Common Name: A noctuid moth ***SPCN***
Scientific Name: *Amphipoea erepta ryensis*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: SGCN

Natural Heritage Program Rank:
Global: GUT1Q
New York: S1
Tracked: Yes

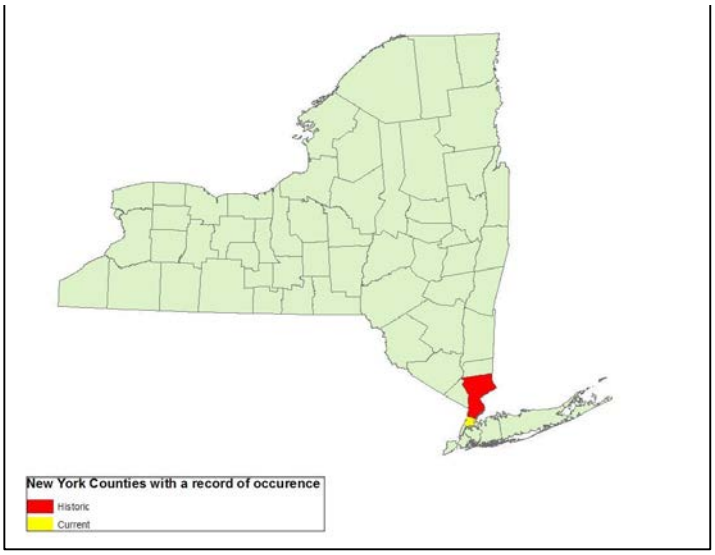
Synopsis:
Amphipoea erepta ryensis is a subspecies of *A. erepta erepta*. This moth is endemic to New York, occurring in only one location, Pelham Bay Park, Bronx County. Preferred habitat is tidal marshland containing the larval foodplant northern gama grass (*Tripsacum dactyloides*). Threats facing the single population include wildlife, invasive *Phragmites australis* and habitat fragmentation. With greater monitoring of this species, more populations could be discovered in neighboring states with suitable habitat (New York Natural Heritage Program 2011).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
Amphiopea erepta ryensis occurs in tidal wetlands containing its sole larval foodplant, northern gama grass (*Tripsacum dactyloides*). Within Pelham Bay Park, gamagrass can be found in one 3-acre swatch and at scattered wetland edges (Kunstler 1991, New York Natural Heritage Program 2011). Northern gama grass is a perennial herb that is widely cultivated. It is present in 31 states, ranging from New York west ward to Nebraska and south to Florida. In New York, northern gama grass is threatened species, with 11 known populations, ranging from Orange county south through New York City, into Eastern Long Island (New York Natural Heritage Program 2011, USDA Plants Profile 2012).

Primary Habitat Type
Tidal Wetlands

Distribution:
One extant population occurs in Pelham Bay Park, Bronx County, NY. It was last verified in 1999 (New York Natural Heritage Program 2011).



County occurrence in New York (Shawn Ferdinand 2011).

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Natural System Modifications	Fire & Fire Suppression	P	L	M
2. Invasive & Other Problematic Species & Genes	Invasive Non-Native/Alien Species (Phragmites)	P	M	H
3. Climate Change & Severe Weather	Habitat Shifting & Alteration(sea level rise)	P	H	V

References Cited:

New York Natural Heritage Program. 2011. Online Conservation Guide for *Amphiopea erepta ryensis*. Available from: http://www.acris.nynhp.org/guide.php?id=8092. Accessed 13 February 2013.

United State Department of Agriculture, Natural Resources Conservation Service. 2012. Plants Profile. <http://plants.usda.gov/java/>. Accessed 20 February 2013.

Common Name: Coastal heathland cutworm ***SPCN***
Scientific Name: *Abagrotis nefascia benjamini*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4T3
New York: S1S3
Tracked: Yes

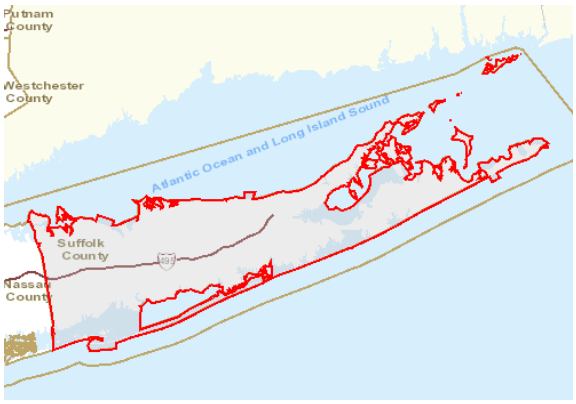
Synopsis:
The coastal heathland cutworm moth (*Abagrotis nefascia benjamini*) is a very disjunct subspecies. Its distribution extends from Cape Cod and offshore islands west to Plymouth, Massachusetts, and includes eastern Long Island and an offshore island in New York. In the early 1900s, it also included East River, Connecticut. It has also been reported from Singletons at Lakehurst (1951) and Dividing Creek (1996) in southern New Jersey, but no populations have been documented there. Lafontaine (1998) indicated that a disjunct population occurs near the mouth of the St. Lawrence River in Canada. Typical *A. n. nefascia* in western North America does not get within 2,000 kilometers of the range of this subspecies. In New York, it is likely restricted to Long Island and nearby islands (New York Natural Heritage Program 2012).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

Habitat Discussion:
The coastal heathland cutworm occurs in dry, sandy, open coastal plain habitats. These habitats include sandplain grasslands, coastal heathlands, and dunes (except the first dunes inland from the beach). In New York State, the moth has been found in several habitats including partially burned grasslands and shrublands, maritime dunes, maritime grasslands, maritime heathlands, and a coastal oak-heath forest (New York Natural Heritage Program 2012).

Primary Habitat Type
Coastal Coniferous Barrens
Coastal Hardwoods
Maritime Dunes

Distribution:
The coastal heathland cutworm is likely restricted to Long Island and nearby islands, where potential habitat is abundant. Five current populations are documented; two were first documented in 2007 (New York Natural Heritage Program 2012).



County occurrence for coastal heathland cutworm in New York (NY Nature Explorer 2009)

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential & Commercial Development	Housing & Urban Areas (habitat loss/degradation)	W	M	H
2. Natural Systems Modifications	Fire & Fire Suppression (large fires as well as fire suppression)	R	L	H
3. Climate Change & Severe Weather	Habitat Shifting & Alteration (southern edge of range species)	P	L	V

References Cited:

Lafontaine, J. D. 1998. Noctuoidea, Noctuidae (part): Noctuinae (part): Noctuini. Fascicle 27.3. 348 pp *in* Hodges, R. W. (ed.). The Moths of North America. Allen Press, Lawrence, Kansas.

New York Natural Heritage Program (NHNHP). 2012. Online Conservation Guide for *Abagrotis nefascia benjamini*. < http://www.acris.nynhp.org/guide.php?id=8168>. Accessed 13 December 2012.

New York Nature Explorer. 2009. New York State Department of Environmental Conservation. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 27 February 2013.

Common Name: Well-marked cutworm ***SPCN***
Scientific Name: *Abagrotis orbis*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G5
New York: S1
Tracked: Yes

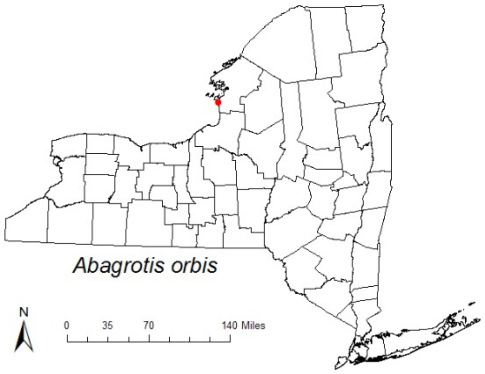
Synopsis:
The well-marked cut worm moth is currently known as *Abagrotis orbis*. It is reclassified from the previous name of *Abagrotis barnesi* (Lafontaine and Schmidt 2010). Information regarding this moth is unknown/incomplete. *A. orbis* is primarily a western species, with the eastern edge of its core population diminishing around eastern Nebraska. There is a disjunct population around the southern Great Lakes region. A single record exists for this species in Black Pond Wildlife Management Area, Jefferson County (Lafontaine1998, NatureServe 2012). Population trends for this species are unknown.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

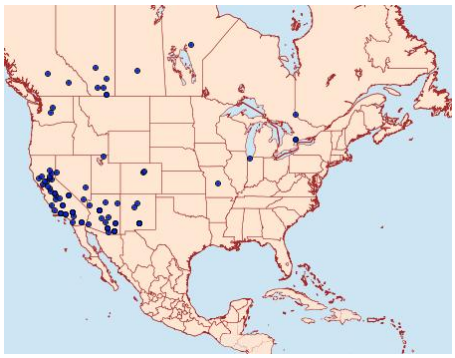
Habitat Discussion:
This species was observed within Black Pond Wildlife Management Area, on the El Dorado dunes. Information on the preferred habitat of *A. orbis* is unknown. The synonym species *A. orbis* inhabits dry agricultural areas, sporadically being found on fruit orchards. It has also been found in riparian areas on creeks and rivers (Lafontaine 1998).

Primary Habitat Type
Great Lakes Dune and Swale

Distribution:
This moth historically was reported from Ithaca, Tompkins County (Forbes 1954). Two specimens were collected in 1992 at Black Pond Wildlife Management Area, Jefferson County (New York Natural Heritage Program 2012).



Abagrotis orbis in New York (New York Natural Heritage Program 2012). Map created by Shawn Ferdinand, NYSDEC.



Records of *A. orbis*. Records are from museum collections and photographs. Some records may not be represented (North American Moth Photographers Group 2012).

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Natural System Modification	Other Ecosystem Modifications (succession)	N	L	H

References Cited:

Lafontaine, J. D. 1998. Noctuoidea, Noctuidae (part): Noctuinae (part): Noctuini. Fascicle 27.3. 348 pp *in* Hodges, R. W. (ed.). The Moths of North America. Allen Press, Lawrence, Kansas.

Lafontaine, J.D., and B.C. Schmidt. 2010. Annotated check list of the Noctuoidea (Insecta, Lepidoptera) of North America north of Mexico. Zoo Keys 40: 1-239.

MPG (Moth Photographers Group). 2010. *Xylena thoracica.* Moth Photographers Group at the Mississippi Entomological Museum at the Mississippi State University. Available at: < http://mothphotographersgroup.msstate.edu/large_map.php?hodges=9875> (Accessed: March 1, 2013).

New York Natural Heritage Program (NHNHP). 2012. Online Conservation Guide for *Abagrotis nefascia benjamini*. < http://www.acris.nynhp.org/guide.php?id=8168>. Accessed 13 December 2012.

Common Name: A noctuid moth ***SPCN***
Scientific Name: *Agrotis obliqua*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1
Tracked: Yes

Synopsis:
Agrotis obiqua is a boreomontane species, fairly common throughout its range, especially in northwestern United States (D. Lafontaine, personal communication). Information regarding its life cycle, abundance and threats is scarce. This species persists in boreal forests consisting of fir (*Abies* spp.) and pine (*Pinus* spp.) species. In New York, *A. obliqua* has been collected in the sandstone pavement barrens dominated by jack pine (*Pinus banksiana*) in Clinton County (Lafontaine 2004, New York Nature Explorer 2009, NatureServe 2012). Additional research is required to further assess this species.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Stable
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%		Rare			

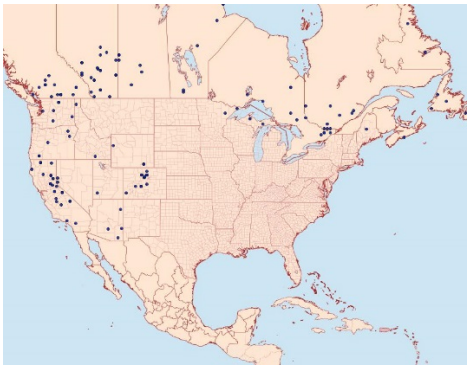
Habitat Discussion:
Agrotis obliqua can be found the boreal spruce-fir or quaking aspen forests across Canada and mountains in the western United States. In New York, this species has been found in sandstone pavement barrens, dominated by jack pine and sparsely scattered with various ericaceous shrubs, mosses, lichens and ferns (New York Nature Explorer 2009, NatureServe 2012).

Primary Habitat Type
Cliff and Talus
Coastal Coniferous Barrens
Coastal Hardwoods
Erosional Bluff
Maritime Dunes
Mixed Northern Hardwoods
Mountain Spruce-Fir Forests
Native Barrens and Savanna
Oak Forest
Oak-Pine Forest
Old Field/Managed Grasslands
Open Acidic Peatlands
Pasture/Hay

Pine Barrens
Spruce-Fir Forests and Flats

Distribution:
This species was recorded in Gadway Sandstone Pavement Barrens Preserve, Clinton County, in 1991, 1995 and in 2003 and is abundant in jack pine barrens (New York Natural Heritage Program 2013). This species does not occur in the Albany Pine Bush (Albany County), as some have suggested; *A. stigmosa* occurs there.

Location of *A. obliqua* in Gadway Sandstone in New York
(New York Natural Heritage Program 2013).
Map created by Shawn Ferdinand, NYSDEC.



States and provinces where specimens of *A. obliqua* have been collected for museums and/or photographed. Some records may not be represented (North American Moth Photographers Group 2012).

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Natural System Modifications	Fire & Fire Suppression	P	M	M
2. Invasive & Other Problematic Species & Genes	Problematic Native Species (over-browsing by mammals)	N	L	M
3. Climate Change & Severe Weather	Habitat Shifting & Alteration (at southern limit of range)	P	L	V
4. Natural System Modifications	Other Ecosystem Modifications (natural succession)	N	L	M

References Cited:

Lafontaine, J. D., 2004. Moths of America North of Mexico, Fascicle 27.1: p. 245

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 27 February 2013.

New York Natural Heritage Program (NYNHP). 2013. Biodiversity database. Albany, N.Y. Accessed 27 February 2013.

New York State Department of Environmental Conservation. 2009. New York Nature Explorer. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 27 February 2013.

North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University. <http://mothphotographersgroup.msstate.edu>. Accessed 27 February 2013.

Common Name: A noctuid moth ***SPCN***
Scientific Name: *Apamea inordinata*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: GU
New York: S1
Tracked: Yes

Synopsis:
Apamea inordinata is distributed in a narrow band across southern Canada and the northern United States, reaching southward into Utah, Colorado, and Nebraska. In the northeastern United States, *A. inordinata* is restricted to the upper Midwest and along the Atlantic Coast from New Jersey to Quebec (Mikkola et al. 2009). This species inhabits areas with dry sandy soils, containing grasses and sedges. Historical records show this species to be very local in Long Island, NY. Additional research is needed to better assess the life history, demographics and threats of this species (New York Natural Heritage Program 2011). According to participants at the SGCN Expert Meeting, this species occurs in two locations in Suffolk County, where it was found in good numbers in 2012.

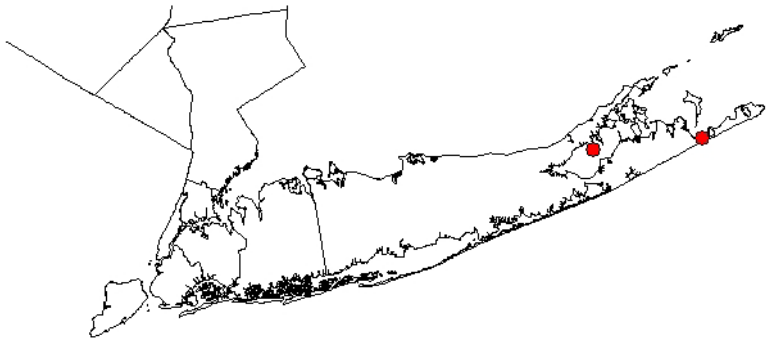
Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant	X	Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare			

Habitat Discussion:
This species is found in dry sandy areas with vegetation consisting of grasses and/or sedges (New York Natural Heritage Program 2011). In the western United States, this species is associated with low elevation, sand-dune habitats and rangelands that have been recently burned by wildlife.

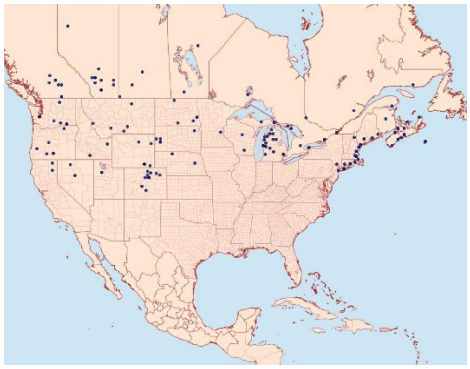
Primary Habitat Type
Cliff and Talus
Coastal Coniferous Barrens
Coastal Hardwoods
Erosional Bluff
Maritime Dunes
Mixed Northern Hardwoods
Mountain Spruce-Fir Forests
Native Barrens and Savanna
Oak Forest
Oak-Pine Forest
Old Field/Managed Grasslands
Open Acidic Peatlands

Pasture/Hay
Pine Barrens
Spruce-Fir Forests and Flats

Distribution:
There are two records from Suffolk County. In 1997 one specimen was captured on Robins Island. In 2007 and 2012, this species was captured in Napeague State Park (New York Natural Heritage Program 2011, NYSDEC 2013). Unverified records were reported from Bronx, Suffolk, and Orange counties (American Moth Photographers Group 2012).



Locations of *A. inordinata* in New York (New York Natural Heritage Program 2011). Map created by Shawn Ferdinand, NYSDEC.



States and provinces where specimens of *A. inordinata* have been collected for museums and/or photographed. Some localities may not be represented by this map (North American Moth Photographers 2012).

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential and Commercial Development	Housing & Urban Areas (habitat loss)	N	L	L
2. Natural System Modifications	Fire & Fire Suppression	R	L	M
3. Climate Change & Severe Weather	Habitat Shifting & Alteration (southern limit of range)	P	L	V

References Cited:

Mikkola K, J.D. Lafontaine, and J.D. Gill. 2009. Noctuoidea, Noctuidae (part): Xyleninae (part): Apameini (part–Apamea group of genera) in Hodges RW et al., The Moths of North America, fasc. 26.9. Allen Press. Lawrence, Kansas. 192 pp.

New York Natural Heritage Program. 2011. Online Conservation Guide for *Apamea inordinata*. Available from: http://www.acris.nynhp.org/guide.php?id=8083. Accessed 19 February 2013.

New York State Department of Environmental Conservation. 2005. New York State Comprehensive Wildlife Conservation Strategy. http://www.dec.ny.gov/index.html.

North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University. <http://mothphotographersgroup.msstate.edu>. Accessed 19 February 2013.

Common Name: Gorgone checkerspot ***SPCN***
Scientific Name: *Chlosyne gorgone*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G5
New York: S1
Tracked: Yes

Synopsis:
The subspecies taxonomy of this species is uncertain. Klots (1951) and Gatrelle (1998, 2001) restricted the name, *Chlosyne gorgone*, to populations in the Georgia and South Carolina Sand Hills region. A western subspecies has been named *Chlosyne gorgone carlota*. Klots (1951) considered mountain populations in adjacent northern Georgia to be intergrades between the two subspecies. Newly discovered populations in the mountains of North Carolina have been considered neither of these subspecies (Gatrelle 2001). There is some doubt that the western Carolina and Georgia population cluster includes three subspecies. However, southeastern populations of this butterfly may or may not prove to be taxonomically distinct from what is now called *Chlosyne gorgone carlota* and within these there may be some clinical north to south variation. Even when taken together, the entire species is of conservation concern, and this species might be the rarest butterfly in the United States, assuming it is not extinct (Schweitzer et al. 2011).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
Habitat includes prairies, old fields, oak-pine barrens and streamsides, open areas, roadsides, meadows, pastures, forest glades, prairies, and wastelands. This species also inhabits dry, jack-pine barrens where its larvae feed on sunflower (Helianthus sp.). More specific habitat needs include the presence of the host plant in oak openings, oak-pine barrens, pine barrens, mesic sand prairie, mesic prairie, hillside prairie, dry-mesic prairie, dry sand prairie (Michigan Natural Features Inventory 2007).

Primary Habitat Type
Oak-Pine Forest
Old Field/Managed Grasslands
Pine Barrens
Plantation, Disturbed Land, Pioneer Forest
Powerline
Residential Rural

Distribution:
There is one record from Lewis County in 1970.

New York Nature Explorer (2009)

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential & Commercial Development	Housing & Urban Areas (habitat loss/degradation)	P	L	L
2. Natural System Modifications	Fire & Fire Suppression (too much or too little)	P	L	L
3. Pollution	Agricultural & Forestry Effluents (herbicides and pesticides)	P	L	L

References Cited:

Gatrelle, R. R. 1998. The rediscovery, taxonomy, and biology of *Chlosyne gorgone gorgone* and *Chlosyne ismeria* (Nymphalidae) in Burke County, Georgia. The Taxonomic Report of the International Lepidoptera Survey 1: 1-9.

Gatrelle, R. R. 2001. An examination of *Mitoura* (Lycaenidae) in the southeastern United States: With the description of a new subspecies of *Mitoura hesseli*. The Taxonomic Report of the International Lepidoptera Survey 3: 1-10.

Klots, A. B. 1951. A field guide to the butterflies of North America, east of the Great Plains. Peterson Field Guide series. Houghton Mifflin Company, Boston, Massachusetts, USA.

Michigan Natural Features Inventory. 2007. Rare Species Explorer (Web Application). <http://mnfi.anr.msu.edu/explorer>. Accessed 2 January 2013.

New York Nature Explorer. 2009. New York State Department of Environmental Conservation. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 27 February 2013.

Schweitzer, D.F., M.C. Minno, and D.L. Wagner. 2011. Rare, declining, and poorly known butterflies and moths (Lepidoptera) of forests and woodlands in the Eastern United States. USDA Forest Health Technology Enterprise Team FHTET-2011-01.

Common Name: Monarch butterfly ***SPCN***
Scientific Name: *Danaus plexippus*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G5
New York: S5
Tracked: No

Synopsis:
While a recent catalogue of Latin American butterflies recognized six subspecies of *D. plexippus* (Lamas 2004), mitochondrial DNA sequences suggest that these groups are not genetically distinct (Brower and Jeansonne 2004) and at least one of the subspecies (*D. plexippus megalippe*) may mix in the Caribbean with migratory *D. plexippus plexippus* (NAMCP 2008). Herein, we are concerned with the subspecies *Danaus plexippus plexippus* in Mexico, the United States, and Canada.

East of the Rocky Mountains, monarchs have declined by more than 90 percent since 1995, and the 2013/2014 winter count showed these monarchs had dropped to the lowest number recorded yet. (D. Blanton USFWS, personal communication). The migratory butterflies in eastern and western North America represent the vast majority of all monarchs in the world (Brower et al. 2004).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%		Abundant		Unknown	Severe Decline
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%	X	Rare			

Habitat Discussion:
Monarch butterflies are found in open meadows and fields that usually contain a variety of wildflowers including milkweed, coastal beaches with dunes, and man-made butterfly gardens.

Monarch larvae are obligate herbivores of milkweeds and are likely to feed on any of the approximately 115 species in the genus *Asclepias* in North America and the Caribbean. This genus of perennial plants, with over 140 species world-wide, was also named, like the monarch, by Linnaeus. Monarchs also feed on milkweed vines in the genera *Sarcostemma*, *Cynanchum* and *Matelea* (NAMCP 2008). It is important to note, however, that although Monarchs are known to lay their eggs on some of these related species, the larvae may not be successful in their development (L. Milbrath, personal communication).

In addition, certain major coastal migratory stopovers are important conservation sites, especially those in along Delaware Bay in New Jersey including Cape May, where adults holdover for several days awaiting suitable conditions for crossing the Bay. There are also major roosting sites farther north such as east of New Haven and probably others farther south perhaps even as far as Cuba. Coastal regions are important flyways and so nectar (wild or in gardens) is an important resource in such places (NatureServe 2014). These sites may be important buffers against stochastic events that could potentially reduce or eliminate

populations that utilize the overwintering grounds in Mexico, which has already been significantly reduced in size.

Habitat requirements of this species is a complex issue for this species. In general, breeding areas are virtually all patches of milkweed in North America and some other regions. The critical conservation feature for North American populations is the overwintering habitats, which are certain high altitude Mexican conifer forests and or coastal California conifer or Eucalyptus groves as identified in literature. It appears that nearly all North American monarchs overwinter in one of these two three areas. Lethal cold would precludes successful overwintering in places like the Gulf Coast and much of Florida some years and it appears these are not major wintering regions as used was once to be assumed. In addition, certain major coastal migratory stopovers may be

In addition, certain major coastal migratory stopovers may be important conservation sites, especially those in along Delaware Bay in New Jersey including Cape May, where adults may holdover for several days awaiting suitable conditions for crossing the Bay. There are major, but probably less important, roosting sites farther north such as east of New Haven and probably others farther south perhaps even as far as Cuba. Coastal regions are important flyways and so nectar (wild or in gardens) is an important resource in such places (NatureServe 2014).

Primary Habitat Type
Old field/Managed grassland
Pasture/Hay

Distribution:
Monarchs can be found statewide in New York.

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential & Commercial Development	Housing & Urban Areas (loss of migratory corridors)	W	M	V
2. Residential & Commercial Development	Commercial & Industrial Areas (loss of migratory corridors)	L	M	V
3. Residential & Commercial Development	Tourism & Recreation Areas (loss of migratory corridors due to golf courses, playing fields)	L	M	M
4. Pollution	Agricultural & Forestry Effluents	R	U	L
5. Agriculture & Aquaculture	Wood & Pulp Plantations	R	L	L
6. Agriculture & Aquaculture	Annual & Perennial Non-timber Crops	R	U	L
7. Invasive & Other Problematic Species & Genes	Problematic Native Species (Aspen, reforestation)	U	U	H
8. Invasive & Other Problematic Species & Genes	Invasive Non-Native/Alien species (swallowwart)	U	U	H
9. Climate Change & Severe Weather	Droughts	W	H	M
10. Climate Change & Severe Weather	Temperature Extremes	W	H	H
11. Climate Change & Severe Weather	Storms & Flooding (flooding, sea level rise)	R	H	M

References Cited:

Blanton, Dee. Personal communication. Fish & Wildlife Biologist, USFWS, Hadley, MA.

Brower, L. P., D. R. Kust, E. Rendon-Salinas, E. G. Serrano, K. R. Kust, J. Miller, C. Fernandez del Rey, and K. Pape. 2004. Catastrophic winter storm mortality of monarch butterflies in Mexico during January 2002. Pages 151-166 in K. S. Oberhauser and M. J. Solensky, editors. The Monarch Butterfly. Biology and Conservation. Cornell University Press, Ithaca.

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NAMCP. North American Monarch Conservation Plan. 2008. Commission for Environmental Conservation. <http://www.cec.org/Storage/62/5431_Monarch_en.pdf>. Accessed 1 October 2014.

Common Name: Switchgrass dart ***SPCN***
Scientific Name: *Dichagyris acclivis*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4G5
New York: S2S3
Tracked: Yes

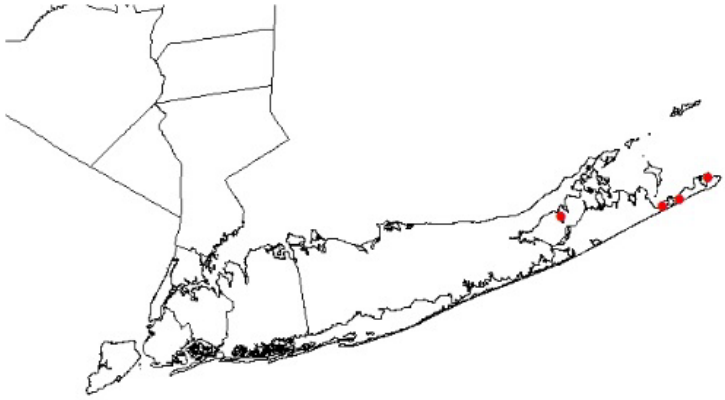
Synopsis:
The switchgrass dart is currently known as *Dichagyris acclivis*. It has been reclassified from the genus Richia (Poole and Gentili 1996). *Dichagyris acclivis* ranges from Kansas, northwestern Connecticut, and Cape Cod southward to North Carolina and Texas. In New York, *D. acclivis* may be restricted to the coastal plains. In New York, the short-term trend of this species is stable. An extant and viable population exists within Montauk County Park, Suffolk County where individuals were captured in 1995 and 2000. The larval foodplant of this species is switchgrass (*Panicum virgatum*) (Wagner et al. 2008, New York Natural Heritage Program 2011).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Stable
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%		Rare			

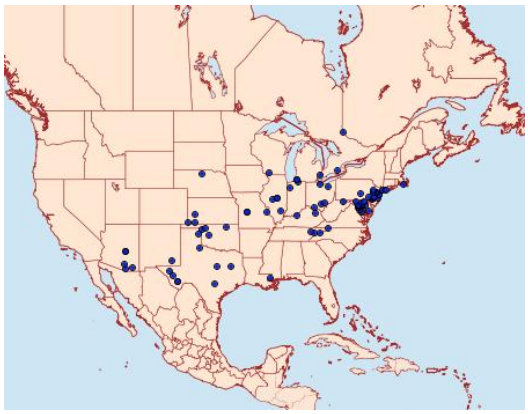
Habitat Discussion:
Dichagyris acclivis can be found in sandy areas, were there is an abundance of switchgrass (*Panicum virgatum*). In New York, this moth was observed in maritime healthland, maritime grassland and in an oak forest with bayberry (*Myrica* sp.) and *Phraghmites australis*. Suitable habitat is abundant in New York, but the species may be limited to the coastal plain as in New Jersey (New York Natural Heritage Program 2013).

Primary Habitat Type
Coastal Coniferous Barrens
Maritime Dunes
Oak Forest
Open Alkaline Peatlands

Distribution:
This species was documented in 1995 at Montauk County Park, Suffolk County. Eleven adults were trapped on 19 July and another 5 adults were trapped on 26 July. The site was re-sampled in 2000 and 11 adults were trapped. In 1997, 8 adults were trapped on Robins Island, Suffolk County. In 2007, D. acclivis was captured in Napeaque State Park and Hither Hills State Park, Suffolk County (New York Natural Heritage Program 2013).



NY Natural Heritage Program (2013)



States and provinces with records of *Dichagyris acclivis*. Map includes records of synonym species *Richia acclivis* and *Agrotis acclivis*. Some localities may not be represented (North American Moth Photographers 2012).

Threats:

Threats were identified but not assessed due to lack of information.

References Cited:

New York Natural Heritage Program. 2011. Online Conservation Guide for *Dichagyris acclivis*. Available from: http://www.acris.nynhp.org/guide.php?id=8163. Accessed 13 March 2013.

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North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University, MS. http://mothphotographersgroup.msstate.edu/MainMenu.shtml. Accessed 13 March 2013.

Poole, R.W., and P. Gentili. 1996. Nomina Insecta Nearctica: a check list of insects of North America. Volume 3 (Diptera, Lepidoptera, Siphonaptera). Entomological Information Services, Rockville, MD.

Common Name: A geometrid moth ***SPCN***
Scientific Name: *Digrammia denticulata*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4G5
New York: S1
Tracked: Yes

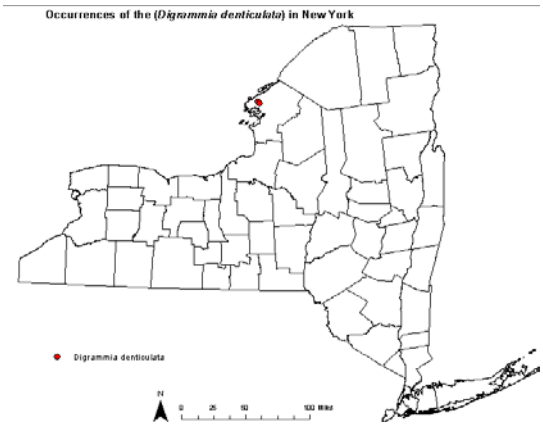
Synopsis:
This moth, formerly known as *Semiothisa denticulata*, is likely restricted to alvar grasslands and other dry prairies in western New York (NYNHP 2013). This moth was documented in 1996 at two locations in New York, both in Jefferson County (NYNHP 2013). It historically was found in Smokey Fall, Mattagami River, and Grand Bend, Ontario to Great Slave Lake, southwards to Chicago, Illinois and west (Forbes 1948).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

Habitat Discussion:
Likely to be confined to alvar grasslands and other dry prairies (NYNHP 2013).

Primary Habitat Type
Native Barrens and Savanna

Distribution:
In 1996, there were captures of this species in two locations. At Three Mile Creek Road Barrens, Town of Lyme, Jefferson County ten adults were captured at blacklight traps (NYNHP 2013). At the Lucky Star Alvar, Town of Lyme, Jefferson County two adults were captured at a blacklight trap (NYNHP 2013).



NYNHP (2013)

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Invasive & Other Problematic Species & Genes	Problematic Native Species (deer over-browse)	P	H	H

References Cited:

Forbes, W.T.M. 1948. Lepidoptera of New York and neighboring states part II. Cornell University Agricultural Experiment Station Memoir 274.

New York Natural Heritage Program (NYNHP). 2013. Biodiversity Database. New York State Department of Environmental Conservation. Albany, NY. (Accessed: March 5, 2013).

Common Name: Shadowy arches moth ***SPCN***
Scientific Name: *Drasteria adumbrata*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1S2
Tracked: Yes

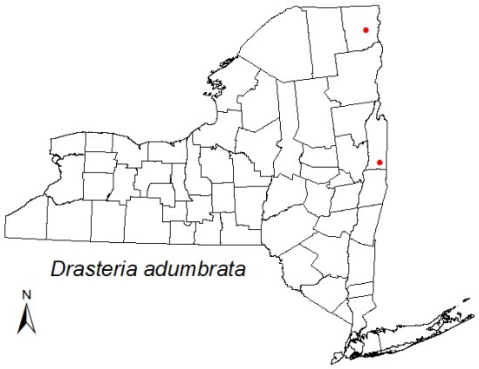
Synopsis:
The shadowy arches is currently known as *Drasteria adumbrata*. It was reclassified from the genus Synedoida (Poole 1989). There are two subspecies, the western *D. a. saxea* and the eastern *D. a. alleni*. Information on the population trend of this species is incomplete. *D. a. alleni* ranges from eastern Alberta, New York to Nova Scotia. The western *D. a. saxea* spans from southern British Columbia and southwestern Alberta, southward to California and Colorado. This species ranges from Nova Scotia and New York, westward to British Columbia and southward to Colorado and California (Richards 1939, Forbes 1954). The species is known from just two locations in New York, in West Plattsburg Pine Barrens, Clinton County, along a power-line right of way in a degraded pine barrens community, and in Washington County. Host plants are various blueberry species (*Vaccinium* spp.) (University of Alberta E.H. Strickland Entomological Museum 2013).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

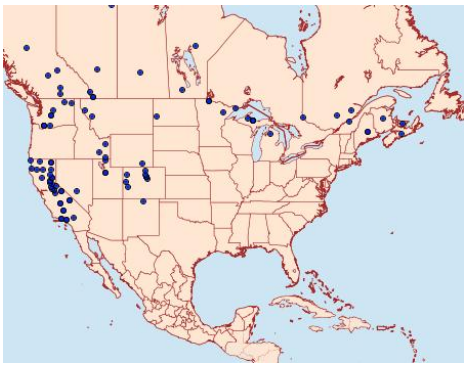
Habitat Discussion:
This species was captured in a degraded pine barrens community in Clinton County. Primary vegetation consisted of pitch pine (*Pinus rigida*), white pine (*Pinus strobus*), and red oak (*Quercus rubra*) on sandy soils. Understory vegetation was dominated by blueberry species (New York Natural Heritage Program 2013). In the Pacific Northwest, this species commonly inhabits dry montane woodlands and open woods in southern boreal and parkland region (University of Alberta E.H. Strickland Entomological Museum 2013).

Primary Habitat Type
Oak-Pine Forest
Pine Barrens

Distribution:
Six individuals were collected in the West Plattsburgh Pine Barrens, Clinton County in 1993. Tim McCabe also collected this species at Cambridge, Washington County, but records lack a specific date (New York Natural Heritage Program 2013).



Locations of *Drasteria adumbrata* in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand, NYSDEC.



Records of *Drasteria adumbrata* in North America. Data is collected from museum collections and photographs. Some localities may be absent (North American Moth Photographers Group 2012).

Threats:

Threats were identified but not assessed due to lack of information.

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential and Commercial Development	Housing & Urban Areas (habitat loss)			
2. Human Intrusions & Disturbance	Recreational Activities (off-road vehicles)			
3. Natural System Modifications	Fire & Fire Suppression (fire suppression)			
4. Invasive & Other Problematic Species & Genes	Problematic Native Species (over-browsing by deer)			
5. Invasive & Other Problematic Species & Genes	Invasive Non-Native/Alien Species (parasitoid flies)			
6. Pollution	Excess Energy (light pollution)			
7. Climate Change & Severe Weather	Habitat Shifting & Alteration			

References Cited:

Forbes, W. T. M. 1954. Lepidoptera of New York and neighboring states part III. Cornell University Experiment Station Memoir 329.

New York Natural Heritage Program. 2013. Biodiversity database. Albany, NY. Accessed 18 March 2013.

North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University, MS. <http://mothphotographersgroup.msstate.edu/MainMenu.shtml>. Accessed 18 March 2013.

Poole, R. W. 1989. Lepidopterorum Catalogus (new series) Fascicle 118: Noctuidae. E.J. Brill, Leiden, The Netherlands. 1314 pp.

Richards, A.G. 1939. A revision of the North American species of Phoberia-Melipotis-Drasteria group of moths (Lepidoptera: Phalaenicae). Entomologica Americana 19: 1–100.

Common Name: A geometrid moth ***SPCN***
Scientific Name: *Euchlaena madusaria*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1
Tracked: Yes

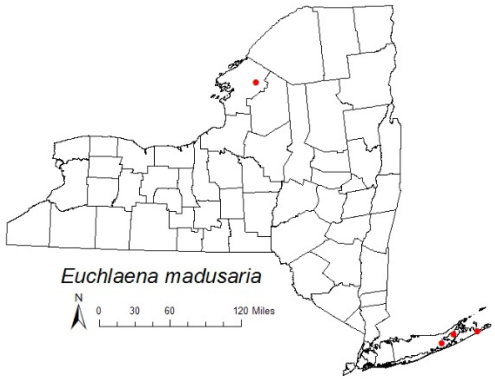
Synopsis:
Euchlaena madusaria is known by two common names: sandplain euchlaena moth and scrub echlaena moth. It ranges from southern British Columbia to Nova Scotia, southward to Florida, Missouri and Oregon (McGuffin 1981). In New York, the short-term trends are stable, with populations on Long Island proven extant and viable. The long-term trends of this species are unknown (New York Natural Heritage Program 2013). This species inhabits dry woodland and scrublands within barrens and other sandy areas. Larval host plants include oak (*Quercus* sp.) and lowbush blueberry (*Vaccinium angustifolium* and *V. pallidum*) (Nelson 2007).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Stable
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
Euchlaena madusaria inhabits dry woodlands and adjacent scrublands in sandy or barrens areas. In New York, this species has been found in pitch pine-oak-heath woodlands, maritime heathlands, and dwarf pine plains (Nelson 2007, New York Natural Heritage Program 2013). Western populations inhabit dry woodlands in the montane, prairie, and southern boreal region (University of Alberta E.H. Strickland Entomological Museum 2013). Larval host plants include lowbush blueberry and a variety of oak species.

Primary Habitat Type
Native Barrens and Savanna

Distribution:
Euchlaena madusaria was collected on Robins Island, Suffolk County in 1997. Four adult moths were captured in 1997 and 3 more adults were captured in 2005 in the dwarf pine barrens in Southampton, Suffolk County. Additional moths were collected in 2007 at Napeague State Park, Suffolk County. In 2012, a single individual was collected at Fort Drum Military Instillation, Jefferson County (New York Natural Heritage Program 2013).



NYNHP (2013)

Threats:
Threats were identified but not assessed, due to lack of information.

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential and Commercial Development	Housing & Urban Areas (habitat loss)			
2. Human Intrusions & Disturbance	Recreational Activities (off-road vehicles)			
3. Natural System Modifications	Fire & Fire Suppression (fire suppression)			
4. Invasive & Other Problematic Species & Genes	Problematic Native Species (over-browsing by deer)			
5. Invasive & Other Problematic Species & Genes	Invasive Non-Native/Alien Species (parasitoid flies)			
6. Pollution	Excess Energy (light pollution)			
7. Climate Change & Severe Weather	Habitat Shifting & Alteration			

References Cited:

McGuffin, W. C. 1981. Guide to the Geometridae of Canada (Lepidoptera), II Subfamily Ennominae. 3. Memoirs of the Entomological Society of Canada, no. 117: 153 pp.

Nelson, M.W. 2007. Massachusetts rare species fact sheets. Massachusetts Division of Fisheries & Wildlife, Westborough, MA. <http://www.mass.gov/dfwele/dfw/nhesp/species_info/fact_sheets.htm>. Accessed 26 March 2013.

New York Natural Heritage Program. 2013. Online Conservation Guide for *Euchlanea madusaria*. Available from: http://www.acris.nynhp.org/guide.php?id=7943. Accessed 26 March 2013.

University of Alberta E.H. Strickland Entomological Museum. 2013. Entomology Collection Species Page. <http://entomology.museums.ualberta.ca/searching_species_details.php?s=2783> Accessed 26 March 2013.

Common Name: Olympia marble ***SPCN***
Scientific Name: *Euchloe olympia*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Special Concern

Natural Heritage Program Rank:
Global: G4G5
New York: S1
Tracked: Yes

Synopsis:
The olympia marble ranges from the eastern plains of Alberta, Canada southward through eastern Montana, Wyoming and Colorado. There are isolated populations in southern Missouri, Arkansas, Texas and Ontario, Canada. In the eastern U.S., this species is found from northern Minnesota through Wisconsin and Michigan. Appalachian populations are found in West Virginia, Virginia, Pennsylvania, New York, Maryland, North Carolina, Tennessee, and Ohio (Parshall 2002). This species was first recorded in Jefferson County, New York in 1986 (NYNHP 2013).

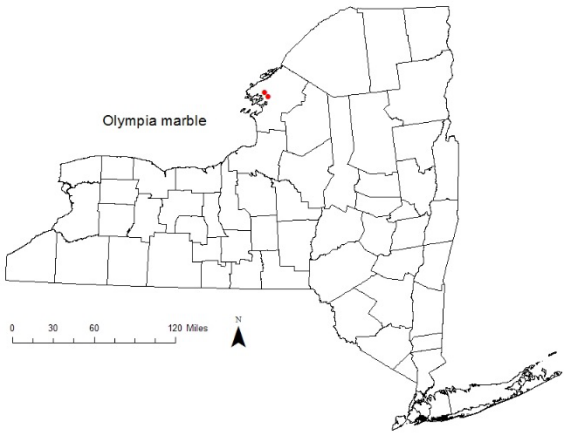
The olympia marble inhabits open woods, barrens, very dry meadows in eastern part of range and open grasslands to the west. It is typically found in habitats that appear semi-arid with well-drained soils (Opler and Krisek 1984). Appalachian populations are restricted to shale barrens, openings, and rights-of-way on sunny wooded shale slopes and crests. Great Lakes region and southeastern Canadian populations are found in dry meadows and open sandy woodlands on old dunes and in alvars (NatureServe 2013). Short-term trend for this species has increased 10–25%. Olympia marble has recently expanded its ranged in the Great Lakes region of Ontario and western New York. Long-term trend for this species varies from an increase of 10–25% to a decline of 30% (NatureServe 2013).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
The olympia marble is mainly a species of dryland areas. On the prairies, it is usually found on grassy knolls or around badlands near its foodplants. In Ontario and Quebec, it is a species of dry meadows and open woodlands, most often found on alvars and old dunes (Layberry et al. 1998).

Primary Habitat Type
Great Lakes Dune and Swale
Old Field/Managed Grasslands

Distribution:
In 1986, this species was collected in Limerick Cedars Preserve, Jefferson County. In 1987, this species was collected in Chaumont Barrens Preserve, Jefferson County. It was observed in 1996 in Chaumont Barrens Preserve. This species was observed in both Limerick Cedars Preserve and Chaumont Barrens Preserve in 2002–2005. In 2006 a survey of both Chaumont Barrens and Limerick Cedars Preserves was unable to observe this species (NYNHP 2013).



NY Natural Heritage Program (2013)

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential & Commercial Development	Housing and Urban Areas (habitat loss/degradation)	P	L	M
2. Climate Change & Severe Weather	Habitat Shifting and Alteration	P	L	H
3. Natural System Modifications	Other Ecosystem Modifications (natural succession---cedar)	P	M	L

References Cited:
Layberry, R. A., P. W. Hall, and J.D. Lafontaine. The Butterflies of Canada. 1998. University of Toronto Press.

NatureServe. 2013. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 30 January 2013.

New York Natural Heritage Program (NYNHP). 2013. Biodiversity database. Albany, New York. Accessed May 6 2013.

Opler, P.A. and G.O. Krizek. 1984. Butterflies East of the Great Plains, an illustrated natural history. Johns Hopkins University Press. Baltimore.

Parshall, D.K. 2002. Conservation assessment for olympia marble butterfly (*Euchloe olympia*). USDA Forest Service, Eastern Region. <www.fs.fed.us/.../insect_euchloe_olympia-OlympiaMarbleButterfly.pdf>.

Common Name: Fawn brown dart moth ***SPCN***
Scientific Name: *Euxoa pleuritica*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S2S3
Tracked: Yes

Synopsis:
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. This species is very rare in the east and is much more common westward (Forbes 1954, New York Natural Heritage Program 2011). 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).

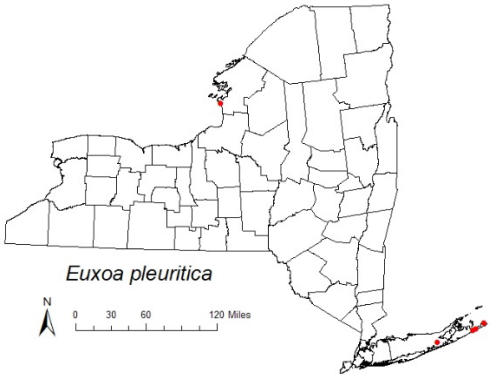
The short term population trend for *Euxoa pleuritica* is thought to be in decline. At one survey site, a single individual was collected in 1993 but the species was not recorded during surveys in 2005. The long-term trend for this species is thought to also be in decline. Historic records describe populations 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).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

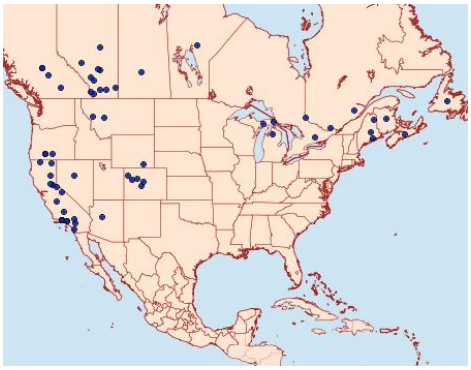
Habitat Discussion:
The fawn brown dart inhabits dunes and other sparsely vegetated sandy areas, such as pine barrens. This species has been found in several habitats including maritime grasslands, Great Lakes dunes, dwarf pine plains, and maritime heathlands (New York Natural Heritage Program 2011).

Primary Habitat Type
Great Lakes Dune and Swale
Maritime Dunes
Native Barrens and Savanna
Pine Barrens

Distribution:
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).



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


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

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Human Intrusions & Disturbance	Recreational Activities (off-road vehicles)	N	L	L
2. Natural System Modifications	Fire & Fire Suppression (fire suppression)	N	L	M
3. Climate Change & Severe Weather	Habitat Shifting & Alteration (southern limit of range)	R	L	V
4. Climate Change & Severe Weather	Severe Storms & Flooding	R	L	V

References Cited:

Anweiler, G.G. 2003. *Euxoa pleuritica*. University of Alberta E.H. Strickland Entomological Museum. http://www.entomology.ualberta.ca/searching_species_details.php?s=4250. Accessed 11 March 2013.

Forbes, William T. M. 1954. Lepidoptera of New York and neighboring states part III. Cornell University Experiment Station Memoir 329.

New York Natural Heritage Program. 2011. Online Conservation Guide for *Euxoa pleuritica*. Available from: http://www.acris.nynhp.org/guide.php?id=8159. Accessed 8 March 2013.

New York Natural Heritage Program. 2013. Biodiversity Database. Albany, New York. Accessed 11 March 2013.

North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University, MS. http://mothphotographersgroup.msstate.edu/MainMenu.shtml. Accessed 11 March 2013.

Common Name: Marsh fern moth ***SPCN***
Scientific Name: *Fagitana littera*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1S3
Tracked: Yes

Synopsis:
Information on the biology of the marsh fern moth is incomplete. This species inhabits open/shrubby marsh areas, acidic bogs/calcareous fens, and wet meadow areas. The marsh fern moth is distributed from Nova Scotia, Ottawa, Adirondacks, New York, westward to Wisconsin and southward to North Carolina (NYSDEC 2013). The larval foodplant for this species has been reported as marsh fern (*Thelypteris palustris*) and Virginia chain fern (*Woodwardia virginica*). Short and long-term population trends for this species are unknown. In the 1950s this species was affected by DDT spraying, which is thought to have extirpated some populations. Since the ban of DDT use, it is thought that populations should have had adequate time to recover, which recent records suggest. This species is a strong recolonizer and has re-colonized habitats in New Jersey; it is likely that populations have also rebounded on Long Island (Wagner et al. 2008, NatureServe 2012).

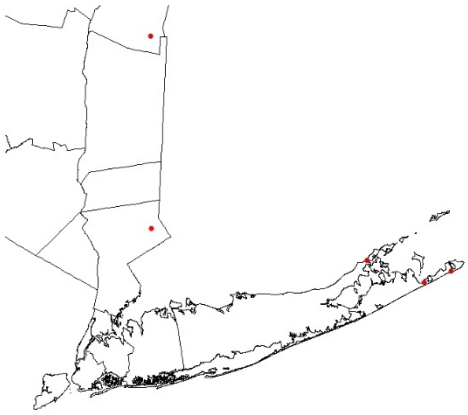
Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%		Rare			

Habitat Discussion:
The marsh fern moth inhabits un-forested wetlands including costal bogs, shrub swamps and marshes. In New Jersey, this species has been found in wet power lines and wet open pinelands in New Jersey. This species can be found primarily bogs in Ohio and open/shrubby wetlands in Wisconsin (Rings et al. 1992, Ferge and Balogh 2000). In New York, this species has been recorded in open to shrubby wetlands, wet meadows and acidic bogs/ calcareous fens (New York Natural Heritage Program 2013).

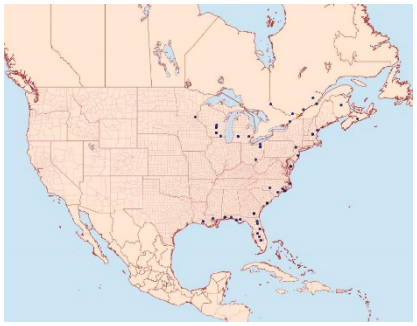
Primary Habitat Type
Freshwater Marsh
Open Acidic Peatlands
Open Alkaline Peatlands
Wet Meadow/Shrub Marsh

Distribution:
A specimen was collected in Centre, Albany County 1907 (New York State Museum 1907). Additional historic occurrences of this moth were reported in Rye, Westchester County, Poughkeepsie, Dutchess

County, and the Adirondacks (Leonard 1928). This moth was captured at Drowned Woods Swamp, Columbia County in 1989. This moth was captured at Shadmoor State Park and Napeague State Park, Suffolk County in 2007. Specimens were also observed in Ward Pound Park, Westchester County, in 2007. The most recent capture of four males was in Arshamomaque Preserve, Suffolk County in 2012 (New York Natural Heritage Program 2013).



Locations of *Fagitana littera* in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand.



States and provinces with current records of occurrence of *F. littera*. Map data is collected from museum specimens and photographs. Some records may not be represents (North American Moth Photographers Group 2012).

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Natural System Modifications	Fire & Fire Suppression (fire suppression)	R	L	H
2. Pollution	Air-Borne Pollutants (pesticide spraying for mosquitoes)	W	M	M
3. Invasive & Other Problematic Species & Genes	Invasive & Non-Native Alien Species(Phragmites)	P	M	H

References Cited:

Ferge, L.A., and G.J. Balogh. 2000. Checklist of Wisconsin Moths (Superfamilies Drepanoidea, Geometroidea, Mimmallonoidea, Bombycoidea, Sphingoidea, and Noctuiodea). Contributions in Biology and Geology of the Milwaukee Public Museum No. 93. Mil

Leonard, M. D. 1928. A list of the insects of New York, with a list of the spiders and certain other allied groups. Cornell University Agricultural Experiment Station Mem. 101. Ithaca, New York. 1121 pp.

New York Natural Heritage Program. 2013. Biodiversity Database. Albany, New York. Accessed 11 March 2013.

New York State Museum. 1907. Annual report of the New York State Museum. University of Albany New York 61(2): 1-160.

North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University, MS. http://mothphotographersgroup.msstate.edu/MainMenu.shtml. Accessed 11 March 2013.

NYSDEC. 2013. State Wildlife Grant T-17: Baseline survey of Lepidoptera Species of Greatest Conservation Need. Annual Progress Report to USFWS. Albany, NY.

Rings, R.W., E.H. Metzler, F.J. Arnold, and D.H. Harris. 1992. The Owlet Moths of Ohio (Order Lepidoptera, family Noctuidae). Ohio Biol. Surv. Bull. New Series, Vol. 9, no. 2, vi. + 219 pp., 16 color plates.

Wagner, D.L., D.F. Schweitzer, J.B. Sullivan, and R.C. Reardon. 2008. Owlet Caterpillars of Eastern North America (Lepidoptera: Noctuidae).

Common Name: Blueberry gray ***SPCN***
Scientific Name: *Glena cognataria*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4G5
New York: S1S3
Tracked: Yes

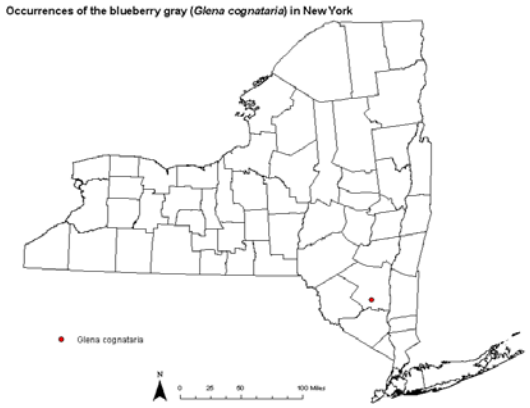
Synopsis:
This species historically occurred mainly along the Atlantic Coast, from Nova Scotia to Florida, but also inland in northeastern Pennsylvania, New York, and in the Virginia mountains (Forbes 1954, NYNHP 2011). The range is not continuous (NYNHP 2011). This species is associated with heathlands, including bogs and pine barrens (NYNHP 2011). This species is rare north of New Jersey (NYNHP 2013).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
This species can be found in heathlands including bogs and pine barrens and is associated with extensive areas of lowbush blueberry (NYNHP 2011). The NY Natural Heritage Program (2013) has identified an association with the following ecological communities: chestnut oak forest and pitch pine-oak-heath rocky summit.

Primary Habitat Type
Mountain Spruce-Fir Forests
Oak-Pine Forest
Open Alkaline Peatlands
Pine Barrens

Distribution:
This species was apparently historically abundant on Long Island and may still occur in unknown locations there (Rindge 1965, NYNHP 2011). In 1988, a specimen was captured by blacklight trap at Millbrook Burn in Minnewaska State Park Preserve in Gardiner, Ulster County (NYNHP 2011). There are no current occurrences of this species in New York. A survey at Minnewaska State Park Preserve in 2008 resulted in no captures, and that population is thought to be extirpated (NYNHP 2013). Although there are no known locations currently, it is suspected that the blueberry gray may be more abundant in New York than the records show (NYNHP 2013).



NYNHP (2013)

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Forbes, W. T. M. 1954. Lepidoptera of New York and neighboring states part II. Cornell University Experiment Station Memoir 274.

New York Natural Heritage Program. 2011. Online Conservation Guide for *Glena cognataria*. Available at: <http://www.acris.nynhp.org/guide.php?id=7935> (Accessed: March 18, 2013).

New York Natural Heritage Program. 2013. Biodiversity Database. New York State Department of Environmental Conservation. Albany, NY. (Accessed: March 5, 2013).

Rindge, F.H. 1965. A revision of the Nearctic species of the genus *Glena* (Lepidoptera, Geometridae). Bulletin of the AMNH; v. 129, article 3.

Common Name: A notodontid moth ***SPCN***
Scientific Name: *Heterocampa varia*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Special Concern

Natural Heritage Program Rank:
Global: G3G4
New York: S1S2
Tracked: Yes

Synopsis:
Heterocampa varia occupies habitat in six states on the East Coast. *H. varia* is listed under the common names of prominent moth and sandplain heterocampa. Extant populations are known from New York, New Jersey, Massachusetts, and North Carolina. This species historically ranged from Massachusetts to Georgia. *H. varia* inhabits scrub oak-pitch pine barrens and heath land, sandy grass lands with oak components, and open savanna-like oak woodland. The larval host plant of this species is scrub oak (*Quercus ilicifolia*), but this moth most likely feeds on additional oak species. The short-term trend for this species has been stable in New York, with extant populations occurring in eastern Long Island. The long term trends of this species have declined 50–90% due to habitat loss and fire suppression. This species is pyrogenic, requiring frequent fires to maintain open habitat and the growth of larval host plants.

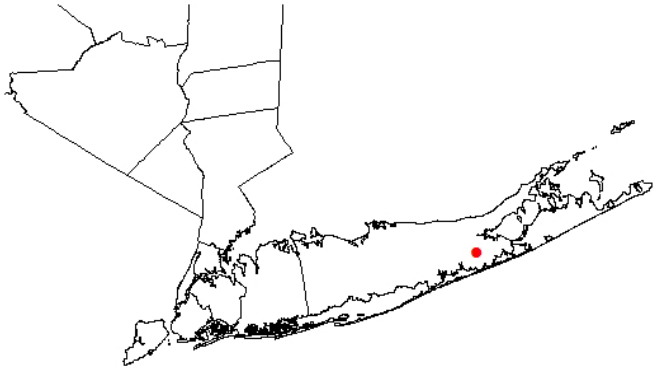
Heterocampa varia is not threatened in northeastern United States except by its rarity; there are only 10 extant occurrences in the 6 states with historical records. This species is listed as possibly extirpated in South Carolina, Georgia and Massachusetts; critically imperiled in New York and North Carolina; and vulnerable in New Jersey (NatureServe 2012). Increased monitoring could discover additional populations in historic localities.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Stable
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%		Rare			

Habitat Discussion:
This species can be found in xeric habitats with sandy soils. In Long Island, this species is found in dwarf pine barrens, dominated by *Pinus rigida* and *Quercus ilicifolia*. In Massachusetts this species is associated with coastal scrub oak barrens and heathlands, sandplain grasslands with a scrub oak component and savanna-like oak woodland (Wagner et al 2003, Nelson 2007).

Primary Habitat Type
Coastal Coniferous Barrens
Coastal Hardwoods
Oak Forest
Oak-Pine Forest
Pine Barrens

Distribution:
A population of *Heterocampa varia* has been known to be extant and viable since 1986 in the dwarf pine barrens, Southampton, Suffolk County (New York Natural Heritage Program 2013). Specimens were collected in 1986, 1993, 1997, 1999, and 2005.



Location of *Heterocampa varia* in New York (NYNHP 2013). Map created by Shawn Ferdinand, NYSDEC.

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 19 March 2013.

Nelson, M.W. 2007. Massachusetts rare species fact sheets. Massachusetts Division of Fisheries & Wildlife, Westborough, MA. <http://www.mass.gov/dfwele/dfw/nhesp/species_info/fact_sheets.htm>. Accessed 19 March 2013.

New York Natural Heritage Program. 2013. Biodiversity database. Albany, New York. Accessed 20 March 2013.

Wagner, D.L., M.W. Nelson, and D.F. Schweitzer. 2003. Shrubland Lepidoptera of southern New England and southeastern New York: ecology, conservation, and management. Forest Ecology and Management 185: 95-112.

Common Name: Pine pinion moth ***SPCN***
Scientific Name: *Lithophane lepida lepida*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Endangered

Natural Heritage Program Rank:
Global: G3T1T3
New York: S1
Tracked: Yes

Synopsis:
Pine pinion moths historically ranged from Ottawa, Ontario southward to Albany, New York and eastward to Nova Scotia. There are taxonomic ambiguities whether the current sub-species *L. l. lepida* and *L. l adipel* are sub-species or distinct species. *L. l. adipel* ranges from northern New York and New Hampshire, southward to Georgia and westward from there in Canada to Alberta. *L. l. lepida* occurs only in Maine, Nova Scotia, New Brunswick, Quebec, and eastern Ontario, with an overlapping range with *L. l. adipel* in eastern New York and New Hampshire (D. Lafontaine, personal communication). Further differences between the two exist in appearance, with forewing and genitalia differences (D. Lafontaine, personal communication). The pine pinion moth was historically found around the Albany area and has not been seen in more than 100 years. The only current location in New York is in Clinton County, where it was documented in sandy pitch pine (*Pinus rigida*) barrens in 1991. Long term trends for this species have shown a decrease in population size since the 1900s (Schweitzer et al. 2011, NatureServe 2012).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
Specimens of the pine pinion were collected in extensive sandy pitch (*Pinus rigida*) and jack pine (*Pinus banksiana*) forests and barrens (New York Nature Explorer 2009). This species inhabits early-successional communities dominated by pitch pine and scrub oak (*Quercus ilicifolia*) (Sperduto and Nichols 2004). Pine pinion serve as an indicator of ecological condition. When the barrens habitat goes unmanaged and reverts to a closed canopy system, populations of this moth become increasingly vulnerable to extirpation (New Hampshire Fish and Game Department 2005).

Primary Habitat Type
Pine Barrens
Powerline

Distribution:
One specimen has been collected from Keene, Essex County in 1965 (McCabe 2010). Two adults were collected in 1982 and 1 adult in 1984 at the Clintonville Pine Barrens, Clinton County (New York Natural

Heritage Program 2013). This species was proven extant at the Clintonville Pine Barrens, Clinton County in 1991 (New York Natural Heritage Program 2013).

Location of *Lithophane lepida lepida* in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand, NYSDEC.

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 15 February 2013.

New Hampshire Fish and Game Department. 2005. New Hampshire Wildlife Action Plan. <www.wildlife.state.nh.us>.

New York Natural Heritage Program. 2013. Biodiversity database. Albany, NY. Accessed 26 February 2013.

New York State Department of Environmental Conservation. 2009. New York Nature Explorer. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 15 February 2013.

Schweitzer, D. F., M. C. Minno, and D. L. Wagner. 2011. Rare, declining, and poorly known butterflies and moths (Lepidoptera) of forests and woodlands in the eastern United States. USFS Forest Health technology Enterprise Team, Technology Transfer Bulletin FHTET-2011-01. 517 pp.

Common Name: Pale green pinion moth ***SPCN***
Scientific Name: *Lithophane viridipallens*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G5
New York: S1
Tracked: Yes

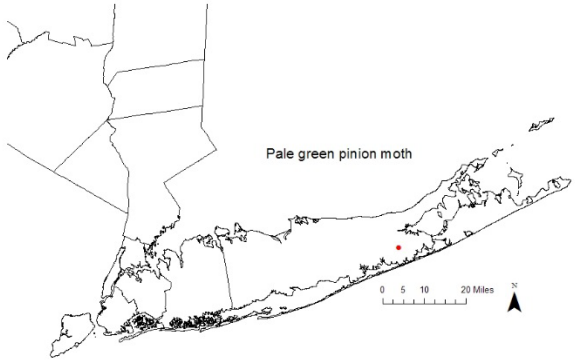
Synopsis:
The pale green pinion moth is a common, habitat generalist species throughout the southern U.S. lowlands. This species is spottily distributed along the coastal plain from Massachusetts to New Jersey, becoming more continuous from New Jersey to Georgia and west to Louisiana and east Texas (Wagner et al. 2011, NatureServe 2013). In New York, this species was historically known from Long Island (Forbes 1954). This species was recently collected in the dwarf pine barrens, Suffolk County in 2005. This species can be found in a variety of habitats including cedar swamps, hardwood swamps, shrub swamps, woodlands and forests (Wagner et al. 2011). Population trends for this species in New York are unknown. The short-term trend throughout its range is considered to be relatively stable. The long-term trend for this species has declined 30–50% throughout its known range (NatureServe 2013).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
In New York, this species was recorded in a dwarf pine barrens community, dominated with dwarf pitch pine-scrub oak (NYNHP2013b). This species is considered a generalist occupying multiple coastal habitats including cedar swamps, hardwood swamps, shrub swamps, woodlands and forests (Wagner et al. 2011). In Massachusetts this species is found in oak/holly swamps and acidic shrub swamps containing a variety of its probable host plants. Larval host plants are undocumented but are thought to include hollies (*Ilexi* spp.), sweet pepper-bush (*Clethra alnifolia*), swamp-fetterbush (*Leucothoe racemosa*), maleberry (*Lyonia ligustrina*), and highbush blueberry (*Vaccinium corymbosum*, *V. pallidum*) (Nelson 2013, NYNHP 2013b). This species occurs in other wooded habitats on Long Island, demonstrating that it is not a barrens specialist (McGuiness 2006).

Primary Habitat Type
Mixed Hardwood Swamp
Northern White Cedar Swamp
Pine Barrens
Wet Meadow/Shrub Marsh

Distribution:
This species was observed by Hugh McGuinness in the dwarf pine barrens in Southampton, Suffolk County in 2005 (NYNHP 2013b). There are additional undocumented sightings of this species at multiple locations on Long Island (NYNHP 2013a).



NY Natural Heritage Program (2013b)

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Forbes, W. T. M. 1954. Lepidoptera of New York and neighboring states part III. Cornell University Experiment Station Memoir 329

McGuinness, Hugh. 2006. Overview of the 2005 Dwarf Pine Plains data.

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 3 May 2013.

Nelson, M.W. 2013. Massachusetts rare species fact sheets. Massachusetts Division of Fisheries & Wildlife, Westborough, MA. <www.mass.gov/dfwele/dfw/nhesp/species.../lithophane_viridipallens.pdf >. Accessed 3 May 2013.

New York Natural Heritage Program (NYNHP). 2013a. Online Conservation Guide for *Lithophane viridipallens*. Available from: http://www.acris.nynhp.org/guide.php?id=8130. Accessed 3 May 2013.

New York Natural Heritage Program (NYNHP). 2013b. Biodiversity database. Albany, New York. Accessed 3 May 2013.

Wagner, D.L., D.F. Schweitzer, J.B. Sullivan, and R.C. Reardon. 2011. Owlet caterpillars of Eastern North America. Princeton University Press, Princeton, New Jersey. 576 pp.

Common Name: Jack pine looper ***SPCN***
Scientific Name: *Macaria marmorata*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G5
New York: S1
Tracked: Yes

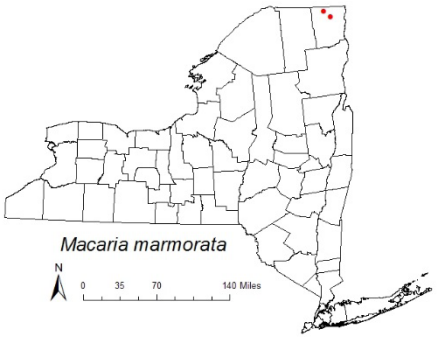
Synopsis:
The jack pine looper is currently known as *Macaria marmorata*. It was reclassified from the previous species name *Semiothisa banksianae* (Ferguson 2008). The jack pine looper is a boreal species, spanning coast to coast in Canada. In the United States, populations are known in Maine, Michigan, Wisconsin, and New York where it was recently discovered in Clinton County. The larval host plant of this species is jack pine (*Pinus banksiana*), an uncommon species in New York (New York Natural Heritage Program 2012, USDA 2012). Additional monitoring is needed to assess the population trends, phenology and life cycle for this species. It is believe to continue to occur at this one location in Clinton County, where it was discovered in 1995 and was still present in 2006 (SGCN Expert Meeting).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common	X		
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare			

Habitat Discussion:
The jack pine looper is dependent on the larval fooplant, jack pine. In New York, the jack pine's distribution is limited to the northern counties (USDA 2012). Collection sites in New York were dominated by jack pine, with an understory of ericaceous shrubs. The site also contains exposed bedrock and an herb layer of sparse grasses, mosses and lichens (New York Natural Heritage Program 2013).

Primary Habitat Type
Erosional Bluff
Oak-Pine Forest
Pine Barrens

Distribution:
This species was collected at the Altona Flat Rock State Forest and Gadway Sandstone Pavement Barrens Preserve, both in Clinton County, in 1995 (New York Nature Explorer 2009). Surveys in 2003 confirmed the continued presence of the species at the Gadway site.



Known occurrences of jack pine looper in New York (NY Nature Explorer 2009). Map created by Shawn Ferdinand, NYSDEC.

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Ferguson, D.C. 2008. Moths of America north of Mexico. Fascicle 17.2. Geometroidea, Geometridae, Ennominae (part: Abaxini, Cassymini, Macariini). The Wedge Entomological Research Foundation. 430 pp.

New York Natural Heritage Program. 2012. Online Conservation Guide for *Macaria marmorata*. Available from: http://www.acris.nynhp.org/guide.php?id=7929. Accessed 25 March 2013.
New York Natural Heritage Program. 2013. Biodiversity database. Albany, NY. Accessed 25 March 2013.

New York State Department of Environmental Conservation. 2009. New York Nature Explorer. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 25 March 2013.

USDA, NRCS. 2012. The PLANTS Database, Version 3.5. National Plant Data Center, Baton Rouge, LA. http://plants.usda.gov.

Common Name: Black-bordered lemon moth ***SPCN***
Scientific Name: *Marimatha nigrofimbria*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G5
New York: S1
Tracked: Yes

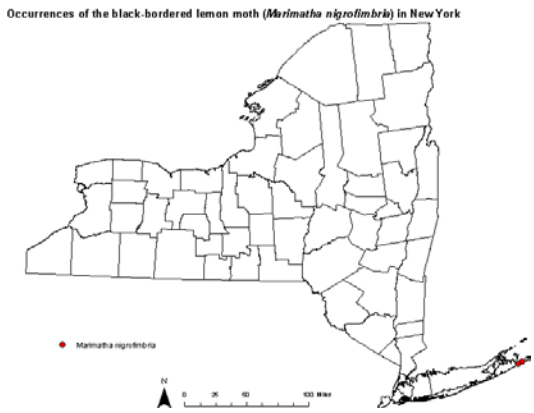
Synopsis:
The black-bordered lemon moth was formerly classified in the genus Thioptera. This species is found from southern New York and Massachusetts to Florida, westward to Texas and Arizona, and from the Midwest in Ohio, Missouri, Kansas, and Oklahoma (Covell 1984, NYSDEC 2010, NatureServe 2012, Pogue 2012). Its habitat requirements are not well understood. In New York, this species has been captured at two locations on Long Island in 2007 (NYNHP 2013). Prior to that, this moth was not known in the state.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

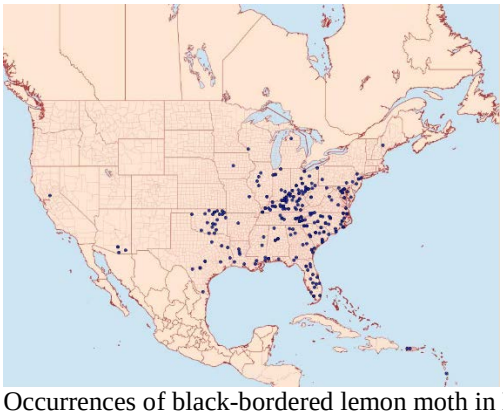
Habitat Discussion:
The black-bordered lemon moth's preferred habitat is poorly understood. Based on the two captures in New York, it seems to be associated with maritime dunes, grasslands, and heathlands (NYNHP 2013). Known foodplants are crabgrass and morning glories; laboratory experiments also show this species will feed on panic grass and bluegrass (NYNHP 2013).

Primary Habitat Type
Maritime Dunes
Old Field/Managed Grasslands

Distribution:
There are two current records of this species from 2007 on Long Island (NYNHP 2013). One capture was at the Hither Hills Uplands at Hither Hills State Park in East Hampton, Suffolk County (NYNHP 2013). The other capture, also in East Hampton, was at Napeague Beach at Napeague State Park (NYNHP 2013). Both locations were surveyed with blacklight traps.



NYNHP (2013)


Occurrences of black-bordered lemon moth in North America (MPG 2010). May not account for all occurrences.

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Covell, C.V. 1984. A Field Guide to the Moths of Eastern North America. Boston: Houghton Mifflin.

New York Natural Heritage Program. 2012. Online Conservation Guide for *Thioptera nigrofimbria*. Available at: <http://www.acris.nynhp.org/guide.php?id=8077> (Accessed: March 18, 2013).

NYSDEC. 2010. State Wildlife Grant T-17: Baseline survey of Lepidoptera Species of Greatest Conservation Need. Annual Progress Report to USFWS. Albany, NY.

MPG (Moth Photographers Group). 2010. *Marimatha nigrofimbria*. Moth Photographers Group at the Mississippi Entomological Museum at the Mississippi State University. Available at: <http://mothphotographersgroup.msstate.edu/large_map.php?hodges=9044> (Accessed: March 18, 2013).

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer> (Accessed: March 5, 2013).

Pogue, M.G. 2012. The Aventiinae, Boletobiinae, Eublemminae, Pangraptinae, Phytometrinae, and Scolecocampinae (Lepidoptera: Noctuoidae: Erebidae) of Great Smoky Mountains National Park, U.S.A. Zootaxa 3153: 1-31.

Common Name: Pin-striped slug moth ***SPCN***
Scientific Name: *Monoleuca semifascia*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1
Tracked: Yes

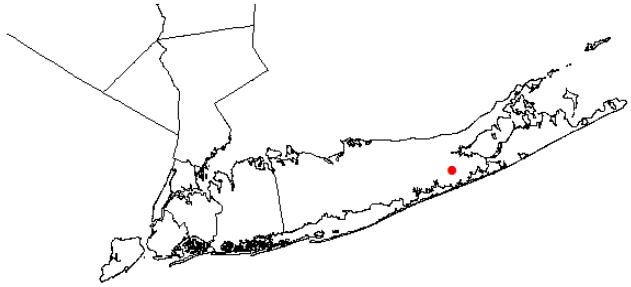
Synopsis:
In New York, *Monoleuca semifascia* inhabits the dwarf pine barrens of Long Island. The pin-striped slug moth was discovered on Long Island in 1993 and is extant and viable. The Long Island population is the first known to be north of New Jersey and the first discovery of this species in New York. The pin-striped slug moth ranges from New York and New Jersey, southward to Florida and Texas, with populations in Missouri and Arkansas. The short-term trend in New York is stable; individuals were most recently collected in 2005. In New York, the long-term trend is unknown; however, the habitat community that supports this species historically declined from development and fire suppression (New York Natural Heritage Program 2011).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Stable
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%		Rare			

Habitat Discussion:
This species exists in xeric sandy forests dominated by pitch pine (*Pinus rigida*) and scrub oak (*Quercus ilicifolia*). Larval host plants include Oak (*Quercus* sp.), cherry (*Prunus* sp.), pecan (*Carya illinoinensis*), and persimmon (*Diospyros virginiana*) (Wagner et al. 2008, Opler et al. 2010). The site at which this species is monitored is an open canopy forest of pitch pine and scrub oak, The understory vegetation consists of black huckleberry (*Gaylussacia baccata*), blue ridge blueberry (*Vaccinium pallidum*), eastern teaberry (*Gaultheria procumbens*), and bearberry (*Arctostaphylos uva-ursi*). (New York Natural Heritage Program 2013).

Primary Habitat Type
Oak Forest
Oak-Pine Forest
Pine Barrens

Distribution:
A viable population has been surveyed in the dwarf pine barrens, Southampton, Suffolk County from 1993 to 2005 (New York Natural Heritage Program 2013).



Location of *Monoleuca semifascia* in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand, NYSDEC.

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
New York Natural Heritage Program. 2011. Online Conservation Guide for *Monoleuca semifascia*. Available from: http://www.acris.nynhp.org/guide.php?id=7923. Accessed 19 March 2013.

New York Natural Heritage Program. 2013. Biodiversity database. Albany, NY. Accessed 20 March 2013.

Opler, P.A., K. Lotts, and T. Naberhaus. 2010. Butterflies and Moths of North America. Bozeman, MT: Big Sky Institute. <http://www.butterfliesandmoths.org/>. Accessed 20 March 2013.

Wagner, D.L., D.F. Schweitzer, J.B. Sullivan, and R.C. Reardon. 2008. Owlet Caterpillars of Eastern North America (Lepidoptera: Noctuidae).

Common Name: Grey woodgrain ***SPCN***
Scientific Name: *Morrisonia mucens*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4G5
New York: S1S3
Tracked: Yes

Synopsis:
The gray woodgrain moth (*Morrisonia mucens*) belongs to a group called the dart or cutworm moths. When resting, the moths hold their wings back in a triangular "dart-like" position. They also cut plant stems off at the base by chewing on them near the soil level (NYNHP 2012).

This species is known from Long Island, New York, southward to Florida, and westward to Ohio and Texas (Covell 1984). The gray woodgrain is a barrens specialist. Currently, in New York this species is known only from Napeague State Park and the dwarf pine barrens on Long Island. Future inventories may locate this species at other pine barrens type habitats on Long Island and possibly off the coastal plain (NYNHP 2012).

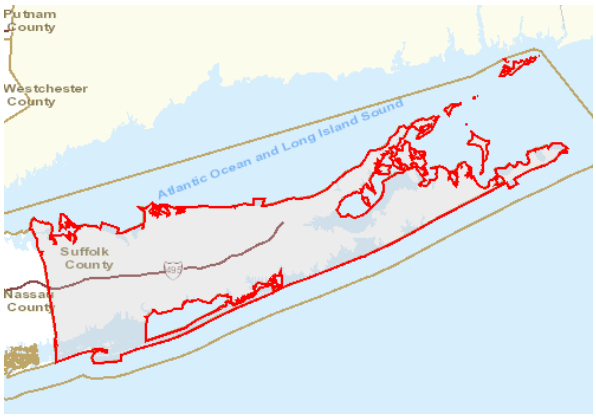
This species appears to be stable on Long Island. Surveys since 1993 have indicated very little change in the dwarf pine barrens population on Long Island, with the exception of 2005 surveys, which showed a significant increase in numbers of moths. It is possible that previous forest fires in the dwarf pine plains caused an increase in habitat for this species. The long-term trend for this species is tied to the long-term trend of the natural community it lives in. The acreage of dwarf pine plains in New York has declined from development, although there is still a large occurrence of this habitat type on Long Island.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Stable
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

Habitat Discussion:
In New York State, this species is found exclusively in the open-canopy dwarf pine barrens and pitch pine-oak heath woodlands of Long Island. Pitch pine and scrub oak are the dominant plant species in both of these habitats (NYNHP 2012).

Primary Habitat Type
Pine Barrens

Distribution:
In New York, this species occurs only in Suffolk County.



Occurrence of the grey woodgrain in New York (New York Nature Explorer 2009)

Threats:
Threats were identified but not assessed due to lack of information.

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential & Commercial Development	Housing & Urban Areas (habitat loss/degradation)			
2. Natural Systems Modifications	Fire & Fire Suppression (fire suppression, or fire with no refugia)			

References Cited:
Covell, Charles V. 1984. A field guide to the moths of eastern North America. Houghton Mifflin Company, Boston.

New York Nature Explorer. 2009. New York State Department of Environmental Conservation. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 27 February 2013.

New York Natural Heritage Program (NYNHP). 2012. Online Conservation Guide for *Morrisonia mucens*. <http://www.acris.nynhp.org/guide.php?id=8153>. Accessed 2 January 2013.

Common Name: A noctuid moth ***SPCN***
Scientific Name: *Paectes abrostolella*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1
Tracked: Yes

Synopsis:
The eastern range of *Paectes abrostolella* stretches from southern Ontario southward to central Missouri and Arkansas, with records from Florida being suspect (Wagner et al. 2011, C. Schmidt, personal communication). New York is on the eastern edge of the distribution and includes only one current record, in Jefferson County in 1996 (NY Nature Explorer 2009). There has been little research on this moth, and therefore, literature is sparse, with information on habitat preference, life cycle, population trend and threats. The larval foodplant of this species is thought to be *Rhus copallium* and *Rhus aromatica* (NYSDEC 2012, C. Schmidt, personal communication). Recent surveys in eastern Ontario had found this species to be found solely on *Rhus aromatica*, even when other *Rhus* sp. were present (C. Schmidt, personal communication). Research on this species is required to assess threats. Habitat fragmentation and development are thought to be likely threats. There is currently one known location of this species in New York, in Jefferson County (SGCN Experts Meeting).

Information regarding the rarity of *Paectes abrostolella* in New York is incomplete. In 1995, two specimens were collected in Point Pelee National Park, Ontario. The specimens contributed to the first recorded occurrence in Canada, and are thought to be from a resident population (Hanks 1995). In the eastern United States, *P. abrostolella* is thought to occur in disjunct populations within remnant prairie patches (Hanks 1995). This moth is at the extreme northern limits of its range; the Chaumont Barrens location in Jefferson County is the easternmost record of its existence. This species is not associated with a scarce resource or special habitat, making it questionable to be listed as a Species of Greatest Conservation Need list (McCabe 2012).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
The habitat needs of common oak moths are unknown, but the species is thought to thrive in remnant prairie patches. This species may also be found in areas containing *Rhus* species, especially fragrant sumac (*Rhus aromatica*) and winged sumac (*Rhus copallium*; C. Schmidt, personal communication). Winged sumac is considered a weed and can be abundant in western New York (McCabe 2012).

Primary Habitat Type
Cliff and Talus
Coastal Coniferous Barrens
Coastal Hardwoods
Erosional Bluff
Maritime Dunes
Mixed Northern Hardwoods
Mountain Spruce-Fir Forests
Native Barrens and Savanna
Oak Forest
Oak-Pine Forest
Old Field/Managed Grasslands
Open Acidic Peatlands
Pasture/Hay
Pine Barrens
Spruce-Fir Forests and Flats

Distribution:
There is a recent record from the Chaumont Barrens, Jefferson County in 1996 (New York Nature Explorer 2009).

Current record of *P. abrostolella* in New York (New York Nature Explorer 2009). Map created by Shawn Ferdinand, NYSDEC.

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Hanks, A.J. 1995. Butterflies of Ontario & summaries of Lepidoptera encountered in Ontario in 1994. Toronto Entomologists' Association, Occasional Publication #27-95.

McCabe, T. 2012. State Wildlife Grant T-17: Baseline survey of Lepidoptera Species of Greatest Conservation Need. Annual Progress Report to USFWS. Albany, NY.

New York State Department of Environmental Conservation. 2009. New York Nature Explorer. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 14 February 2013.

Schmidt, B. Christian. Personal communication. Canadian National Collection of Insects. Ottawa, Ontario, Canada.

Wagner, D.L., D.F. Schweitzer, J.B. Sullivan, and R.C. Reardon. 2011. Owlet caterpillars of Eastern North America. Princeton University Press, Princeton, NJ.

Common Name: Chain fern borer moth ***SPCN***
Scientific Name: *Papaipema stenocelis*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1?
Tracked: Yes

Synopsis:
Most species in the genus *Papaipema* seem to have declined since the 1970s. Exceptions include the chain fern borer moth (*Papaipema stenocelis*), others whose larvae feed on ferns, and the flypoison borer moth (*Papaipema* sp. 1).

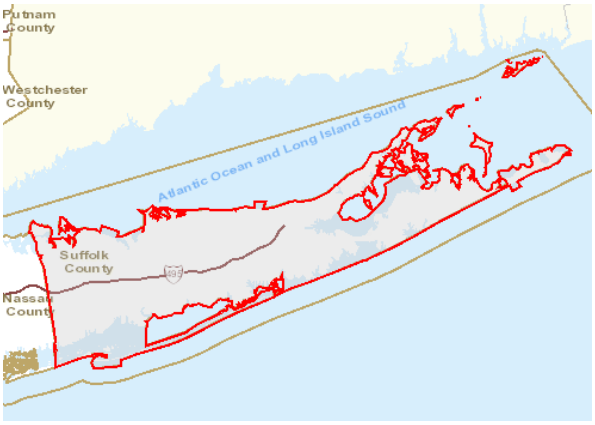
One population of the chain fern borer moth is known. The population has not been surveyed since 1987, when one individual was captured. Potential habitat (wetlands that contain sizeable stands of Virginia chain fern, the larval foodplant) exists throughout much of New York State. However, in parts of the state, its distribution is very limited (Weldy and Werier 2010). The chain fern borer moth is known to be confined to certain areas throughout its range (D. Schweitzer, pers. comm.). In general, species in the genus *Papaipema* tend to not occupy many apparently suitable habitats, for unknown reasons. Some, many, or all habitats for the chain fern borer moth may be suitable only in certain years, depending on water levels. Also, in any given area, some habitat patches may be occupied in some seasons, and others in other seasons (NatureServe 2012).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
The chain fern borer moth occurs in wetlands such as acid bogs, fens, swamps, edges of ponds, wet thickets, and swales (Weldy and Werier 2010) that contain persistent, abundant or numerous, patches of Virginia chain fern (*Woodwardia virginica*), the larval foodplant (Hessel 1954, Covell 1984, Wagner et al. 2008). In general, species in the genus *Papaipema* tend to not occupy many apparently suitable habitats, for unknown reasons. Some, many, or all habitats for the chain fern borer moth may be suitable only in certain years, depending on water levels. Also, in any given area, some habitat patches may be occupied in some seasons, and others in other seasons (NatureServe 2012). In New York State, the moth was documented to occupy a swale containing a nearly pure, dense stand of *Woodwardia virginica* (New York Natural Heritage Program 2012).

Primary Habitat Type
Freshwater Marsh
Open Acidic Peatlands
Wet Meadow/Shrub Marsh

Distribution:
One individual was found at one site in Suffolk County in 1987 (NY Nature Explorer 2009).



County occurrence for chain fern borer moth in New York (NY Nature Explorer 2009)

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Natural System Modifications	Dams & Water Management/Use (Hydrological changes)	P	L	H
2. Climate Change & Severe Weather	Habitat Shifting & Alteration (sea level rise)	P	H	V

References Cited:
Covell, C. V. 1984. A field guide to the moths of eastern North America. Houghton Mifflin Company, Boston.

Hessel, S. A. 1954. A guide to collecting the plant-boring larvae of the genus *Papaipema* (Noctuidae). Lepid. News. 8: pp. 57-63.

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 10 December 2012.
New York Nature Explorer. 2009. New York State Department of Environmental Conservation. <http://www.dec.ny.gov/natureexplorer/app/>. Accessed 27 February 2013.

Wagner, D. L., D. F. Schweitzer, J. B. Sullivan, and R. C. Reardon. 2008. Owlet Caterpillars of Eastern North America (Lepidoptera: Noctudiae).

Weldy, T. and D. Werier. 2010. New York flora atlas. [S.M. Landry, K.N. Campbell, and L.D. Mabe (original application development), Florida Center for Community Design and Research <http://www.fccdr.usf.edu/>. University of South Florida http://www.usf.edu/. Accessed 10 December 2012.

Common Name: Stinging rose caterpillar moth ***SPCN***
Scientific Name: *Parasa indetermina*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1
Tracked: Yes

Synopsis:
The stinging rose caterpillar moth is a member of the small genus *Parasa*, which includes only a few North American species (Bess 2005). The larvae have developed a unique defense mechanism where spines with detachable tips protrude along their backside, delivering a highly irritating poison to ward off predators. It occurs in scattered populations from New York to Florida and westward to Missouri and Texas. Although this species is widespread across eastern North America, New York is at the northern edge of its range and there is a single extant location in Suffolk County (NYNHP 2011). This occurrence was found at the border of two natural community types: maritime dunes and maritime grassland, in the Hither Hills State Park (NYNHP 2013). The species was considered possibly extirpated from New York until it was documented in 2007 at this site on Long Island (NYSDEC SGCN Experts Meeting). Development, fire suppression, biocide use to control gypsy moths, and artificial light are the major threats to the persistence of this species.

Although this species is not considered to be common anywhere in its range, this may be due to historical collection methods (Schweitzer et al. 2011). Some threats exist but none appear serious on a large scale and this species appears secure in much of its range, resulting in the Globally Secure rank (NatureServe 2013). Although its range is widespread throughout North America and it does not appear to be in immediate danger of extirpation, there is insufficient information to conclude it is secure throughout much or all of its range, and this is especially true in regards to its preferred habitats (fire maintained dry coastal scrub, oak woodlands, barrens and grasslands), many of which are globally imperiled (Bess 2005).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

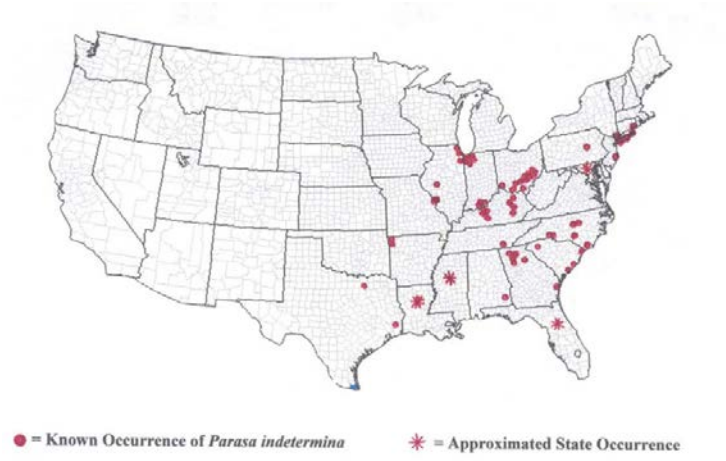
Habitat Discussion:
The stinging rose caterpillar moth occurs in habitats of high quality, dry coastal scrub, barrens, woodlands, and associated prairies, typically on sand and usually associated with the Atlantic Coastal Plain (Bess 2005). The USDA Forest Service Conservation Assessment has identified three distinct ecosystems where this species occurs: the sandy pine-oak savannas of the southern Atlantic Coastal Plain, clay-soil barrens on limestone in the unglaciated Ohio River Valley, and sand barrens in the Kankakee Valley and southern Lake Michigan sand dunes of Indiana and Illinois (Bess 2005).

While native *Rosaceae* are the preferred larval food plants, this species has been reported to utilize numerous food plants including apple (*Malus* spp.), cottonwood (*Populus deltoides*), dogwood (*Cornus* spp.), hickory (*Carya* spp.), oaks (*Quercus* spp.), redbud (*Cercis canadensis*), chestnut (*Castanea dentata*), cherry and plum (*Prunus* spp.) and sycamore (*Plantanus occidentalis*) (Bess 2005, NYNHP 2011).

Primary Habitat Type
Coastal Coniferous Barrens
Maritime Dunes
Oak-Pine Forest

Distribution:
This species was found on Long Island in East Hampton, Suffolk County in 2007 at the Hither Hills State Park; this is the first record since the 1920s (NYNHP 2013).

NYNHP (2013)



Bess (2005)

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Bess, J. 2005. Conservation assessment for the stinging rose caterpillar (*Parasa indetermina*, Biosduval). USDA Forest Service, Eastern Region. Milwaukee, Wisconsin. 37p.

New York Natural Heritage Program (NYNHP). 2011. Online conservation guild for the stinging rose caterpillar moth. Available from: http://www.acris.nynhp.org/guide.php?id=7926. Accessed: 14 May, 2013.

New York Natural Heritage Program (NYNHP). 2013. Element Occurrence Database. Albany, NY.

Schweitzer, D.F., M.C. Minno, and D.L. Wagner. 2011. Rare, declining, and poorly known butterflies and moths (Lepidoptera) of forests and woodlands in Eastern United States. USDA Forest Health Technology Enterprise Team FHTET-2011-01. 517p.

Common Name: A noctuid moth ***SPCN***
Scientific Name: *Phoberia ingenua*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G3G4
New York: S2S3
Tracked: No

Synopsis:
A recent review of this species has revised the taxonomic name to *Phoberia ingenua* (Lafontaine et al. 2009). This species is widespread throughout eastern North America. East of the Great Plains, it spans from Albany, NY to northern Florida and west of the Great Plains in Colorado. It occurs very spottily in distribution, and is known from only one or two locations in many states were it does occur (D. Lafontaine, personal communication). This species is common within the New Jersey Pine Barrens and the central Wisconsin Barrens. Limited information exists regarding the distribution, population trend and life cycle of *P. ingenua*. The preferred habitat is sand hills with scrubby oak (*Quercus* sp.) (D. Lafontaine, personal communication). In New York, suitable habitat can be found in the Albany Pine Bush and on Long Island. Minimal records exist regarding occurrences within New York or in the Northeast. *P. ingenua* occurs within the Upper Hudson River Valley and Lower Hudson-Long Island Bay Basin; however there is no specific recording for the location/county of populations. Larval foodplants consist of a variety of oak species (*Quercus* spp.). Future monitoring and research is needed to better assess this species. Due to the widespread distribution and abundance, it recommended this species be removed from the list of Species of Greatest Conservation Need list (NYSDEC 2010).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
Phoberia ingenua can be found in dry sandplain pitch pine-scub oak barrens and possibly in open pine-oak woodland (Wagner et al. 2003). This species preferred habitat is sand hills with scrubby oaks (D. Lafontaine, personal communication).

Primary Habitat Type
Cliff and Talus
Coastal Coniferous Barrens
Coastal Hardwoods
Erosional Bluff
Maritime Dunes
Mixed Northern Hardwoods
Mountain Spruce-Fir Forests

Native Barrens and Savanna
Oak Forest
Oak-Pine Forest
Old Field/Managed Grasslands
Open Acidic Peatlands
Pasture/Hay
Pine Barrens
Spruce-Fir Forests and Flats

Distribution:
This species currently occurs in the Upper Hudson River Valley and Lower Hudson-Long Island Bays Basin (NYSDEC 2005).

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Lafontaine, Donald. 2013. Email on status and distribution of *Phoberia ingenua* in New York. Personal communication. The Canadian Collection of Insects. Ottawa, Ontario, Canada.

Lafontaine, D., T.S. Dickel, D.F. Schweitzer, T.L. McCabe, and J. Metlevski. 2009. Taxonomy and identification of *Phoneria* species (Lepidoptera: Noctuidae: Catocalinae). Lepidoptera Novae 1: 103-108.

NYSDEC (New York State Department of Environmental Conservation). 2005. New York State Comprehensive Wildlife Conservation Strategy. http://www.dec.ny.gov/index.html.

NYSDEC (New York State Department of Environmental Conservation). 2010. State Wildlife Grant T-17: Baseline survey of Lepidoptera Species of Greatest Conservation Need. Annual Progress Report to USFWS. Albany, NY.

Common Name: Slender flower moth ***SPCN***
Scientific Name: *Schinia bifascia*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4Q
New York: S1
Tracked: Yes

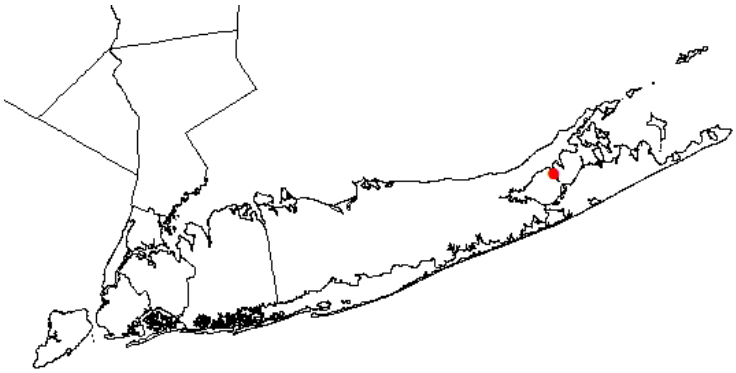
Synopsis:
S. bifascia has been listed as a synonym species of *S. gracilenta* (Hardwick 1996, Lafontaine and Schmit 2010). There is confusion on the correct application of the names *S. bifascia* and *S. gracilenta*. It is clear that there are two separate-looking moth species, one a larger, Midwestern species and the other a coastal salt marsh species. These two species have both been described as *S. bifascia*, making the distribution in North America unclear. The name *S. bifascia* is used by NatureServe because New York, New Jersey, and Massachusetts track the species that uses salt marsh habitat (Nature Serve 2012). The species listed under *S. bifascia* for NY, NJ and MA is known to inhabit high salt marshes. The larval foodplant is thought to be marsh elder (*Iva frutescens*). The short and long term population trends for this species are unknown. Only one population is known to exist in New York, in Suffolk County (New York Natural Heritage Program 2011).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

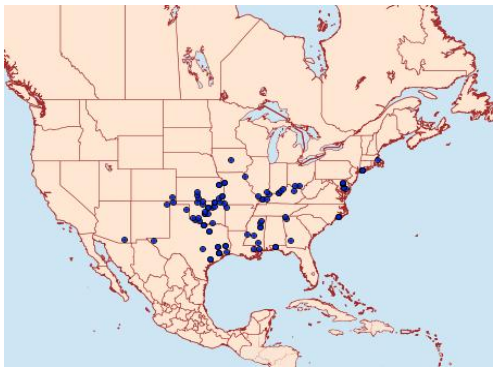
Habitat Discussion:
This species is typically found in salt marshes. The one known population in New York was found in a salt marsh with *Phragmites australis*. *Schinia gracilenta* have been documented to use annual marsh elder (*Iva annua*) and marsh elder (*Iva frutescens*) as a host plant. *I. annua* does not occur in New York State, but marsh elder (*I. frutescens* ssp. *oraria*) is characteristic of salt shrub communities in New York State, and is an associated species in the state's coastal salt ponds, brackish interdunal swales, and sea level fens (New York Natural Heritage Program 2013).

Primary Habitat Type
High Marsh

Distribution:
There is one current record of occurrence of a single individual being captured on Robins Island, Suffolk County in 1997 (New York Natural Heritage Program 2013).



Location of the slender flower moth in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand, NYSDEC.



States with occurrence records of *S. gracilenta*. Map includes synonym species *S. bifascia*. Records are from museum collections and photographs. Some records may not be represented (North American Moth Photographers Group 2012).

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
Hardwick, David F. 1996. A Monograph of the New World Heliothentinae (Lepidoptera: Noctuidae). Centre for Land and Biological Resources Research, Agriculture Canada, Ottawa Canada. 281 pp., 24 color plates.

Lafontaine, J.D., and B.C. Schmidt. 2011. Additions and corrections to the check list of the Noctuoidea (Insecta, Lepidoptera) of North America north of Mexico. In: Schmidt B.C., Lafontaine J.D. (Eds) Contributions to the systematic of New Work macro-moths III. ZooKeys 149: 145-161.

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. Accessed 11 March 2013.

New York Natural Heritage Program. 2011. Online Conservation Guide for Schinia bifascia. Available from: http://www.acris.nynhp.org/guide.php?id=8175. Accessed 11 March 2013.

North American Moth Photographers Group. 2012. Mississippi Entomological Museum at Mississippi State University, MS. http://mothphotographersgroup.msstate.edu/MainMenu.shtml. Accessed 11 March 2013.

New York Natural Heritage Program. 2013. Biodiversity Database. Albany, NY. Accessed 11 March 2013.

Common Name: Golden aster flower moth ***SPCN***
Scientific Name: *Schinia tuberculum*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S2
Tracked: Yes

Synopsis:
The golden aster flower moth (*Schinia tuberculum*) is, or was, widespread in the western United States. Its range extended eastward, mostly in the prairies, to northwestern Indiana, the Chicago area, and one known locality in western Michigan. East of the prairies, it is found mostly within 100 kilometers of the coast, but not necessarily on the Coastal Plain, from Maine to Southern Delaware, and near the coast or in the Sand Hills from North Carolina to Louisiana (Schweitzer et al. 2011).

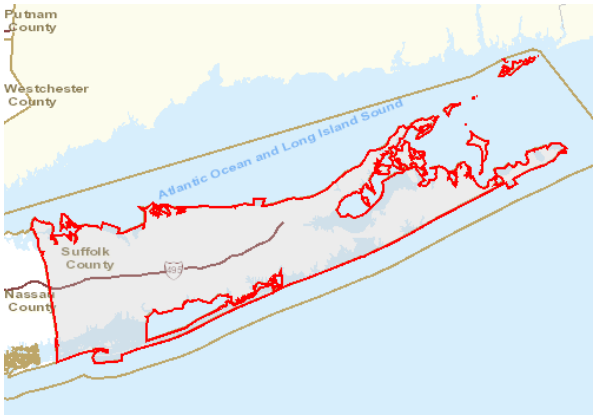
Currently, the golden aster flower moth is known from only one location in the Dwarf Pine Barrens on Long Island. There are several historical records from Long Island, however, additional surveys are needed to determine if it is still present at these and other locations. Although there is much suitable habitat on Long Island, this moth seems to be absent at many sites that appear to provide suitable habitat. It is best sought during the day by sweeping the flowers of its food source, and therefore it may be overlooked during field surveys. However, it also comes to black light. This moth is unlikely to occur elsewhere in the state outside of Long Island, since Long Island represents the northern edge of its range, and within New York its food plant occurs only on Long Island.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
The golden aster flower moth is found in dry sandy areas that contain an abundance of its food source, *Pityopsis falcata* (sickle-leaf golden-aster, sickle-leaf silkgrass). *P. falcata* has yellow flowers, is found in dry sandy areas near the coast and in pine barrens, and flowers from July to September. Although this moth is found in barren-type habitats, it is not considered a barrens species, since it can also inhabit other habitat types.

Primary Habitat Type
Coastal Hardwoods
Pine Barrens

Distribution:
A concentration of records near the coast from New England to New Jersey, then a disjunction to eastern North Carolina, is a familiar pattern and suggests that the species is a prairie or savanna relict eastward. Widely scattered eastern inland records did occur, however. Only seven localities range wide are more than 100 km from the coast or Carolina Sand Hills, and two were single specimens capture by Tim McCabe in very well-collected places in New York. One adult was taken on New England aster near Ithaca in 1974, and is apparently the only record for this region. Another was collected in 1991 in Albany using a black light (Schweitzer et al. 2011). Currently, it occurs only in Suffolk County, where it was last documented in 1999.



Occurrence of the golden aster flower moth in New York (New York Nature Explorer 2009)

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential & Commercial Development	Housing & Urban Areas	W	M	H
2. Natural System Modifications	Fire & Fire Suppression (fire suppression)	R	L	M
3. Invasive & Other Problematic Species & Genes	Invasive Non-native/Alien Species (invasive plants)	W	M	H

References Cited:
New York State Department of Environmental Conservation. 2009. New York Nature Explorer. <http://www.dec.ny.gov/natureexplorer/app/> Accessed 28 December 2012.

Schweitzer, D.F., M.C. Minno, and D.L. Wagner. 2011. Rare, declining, and poorly known butterflies and moths (Lepidoptera) of forests and woodlands in the Eastern United States. USDA Forest Health Technology Enterprise Team FHTET-2011-01.

Common Name: Maroonwing ***SPCN***
Scientific Name: *Sideridis maryx*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S2S3
Tracked: Yes

Synopsis:
The maroonwing ranges from Newfoundland southward to New Jersey and Pennsylvania, westward across southern Canada into the Pacific Northwest (Forbes 1954, University of Alberta E.H. Strickland Entomological Museum 2013). Maroonwing is estimated to occur in 20-50 sites throughout the northeastern U.S. (Schweitzer 2000) and is considered to be uncommon to rare (Forbes 1954, Rockburne and Lafontaine 1976). Dale Schweitzer (2000) mentioned that this species was found in every major barrens that he and Tim McCabe had searched in (NYNYHP 2013). This species is common in the New Jersey Pine Barrens (Schweitzer 2000). This species was considered to be very abundant in the Gadway Pine Barrens, Clinton County (NYSDEC 2012).

In New York, populations are found in Clintonville and Gadway Barrens, Clinton County; Albany Pine Bush, Albany County; Palenville, Greene County (NYSDEC 2010, NYSDEC 2012). A report by Tim McCabe suggests that populations in the Albany Pine Bush have declined recently (NYSDEC 2012), but populations in pavement barrens habitats are apparently stable.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

Habitat Discussion:
The maroonwing thrives in either rocky or sandy barren habitat. In New York, this species inhabits the sandy barrens of the Albany Pine Bush. It can also be found in the sandstone pine barrens of Clinton County (NYSDEC 2012). In New Jersey and Pennsylvania, a few populations are associated with boggy habitats (Schweitzer 2000). The dwarf pine barrens in Suffolk County are possibly too dry for this species. Given its presence in the Albany Pine Bush, it is thought that this species does not require pristine habitats (NYNHP 2013).

Primary Habitat Type
Open Acidic Peatlands
Pine Barrens

Distribution:
This species was collected in the Gadway Pine Barrens, Clinton County, in 2003 and 2013 (McCabe 2004, NYDEC 2012). It was observed in the Albany Pine Bush, Albany County, in 2010 (NYSDEC 2010, NYSDEC 2012). It also occurs in Palenville, Greene County and in the Clintonville Barrens, Clinton County (NYSDEC 2012).

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Pollution	Excess Energy (light pollution)	U	U	U

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University of Alberta E.H. Strickland Entomological Museum. 2013. Entomology Collection Species Page. < http://pnwmoths.biol.wwu.edu/browse/family-noctuidae/subfamily-noctuinae/tribe-hadenini/sideridis/sideridis-maryx/> Accessed 3 May 2013.

Common Name: Barrens itame ***SPCN***
Scientific Name: *Speranza exonerata*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G3G4
New York: S1S3
Tracked: Yes

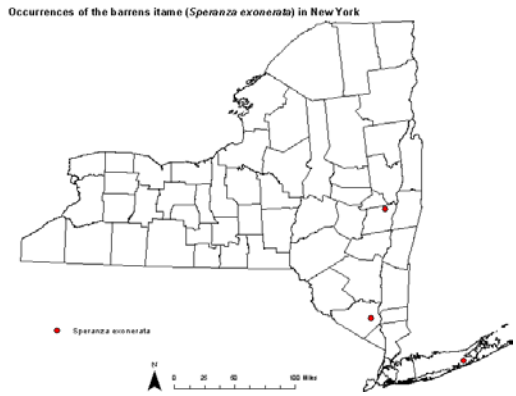
Synopsis:
The barrens itame can be found from Maine to Virginia, and west to New York and Pennsylvania. Most occurrences are in the undisturbed pine barrens of New Jersey (NHFG 2006, Schweitzer et al. 2011, NatureServe 2012). This species is believed to be more widespread on Cape Cod and nearby islands off the coast of Massachusetts, and possibly on Long Island, New York (Nelson 2007, Schweitzer et al. 2011, NatureServe 2012). This species is declining throughout its range except in New Jersey (NHFG 2006, Nelson 2007, NatureServe 2012). The barrens itame has been captured in New York as recently as 2005 (NYNHP 2013).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Moderate Decline	Moderate Decline
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

Habitat Discussion:
This species occurs in pitch pine-scrub oak barrens. The absence of barrens itame from seemingly suitable habitat suggests that there are other unknown habitat requirements (NHFG 2006, Nelson 2007, Schweitzer et al. 2011).

Primary Habitat Type
Oak-Pine Forest
Pine Barrens

Distribution:
This species was historically found only in the Albany Pine Bush in Albany County. Surveys in 1978–1979 produced captures and provided evidence of an extant population (NYNHP 2013). There are two recent occurrences of the barrens itame in New York. In 1993 a survey in Schunnemunk Mountain State Park in Orange County resulted in the capture of one individual (NYNHP 2013). Surveys in the Town of Southampton, Suffolk County, produced a large number in 1996, 1997, and 1999, and twice in July of 2005 (NYNHP 2013). This moth has not been recorded in the Albany Pine Bush since the 1978–1979 surveys (NYNHP 2013).



NYNHP (2013)

Threats:
Threats were identified but not assessed due to lack of information.

References Cited:
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Schweitzer, D.F., Minno, M.C., and D.L. Wagner. 2011. Rare, declining, and poorly known butterflies and moths (Lepidoptera) of forests and woodlands in the eastern United States. U.S. Department of Agriculture Forest Service. Washington, D.C.

Common Name: Scribble sallow ***SPCN***
Scientific Name: *Sympistis perscripta*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1
Tracked: Yes

Synopsis:
The scribble sallow is currently known as *Sympistis perscripta*. It has been reclassified from the genus *Lepipolys* (Troubridge 2008). The distribution of this poorly known moth is thought to span spottily from southern Maine to Florida, westward through Minnesota, Colorado, and Arizona to California, but information on its distribution in the United States and Canada is incomplete (Wagner et al. 2011). Likewise, little is known about the distribution of scribbled sallow moths in New York; it occurs in two locations in Suffolk County. Populations from Texas westward have different larvae and habitats than the eastern populations (Wagner et al. 2011).

Sympistis perscripta can be rare in parts of its range, especially at is periphery. Occurrences are not widespread across the United States, but can occur in small foodplant patches (Wagner et al. 2011). This species is thought to be confined to Long Island and neighboring islands (Schweitzer 1998). If a separation was to be made between the populations west of Texas and the eastern populations; given the rarity of this species in the east and the bad shape of East Coast habitats, this species is probably much more imperiled (D. Lafontaine, personal communication).

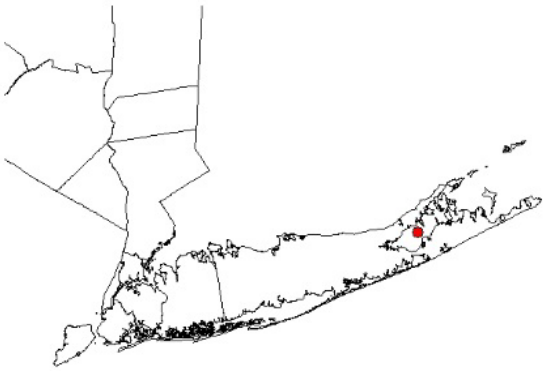
The preferred habitats for this species include dunes, rocky outcrops, waste lots, and other dry areas. Larvae are found most commonly on stems of the foodplant, old-field toadflax (*Nuttallanthus canadensis*) (New York Heritage Program 2011).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon			
> 50%		Rare	X		

Habitat Discussion:
Sand plains, dunes, rocky outcrops, waste lots and other open xeric habitats (Wagner et al. 2011). In New York, this species inhabits the sandy beaches and bluffs of Suffolk County. These moths occur in larval foodplant patches of old-field toadflax. The low number of occurrences and lack of data require further research to accurately assess preferred habitat of this species (New York Natural Heritage Program 2011).

Primary Habitat Type
Erosional Bluff
Maritime Dunes

Distribution:
There are two known occurrences in the state, one from 1954 and one from 1997; both records are from Suffolk County (New York Nature Explorer 2009). The record from Robbins Island, Suffolk County is the last reported occurrence of this species in New York (NatureServe 2012).



Locations of *Sympistis perscripta* in New York (New York Natural Heritage Program 2013). Map created by Shawn Ferdinand, NYSDEC

Threats to NY Populations				
Threat Category	**Threat**	**Scope**	**Severity**	**Irreversibility**
1. Residential and Commercial Development	Housing & Urban Areas (habitat loss)	W	M	H
2. Human Intrusions & Disturbance	Recreational Activities (off-road vehicles)	N	L	L
3. Natural System Modifications	Fire & Fire Suppression	N	L	M
4. Invasive & Other Problematic Species & Genes	Problematic Native Species (over-browsing by mammals)	N	L	L

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Wagner, D. L., D. F. Schweitzer, J. B. Sullivan, and R. C. Reardon. 2011. Owlet Caterpillars of Eastern North America. Princeton University Press, Princeton, NJ.

Common Name: Acadian swordgrass moth ***SPCN***
Scientific Name: *Xylena thoracica*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1S2
Tracked: Yes

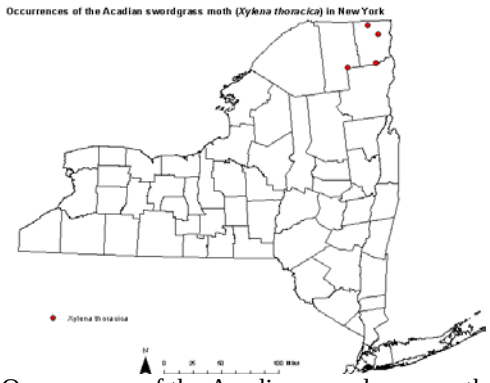
Synopsis:
This species is widely distributed across North America and can be found in pitch pine–scrub oak barrens and bogs in the northern extent of its range (Wagner et al. 2003). It was historically found throughout the Hudson Valley and in Long Island Bay; however, it now only occurs in Clinton and Franklin counties (NYSDEC 2005). There is little information regarding recent trends in species distribution or abundance.

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Unknown	Unknown
6% to 10%		Common			
11% to 25%		Fairly common			
26% to 50%		Uncommon	X		
> 50%		Rare			

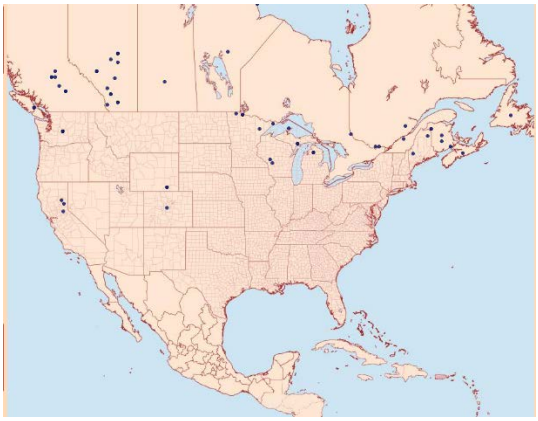
Habitat Discussion:
This species is found in pitch pine-scrub oak barrens and bogs (Wagner et al. 2003).

Primary Habitat Type
Oak-Pine Forest
Open Acidic Peatlands
Pine Barrens

Distribution:
Since 1988, there have been four separate occurrences reported by the New York Natural Heritage Program. One location is Bloomingdale Bog in Franklin/Essex County, where the species was last confirmed in 1988 and 1990 (NYSDEC 2009). The other three locations are in Clinton County: Clintonville Pine Barrens in 1991, Altona Flat Rock in 1995, and Gadway Sandstone Pavement Barrens Preserve in 2003 (NYSDEC 2009).



Occurrences of the Acadian swordgrass moth in New York (New York Natural Heritage Program 2013). Map created by Jim Katz, NYSDEC.


Occurrence map of Acadian Swordgrass moth in North America (MPG 2010). *may not account for all known occurrences.

Threats:
Threats were identified but not assessed due to lack of information.

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Wagner, D.L., Nelson, M.W., and D.F. Schweitzer. 2003. Shrubland Lepidoptera of southern New England and southeastern New York: ecology, conservation, and management. Forest Ecology and Management 185: 95-112.

Common Name: Pine barrens zanclognatha ***SPCN***
Scientific Name: *Zanclognatha martha*
Taxon: Butterflies and Moths

Federal Status: Not Listed
New York Status: Not Listed

Natural Heritage Program Rank:
Global: G4
New York: S1S2
Tracked: Yes

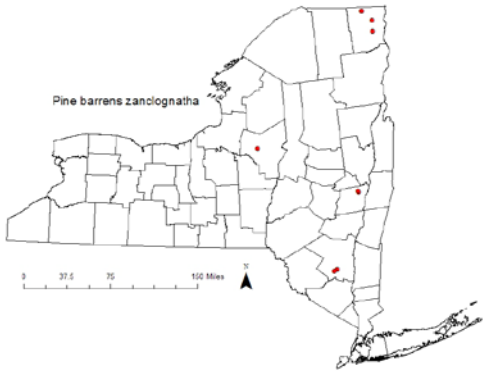
Synopsis:
Recent taxonomic review of *Zanclognatha martha* has described a new species, *Z. dentata* (Wagner and McCabe 2011). Reports prior to 2011 on *Z. martha* would have described the two species under the single name. The new discovery could prove that *Z. martha* is less common that previously considered (NYSDEC 2012). Pine barrens zanclognatha is a barrens species found in sandy pitch pine (*Pinus rigida*)- scrub oak (*Quercus ilicifolia*) barrens. This species is common in the pinelands of southern New Jersey, in the inland sandplain-pine barrens of New York and New England, northward to central New Hampshire and southern Maine. It is also found in eastern Pennsylvania, southern Ohio, and the mountains from Virginia to northern Georgia (NYNHP 2013a). Wagner et al. (2011) mention populations in Wisconsin and Texas. Pine barrens zanclognatha is moderately widespread but very local in areas outside of southern New Jersey (NatureServe 2013). In New York, this species is numerous and widespread throughout the Albany Pine Bush (NYNHP 2013a). Short-term trends of this species in New York are thought to be stable; however, it is thought that a population has been extirpated from Minnewaska State Park, Ulster County. Long-term trends show a moderate to substantial decline of 25-75% of the population in New York. A recent report by Tim McCabe discussed the extirpation of this species from Massachusetts and Connecticut (NYSDEC 2012).

Distribution (% of NY where species occurs)		**Abundance** (within NY distribution)		**NY Distribution Trend**	**NY Abundance Trend**
0% to 5%	X	Abundant		Stable	Stable
6% to 10%		Common			
11% to 25%		Fairly common	X		
26% to 50%		Uncommon			
> 50%		Rare			

Habitat Discussion:
Zanclognatha martha inhabits pine barren communities, occurring in coarse-textured, nutrient-poor, and droughty soils, that are dominated by pitch pine and scrub oak (NHNHB 2005). In New Hampshire, this species is associated with open pitch pine forests with a scrub oak-ericaceous understory (Mello 1998). It is most numerous where there is substantial leaf litter and a pine canopy. This species prefers more of a pine canopy than most other pine barren specialists (NYNHP 2013a). *Z. martha* is an indicator of habitat health. As pine barrens habitat is lost, fragmented, and transitioned to a closed canopy system, this species dies off (NHNHB 2005).

Primary Habitat Type
Oak-Pine Forest
Pine Barrens

Distribution:
This species was collected at 5 out of 6 trap sites set up by Tim McCabe in the Albany Pine Bush, Albany County, in 1990. In 1993, one specimen was collected by a light trap set by Mark Gretch in the West Plattsburgh Pine Barrens, Clinton County. In 1995, it was collected by Edward Stanton in the Gadway Sandstone Pavement Barrens Preserve and Altona Flat Rock, Clinton County and in Rome Sand Plains, Oneida County. Tim McCabe collected this species in Minnewaska State Park Preserve, Ulster County in 1996; however, it was not observed in an additional survey of the area in 2008 (NYNHP 2013b). It is thought to be extirpated from Minnewaska State Park (NYSDEC 2012).



Occurrences of pine barrens zanclognatha in New York (New York Natural Heritage Program 2013).
Map created by Shawn Ferdinand, NYSDEC

Threats:
Threats were identified but not assessed due to lack of information.

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Mello, M.J. 1998. Survey of state-listed and other rare Lepidoptera at proposed New Hampshire Army National Guard, Army Aviation Support Facility lease property, Regional Drive at Concord Municipal Airport and at other sites within Concord New Hampshire's Pine Barrens. Report submitted to the New Hampshire Army National Guard, by the Lloyd Center for Environmental Studies. South Dartmouth, MA.

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