New Zealand Vessel Biosecurity Quarterly March 2023 Issue 5 newsletter](#) (page 5).

FSMC/AGM requirements are set out in part 3 of the **Craft Risk Management Standard (CRMS) - Vessels**. Further details can be found in the **Guidance Document to the CRMS for Vessels**, and on the following Biosecurity New Zealand webpage, which includes a link to a list of approved AGM inspection bodies: **Hitchhiker pests**.

The Ministry for Primary Industries has also published a **Fact Sheet to assist Owners and Operators of Commercial Vessels**.

USA and Canada

FSMC/AGM requirements are set out in the [Asian Gypsy Moth Notice issued February 2023](#) jointly by the Canadian Food Inspection Agency (CFIA) and the United States Department of Agriculture (USDA). Specific country requirements can be seen in full here (for Canada) and here (for USA).

As of this year the common name “Asian Gypsy Moth” has been changed as is now referred to as “**Flighted Spongy Moth Complex**” (FSMC). This name change will take time to be changed on the various websites, policies, form certificates and educational material. Furthermore, not all countries have changed the name of the pest. In the meantime, reference to AGM will continue to be seen during the transition period and certificates that use this name will be considered valid when issued by the recognised certificate body.

Inspectors have found that in North American ports there were a high number of FSMC/AGM egg masses recorded in previous years. Therefore, for 2023, extra vigilance should be taken in conducting self-inspections and receiving required certification in FSMC/AGM regulated areas.

FSMC/AGM Charter Party Clause

When negotiating charter parties, Members may wish to include the following clause if the vessel could be required to call at ports in the high-risk region during the flight period:

“Should Charterers order the vessel to a port, place, country or area infested by Flighted Spongy Moth Complex (“FSMC”) / Asian Gypsy Moth (“AGM”) or where there is risk of exposure to infestation by FSMC/AGM as reasonably determined by the Master, Charterers shall take all reasonable steps at their time and expense to ensure that the vessel does not become infested. Without prejudice to this obligation, Charterers shall, at their time and expense, arrange for the appropriate certificate stating that the vessel is free from infestation by FSMC/AGM, its larvae or eggs to be issued by an appropriate and recognised authority to the satisfaction of the Master just prior to departure from the last port of call within the high-risk area during the flight season. Notwithstanding the issuing of such a certificate, Charterers will be responsible for any consequences whatsoever, including but not limited to time, costs and third party liabilities to cargo interests etc., howsoever arising, and the vessel to remain on hire/laytime to count (as applicable) should an infestation of FSMC/AGM be found or suspected and/or should delays or costs be incurred due to charterers having ordered the vessel to call at a port, place, country or area where the presence of FSMC/AGM is known or suspected.”

Additional Information

Additional information on the FSMC/AGM can be found in the: [Gypsy Moth Inspectional Pocket Guide](#).

Members requiring further guidance or assistance should contact the **Loss Prevention department**.