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## CHECKLIST OF THE MOTHS OF GRAND RIVER TERRACES PRESERVE, ASHTABULA COUNTY, OHIO (1988-1992) WITH ANALYSES OF ABUNDANCE

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### ABSTRACT

The biodiversity of moths at Grand River Terraces Preserve in Ashtabula County, Ohio was studied by placing an ultraviolet light trap at the same location each year. The checklist tabulates five consecutive years of trapping (1988-1992) and includes 30,087 specimens representing 520 species. The study began in 1987 and continued through 1996, but only data for 1988-1992 are included here. The checklist is a historical record of the species that were present in 1988-1992 and the techniques used were designed so they can be duplicated in the future. The accumulation of species collected over time illustrates the importance of long-term studies. Species were still being added after ten years of trapping. The Shannon-Wiener Diversity Index for the moths collected in 1988-1992 is 6.53 and the Shannon-Wiener Evenness Index is 0.72. Two hundred nineteen of the 520 species are widespread in northeast Ohio, having also been collected in Columbiana, Stark, and Ashland Counties. Eighty-three of the 219 widespread species had counts of less than 10 at Grand River Terraces. Three species of owlet moths that were collected at Grand River Terraces are of special interest in Ohio. All specimens collected are deposited at The Cleveland Museum of Natural History, Cleveland, Ohio.

### Introduction

The objective of this study was to document the population changes of native moths for ten years at several sites within the drainage basin of the Grand River in Trumbull, Ashtabula, and Lake Counties, Ohio, during gypsy moth invasion and control. This is the fourth in a series of six checklists that tabulate the moths collected at each site during 1988–1992.

Over this same period, the population of the gypsy moth increased in the entire drainage basin. Pheromone trap catches of male gypsy moths increased at Grand River Terraces Preserve from  $7 \pm 2(4)$  per trap in 1987 [mean  $\pm$  standard error (number of traps)], to  $29 \pm 7(4)$  in 1988,  $85 \pm 32(4)$  in 1989,  $191 \pm 67(4)$  in 1990, and  $344 \pm 60(4)$  in 1991. Pheromone trapping was discontinued after 1991. Ultraviolet-light-trap catches of male gypsy moths also increased, from 2 in 1987, to 7 in 1988, 52 in 1989, 109 in 1990, 54 in 1991, and 185 in 1992, but noticeable defoliation was not observed at Grand River Terraces Preserve.

The overall study provides baseline data on pre-outbreak moth diversity, as well as data on the impact of gypsy moth control agents.

### Description of the Surveillance Site at Grand River Terraces Preserve

Grand River Terraces, a preserve of The Cleveland Museum of Natural History, is composed of 218 ha of mixed mesophytic forest and hemlock swamp forest (Bissell, 1998) and includes 1.6 km of frontage on the Grand River. The

Preserve spans Schweitzer (misspelled as Sweitzer on the topographic map) Road, Tote Road, and the Grand River (Anonymous, 1995). The Preserve is situated on swampy glacial lake plain with fine-grained lacustrine silt and clay soils (White and Totten, 1979, p. 7, Pl. 1) overlain by rich organic muck.

The light trap at Grand River Terraces Preserve was located in Morgan Township in Ashtabula County at latitude  $41^{\circ} 42' 19''$  N and longitude  $80^{\circ} 52' 53''$  W (U.S. Geological Survey East Trumbull and Jefferson, Ohio, 7.5-minute quadrangle topographic maps; Figure 1).

Grand River Terraces Preserve is located approximately 30 km northeast of the National Oceanic and Atmospheric Administration weather station at Chardon. The station at Chardon measured an average temperature of  $9^{\circ}$  Celsius, an average annual precipitation of 120 cm, and an average annual snowfall of 220 cm for 1988–1992.

The composition of the canopy and understory was evaluated for the 2500 m<sup>2</sup> of forest centered on the surveillance trap (point-quarter technique, nine points; Cottam and Curtis, 1956; Cox, 1980). The area used for the evaluation, 0.25 ha, is smaller than the area from which the moths are drawn. The light was visible to human eyes at distances of 80–90 m at Grand River Terraces. The importance values for the woody plants at the surveillance site at Grand River Terraces Preserve are given in Table 1.

The herbaceous plants included: State-threatened dewdrop *Dalibarda repens* L.; State-endangered moun-

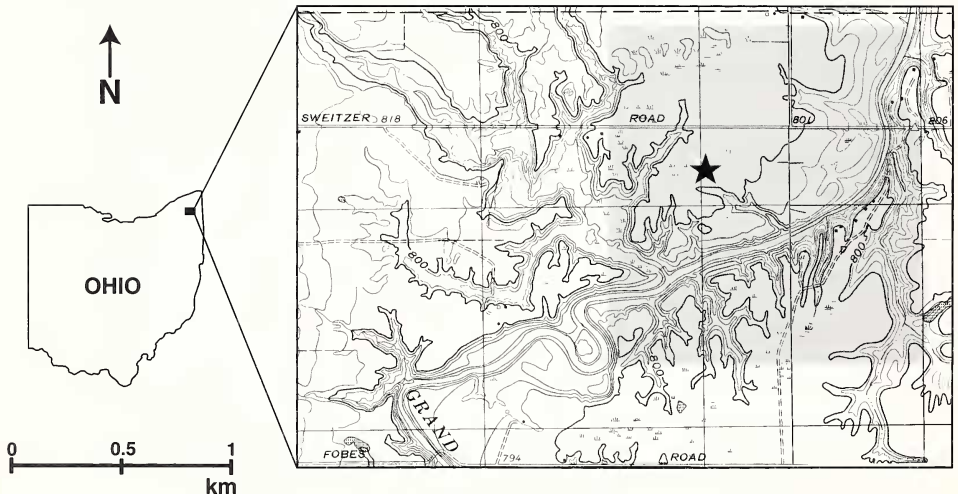


Figure 1. Map of the study area (adapted from the U.S. Geological Survey East Trumbull and Jefferson, Ohio 7.5-minute quadrangle topographic maps). Shaded area delineates Grand River Terraces Preserve; star indicates position of surveillance trap within the Preserve.

**Table 1.** Importance values for woody plants at the surveillance site at Grand River Terraces Preserve. The inventory included all woody stems with a circumference of five or more cm. A stem was counted as canopy only if it reached the uppermost layer of vegetation. Author citations according to Kartesz (1994); common names according to Weishaupt (1971).

Woody Plant Species		Canopy	Understory
Maple, red	<i>Acer rubrum</i> L.	77	0
Beech, American	<i>Fagus grandifolia</i> Ehrh.	73	101
Maple, sugar	<i>Acer saccharum</i> Marsh.	69	168
Cherry, black	<i>Prunus serotina</i> Ehrh.	40	0
Tuliptree	<i>Liriodendron tulipifera</i> L.	24	0
Ash	<i>Fraxinus</i> spp.	17	0
Grape, summer	<i>Vitis aestivalis</i> Michx.	0	18
Hop Hornbeam, eastern	<i>Ostrya virginiana</i> (Mill.) K. Koch	0	14

tain rice-grass *Oryzopsis asperifolia* Michx.; State-threatened brownish sedge *Carex brunnescens* (Pers.) Poir., which is found nowhere else in Ohio; and toothwort *Cardamine maxima* (Nutt.) Wood, which is also found nowhere else in Ohio (Bissell, 1998; author citations according to Kartesz, 1994). These species were selected from a longer list of Grand River Terraces species on deposit in the Herbarium at The Cleveland Museum of Natural History.

An inventory of all plant species in the immediate vicinity of the trap was done in 1993 (James K. Bissell, 1998, personal communication). The spindle tree *Euonymus obovatus* Nutt. is one of the plants noted (author citation according to Kartesz, 1994). The third most abundant moth species feeds on euonymous.

### Surveillance Techniques

One Ellisco®-type ultraviolet light trap (15 watt, BL) was operated at the same location each year, from late May through September. The light was controlled by a timer from 7 p.m. to 8 a.m., eastern daylight time. The trap was set up before 7 p.m. the evening of operation and emptied after 8 a.m. the next morning. Two killing agents, potassium cyanide and ethyl acetate, were used during each collecting period. Using both improved the condition of the moths in the catch as compared to using only one or the other. Collections were made one week apart regardless of weather. The entire catches were sorted and archived in cellophane envelopes and all data were computerized. All the specimens collected are deposited in the Insect Collection at The Cleveland Museum of Natural History.

### Results and Discussion

A total of 30,087 specimens representing 520 species were collected in 1988–1992 (Appendix). Species were identified using Covell (1984), Ferguson (1985), Forbes (1923; 1948; 1954; 1960), Holland (1922), Rings et al.

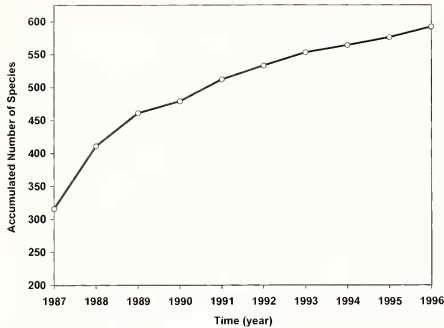
(1992), and Rockburne and Lafontaine (1976). Nomenclature for the Noctuidae was updated from that used by Hodges et al. (1983) to that used by Rings et al. (1992; after Poole, 1989). Crambidae is used according to Scholtens (1996). There are 32 species that have been designated as plus-groups (+). These are species that are easily confused with closely related species; the count for a plus group may therefore include individuals from more than one species.

The accumulation of species collected over time, from 1987 to 1996, is shown in Figure 2. In 1987 (not included in this checklist), 316 species were collected, and in 1996, after ten years, the total had reached 592 (1993–1996, also not included in this checklist). Figure 2 illustrates the importance of long-term studies. One or two years of monitoring would not have been long enough to estimate moth biodiversity at Grand River Terraces Preserve and five years would have been a minimum. The species accumulation curve was still rising after ten years of sampling. Rings and Metzler (1989) estimated that 600 to 1000 moth species may be sampled in a locality with high host plant diversity if collections are made at frequent intervals over five or more years. Our data are consistent with that assertion. It is expected that the asymptote of the curve is well above 600 species since a number of categories of moths are missing from our checklist: fall, winter, and early spring moths are missing because collecting was not begun until the end of May and collecting ended in September. Some species of moths are poorly sampled by light trapping. Also, many Microlepidoptera that were collected are not included because of the difficulty of identifying them.

Our checklist is a historical record of the moth species that were present in 1988–1992. The techniques were designed so that they can be duplicated in the future to document the changes in moth diversity that follow changes in land use and weather.

Relative abundances of the 520 species are shown in Figure 3. The Shannon-Wiener Diversity function was used to measure species diversity (Krebs, 1994). This index takes into account both the number of species and the manner in which the individuals are distributed among the species. A greater number of species increases the index and a more even distribution of individuals among the species also increases the index. Evenness can vary from zero to one and an evenness of one indicates that all species have the same number of individuals. The Shannon-Wiener Diversity Index is 6.53 and the Shannon-Wiener Evenness Index is 0.72.

Over 20 percent of the total count was composed of lesser maple spanworm moth *Itame pustularia* (6273), and red and sugar maples (together with American beech) are dominants in the canopy and understory. The next most abundant species was banded tussock moth



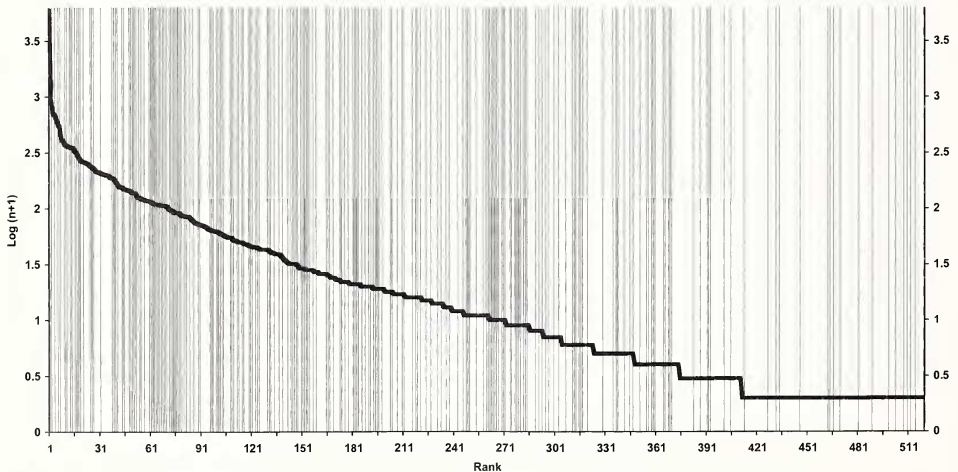
**Figure 2.** Plot of the annual accumulation of species collected at Grand River Terraces Preserve, 1987–1996.

*Halysidota tessellaris* (8203+) whose larva feeds on many deciduous trees. Following, in order of decreasing abundance, were: American ermine moth *Yponomeuta multipunctella* (2420) whose larva feeds on euonymous; disparaged arches *Polia detracta* (10288+) whose larva feeds on clover, blueberries, oaks, etc.; esther moth *Hypagyrtis esther* (6655) whose larva feeds on pines; cynical quaker *Orthodes cynica* (10587) whose larva feeds on plantain, dandelion, and developing goldenrod blossoms; forest tent caterpillar moth *Malacosoma disstria* (7698) whose

larva feeds on trees and shrubs, especially aspens and maples; sod webworm *Crambus agitatellus* (5362+) whose larva feeds on grasses and low plants; gypsy moth *Lymantria dispar* (8318) whose larva feeds on shrubs and trees, especially oak; and pale beauty *Campea perlata* (6796) whose larva feeds on a variety of deciduous trees.

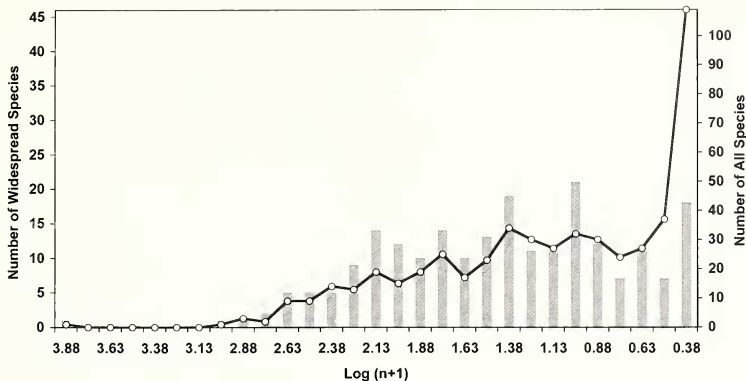
Figure 3 also indicates, with a vertical line, every species that had been collected at single locations in Columbiana County (Rings and Metzler, 1992), Stark County (Rings et al., 1987), and Ashland County (Rings and Metzler, 1989). A total of 219 Grand River Terraces species have been collected at all four sites and can be considered to be widespread in northeast Ohio. Data on a wide variety of plants and animals show a broad positive correlation between abundance and distribution (Gaston, 1988; 1990). Three explanations have been proposed (Krebs, 1994). First, the relationship is an artifact of sampling because rarer species are less likely to be found. Second, species that use a restricted variety of resources are less likely to be abundant and widespread. And third, species that disperse more are more common and widespread. Our data (Figure 3) suggest that a positive correlation between abundance and distribution does not exist, when abundance is viewed from the perspective of abundance at Grand River Terraces. Of the 219 Grand River Terraces species which are widespread in northeast Ohio, 83 had total counts of 10 or fewer at Grand River Terraces.

Overall, there is a close correspondence between the number of widespread species in an abundance interval



**Figure 3.** Plot of the logarithm of abundance versus rank. Vertical lines indicate species that are widespread in northeast Ohio. Species collected at Grand River Terraces Preserve, 1988–1992.





**Figure 4.** Correspondence between the total number of Grand River Terraces species in an abundance interval (line, scale at right) and the number of widespread Grand River Terraces species in the same abundance interval (bar, scale at left). Note that the y-axis scale for the widespread species is larger than the y-axis scale for the total number of species.

and the total number of species (Figure 4). Only the decrease in the proportion of widespread species in the singleton and doubleton intervals conforms to expectation.

Three species of owllet moths collected at Grand River Terraces are listed as being of special interest in Rings et al. (1992): *Enargia decolor* (9549) whose larva feeds on trembling aspen, speckled alder, and willow; *Enargia infumata* (9550) whose larva feeds on trembling aspen and willow; and scurfy quaker *Homorthodes fufurata* (10532) whose larva feeds on maples.

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**Appendix.** Checklist of species collected at Grand River Terraces, 1988–92. Numbers preceding the species names are checklist numbers from Hodges et al. (1983). A plus-group (+) is a species that is easily confused with closely related species. Following the checklist number is the species name including author (abbreviations as listed in Hodges et al., 1983), date of collection, and count of specimens collected. When more than one collection date is listed, the first is the earliest seasonal date of collection and the second is the latest, both with the year in which that occurred. The count is the total number of specimens collected in 1988–1992.

**Family OECOPHORIDAE**

882	<i>Agonopterix robiniella</i> (Pack.) June 22–July 29, 1988 . . . . .	Count 20
951	<i>Maclimbia tentoriferella</i> Clem. Sep. 10, 1992 . . . . .	Count 1
957	<i>Psilocorsis reflexella</i> Clem. June 1, 1988–Aug. 21, 1989 . . . . .	Count 42
1014+	<i>Antaeotricha leucillana</i> (Zell.) May 18, 1988–Aug. 30, 1991 . . . . .	Count 349
1046	<i>Callina argenticinctella</i> Clem. June 27, 1991–Aug. 16, 1990 . . . . .	Count 7

**Family YPONOMEUTIDAE**

2401	<i>Atteva punctella</i> (Cram.) July 29, 1988 . . . . .	Count 1
2420	<i>Yponomeuta multipunctella</i> Clem. June 20, 1991–Aug. 7, 1992 . . . . .	Count 712

**Family TORTRICIDAE**

2863	<i>Hedya chionosema</i> (Zell.) July 29, 1988 . . . . .	Count 1
3186	<i>Epiblema scudderiana</i> (Clem.) June 1, 1988 . . . . .	Count 1
3361	<i>Ancylis semiovana</i> (Zell.) Aug. 5, 1988 . . . . .	Count 3
3504	<i>Croesia curvatana</i> (Kft.) June 26, 1989–July 8, 1988 . . . . .	Count 3
3540	<i>Acleris logiana</i> (Cl.) May 18, 1988 . . . . .	Count 13
3594	<i>Pandemis limitata</i> (Rob.) June 12, 1989–Sep. 10, 1988 . . . . .	Count 90
3623	<i>Argyrotaenia quercifoliaria</i> (Fitch) June 6, 1991–July 4, 1989 . . . . .	Count 25
3624	<i>Argyrotaenia alisellana</i> (Rob.) June 26, 1992 . . . . .	Count 1
3625	<i>Argyrotaenia mariana</i> (Fern.) May 21–June 4, 1989 . . . . .	Count 11
3632	<i>Choristoneura fractivittana</i> (Clem.) May 30, 1991–Aug. 26, 1988 . . . . .	Count 359
3633	<i>Choristoneura parallela</i> (Rob.) June 22, 1988–Sep. 10, 1992 . . . . .	Count 54
3635	<i>Choristoneura rosaceana</i> (Harr.) June 15–Aug. 24, 1990 . . . . .	Count 102
3648	<i>Archips argyrosipila</i> (Wlk.) June 1–July 8, 1988 . . . . .	Count 116
3658	<i>Archips purpurana</i> (Clem.) July 8, 1988–July 10, 1989 . . . . .	Count 2
3661	<i>Archips cerasivorana</i> (Fitch) June 1, 1988 . . . . .	Count 5
3672	<i>Syndemis afflictana</i> (Wlk.) May 18–July 8, 1988 . . . . .	Count 22
3686	<i>Clepsis melaleucana</i> (Wlk.) June 1, 1988–June 26, 1989 . . . . .	Count 69
3720	<i>Sparganothis reticulatana</i> (Clem.) July 15, 1988–Aug. 27, 1992 . . . . .	Count 28

3725	<i>Sparganothis pettitana</i> (Rob.) June 22, 1988–July 20, 1990 . . . . .	Count 15
3748	<i>Amorbia hmersosana</i> Clem. June 1, 1988–June 26, 1989 . . . . .	Count 2

**Family LIMACODIDAE**

4652	<i>Tortricidia testacea</i> Pack. May 30–July 19, 1991 . . . . .	Count 106
4654	<i>Tortricidia flexuosa</i> (Grt.) June 6–Aug. 23, 1991 . . . . .	Count 250
4659	<i>Packardia geminata</i> (Pack.) June 12, 1989–June 27, 1991 . . . . .	Count 9
4661	<i>Packardia elegans</i> (Pack.) June 6, 1991–July 24, 1992 . . . . .	Count 15
4665	<i>Lithacodes fasciola</i> (H.-S.) June 6, 1991–Aug. 7, 1989 . . . . .	Count 42
4667	<i>Apoda y-inversum</i> (Pack.) June 22, 1988–July 24, 1992 . . . . .	Count 23
4669	<i>Apoda biguttata</i> (Pack.) June 15, 1988 . . . . .	Count 1
4681	<i>Isa textula</i> (H.-S.) June 26, 1989–July 15, 1988 . . . . .	Count 6
4685	<i>Adoneta spinuloides</i> (H.-S.) June 20, 1991–Aug. 7, 1992 . . . . .	Count 4
4697	<i>Encllea delphinii</i> (Bdv.) June 15, 1988–July 20, 1990 . . . . .	Count 6

**Family CRAMBIDAE**

4703	<i>Gesneria centuriella</i> (D. & S.) June 1, 1988–Sep. 9, 1989 . . . . .	Count 211
4748	<i>Mimroessa icciusalis</i> (Wlk.) June 15, 1988–Aug. 14, 1989 . . . . .	Count 8
4751	<i>Mimroessa gyralis</i> (Hulst) July 8, 1988–Aug. 7, 1992 . . . . .	Count 2
4889	<i>Dicymolomia julianalis</i> (Wlk.) July 8, 1988–Sep. 9, 1989 . . . . .	Count 3
4897	<i>Evergestis pallidata</i> (Hufn.) June 6–Sep. 13, 1991 . . . . .	Count 26
4936	<i>Saucrobotys finifalis</i> (Led.) June 12, 1992–Aug. 2, 1991 . . . . .	Count 4
4937	<i>Nascia acutella</i> (Wlk.) Aug. 19, 1988 . . . . .	Count 1
4944	<i>Crociodophora serratissimalis</i> Zell. June 1, 1990–Aug. 30, 1991 . . . . .	Count 31
4945	<i>Crociodophora tuberculalis</i> Led. June 15, 1988–Aug. 7, 1992 . . . . .	Count 85
4949	<i>Ostrinia mbilalis</i> (Hbn.) June 5, 1992–Aug. 23, 1991 . . . . .	Count 24
4950	<i>Fumibotys funialis</i> (Gn.) Aug. 7, 1992–Aug. 21, 1989 . . . . .	Count 4
4951	<i>Perispasta caeculalis</i> Zell. Aug. 5, 1988 . . . . .	Count 1
4953a	<i>Phlyctaenia coronata tertialis</i> (Gn.) July 12–Aug. 2, 1991 . . . . .	Count 4

4962	<i>Hahncappsia marculenta</i> (G. & R.) June 1–Sep. 10, 1988.....	Count 8
5040	<i>Pyrausta bicoloralis</i> (Gn.) June 6, 1991–Sep. 21, 1990.....	Count 17
5071	<i>Pyrausta acronialis</i> (Wlk.) Aug. 16, 1990.....	Count 1
5079	<i>Udea rubigalis</i> (Gn.) June 6, 1991–Sep. 9, 1989.....	Count 65
5142	<i>Diacme clealis</i> (Wlk.) July 4–Aug. 14, 1989.....	Count 44
5156	<i>Nomophila nearctica</i> Mun. June 15, 1988–Aug. 2, 1991.....	Count 4
5159	<i>Desmia funeralis</i> (Hbn.) May 30, 1991–Sep. 9, 1989.....	Count 112
5182	<i>Blepharomastix ranalis</i> (Gn.) June 20, 1991–July 20, 1990.....	Count 4
5226	<i>Palpa magniferalis</i> (Wlk.) June 1, 1990–Sep. 6, 1991.....	Count 154
5228	<i>Polygrammodes flavidalis</i> (Gn.) June 20, 1991–Aug. 27, 1992.....	Count 8
5241	<i>Pantographa limata</i> (G. & R.) June 20, 1991–Aug. 24, 1990.....	Count 275
5272	<i>Herpetogramma bipunctalis</i> (F.) June 15, 1988–Sep. 9, 1989.....	Count 12
5275	<i>Herpetogramma pertextalis</i> (Led.) July 4–Aug. 21, 1989.....	Count 68
5277	<i>Herpetogramma thestealis</i> (Wlk.) Aug. 21, 1989.....	Count 1
5280	<i>Herpetogramma aeglealis</i> (Wlk.) July 17–Aug. 27, 1992.....	Count 70
5362+	<i>Crambus agitatellus</i> Clem. June 15–Sep. 10, 1988.....	Count 412
5464	<i>Urola nivalis</i> (Drury) July 5, 1991–July 27, 1990.....	Count 4
5465	<i>Vaxi auratella</i> (Clem.) July 15, 1988–Aug. 3, 1990.....	Count 2

**Family PYRALIDAE**

5518	<i>Aglossa cuprina</i> Zell. June 15, 1988–Aug. 31, 1990.....	Count 188
5524	<i>Hypsopygia costalis</i> (F.) June 15–July 15, 1988.....	Count 9
5532	<i>Herculia infubrialis</i> Dyar July 15, 1988–July 31, 1989.....	Count 6
5533	<i>Herculia olinalis</i> (Gn.) July 4, 1989–Aug. 9, 1990.....	Count 6
5552	<i>Galasa nigrinodis</i> (Zell.) July 5–July 12, 1991.....	Count 2
5556	<i>Tosale oviplagalis</i> (Wlk.) July 4, 1989–July 29, 1988.....	Count 13
5571	<i>Condylotomia participalis</i> Grt. June 29–Aug. 16, 1990.....	Count 158
5577	<i>Epipaschia superatalis</i> Clem. June 27, 1991–Aug. 5, 1988.....	Count 5
5606	<i>Tetralopha asperatella</i> (Clem.) July 13, 1990.....	Count 1
5997	<i>Euzophera ostricolorella</i> Hulst June 15, 1988–Sep. 7, 1990.....	Count 10
6053	<i>Peoria approximella</i> (Wlk.) July 12, 1991–July 20, 1990.....	Count 2

**Family THYRIDIDAE**

6079	<i>Dysodia granulata</i> (Neum.) Aug. 5, 1988.....	Count 2
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**Family THYATIRIDAE**

6235	<i>Habrosyne scripta</i> (Gosse) May 30, 1991–June 8, 1990.....	Count 2
6237	<i>Pseudothyatira cynatophoroides</i> (Gn.) May 30, 1991–Aug. 5, 1988.....	Count 5

**Family DREPANIDAE**

6251	<i>Drepana arcuata</i> Wlk. May 30, 1991–Aug. 24, 1990.....	Count 5
6253	<i>Eudeilinia herminiata</i> (Gn.) June 6, 1991.....	Count 1
6255	<i>Oreta rosea</i> (Wlk.) June 6, 1991–Sep. 2, 1989.....	Count 19

**Family GEOMETRIDAE**

6261	<i>Heliomata cycladata</i> G. & R. May 30, 1991.....	Count 2
6270	<i>Protitame virginialis</i> (Hulst) May 30, 1991–Aug. 5, 1988.....	Count 15
6273	<i>Eumacaria pustularia</i> (Wlk.) June 6–Sep. 13, 1991.....	Count 6302
6299	<i>Itame coartaria</i> (Hulst) June 20, 1991–July 10, 1989.....	Count 5
6303	<i>Itame subcessaria</i> (Wlk.) June 20, 1991–July 24, 1992.....	Count 17
6335+	<i>Semiothisa aequiferaria</i> (Wlk.) May 30, 1991–Sep. 14, 1990.....	Count 114
6342	<i>Semiothisa bisignata</i> (Wlk.) June 15–July 15, 1988.....	Count 5
6344+	<i>Semiothisa signaria</i> (Hbn.) May 18, 1988–Sep. 9, 1989.....	Count 87
6353	<i>Semiothisa multilineata</i> (Pack.) Aug. 7, 1989.....	Count 1
6386	<i>Semiothisa ocellinata</i> (Gn.) Aug. 2, 1991.....	Count 1
6583	<i>Anacamptodes ephyraria</i> (Wlk.) June 27–July 12, 1991.....	Count 20
6584	<i>Anacamptodes humaria</i> (Gn.) Aug. 23, 1991.....	Count 1
6588	<i>Iridopsis larvata</i> (Gn.) May 18, 1988–Sep. 7, 1990.....	Count 96
6590	<i>Anavitrinella pampinaria</i> (Gn.) June 1, 1988–Aug. 21, 1989.....	Count 28
6597	<i>Ectropis crepuscularia</i> (D. & S.) June 6, 1991–Sep. 25, 1992.....	Count 241
6598	<i>Protoboarmia porcelaria</i> (Gn.) June 15, 1988–Sep. 25, 1992.....	Count 15
6599	<i>Epimecis hortaria</i> (F.) May 18, 1988–Aug. 24, 1990.....	Count 71
6620+	<i>Melanolophia canadaria</i> (Gn.) May 18, 1988–Aug. 27, 1992.....	Count 324
6638	<i>Eufidonia notataria</i> (Wlk.) June 12, 1992.....	Count 1
6640a	<i>Biston betularia cognataria</i> (Gn.) May 30, 1991–Aug. 9, 1990.....	Count 10
6654	<i>Hypagyrtis unipunctata</i> (Haw.) June 5, 1992–Sep. 21, 1990.....	Count 49

6655	<i>Hypagyrtis esther</i> (Barnes) May 30, 1991–Sep. 9, 1989 . . . . .	Count 631	6840	<i>Plagodis serinaria</i> H.-S. May 18, 1988–June 26, 1989 . . . . .	Count 235
6656	<i>Hypagyrtis piniata</i> (Pack.) June 26, 1992 . . . . .	Count 1	6841	<i>Plagodis knetzingi</i> (Grt.) June 1, 1988–June 19, 1989 . . . . .	Count 8
6667	<i>Lomographa vestaliata</i> (Gn.) May 28, 1992–Aug. 9, 1990 . . . . .	Count 91	6842	<i>Plagodis phlogosaria</i> (Gn.) May 21–July 31, 1989 . . . . .	Count 13
6668	<i>Lomographa glomeraria</i> (Grt.) May 21, 1989–June 5, 1992 . . . . .	Count 3	6844	<i>Plagodis alcoalaria</i> (Gn.) May 18, 1988–Aug. 21, 1989 . . . . .	Count 61
6677	<i>Cabera erythemaria</i> Gn. May 18, 1988–Sep. 9, 1989 . . . . .	Count 264	6863	<i>Caripeta divisata</i> Wlk. June 20, 1991–Aug. 27, 1992 . . . . .	Count 14
6678	<i>Cabera variolaria</i> Gn. June 1–June 22, 1988 . . . . .	Count 2	6884	<i>Besma endropiaria</i> (G. & R.) May 30, 1991–Aug. 24, 1990 . . . . .	Count 220
6680	<i>Cabera quadrifasciaria</i> (Pack.) June 15, 1988 . . . . .	Count 1	6885	<i>Besma quercivoraria</i> (Gn.) May 21–Sep. 9, 1989 . . . . .	Count 21
6720	<i>Lyrosis mitaria</i> (H.-S.) June 6, 1991–July 17, 1989 . . . . .	Count 148	6892	<i>Lambdina pellicidaria</i> (G. & R.) May 30, 1991 . . . . .	Count 1
6724	<i>Enchlaena serrata</i> (Drury) June 15, 1990–July 15, 1988 . . . . .	Count 3	6906	<i>Nepytia canosaria</i> (Wlk.) Sep. 21, 1990–Sep. 25, 1992 . . . . .	Count 3
6725	<i>Enchlaena unzarica</i> (Wlk.) May 30, 1991–July 3, 1992 . . . . .	Count 25	6912	<i>Sicya macularia</i> (Harr.) June 13, 1991–July 10, 1989 . . . . .	Count 42
6729	<i>Enchlaena johnsonaria</i> (Fitch) Aug. 2, 1991–Aug. 26, 1988 . . . . .	Count 5	6941	<i>Ensarca confusaria</i> Hbn. July 27, 1991–Sep. 10, 1988 . . . . .	Count 12
6739	<i>Enchlaena irraria</i> (B. & McD.) May 30, 1991–June 22, 1988 . . . . .	Count 7	6963	<i>Tetracis crocallata</i> Gn. May 30, 1991–July 8, 1988 . . . . .	Count 10
6740+	<i>Xanthopsis urticaria</i> Swett May 30, 1991–Aug. 24, 1990 . . . . .	Count 24	6964	<i>Tetracis cachexiata</i> Gn. May 28–July 3, 1992 . . . . .	Count 187
6753+	<i>Pero honestaria</i> (Wlk.) May 21, 1989–Aug. 24, 1990 . . . . .	Count 107	6965	<i>Engonabapta nivoxaria</i> (Gn.) June 13, 1991–Aug. 21, 1989 . . . . .	Count 347
6763	<i>Nacophora quernaria</i> (J.E. Smith) June 15–June 29, 1988 . . . . .	Count 5	6966	<i>Eutrapela clemataria</i> (J.E. Smith) May 18, 1988–Sep. 9, 1989 . . . . .	Count 185
6796	<i>Campaea perlata</i> (Gn.) May 30, 1991–Sep. 14, 1990 . . . . .	Count 372	6982	<i>Prochoerodes transversata</i> (Drury) June 20, 1991–Sep. 21, 1990 . . . . .	Count 77
6797	<i>Emmomos magnaria</i> Gn. July 19, 1991–Sep. 24, 1988 . . . . .	Count 5	6987	<i>Antepione thisoaria</i> (Gn.) July 5, 1991–Aug. 7, 1989 . . . . .	Count 2
6798	<i>Emmomos subsignaria</i> (Hbn.) June 13, 1991–Aug. 21, 1992 . . . . .	Count 203	7009	<i>Nematocampa limbata</i> (Haw.) June 20, 1991–Sep. 9, 1989 . . . . .	Count 202
6813	<i>Homochlodes disconventa</i> (Wlk.) June 15, 1990–June 19, 1989 . . . . .	Count 3	7046+	<i>Nemorina bistriaria</i> Hbn. July 5, 1991–Aug. 27, 1992 . . . . .	Count 31
6819	<i>Metanema inatomaria</i> Gn. June 1–July 8, 1988 . . . . .	Count 11	7047	<i>Nemorina rubrifrontaria</i> (Pack.) June 1, 1988 . . . . .	Count 1
6822	<i>Metarranthis duaria</i> (Gn.) June 4, 1989–June 12, 1992 . . . . .	Count 2	7048	<i>Nemorina minosaria</i> (Gn.) June 4, 1989–Aug. 16, 1990 . . . . .	Count 4
6823	<i>Metarranthis angularia</i> B. & McD. May 30, 1991–June 26, 1989 . . . . .	Count 5	7053	<i>Dichorda iridaria</i> (Gn.) July 19, 1991 . . . . .	Count 1
6825	<i>Metarranthis indeclinata</i> (Wlk.) June 5–June 19, 1992 . . . . .	Count 16	7058	<i>Synchlora acrata</i> (F.) May 30–Aug. 30, 1991 . . . . .	Count 6
6826	<i>Metarranthis hypocharia</i> (H.-S.) June 1, 1988–July 3, 1992 . . . . .	Count 106	7132	<i>Pleuropracha insulsaria</i> (Gn.) June 20–Sep. 6, 1991 . . . . .	Count 55
6827	<i>Metarranthis refractaria</i> (Gn.) July 3, 1992 . . . . .	Count 1	7136	<i>Cyclophora packardi</i> (Prout) May 30, 1991–Sep. 9, 1989 . . . . .	Count 8
6828	<i>Metarranthis homuraria</i> (G. & R.) June 15, 1988 . . . . .	Count 2	7139	<i>Cyclophora pendulinaria</i> (Gn.) Aug. 5, 1988 . . . . .	Count 1
6834	<i>Cepphis decoloraria</i> (Hulst) July 3, 1992 . . . . .	Count 1	7146	<i>Haematopsis grataria</i> (F.) Sep. 9, 1989 . . . . .	Count 2
6835	<i>Cepphis armataria</i> (H.-S.) June 20, 1991–July 15, 1988 . . . . .	Count 6	7157	<i>Scopila cacaminaria</i> (Mort.) June 15–June 22, 1990 . . . . .	Count 2
6836	<i>Anagoga occidnaria</i> (Wlk.) May 18–Aug. 19, 1988 . . . . .	Count 26	7159	<i>Scopila limboundata</i> (Haw.) June 15, 1990–Sep. 10, 1988 . . . . .	Count 174
6838+	<i>Probole amicaria</i> (H.-S.) May 28, 1992–Aug. 14, 1989 . . . . .	Count 229	7169	<i>Scopila inductata</i> (Gn.) June 26–Aug. 14, 1989 . . . . .	Count 2



7189	<i>Dysstroma hersiliata</i> (Gn.) May 30, 1991–July 17, 1989	Count 25
7196+	<i>Eulithis diversilineata</i> (Hbn.) June 20, 1991–Sep. 25, 1992	Count 167
7236+	<i>Hydriomena renunciata</i> (Wlk.) May 21, 1989–June 8, 1988	Count 2
7292	<i>Hydria prunivorata</i> (Fgn.) June 1, 1988–July 20, 1990	Count 5
7307	<i>Mesolenca ruficillata</i> (Gn.) June 15, 1988–July 24, 1989	Count 3
7329	<i>Anticlea vasiliata</i> Gn. May 21, 1989	Count 1
7330	<i>Anticlea multiflerata</i> (Wlk.) June 15, 1988	Count 1
7333	<i>Stannodes gibbicosata</i> (Wlk.) Sep. 6, 1991–Sep. 25, 1992	Count 4
7368	<i>Xanthorhoe labradorensis</i> (Pack.) July 19, 1991–Sep. 25, 1992	Count 120
7388	<i>Xanthorhoe ferrugata</i> (Cl.) May 31, 1991–Sep. 7, 1990	Count 7
7390	<i>Xanthorhoe lacustrata</i> (Gn.) May 21, 1989–Sep. 10, 1988	Count 46
7394	<i>Epirrhoe alternata</i> (Muller) May 30, 1991–Aug. 27, 1992	Count 16
7399a	<i>Euphyia unangulata intermedia</i> (Gn.) May 30, 1991–Sep. 9, 1989	Count 27
7414	<i>Orthonama obstipata</i> (F.) May 30, 1991–Sep. 14, 1990	Count 42
7416	<i>Orthonama centrostrigaria</i> (Woll.) May 30, 1991–Sep. 25, 1992	Count 109
7422	<i>Hydrelia inornata</i> (Hulst) May 30–Aug. 16, 1991	Count 25
7423	<i>Hydrelia albifera</i> (Wlk.) May 30, 1991–Aug. 21, 1989	Count 12
7430	<i>Trichodezia albovitata</i> (Gn.) June 12, 1989–Aug. 5, 1988	Count 2
7440	<i>Eubaphe mendica</i> (Wlk.) June 6–July 19, 1991	Count 124
7445	<i>Horisme intestinata</i> (Gn.) May 30, 1991–Sep. 9, 1989	Count 49
7474+	<i>Eupithecia miserulata</i> Grt. May 18, 1988–Sep. 25, 1992	Count 200
7640	<i>Lobophora nivergerata</i> Wlk. May 21–June 19, 1989	Count 11
7647	<i>Heterophleps trivittaria</i> H.-S. May 30–Sep. 13, 1991	Count 30
7648	<i>Dyspteris aborivaria</i> (H.-S.) May 30–Aug. 2, 1991	Count 21

**Family EPIPLEMIDAE**

7653	<i>Calledapteryx dryopterata</i> Grt. Aug. 16, 1990	Count 1
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**Family MIMALLONIDAE**

7662	<i>Cicinnus melsheimeri</i> (Harr.) July 3, 1992	Count 1
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**Family APATELODIDAE**

7663	<i>Apateledes torrefacta</i> (J.E. Smith) June 20, 1991–July 15, 1988	Count 8
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7665	<i>Olceclostera angelica</i> (Grt.) June 12, 1992–July 15, 1988	Count 8
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**Family LASIOCAMPIDAE**

7670	<i>Tolype vellela</i> (Stoll) May 21, 1989–Sep. 24, 1988	Count 59
7673	<i>Tolype laricis</i> (Fitch) July 12, 1991–Sep. 9, 1989	Count 34
7687	<i>Phylloidesma americana</i> (Harr.) May 28, 1989	Count 1
7698	<i>Malacosoma disstria</i> Hbn. June 20, 1991–July 24, 1992	Count 539
7701	<i>Malacosoma americanum</i> (F.) June 6, 1991–July 13, 1990	Count 84

**Family SATURNIIDAE**

7715	<i>Dryocampa rubicunda</i> (F.) May 30, 1991–July 29, 1988	Count 51
7746	<i>Automeris io</i> (F.) May 30, 1991–July 13, 1990	Count 27
7757	<i>Antheraea polyphemus</i> (Cram.) May 30, 1991–July 15, 1988	Count 15
7758	<i>Actias luna</i> (L.) May 30, 1991–Aug. 27, 1992	Count 18
7765	<i>Callosamia angulifera</i> (Wlk.) July 15, 1988–July 31, 1989	Count 4

**Family SPHINGIDAE**

7787	<i>Ceratomia undulosa</i> (Wlk.) June 6, 1991–July 20, 1990	Count 7
7821	<i>Smerinthus jamaicensis</i> (Drury) July 19, 1991–Aug. 16, 1990	Count 2
7824	<i>Paonias excaecatus</i> (J.E. Smith) May 30, 1991–July 31, 1992	Count 105
7825	<i>Paonias myops</i> (J.E. Smith) May 30, 1991–July 29, 1988	Count 45
7827	<i>Laothee juglandis</i> (J.E. Smith) May 18, 1988–July 13, 1990	Count 22
7828	<i>Pachysphinx modesta</i> (Harr.) June 5, 1992–June 15, 1988	Count 2
7871	<i>Deidamia inscripta</i> (Harr.) May 28, 1989–June 12, 1992	Count 11
7885	<i>Darapsa myron</i> (Cram.) June 1, 1988–July 24, 1989	Count 10
7886	<i>Darapsa pholus</i> (Cram.) June 6, 1991–July 4, 1989	Count 3

**Family NOTODONTIDAE**

7895	<i>Clostera albosigma</i> Fitch June 1–Aug. 24, 1990	Count 21
7898	<i>Clostera strigosa</i> (Grt.) June 1, 1988–Aug. 7, 1992	Count 10
7901	<i>Clostera apicalis</i> (Wlk.) July 19, 1991–Aug. 14, 1989	Count 8
7902	<i>Datana ministra</i> (Drury) May 30, 1991–July 15, 1988	Count 9
7903	<i>Datana angusii</i> G. & R. June 15, 1988–July 20, 1990	Count 6
7904+	<i>Datana drexelii</i> Hy. Edw. June 20, 1991–July 29, 1988	Count 19

7906+	<i>Dataula contracta</i> Wlk. June 20, 1991–Aug. 7, 1989 . . . . .	Count 27	8107	<i>Haploa clymene</i> (Brown) July 5, 1991–Aug. 21, 1989 . . . . .	Count 146
7915	<i>Nadata gibbosa</i> (J.E. Smith) May 28–Aug. 21, 1989 . . . . .	Count 291	8121+	<i>Holomehina aurantiaca</i> (Hbn.) June 6, 1991–July 31, 1992 . . . . .	Count 212
7917	<i>Hyperaeschra georgica</i> (H.-S.) June 6–Aug. 2, 1991 . . . . .	Count 5	8129	<i>Pyrrharctia isabella</i> (J.E. Smith) June 6, 1991–Sep. 9, 1989 . . . . .	Count 18
7919	<i>Peridea basitriens</i> (Wlk.) May 30, 1991–Aug. 24, 1990 . . . . .	Count 260	8133	<i>Spilosoma latipennis</i> Stretch May 30, 1991–July 3, 1992 . . . . .	Count 10
7920	<i>Peridea angulosa</i> (J.E. Smith) June 15, 1988–Sep. 4, 1992 . . . . .	Count 94	8134	<i>Spilosoma congrua</i> Wlk. May 21, 1989–July 24, 1992 . . . . .	Count 208
7922	<i>Pheosia rimosa</i> Pack. May 30, 1991–Aug. 9, 1990 . . . . .	Count 18	8137	<i>Spilosoma virginica</i> (F.) May 28, 1989–Aug. 23, 1991 . . . . .	Count 54
7924	<i>Odontostia elegans</i> (Stkr.) May 30, 1991–July 15, 1988 . . . . .	Count 4	8140	<i>Hypanthria cunea</i> (Drury) July 3, 1992 . . . . .	Count 3
7926	<i>Notodonta scitipennis</i> Wlk. July 15, 1988 . . . . .	Count 1	8169+	<i>Apantesis phalerata</i> (Harr.) June 20, 1991–Sep. 9, 1989 . . . . .	Count 4
7929	<i>Nerice bidentata</i> Wlk. May 30, 1991–Aug. 21, 1989 . . . . .	Count 9	8197	<i>Apantesis virgo</i> (L.) July 29, 1988 . . . . .	Count 1
7930	<i>Ellida caniplaga</i> (Wlk.) May 30, 1991–July 31, 1989 . . . . .	Count 31	8203+	<i>Halsydotia tessellaris</i> (J.E. Smith) May 30, 1991–Aug. 7, 1992 . . . . .	Count 909
7931	<i>Gluphisia septentrionis</i> Wlk. June 5, 1992–Aug. 16, 1990 . . . . .	Count 18	8211	<i>Lophocampa caryae</i> Harr. May 30, 1991–June 15, 1988 . . . . .	Count 31
7951+	<i>Symmerista albifrons</i> (J.E. Smith) May 30, 1991–Aug. 16, 1990 . . . . .	Count 142	8214	<i>Lophocampa maculata</i> Harr. June 15, 1988 . . . . .	Count 1
7957	<i>Dasylophia anguina</i> (J.E. Smith) June 15, 1988 . . . . .	Count 1	8230	<i>Cycnia tenera</i> Hbn. July 4, 1989–Aug. 26, 1988 . . . . .	Count 5
7958	<i>Dasylophia thyatiroides</i> (Wlk.) May 18, 1988–Aug. 24, 1990 . . . . .	Count 62	8231	<i>Cycnia oregonensis</i> (Stretch) June 12, 1989 . . . . .	Count 1
7974	<i>Misogada unicolor</i> (Pack.) June 26, 1989 . . . . .	Count 1	8238	<i>Enchaetes egle</i> (Drury) June 22–July 29, 1988 . . . . .	Count 8
7975	<i>Macrurocampa marthesia</i> (Cram.) June 20, 1991–Aug. 9, 1990 . . . . .	Count 97	8262	<i>Ctennucha virginica</i> (Esp.) June 15, 1988 . . . . .	Count 1
7994	<i>Heterocampa guttivitta</i> (Wlk.) May 18, 1988–Aug. 7, 1989 . . . . .	Count 369	8267	<i>Cisseps fulvicollis</i> (Hbn.) May 30, 1991–Sep. 9, 1989 . . . . .	Count 14
7995	<i>Heterocampa binudata</i> Wlk. May 30, 1991–Aug. 24, 1990 . . . . .	Count 14	<b>Family LYMANTRIIDAE</b>		
7998	<i>Lochmaeus manteo</i> Doubleday June 6, 1991–Aug. 5, 1988 . . . . .	Count 16	8294	<i>Dasychira vagans</i> (B. & McD.) July 20, 1990 . . . . .	Count 1
7999	<i>Lochmaeus bilineata</i> (Pack.) June 1, 1988–Aug. 21, 1989 . . . . .	Count 64	8296	<i>Dasychira basiflava</i> (Pack.) July 5, 1991–Aug. 16, 1990 . . . . .	Count 62
8005	<i>Schizura ipomoeae</i> Doubleday June 6, 1991–July 24, 1992 . . . . .	Count 8	8297	<i>Dasychira matheri</i> Fgn. July 12, 1991 . . . . .	Count 16
8006	<i>Schizura badia</i> (Pack.) June 5, 1992–July 10, 1989 . . . . .	Count 3	8302	<i>Dasychira obliquata</i> (G. & R.) Aug. 9, 1990 . . . . .	Count 3
8007	<i>Schizura unicornis</i> (J.E. Smith) May 30, 1991–Aug. 21, 1989 . . . . .	Count 57	8304	<i>Dasychira plagiata</i> (Wlk.) July 6, 1990 . . . . .	Count 1
8011	<i>Schizura leptinoides</i> (Grt.) May 30, 1991–July 8, 1988 . . . . .	Count 23	8314	<i>Orgyia definita</i> Pack. July 5, 1991–Sep. 24, 1988 . . . . .	Count 18
8012	<i>Oligocentria semirufescens</i> (Wlk.) June 6, 1991–July 24, 1989 . . . . .	Count 16	8316	<i>Orgyia leucostigma</i> (J.E. Smith) June 20, 1991–Sep. 21, 1990 . . . . .	Count 17
8017	<i>Oligocentria lignicolor</i> (Wlk.) July 31, 1989–Aug. 9, 1990 . . . . .	Count 3	8318	<i>Lymantria dispar</i> (L.) July 12, 1991–Aug. 27, 1992 . . . . .	Count 407
<b>Family ARCTIIDAE</b>			<b>Family NOCTUIDAE</b>		
8045.1	<i>Cranbidia pallida</i> Pack. July 31, 1989–Sep. 10, 1992 . . . . .	Count 10	8322	<i>Idia americalis</i> (Gn.) May 30, 1991–Sep. 25, 1992 . . . . .	Count 28
8090	<i>Hypoprepia fucosa</i> Hbn. July 19, 1991 . . . . .	Count 1	8323+	<i>Idia aemula</i> Hbn. May 30, 1991–Sep. 25, 1992 . . . . .	Count 116
8104	<i>Comachara cadburyi</i> Franc. June 5, 1992 . . . . .	Count 1	8326	<i>Idia rotundalis</i> (Wlk.) June 27, 1991–Sep. 10, 1992 . . . . .	Count 255

- 8327 *Idia forbesi* (French)  
July 5, 1991–Aug. 16, 1990 . . . . . Count 74
- 8329 *Idia diminuendus* (B. & McD.)  
June 27, 1991–Aug. 14, 1989 . . . . . Count 67
- 8333 *Idia denticulalis* (Harv.)  
June 20, 1991–Sep. 7, 1990 . . . . . Count 5
- 8334 *Idia lubricalis* (Gey.)  
July 8, 1988–Sep. 9, 1989 . . . . . Count 17
- 8338 *Phalaenophana pyramusalis* (Wlk.)  
June 12, 1989–Aug. 31, 1990 . . . . . Count 18
- 8340 *Zanclognatha lituralis* (Hbn.)  
June 5–Aug. 27, 1992 . . . . . Count 38
- 8345 *Zanclognatha laevigata* (Grt.)  
July 4, 1989–Sep. 4, 1992 . . . . . Count 198
- 8347 *Zanclognatha obscuripennis* (Grt.)  
Sep. 9, 1989 . . . . . Count 1
- 8348 *Zanclognatha pedipilalis* (Gn.)  
Aug. 16, 1990–Aug. 27, 1992 . . . . . Count 3
- 8349 *Zanclognatha protummusalis* (Wlk.)  
July 19, 1991–July 24, 1989 . . . . . Count 2
- 8351 *Zanclognatha cruralis* (Gn.)  
June 6, 1991–Aug. 24, 1990 . . . . . Count 27
- 8352+ *Zanclognatha jacchusalis* (Wlk.)  
May 30, 1991–Sep. 14, 1990 . . . . . Count 258
- 8355 *Chytolita morbidalis* (Gn.)  
May 30, 1991–July 4, 1989 . . . . . Count 83
- 8356 *Chytolita petrealis* Grt.  
June 5–June 26, 1992 . . . . . Count 6
- 8357 *Macrochilo absorptalis* (Wlk.)  
July 4, 1989–July 8, 1988 . . . . . Count 3
- 8358 *Macrochilo phylphora* (Grt.)  
June 27, 1991–July 24, 1989 . . . . . Count 26
- 8360 *Macrochilo orciferalis* (Wlk.)  
June 15, 1988–Sep. 9, 1989 . . . . . Count 2
- 8362 *Phalaenostola metonalis* (Wlk.)  
May 30, 1991–Sep. 10, 1992 . . . . . Count 15
- 8363 *Phalaenostola eumelusalis* (Wlk.)  
July 8, 1988–Aug. 2, 1991 . . . . . Count 6
- 8364 *Phalaenostola larentioides* Grt.  
July 15, 1988–July 20, 1990 . . . . . Count 2
- 8370 *Bleptina caradrinalis* Gn.  
July 4, 1989–July 12, 1991 . . . . . Count 2
- 8378 *Renia sahusalis* (Wlk.)  
June 20, 1991–July 17, 1992 . . . . . Count 5
- 8379 *Renia factiosalis* (Wlk.)  
July 5, 1991–Sep. 7, 1990 . . . . . Count 126
- 8381 *Renia discoloralis* Gn.  
June 26, 1989–Sep. 4, 1992 . . . . . Count 117
- 8386 *Renia adspersigillus* (Bosc)  
June 6, 1991–Sep. 7, 1990 . . . . . Count 47
- 8387 *Renia sobriialis* (Wlk.)  
July 10, 1989–Aug. 7, 1992 . . . . . Count 4
- 8393 *Lascoria ambigualis* Wlk.  
June 1, 1990–Aug. 23, 1991 . . . . . Count 13
- 8397 *Palthis angulalis* (Hbn.)  
May 30, 1991–Sep. 9, 1989 . . . . . Count 12
- 8398 *Palthis asopialis* (Gn.)  
May 30, 1991–Sep. 25, 1992 . . . . . Count 32
- 8404 *Rivula propinqualis* Gn.  
May 30–Sep. 13, 1991 . . . . . Count 33
- 8411 *Colobochyla interpuncta* (Grt.)  
July 5–July 12, 1991 . . . . . Count 3
- 8412 *Melanomma auricinctaria* Grt.  
May 30, 1991–Aug. 21, 1989 . . . . . Count 7
- 8421 *Hyperodes fragitilinea* (Sm.)  
Aug. 27, 1992 . . . . . Count 2
- 8426 *Dyspyralis illocata* Warr.  
July 12–July 19, 1991 . . . . . Count 2
- 8427 *Dyspyralis puncticosta* (Sm.)  
July 5, 1991–July 29, 1988 . . . . . Count 37
- 8428 *Dyspyralis nigella* (Stkr.)  
July 5, 1991–Aug. 9, 1990 . . . . . Count 39
- 8441 *Bomolocha manalis* (Wlk.)  
June 8, 1988–Sep. 9, 1989 . . . . . Count 56
- 8442 *Bomolocha baltimoralis* (Gn.)  
May 18, 1988–Sep. 21, 1990 . . . . . Count 136
- 8443 *Bomolocha bijugalis* (Wlk.)  
July 8, 1988 . . . . . Count 1
- 8444 *Bomolocha palparia* (Wlk.)  
June 15, 1988–Aug. 23, 1991 . . . . . Count 14
- 8445 *Bomolocha abalienalis* (Wlk.)  
June 1, 1988–Aug. 21, 1989 . . . . . Count 9
- 8446 *Bomolocha deceptalis* (Wlk.)  
June 12–Sep. 9, 1989 . . . . . Count 25
- 8447 *Bomolocha madefactalis* (Gn.)  
June 26, 1989–Sep. 7, 1990 . . . . . Count 10
- 8448 *Bomolocha sordidula* (Grt.)  
June 15, 1988 . . . . . Count 1
- 8452 *Bomolocha edictalis* (Wlk.)  
July 3, 1992 . . . . . Count 1
- 8465 *Plathypena scabra* (F.)  
May 30, 1991–Sep. 25, 1992 . . . . . Count 54
- 8479 *Spargaloma sexpunctata* Grt.  
May 30, 1991–Aug. 24, 1990 . . . . . Count 9
- 8491 *Ledaea perditalis* (Wlk.)  
May 30–Aug 16, 1991 . . . . . Count 11
- 8499 *Metalectra discalis* (Grt.)  
July 5, 1991–July 31, 1989 . . . . . Count 8
- 8500 *Metalectra quadrisignata* (Wlk.)  
Aug. 9, 1990 . . . . . Count 1
- 8514 *Scoteocampa liburna* (Gey.)  
June 20, 1991–Aug. 16, 1990 . . . . . Count 84
- 8534 *Plusiodonta compressipalpis* Gn.  
July 5, 1991 . . . . . Count 1
- 8536 *Calyptra canadensis* (Bethune)  
June 20, 1991–Aug. 19, 1988 . . . . . Count 13
- 8555 *Scoliopteryx libatrix* (L.)  
May 21, 1989–Aug. 9, 1990 . . . . . Count 6
- 8587 *Panopoda rufimargo* (Hbn.)  
June 20, 1991–Aug. 5, 1988 . . . . . Count 91
- 8588 *Panopoda carneicosta* Gn.  
July 8, 1988–July 24, 1992 . . . . . Count 5
- 8641 *Drasteria grandirena* (Haw.)  
July 4, 1989 . . . . . Count 1
- 8697 *Zale tinereae* (Gn.)  
May 28, 1992–July 8, 1988 . . . . . Count 38
- 8705 *Zale bethunei* (Sm.)  
June 22, 1988 . . . . . Count 1
- 8716 *Zale unilineata* (Grt.)  
June 15, 1988 . . . . . Count 2

8717	<i>Zale horrida</i> Hbn. May 30, 1991–Aug. 16, 1990 . . . . .	Count 3	8955	<i>Marathyssa inficita</i> (Wlk.) June 15, 1988 . . . . .	Count 1
8721	<i>Allotria elosympha</i> (Hbn.) June 15, 1988–Aug. 7, 1989 . . . . .	Count 8	8956	<i>Marathyssa basalis</i> Wlk. May 21, 1989 . . . . .	Count 1
8727	<i>Parallelia bistriaris</i> Hbn. May 30, 1991–Sep. 9, 1989 . . . . .	Count 58	8957	<i>Paectes oculatrix</i> (Gn.) June 12, 1989–Aug. 24, 1990 . . . . .	Count 17
8738+	<i>Caenurgina crassiuscula</i> (Haw.) July 24, 1992–Sep. 9, 1989 . . . . .	Count 3	8970	<i>Baileya ophthalmica</i> (Gn.) May 21, 1989–July 8, 1988 . . . . .	Count 48
8778	<i>Catocala habilis</i> Grt. Aug. 16, 1991–Sep. 25, 1992 . . . . .	Count 4	8971	<i>Baileya dormitans</i> (Gn.) May 30–July 19, 1991 . . . . .	Count 72
8779	<i>Catocala serena</i> Edw. July 20, 1990 . . . . .	Count 1	8972	<i>Baileya levitans</i> (Sm.) May 28, 1989–Aug. 3, 1990 . . . . .	Count 42
8785	<i>Catocala residua</i> Grt. Sep. 9, 1989 . . . . .	Count 1	8973	<i>Baileya australis</i> (Grt.) June 1, 1988 . . . . .	Count 1
8788	<i>Catocala resecta</i> Grt. Aug. 23, 1991–Sep. 25, 1992 . . . . .	Count 7	8983	<i>Meganola minuscula</i> (Zell.) May 21, 1989–July 19, 1991 . . . . .	Count 10
8792	<i>Catocala vidua</i> (J.E. Smith) Sep. 14, 1990 . . . . .	Count 1	8983.1	<i>Meganola phylla</i> (Dyar) June 1, 1988–Aug. 2, 1991 . . . . .	Count 10
8795	<i>Catocala palaeogama</i> Gn. Aug. 16, 1991–Sep. 14, 1990 . . . . .	Count 4	9037	<i>Hyperstrotia pervertens</i> (B. & McD.) May 30, 1991–Sep. 14, 1990 . . . . .	Count 47
8797	<i>Catocala subnata</i> Grt. Aug. 16, 1990 . . . . .	Count 1	9038	<i>Hyperstrotia villificans</i> (B. & McD.) July 12, 1991 . . . . .	Count 3
8798	<i>Catocala neogama</i> (J.E. Smith) Sep. 25, 1992 . . . . .	Count 1	9040	<i>Hyperstrotia secta</i> (Grt.) July 19, 1991 . . . . .	Count 1
8801	<i>Catocala ilia</i> (Cram.) July 5, 1991–Sep. 9, 1989 . . . . .	Count 15	9046	<i>Lithacodia bellicula</i> Hbn. July 8, 1988 . . . . .	Count 1
8802	<i>Catocala cerogama</i> Gn. Aug. 5–Sep. 24, 1988 . . . . .	Count 20	9047	<i>Lithacodia muscosula</i> (Gn.) May 18, 1988–Aug. 23, 1991 . . . . .	Count 144
8805	<i>Catocala unijuga</i> Wlk. Aug. 24, 1990 . . . . .	Count 1	9048	<i>Lithacodia albidula</i> (Gn.) July 19–July 26, 1991 . . . . .	Count 2
8806	<i>Catocala parta</i> Gn. July 24, 1989–Aug. 3, 1990 . . . . .	Count 2	9051	<i>Lithacodia musta</i> (G. & R.) July 29, 1988 . . . . .	Count 1
8832	<i>Catocala cara</i> Gn. Sep. 25, 1992 . . . . .	Count 1	9053	<i>Pseudeustrotia carneola</i> (Gn.) May 30, 1991–Sep. 9, 1989 . . . . .	Count 85
8833	<i>Catocala concubens</i> Wlk. Sep. 4, 1992 . . . . .	Count 1	9055.1	<i>Maliattha synchitis</i> (G. & R.) May 30, 1991–July 20, 1990 . . . . .	Count 40
8857	<i>Catocala ultronia</i> (Hbn.) July 5, 1991–Sep. 9, 1989 . . . . .	Count 61	9055.3	<i>Anterastria teratophora</i> (H.-S.) June 12, 1989 . . . . .	Count 1
8858	<i>Catocala crataegi</i> Saund. July 12, 1991 . . . . .	Count 1	9056	<i>Homophoberia cristata</i> Morr. July 8, 1988 . . . . .	Count 1
8863	<i>Catocala mira</i> Grt. July 5, 1991–Aug. 21, 1989 . . . . .	Count 21	9057	<i>Homophoberia apicosa</i> (Haw.) May 30, 1991–Aug. 24, 1990 . . . . .	Count 20
8864	<i>Catocala grynea</i> (Cram.) July 5, 1991–Sep. 9, 1989 . . . . .	Count 28	9062	<i>Cerna cerintha</i> (Tr.) June 6, 1991–July 15, 1988 . . . . .	Count 8
8865	<i>Catocala praeclara</i> G. & R. July 12, 1991–July 31, 1989 . . . . .	Count 4	9065	<i>Leuconycta dipteroides</i> (Gn.) June 1–July 15, 1988 . . . . .	Count 15
8867	<i>Catocala blandula</i> Hulst July 8, 1988–July 31, 1989 . . . . .	Count 9	9066	<i>Leuconycta lepidula</i> (Grt.) July 12, 1991–Aug. 19, 1988 . . . . .	Count 2
8878	<i>Catocala amica</i> (Hbn.) Sep. 9, 1989 . . . . .	Count 1	9090	<i>Tarachidia candefacta</i> (Hbn.) July 15–Aug. 5, 1988 . . . . .	Count 2
8898	<i>Allagrapha aerea</i> (Hbn.) June 6, 1991–Sep. 7, 1990 . . . . .	Count 20	9095	<i>Tarachidia erastrioides</i> (Gn.) June 1–July 15, 1988 . . . . .	Count 4
8899	<i>Pseudeva purpurigera</i> (Wlk.) June 15, 1988–July 17, 1989 . . . . .	Count 4	9185	<i>Colocasia propinqua</i> linea (Grt.) May 21, 1989–July 12, 1991 . . . . .	Count 108
8905	<i>Eosphoropteryx thyatroides</i> (Gn.) July 24, 1989–Sep. 21, 1990 . . . . .	Count 4	9189	<i>Charadra deridens</i> (Gn.) June 15, 1988–Aug. 2, 1991 . . . . .	Count 3
8908	<i>Autographa precatonius</i> (Gn.) May 28–Sep. 25, 1992 . . . . .	Count 13	9193	<i>Raphia frater</i> Grt. May 30, 1991–July 31, 1989 . . . . .	Count 19
8924	<i>Anagrapha falcifera</i> (Kby.) May 30–July 26, 1991 . . . . .	Count 3	9200	<i>Acronicta americana</i> (Harr.) June 6, 1991–July 15, 1988 . . . . .	Count 22

- 9203 *Acronicta dactylina* Grt.  
July 24, 1992 . . . . . Count 1
- 9207 *Acronicta imotata* Gn.  
July 17, 1989 . . . . . Count 1
- 9225 *Acronicta vinula* (Grt.)  
July 31, 1989 . . . . . Count 1
- 9226 *Acronicta superans* Gn.  
May 21–June 12, 1989 . . . . . Count 2
- 9227 *Acronicta laetifica* Sm.  
June 1, 1988–Aug. 2, 1991 . . . . . Count 9
- 9229 *Acronicta hasta* Gn.  
May 28, 1989–Aug. 19, 1988 . . . . . Count 45
- 9235 *Acronicta spinigera* Gn.  
May 28–Aug. 21, 1989 . . . . . Count 198
- 9236 *Acronicta morula* G. & R.  
June 12, 1989–July 10, 1992 . . . . . Count 4
- 9237 *Acronicta interrupta* Gn.  
May 30, 1991–June 12, 1989 . . . . . Count 2
- 9238 *Acronicta lobeliae* Gn.  
June 12, 1989 . . . . . Count 1
- 9242 *Acronicta exilis* Grt.  
May 30, 1991 . . . . . Count 1
- 9243 *Acronicta ovata* Grt.  
June 26, 1989–July 15, 1988 . . . . . Count 9
- 9244 *Acronicta modica* Wlk.  
July 8–July 15, 1988 . . . . . Count 2
- 9245+ *Acronicta haesitata* (Grt.)  
May 30, 1991–July 20, 1990 . . . . . Count 314
- 9246 *Acronicta clarescens* Gn.  
June 15, 1988 . . . . . Count 2
- 9251 *Acronicta retardata* (Wlk.)  
May 30–July 19, 1991 . . . . . Count 12
- 9261 *Acronicta impressa* Wlk.  
July 12, 1991–July 20, 1990 . . . . . Count 2
- 9285 *Polygrammate hebraeicum* Hbn.  
May 30, 1991–Aug. 15, 1988 . . . . . Count 38
- 9286 *Harrisinemma trisignata* (Wlk.)  
Aug. 5, 1988 . . . . . Count 1
- 9301 *Eudryas grata* (F.)  
May 30, 1991–July 29, 1988 . . . . . Count 51
- 9314 *Alypia octomaculata* (F.)  
June 22, 1988 . . . . . Count 1
- 9328 *Apamea nigrior* (Sm.)  
June 6, 1991 . . . . . Count 1
- 9329 *Apamea cariosa* (Gn.)  
July 29, 1988 . . . . . Count 1
- 9332 *Apamea vulgaris* (G. & R.)  
June 22, 1990–July 19, 1991 . . . . . Count 5
- 9333 *Apamea lignicolora* (Gn.)  
July 13, 1990 . . . . . Count 1
- 9348 *Apamea amputatrix* (Fitch)  
June 19, 1992 . . . . . Count 1
- 9391 *Luperina passer* (Gn.)  
June 27, 1991 . . . . . Count 1
- 9404 *Oligia modica* (Gn.)  
Aug. 9–Sep. 14, 1990 . . . . . Count 23
- 9406 *Oligia fractilinea* (Grt.)  
July 12–Aug. 16, 1991 . . . . . Count 14
- 9410 *Oligia crytora* (Franc.)  
June 29, 1990 . . . . . Count 1
- 9419 *Oligia mactata* (Gn.)  
July 3–Sep. 25, 1992 . . . . . Count 18
- 9427 *Meropleon diversicolor* (Morr.)  
Aug. 31, 1990 . . . . . Count 1
- 9454 *Amphipoea velata* (Wlk.)  
June 20, 1991–July 21, 1992 . . . . . Count 8
- 9466 *Papaipema cataphracta* (Grt.)  
Sep. 25, 1992 . . . . . Count 1
- 9471 *Papaipema arcivorens* Hamp.  
Sep. 2, 1989–Sep. 25, 1992 . . . . . Count 21
- 9483 *Papaipema inquaesita* (G. & R.)  
Aug. 19, 1988–Sep. 25, 1992 . . . . . Count 20
- 9485 *Papaipema baptisiae* (Bird)  
Sep. 14–Sep. 21, 1990 . . . . . Count 4
- 9503 *Papaipema rigida* (Grt.)  
Sep. 9, 1989 . . . . . Count 1
- 9505 *Papaipema cerussata* (Grt.)  
Sep. 9, 1989–Sep. 25, 1992 . . . . . Count 3
- 9509 *Papaipema unimoda* (Sm.)  
Aug. 31, 1990 . . . . . Count 1
- 9520 *Achatodes zeae* (Harr.)  
July 12, 1991–Aug. 24, 1990 . . . . . Count 3
- 9525 *Bellura obliqua* (Wlk.)  
May 30, 1991 . . . . . Count 1
- 9526 *Bellura densa* (Wlk.)  
Aug. 7, 1989 . . . . . Count 1
- 9545 *Euplexia benesimilis* McD.  
May 30, 1991–Sep. 7, 1990 . . . . . Count 108
- 9546 *Phlogophora iris* Gn.  
June 22, 1988 . . . . . Count 1
- 9547 *Phlogophora periculosa* Gn.  
Aug. 16–Sep. 14, 1990 . . . . . Count 91
- 9549 *Enargia decolor* (Wlk.)  
July 24, 1992 . . . . . Count 1
- 9550 *Enargia infumata* (Grt.)  
June 13, 1991–July 10, 1989 . . . . . Count 19
- 9551 *Enargia mephisto* Franc.  
June 6, 1991–July 10, 1989 . . . . . Count 15
- 9555 *Ipimorpha pleonectusa* Grt.  
July 31–Sep. 9, 1989 . . . . . Count 11
- 9556 *Chytonix palliatricula* (Gn.)  
June 1, 1988–July 31, 1992 . . . . . Count 105
- 9578 *Hyppa xylinoides* (Gn.)  
May 18, 1988–Sep. 2, 1989 . . . . . Count 43
- 9582 *Nedra ramosula* (Gn.)  
Aug. 16, 1991 . . . . . Count 1
- 9618 *Phosphila turbulenta* Hbn.  
July 5–July 12, 1991 . . . . . Count 3
- 9631 *Callopietria mollissima* (Gn.)  
May 30, 1991–Sep. 9, 1989 . . . . . Count 79
- 9633 *Callopietria cordata* (Ljungh)  
July 4, 1989 . . . . . Count 1
- 9638 *Amphipyra pyramioides* Gn.  
May 21, 1989–Sep. 25, 1992 . . . . . Count 123
- 9647 *Athetis miranda* (Grt.)  
Aug. 14, 1989 . . . . . Count 1
- 9650 *Anorthodes tarda* (Gn.)  
June 4, 1989–Sep. 25, 1992 . . . . . Count 27
- 9661 *Crambodes talidiformis* Gn.  
Aug. 27, 1992 . . . . . Count 1



9662	<i>Balsa malana</i> (Fitch) June 15, 1988–Aug. 9, 1990 . . . . .	Count 11	10444+	<i>Leucania phragmatidicola</i> Gn. May 30, 1991–Sep. 4, 1992 . . . . .	Count 7
9663	<i>Balsa tristrigella</i> (Wlk.) May 30, 1991–July 4, 1989 . . . . .	Count 73	10446+	<i>Leucania multilinea</i> Wlk. July 19–Aug. 30, 1991 . . . . .	Count 15
9664	<i>Balsa labecula</i> (Grt.) June 1, 1990–July 29, 1988 . . . . .	Count 31	10447	<i>Leucania commoides</i> Gn. Aug. 7, 1989 . . . . .	Count 1
9666	<i>Spodoptera frugiperda</i> (J.E. Smith) Aug. 30, 1991 . . . . .	Count 1	10461+	<i>Leucania ursula</i> (Fbs.) May 30, 1991–Sep. 10, 1988 . . . . .	Count 36
9678	<i>Elaphria versicolor</i> (Grt.) June 15, 1988–July 10, 1989 . . . . .	Count 10	10495+	<i>Orthosia hibisci</i> (Gn.) May 21, 1989 . . . . .	Count 1
9681	<i>Elaphria festivoides</i> (Gn.) June 15, 1988–July 10, 1992 . . . . .	Count 4	10501	<i>Crocigrapta normani</i> (Grt.) May 18, 1988–June 5, 1992 . . . . .	Count 19
9689	<i>Perigea xanthioides</i> Gn. June 15, 1988–Sep. 9, 1989 . . . . .	Count 13	10521	<i>Morrisonia confusa</i> (Hbn.) May 18–June 15, 1988 . . . . .	Count 9
9696	<i>Condica vecors</i> (Gn.) May 30–Aug. 16, 1991 . . . . .	Count 16	10521.1	<i>Morrisonia latex</i> (Gn.) May 28, 1989–July 15, 1988 . . . . .	Count 39
9720	<i>Ogdoconta cinereola</i> (Gn.) May 30, 1991–Sep. 9, 1989 . . . . .	Count 16	10524	<i>Nepelodes minians</i> Gn. Aug. 27, 1992–Sep. 13, 1991 . . . . .	Count 19
9815	<i>Cosmia calami</i> (Harv.) July 5, 1991 . . . . .	Count 1	10532	<i>Homorhodes furfurata</i> (Grt.) June 27, 1991–July 24, 1992 . . . . .	Count 5
9818	<i>Amolita fessa</i> Grt. June 27, 1991–July 10, 1989 . . . . .	Count 3	10578	<i>Pseudorthodes vecors</i> (Gn.) June 5–Sep. 4, 1992 . . . . .	Count 120
9878	<i>Lithomoia germana</i> (Morr.) Sep. 6, 1991–Sep. 25, 1992 . . . . .	Count 4	10585	<i>Orthodes crenulata</i> (Butler) July 15, 1988–Aug. 30, 1991 . . . . .	Count 10
9886	<i>Lithophan patefacta</i> (Wlk.) Sep. 9, 1989 . . . . .	Count 1	10587	<i>Orthodes cynica</i> Gn. May 30, 1991–July 24, 1992 . . . . .	Count 561
9888	<i>Lithophane inominata</i> (Sm.) May 21, 1989–Sep. 21, 1990 . . . . .	Count 3	10589.1	<i>Orthodes goodelli</i> (Grt.) May 28–June 5, 1992 . . . . .	Count 3
9893	<i>Lithophane hemina</i> Grt. Sep. 25, 1992 . . . . .	Count 1	10627	<i>Tricholita signata</i> (Wlk.) July 26, 1991–Sep. 21, 1990 . . . . .	Count 19
9929	<i>Pyreferra hesperidago</i> (Gn.) May 21, 1989 . . . . .	Count 1	10663	<i>Agrotis ipsilon</i> (Hufn.) May 25, 1988–Sep. 25, 1992 . . . . .	Count 63
9952	<i>Eucliroedia pampina</i> (Gn.) Sep. 10, 1992 . . . . .	Count 1	10664	<i>Agrotis subterranea</i> (F.) July 12, 1991 . . . . .	Count 1
9957	<i>Saitira bicolorago</i> (Gn.) Sep. 14, 1990–Sep. 25, 1992 . . . . .	Count 10	10674+	<i>Feltia subgothica</i> (Haw.) Aug. 7, 1989–Aug. 30, 1991 . . . . .	Count 7
9961	<i>Anathix ralla</i> (G. & R.) Aug. 16, 1990–Sep. 25, 1992 . . . . .	Count 137	10676	<i>Feltia herilis</i> (Grt.) Aug. 2, 1991–Sep. 4, 1992 . . . . .	Count 10
10200	<i>Cucullia asteroides</i> Gn. Aug. 19, 1988 . . . . .	Count 1	10793	<i>Euxoa scholastica</i> McD. July 15, 1988 . . . . .	Count 1
10276	<i>Polia imbrifera</i> (Gn.) June 6, 1991–July 10, 1989 . . . . .	Count 20	10891	<i>Ochropleura plecta</i> (L.) May 30, 1991–Sep. 10, 1988 . . . . .	Count 154
10288+	<i>Polia detracta</i> (Wlk.) May 30, 1991–Aug. 24, 1990 . . . . .	Count 686	10915	<i>Peridroma saucia</i> (Hbn.) Sep. 9, 1989 . . . . .	Count 1
10292	<i>Melanchnra adjuncta</i> (Gn.) May 30, 1991–Sep. 9, 1989 . . . . .	Count 10	10917	<i>Diarsia rubifera</i> (Grt.) Aug. 9, 1990 . . . . .	Count 1
10299	<i>Lacnobia subjuncta</i> (G. & R.) June 4–Aug. 21, 1989 . . . . .	Count 4	10926	<i>Spaelotis clandestina</i> (Harr.) June 15, 1990 . . . . .	Count 1
10300	<i>Spiramater grandis</i> (Gn.) June 12, 1992–July 26, 1991 . . . . .	Count 2	10942.1+	<i>Xestia dolosa</i> Franc. May 30, 1991–Sep. 21, 1990 . . . . .	Count 354
10368	<i>Lacinipolia mediata</i> (Grt.) Aug. 7, 1992 . . . . .	Count 1	10943	<i>Xestia normaniana</i> (Grt.) Aug. 5, 1988–Sep. 25, 1992 . . . . .	Count 149
10397	<i>Lacinipolia renigera</i> (Steph.) June 12, 1992–Sep. 9, 1989 . . . . .	Count 14	10944	<i>Xestia smithii</i> (Snell.) Aug. 16, 1991–Sep. 25, 1992 . . . . .	Count 50
10405	<i>Lacinipolia lorea</i> (Gn.) May 30, 1991–July 8, 1988 . . . . .	Count 44	10950+	<i>Xestia bicarnea</i> (Gn.) Aug. 2–Sep. 13, 1991 . . . . .	Count 137
10436	<i>Aletia oxygala</i> (Grt.) May 30, 1991–Sep. 2, 1989 . . . . .	Count 5	10998	<i>Choephora fungorum</i> G. & R. Sep. 13, 1991 . . . . .	Count 1
10438	<i>Pseudaletia unipuncta</i> (Haw.) May 21, 1989–Sep. 10, 1988 . . . . .	Count 49	11006	<i>Protolampra brunneicollis</i> (Grt.) June 22, 1988–Aug. 24, 1990 . . . . .	Count 44

11007+	<i>Eueretagrotis signoides</i> (Gn.)		11029+	<i>Abagrotis alternata</i> (Grt.)	
	July 12, 1991 . . . . .	Count 1		July 5, 1991–Sep. 25, 1992 . . . . .	Count 41
11010	<i>Heptagrotis phyllophora</i> (Grt.)		11068	<i>Helicoverpa zea</i> (Boddie)	
	June 15–July 15, 1988 . . . . .	Count 6		Sep. 9, 1989 . . . . .	Count 1