

Species Status Assessment

Common Name: Fir Tussock Moth

Date: 3/5/2025

Scientific Name: *Orgyia detrita*

By: Hollie Shaw

Class: Insecta

Family: Erebidae

Species Synopsis (a short paragraph which describes species taxonomy, distribution, recent trends, and habitat in New York):

Orgyia detrita is typically found in the coastal plain from Florida and the Gulf states west to Texas. It is also found north of Florida to Long Island, New York. It becomes less common northward (NatureServe 2025). It was recently rediscovered in New York near Southampton on Long Island in 2019 (iNaturalist 2025).

More data are needed to determine trends in New York. It doesn't appear to have specific habitat requirements, such as an association with rare habitats. However, it is often not found in areas where it would be expected. NatureServe (2025) believes it is not imminently imperiled, but it is uncommon. In New Jersey, the number of observations has increased since 2000. It's unknown if this due to more survey effort or a genuine increase (NatureServe 2025). In New York, it was considered historically present until recently (2019) when a larva was found on Long Island (iNaturalist 2025). This indicates a reproducing population.

Despite the common name, fir tussock moth, this species is not typically associated with firs. More research is needed to determine habitat preferences. It is typically found in the coastal plains. In Florida, it has been found in swamp forests (cypress, white cedar, and hardwood) (NatureServe 2025). Documented larval food plants include oaks (*Quercus* spp.), bald cypress (*Taxodium distichum*) (Hall and Buss 2014/2020, NatureServe 2025), *Decodon verticillatus* (swamp loosestrife or water willow), white cedar (*Thuja occidentalis*), black tupelo (*Nyssa sylvatica*) (NatureServe 2025).

I. Status

a. Current legal protected Status

i. **Federal:** not protected _____ **Candidate:** no _____

ii. **New York:** not protected; SGCN _____

b. Natural Heritage Program

i. **Global:** G3G4 _____

ii. **New York:** S1 _____ **Tracked by NYNHP?:** Yes _____

Other Ranks:

-IUCN Red List:

-Northeast Regional SGCN:

Status Discussion:

O. detrita was rediscovered in 2019 when a larva was found on Long Island (NatureServe 2025). It's not known when it was last observed in New York, but it was considered historical by the New York Natural Heritage Program until the larva was found (New York Natural Heritage Program

2025). The number of observations has been increasing in New Jersey since 2000. It is unknown if this is because of increases survey efforts or, possibly, climate change (NatureServe 2025).

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	-	-			-
Northeastern US	Yes	-	- - -			-
New York	Yes	Unknown	Unknown			Yes
Connecticut	-	-	-			-
Massachusetts	-	-	-			-
New Jersey	Yes	Increasing	Increasing	2000-present		No
Pennsylvania	-	-	-			-
Vermont	-	-	-			-
Ontario	-	-	-			-
Quebec	-	-	-			-

Column options

Present?: Yes; No; Unknown; No data; (blank) or Choose an Item

Abundance and Distribution: Declining; Increasing; Stable; Unknown; Extirpated; N/A; (blank) or Choose an item

SGCN?: Yes; No; Unknown; (blank) or Choose an item

Monitoring in New York (*specify any monitoring activities or regular surveys that are conducted in New York*):

There are no known monitoring activities or regular surveys in New York.

Trends Discussion (*insert map of North American/regional distribution and status*):

More data are needed to determine trends in New York. It doesn't appear to have specific habitat requirements, such as an association with rare habitats. However, it is often not found in areas where it would be expected. NatureServe (2025) believes it is not imminently imperiled, but it is uncommon. In New Jersey, the number of observations has increased since 2000. It's unknown if this due to more survey effort or a genuine increase (NatureServe 2025). In New York, it was considered historically present until recently (2019) when a larva was found on Long Island (iNaturalist 2025). This indicates a reproducing population.

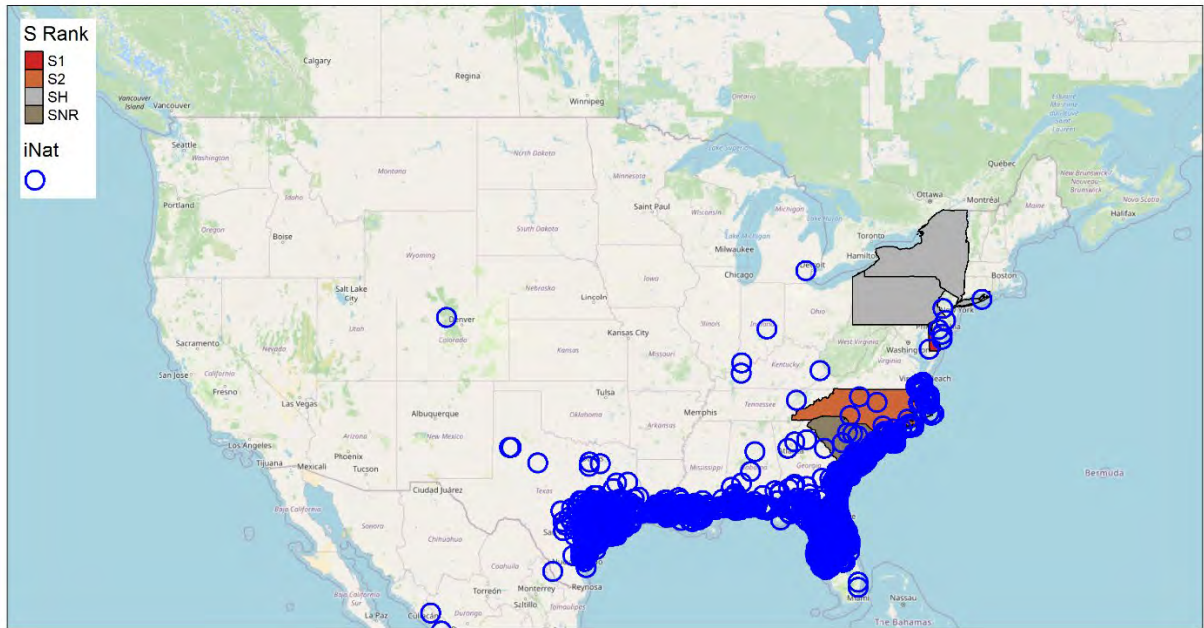


Figure 1. *Orgyia detrita* distribution status in North America (NatureServe 2025b).

III. New York Rarity (provide map, numbers, and percent of state occupied)

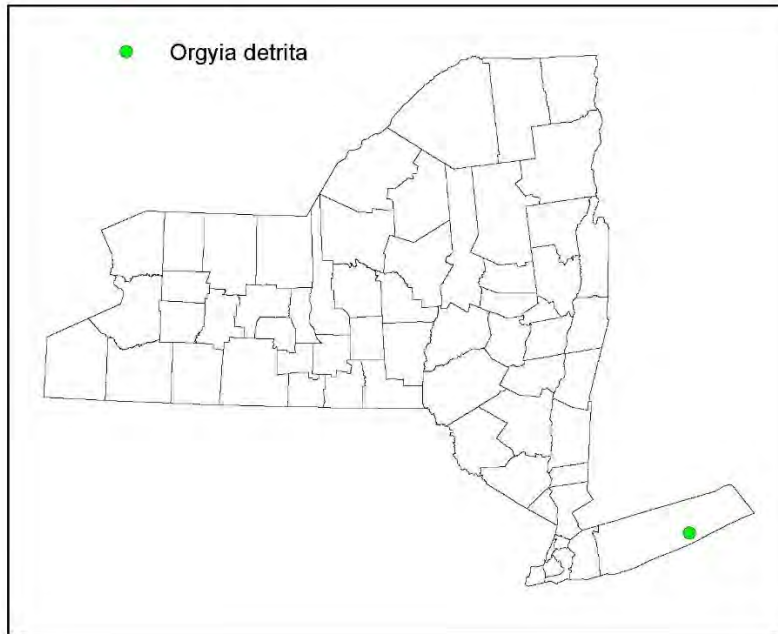


Figure 3. Records of *Orgyia detrita* in New York (iNaturalist 2025)

Years	# of Records	# of Counties	% of State
Pre-2000	unknown	1 or 2	_____
2000- 2023	1	1	<1%

Table 1. Records of *Orgyia detrita* in New York.

Details of historic and current occurrence:

The number of historical occurrences in New York is unknown other than it was documented on Long Island. It was rediscovered in 2019 near Westhampton on Long Island (iNaturalist 2025).

New York's Contribution to Species North American Range:

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Peripheral	1000 miles

Column options

Percent of North American Range in NY: 100% (endemic); 76-99%; 51-75%; 26-50%; 1-25%; 0%; Choose an item

Classification of NY Range: Core; Peripheral; Disjunct; (blank) or Choose an item

IV. Primary Habitat or Community Type (from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):

a. unknown

b.

The habitat used by *O. detrita* in New York is unknown.

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Pollinator Species?	Habitat/Community Trend	Time frame of Decline/Increase
No	No	No	Unknown	

Column options

Habitat Specialist, Indicator Species and Pollinator Species: Yes; No; Unknown; (blank) or Choose an item

Habitat/Community Trend: Declining; Stable; Increasing; Unknown; (blank) or Choose an item

Habitat Discussion:

Despite the common name, fir tussock moth, this species is not typically associated with firs. More research is needed to determine habitat preferences. It is typically found in the coastal plains. In Florida, it has been found in swamp forests (cypress, white cedar, and hardwood) (NatureServe 2025). Documented larval food plants include oaks (*Quercus* spp.), bald cypress (*Taxodium distichum*) (Hall and Buss 2014/2020, NatureServe 2025), *Decodon verticillatus* (swamp loosestrife or water willow), white cedar (*Thuja occidentalis*), black tupelo (*Nyssa sylvatica*) (NatureServe 2025).

V. Species Demographic, and Life History:

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/Catadromous?
Yes	Choose an item.	No	Yes	Yes	Choose an item.

Column options

First 5 fields: Yes; No; Unknown; (blank) or Choose an item

Anadromous/Catadromous: Anadromous; Catadromous; (blank) or Choose an item

Species Demographics and Life History Discussion *(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):*

There is one brood per year. Adults are typically found in July in New Jersey, June in North Carolina, and mid-April to early May in Florida. In Florida, eggs overwinter. Soon after larvae hatch, they produce silk that is used to disperse to new locations (Thurston 2002). Females are flightless and remain on their cocoons where they will also lay their eggs (Hall and Buss 2014/2020).

VI. Threats *(from NY 2015 SWAP or newly described):*

Little is known about the needs of this species and more research is needed. As with many moths, threats include habitat loss and degradation, light pollution, invasive plants and pathogens, pesticides, and climate change. Habitat shifting and alteration and more frequent severe weather events due to climate change is expected to impact moths. Larvae are present at the same time as Spongy Moth (*Lymantria dispar*).

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
1. Residential and Commercial	1.1 Housing & Urban Areas	(habitat loss and degradation)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.1 Invasive Non-Native Plants & Animals	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
8. Invasive & Other Problematic Species	8.4 Pathogens	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.3 Agricultural & Forestry Effluents	9.3.3 Herbicides & pesticides	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.1 Habitat Shifting & Alteration	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 1. Threats to *Orgyia detrita*.

Are there regulatory mechanisms that protect the species or its habitat in New York?

Yes: _____ No: _____ Unknown: ✓

If yes, describe mechanism and whether adequate to protect species/habitat:

Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:

The best management strategy for this species is the management of the natural community, or habitat, where this species occurs. Habitat requirements in New York are unknown. Detailed surveys are needed to determine occupied habitats in order to make management decisions. Considerations to include are removing invasives species and improving habitat quality to include native species that would help prepare for extreme weather events.

Insecticide use should be avoided when possible if rare species are present. When insecticide use cannot be avoided, careful planning along with consistent rare species monitoring, can result in successful eradication of the target species without eliminating rare species. Attempt to control spongy moth populations to avoid extreme oak defoliation. A biocontrol alternative is *Bacillus thuringiensis* (Btk) for some target species, such as spongy moths. Sensitivity varies between species, and it appears that most species are not sensitive to Btk approximately two weeks post-application. There are two other spongy moth biocontrols that appear to be very effective at eliminating or slowing the spread of spongy moths with little effect on non-target species: Gypchek (Reardon et al. 2016) and *Entomophaga maimaiga* (a fungus). *E. maimaiga* was introduced in 1910 and 1911 and was rediscovered in 1989 in the northeast it can be highly variable (Shelton 2025).

In addition, minimizing lighting to maintain dark sky conditions would be beneficial. When lighting is necessary, it's best to use lights that emit red or yellow light because insects are generally not attracted to those colors. However, many sodium lights, which emit yellow light, are so bright that they do attract some insects. The best lighting appears to be low pressure sodium lights which have little effect on flying insects (Schweitzer et al. 2018).

Action Category	Action	Description
A.1 Direct Habitat Management	A.1.0.0.0 Direct Habitat Management	Site Management
A.2 Direct Species Management	A.2.0.0.0 Direct Species Management	Invasive/problematic species control

Action Category	Action	Description
B.3 Outreach	B.3.0.0.0 Outreach	Awareness and Communications
C.6 Design and Plan Conservation	C.6.0.0.0 Design and Plan Conservation	Site/Area Protection
C.6 Design and Plan Conservation	C.6.0.0.0 Design and Plan Conservation	Resource/Habitat Protection
C.6 Design and Plan Conservation	C.6.5.1.3 Develop a conservation, management, or restoration plan for protected private lands	Habitat & natural process restoration
C.7 Legislative and Regulatory Framework or Tools	C.7.0.0.0 Legislative and Regulatory Framework or Tools	Policies and Regulations
C.9 Education and Training	C.9.2.0.0 Training and individual skill development	

Table 2. Recommended conservation actions for *Orgyia detrita*.

VII. References

- Hall, Donald W. and Lyle Buss. 2015 (updated 2020). Featured Creatures: *Orgyia detrita*, *Orgyia leucostigma*, and *Orgyia definita*. Elena Rhodes, PhD. (ed), University of Florida, https://entnemdept.ufl.edu/creatures/urban/medical/tussock_moths.htm (Accessed on March 3, 2025).
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- NatureServe. 2025. NatureServe Network Biodiversity Location Data accessed through NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. Available <https://explorer.natureserve.org/>. (Accessed: March 3, 2025).
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- Schweitzer, D.F., M.C. Minno, and D.L. Wagner. 2018. Rare, Declining, and Poorly Known Butterflies and Moths (Lepidoptera) of Forests and Woodlands in the Eastern United States. USFS Technology Transfer Bulletin, FHTET-2009-02.

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Thurston GS. 2002. *Orgyia leucostigma* (J.E. Smith) whitemarked tussock moth (Lepidoptera:Lymantriidae). pp. 201-203. In: Mason PG, Huber JT, eds., Biological Control Programmes inCanada, 1981-2000. CABI Publishing. New York. 583 pp.

Originally prepared by	Hollie Shaw
Date first prepared	3/5/2025
First revision	
Last revision	