Species Status Assessment

Common Name: Fawn brown dart **Date Updated:** March 2025

Scientific Name: *Euxoa pleuritica* **Minor Edits By:** NYSDEC Wildlife Section

Class: Insecta

Family: Noctuidae

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

The fawn brown dart moth is widespread in southern Canada and the northern United States. This species ranges from Massachusetts westward to interior British Columbia and southward to New Mexico. In New York, five populations have been reported since 1987. Short and long term population trends are declining. Additional sampling is needed in historic and current localities. Threats to the fawn brown dart include habitat loss/fragmentation from development and fire suppression. This species most likely has been affected by mosquito spraying. ATV use can damage suitable habitat (New York Natural Heritage Program 2011).

DEC is not aware of any additional data or new information on population trends or threats to this species since the last SWAP revision in 2015. This species was listed as SPCN in 2015, but with the removal of this status in the 2025 revision it has been changed to SGCN.

I. Status

a. Current legal protected Status

i. **Federal:** Not listed **Candidate:** No

ii. **New York:** Not listed

b. Natural Heritage Program

i. **Global:** G4

ii. **New York:** S2S3 **Tracked by NYNHP?:** Yes

Other Ranks:
-NYS 2025 SGCN Status: SGCN
-IUCN Red List: N/A
-Northeast Regional SGCN: N/A
-United States National Status: N5 (28 Oct 2001)
-Canada National Status: NNR (Not assessed)

Status Discussion:
A recent survey of Napeague State Park, Suffolk County, has found this species to still be extant. The fawn brown dart is expected to be present in sandy soiled areas around the Great Lakes and in the Adirondacks, but has not been confirmed there (New York Natural Heritage Program 2011). Additional surveying in new/historic localities may discover additional populations. This species is listed as imperiled in Massachusetts and New York, and as critically imperiled in New Hampshire (NatureServe 2012).

II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status	SGCN?
North America	Yes	Unknown	Unknown			-
Northeastern US	Yes	Unknown	Unknown			-
New York	Yes	Unknown	Unknown			-
Connecticut	Yes	Unknown	Unknown	2010		Yes
Massachusetts	No data					
New Jersey	No					
Pennsylvania	No					
Vermont	No					
Ontario	No data			2009		
Quebec	No data					

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):*

Intermittent surveys have been conducted in pine barren communities of Long Island

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

The short term population trend for *Euxoa pleuritica* is thought to be in decline. At one survey site, a single individual was collected in 1993 but the species was not recorded during surveys in 2005. The long-term trend for this species is thought to also be in decline. Historic records describe populations in Orient and Riverhead, Suffolk County and “northern New York.” These areas should be sampled to determine if populations are still present (New York Natural Heritage Program 2011).This species is widespread across northern United States and southern Canada, ranging from Massachusetts westward to the interior of British Columbia and southward to New Mexico and Arizona (Anweiler 2003).

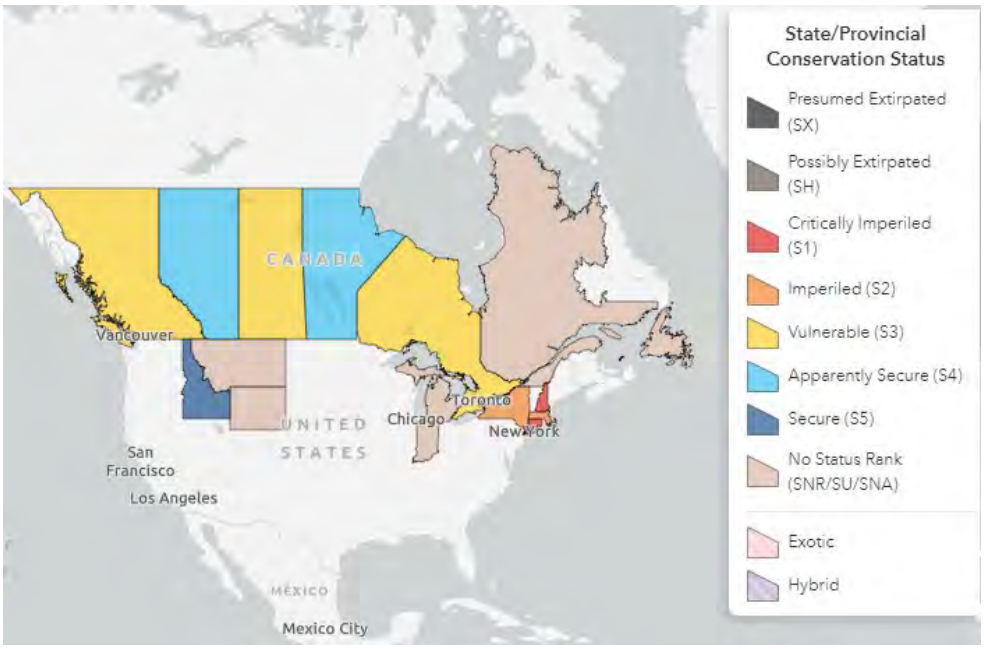

Figure 1. Conservation status of *Euxoa pleuritica* in North America (NatureServe 2024).

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

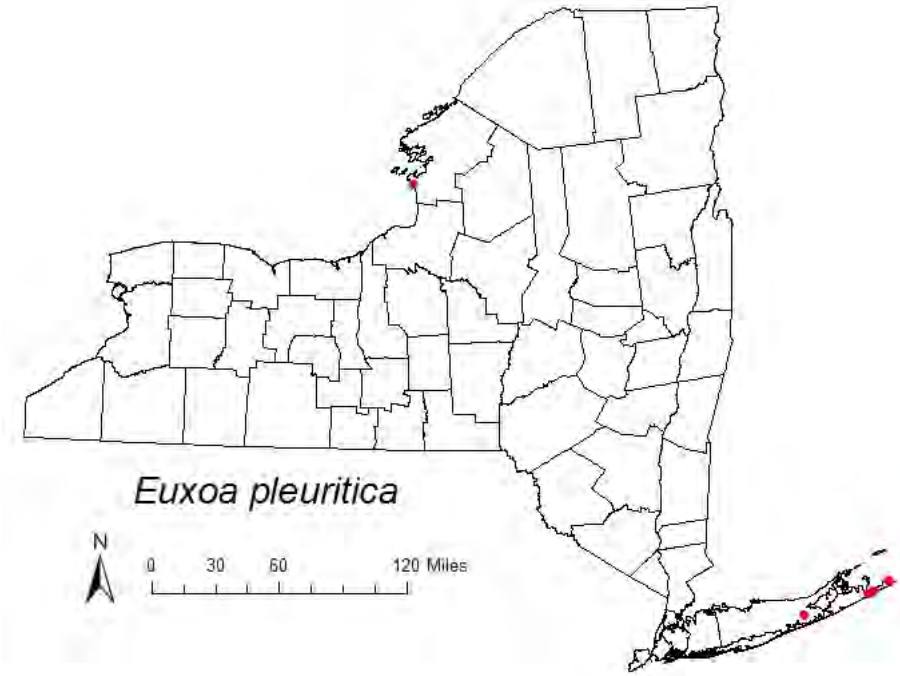

Figure 2. Occurrence locations of the fawn brown dart in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand, NYSDEC.

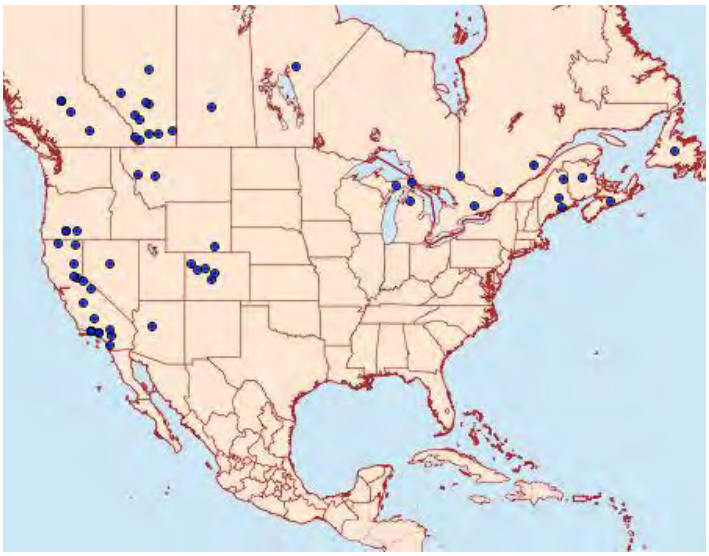

Figure 3. States and provinces with recorded of occurrences of *E. pleuritica.* Map data is collected from museum specimens and photographs. Some records may not be represented (North American Moth Photographers Group 2012).

Details of historic and current occurrence:

There are historical records of this species occurring in Orient and Riverhead, Suffolk County and 'Northern New York' .One specimen was collected from Hither Hills State Park, Suffolk County in 1987. Another individual was collected in Black Pond Wildlife Management Area, Jefferson County in 1988 (New York Natural Heritage Program 2013).

In 1993, this species was captured in dwarf pine barrens in the town of Southampton, Suffolk County. In 1995, one specimen was collected in Montauk County Park, Suffolk County; however, when the site was resurveyed in 2005 it was not present. The most recent specimen was observed in Napeague State Park, Suffolk County in 2007 (New York Natural Heritage Program 2013).

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	

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. Pine barrens

b. Native grasslands and savannah

c. Great Lakes dune and swale

d. Maritime dunes

Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Pollinator Species?	Habitat/ Community Trend	Time frame of Decline/Increase
Yes	No	-	Declining	

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:

The fawn brown dart inhabits dunes and other sparsely vegetated sandy areas, such as pine barrens. This species has been found in several habitats including maritime grasslands, Great Lakes dunes, dwarf pine plains, and maritime heathlands (New York Natural Heritage Program 2011).

V. Species Demographic, and Life History:

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/ Catadromous?
Yes	-	-	Yes	Yes	-

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):*

Little is known on the life history of the fawn brown dart. The larvae are thought to feed on low growing plants and can be seen from late spring into summer. Adults can be seen flying from mid-August to late September and produce a single brood a year. The larvae overwinter and have a long aestivation during summer months (Wagner et al. 2008, New York Natural Heritage Program 2011).

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

Habitat fragmentation/loss can occur from residential and commercial development within habitat locations. Fire suppression can also result in habitat being lost to succession, especially in the Dwarf Pine Barrens. This species is vulnerable to mosquito spraying and destruction of foodplants/habitat from ATV use (New York Natural Heritage Program 2011). There are broad

scale studies that have shown artificial lighting to be a partial cause in changes in moth behavior and predation rates, which could affect population levels (Frank 2006). General threats identified to affect moths include alteration of natural fire regimes; natural succession of shrubland, woodland, and barrens habitats; land clearing; coastal erosion; and sea level rise. Past use of chemical biocides to control gypsy moth and other pest insects continues to kill native Lepidoptera (Schweitzer 2004). Introduced parasitoid flies have been known to negatively affect native Lepidoptera (Boettner et al. 2000). Other threats may include invasive species and over grazing of host plants by wild deer populations (NYSDEC 2005).

Threat Level 1	Threat Level 2	Threat Level 3	Spatial Extent	Severity	Immediacy	Trend	Certainty
6. Human Intrusions & Disturbance	6.1 Recreational Activities	6.1.1 Motor vehicles	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	7.1 Fire & Fire Suppression	7.1.2 Suppression in the fire regime	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.1 Habitat Shifting & Alteration	(southern limit of range)	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.5 Storms & Severe Weather	-	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.

Table 2. Threats to *Euxoa pleuritica.*

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:

Euxoa pleuritica was collected in 3 state parks and a wildlife management area. These sites are state owned land and are protected from future development.

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

This species has previously been collected using overnight black light traps (New York Natural Heritage Program 2013).

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
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.7 Legislative and Regulatory Framework or Tools	C.7.0.0.0 Legislative and Regulatory Framework or Tools	Policies and Regulations

Table 3. Recommended conservation actions for *Euxoa pleuritica* (add more lines as needed).

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for other moths, and for *Euxoa pleuritica* in particular.

Easement acquisition:

____ Where appropriate, acquire easements to promote moth protection and conservation.

Fact sheet:

____ Create fact sheets covering moths.

Habitat management:

____ Determine best management regime for moth species, including fire and other forms of management.

Habitat monitoring:

____ Develop standardized measures of habitat parameters for each species of listed moth.

____ Investigate threats to food and host plants.

____ Monitor land development projects.

Habitat research:

____ Examine role of light pollution as threat to moths.

____ Determine host/ food plant.

Life history research:

____ Investigate the metapopulation dynamics of those species which warrant it.

____ Examine role of introduced parasites and predators in threats to moths.

Other action:

____ Develop standard definition of what is needed for "viable" populations of moths.

____ Research the role of pesticide use in threats to moths.

Population monitoring:

____ Inventory of species within historical range.

____ Develop standardized survey protocols for moths.

Private fee acquisition:

____ Where appropriate, encourage/assist private entities to acquire land for moth protection and conservation.

State fee acquisition:

____ Where appropriate, acquire land essential to moth protection and conservation.

State land unit management plan:

____ Incorporate needs of moths into state land management plans.

VII. References

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