
Classification, Assessment and Protection of Forested Floodplain Wetlands of the Susquehanna Drainage

Report To:

**The United States Environmental Protection Agency
and
The Pennsylvania Department of Conservation and Natural Resources
Bureau of Forestry
Forestry Advisory Services**

Submitted By:

**The Western Pennsylvania Conservancy
209 Fourth Avenue
Pittsburgh, Pennsylvania**

and

**The Nature Conservancy
Pennsylvania Science Office
208 Airport Drive
Middletown, Pennsylvania**

30 June 2002

U.S. EPA Wetland Protection State Development Grant no. CD-993731

DCNR Service Purchase Contract no.'s SP3890055-01 and SP3890058-01

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	1
INTRODUCTION	2
PURPOSE	3
METHODS	4
Site Selection	4
DATA COLLECTION	6
Vegetation Sampling.....	6
Bird Censusing.....	6
Macroinvertebrate Sampling.....	7
RESULTS	7
Physical Setting.....	7
Vascular and Non-vascular Flora.....	10
Bird Censusing.....	17
Invertebrate Sampling.....	22
ANALYSIS.....	36
Data Analysis	36
Non-Metric Multi-Dimensional Scaling Ordination (NMS)	37
Disturbed vs Undisturbed Sites.....	38
PLANT COMMUNITY CLASSIFICATION AND DESCRIPTIONS	41
Sycamore Floodplain Forest	41
Sycamore – Mixed Hardwood Floodplain Forest.....	42
Silver Maple – Black Willow – Box Elder Floodplain Forest.....	42
Green Ash - Mixed Hardwood Floodplain Forest	43
Silver Maple Floodplain Forest	44
COMPARISON TO EXISTING PENNSYLVANIA FORESTED FLOODPLAIN WETLAND	
COMMUNITY CLASSIFICATION	45
Comparisons to other State Forested Floodplain Classifications	46
Sycamore Floodplain Forest Types	46
Silver Maple Types	47
Green Ash – Mixed Hardwood Types	47
Comparisons to Allegheny and Delaware River Basins	48
SITES OF STATE SIGNIFICANCE.....	48
CONSERVATION IMPLICATIONS	49
BIBLIOGRAPHY.....	52
APPENDICES	55
Appendix I. Location of Susquehanna Basin Floodplain Forest Wetland Sites	56
Appendix II: Species and Cover Values for Forested Floodplain Wetlands in the Susquehanna River Basin.....	99
Appendix III: Detailed Insect Collection Data for Forested Floodplain Wetland.....	111
Disturbed and Undisturbed Sites in the Susquehanna River Basin	111
Appendix IV: Plant Community Data Forms	157

LIST OF TABLES

Table 1. Physical Characteristics of Susquehanna River Basin Floodplain Wetland Sites.....	8
Table 2. Breeding Bird Count Totals per Site for Forested Floodplain Wetlands in the Susquehanna Basin, Disturbed Vs. Undisturbed Site Comparison.....	11
Table 3. Ranked Frequency and Abundance of Breeding Bird Species (Disturbed Vs. Undisturbed Sites Pooled) in Forested Floodplain Wetlands in the Susquehanna Basin.....	16
Table 4. Breeding Bird Count Totals per Site for Forested Floodplain Wetlands in the Susquehanna Basin, Disturbed Vs. Undisturbed Site Comparison.....	18
Table 5. Ranked Frequency and Abundance of Breeding Bird Species (Disturbed Vs. Undisturbed Sites Pooled) in Forested Floodplain Wetlands in the Susquehanna Basin.....	20
Table 6. Insect Species Collected by Site for Forested Floodplain Wetlands in the Susquehanna Basin, Disturbed Vs. Undisturbed Site Comparison.....	23

LIST OF FIGURES

Figure 1. Ecoregional boundary map of Pennsylvania showing locations of 42 forested floodplain wetland sites.....	4
Figure 2. Major drainage basin map of Pennsylvania showing 42 forested floodplain wetland site locations.....	5
Figure 3. Dendrogram based on TWINSpan results for forested floodplain wetland sites	36
Figure 4. Ordination graph of non-metric multi-dimensional scaling analysis of forested floodplain wetland sites.....	38
Figure 5. Non-metric multidimensional scaling ordination results for insect data from eight paired disturbed-undisturbed sites.....	40

ACKNOWLEDGEMENTS

We would like to thank the following organizations, agencies, and people for their time and support of this effort: The Environmental Protection Agency (EPA) who funded this study as part of their effort to encourage protection of wetland resources; the Pennsylvania Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, who administered the EPA funds for this work; Jean Fike, DCNR, Ecological Services, who provided administration, field expertise, and valuable consultation; Merlin Benner, DCNR, Bureau of Forestry, for transporting and instructing us in the use of an aluminum John boat; Carol Loeffler of Dickinson College for her many hours of piloting on our reconnaissance of the Susquehanna basin; Jeff Krause of the U.S. Army Corps. of Engineers for his help in selecting and sampling sites within the Raystown National Recreation Area; Doug Gross and Peter Robinson for their expert bird censusing; Dr. Robin Kimmerer, State University of New York - College of Environmental Science and Forestry at Syracuse, for her expertise in identifying bryophytes collected during this study; Dr. John Rawlins of Carnegie Museum of Natural History, Section of Invertebrate Zoology, for agreeing to take on the substantial task of identifying invertebrates collected over the course of the study; Betsy Ray and Sarah Hampsher of The Nature Conservancy (TNC) for their tenacious field work; the Pennsylvania Game Commission, Pennsylvania Bureau of State Parks and Pennsylvania Bureau of Forestry for their cooperation in allowing plots to be established on land under their jurisdiction, and to the many landowners who granted us access to their property. This study would not have been possible without these people. Thank you all.

Greg Podniesinski

Jeffrey Wagner



Greg Podniesinski collecting data on a Susquehanna River island

INTRODUCTION

In Pennsylvania and throughout much of the northeastern United States, few floodplains supporting forests and forested wetlands remain. Agriculture, residential, industrial and commercial development, and drainage impoundments have substantially altered or eliminated floodplain forests. This is particularly the case along major rivers and streams where wide expanses of floodplain encouraged the clearing of land for various uses. In addition, nearly the entire Susquehanna River Basin has been logged continuously for the past three hundred years, with some areas harvested two or three times (Stranahan 1993).

The impact of disturbance and changing land use in the Basin has altered the connectivity of floodplain habitats with surrounding upland habitats. Nutrient and sediment loading have likely increased due to agricultural run-off, land clearing and logging (Kreutzweiser and Scott 2001). Continuity between upland forest and floodplain forest has been severed by urbanization on the floodplain and the development of rail and highway transportation corridors as well as by utility right-of-ways. The hydrologic regime has been altered in many parts of the basin through creation of reservoirs for hydroelectric power generation, recreational use and water supply development. Reservoir impoundments increase the duration and depth of flooding in floodplain forests upstream of the impoundment and reduce flood frequency and duration downstream, leading to rapid and permanent changes in plant community type and composition (Deiller et al. 2001, Shafroth et al. 2002).

All of the above impacts fragment floodplain natural communities, limit genetic flow between remaining high quality stands, and increase the likelihood for invasion by invasive, often exotic species. Exotic species are present in nearly every floodplain forest in the Susquehanna River Basin, and are the dominant vegetation in the herb layer of many stands, particularly on the main stem and major tributaries (e.g., North Branch, West Branch and Juniata River).

Forested floodplain wetlands provide a unique habitat for numerous species of breeding and migratory birds, invertebrates, amphibians, reptiles and mammals (Doherty and Grubb 2002, Jones et al 1999, Zalweski et al. 2001). When left intact, they can serve as travel corridors, breeding habitat and foraging areas for aquatic as well as terrestrial animals. Floodplain forests also act as ecological buffers between natural and human-influenced upland and riverine ecosystems and are an important focal point for landscape-level processes (e.g., nutrient transport, biomass export, sediment sequestration and export, and energy flow) (Keutzweiser and Scott 2001, Smart et al. 2001, Diamond and Serveiss 2001, Sponseller et al 2001). Attributes of floodplain forests important to animals and ecosystem functioning include (adapted from Brinson et al. 1981, Mitsch and Gosselink 1986):

1. Predominance of woody plant communities providing structure, cover and protection as well as roosting areas and favorable microhabitat for numerous species. Woody vegetation also provides potential habitat as dead standing trees and coarse woody debris in streams and rivers. Floodplain forests also shade and cool streams, stabilize sediments and export biomass in the form of leaf litter and woody debris.
2. Presence of surface water and abundant soil moisture provide habitat for wetland-dependent animals (waterfowl, beavers, etc.), including protected aquatic foraging, nesting areas and travel corridors. The seasonally flooded nature of many forested floodplain wetlands are important breeding areas for a variety of amphibians as well as feeding and breeding areas for many aquatic species, particularly during periods of high water.

3. The diversity and mosaic nature of floodplain forest habitats result in a high density of unique microhabitats, which provide for a high diversity and abundance of wildlife.
4. Floodplain forests are linear in nature and provide a natural travel corridor for animal dispersal up and down stream. This is particularly important in areas where the only remaining intact closed canopy forest is on the active floodplain, due to farming or development of the adjacent uplands.

The continued threats to the remaining forested floodplain wetland communities in the Susquehanna River Basin and the critical importance of these plant communities to the ecological health of the river emphasizes the need to identify and document the remaining high quality examples. The identification and evaluation of the variety and relative health of forested floodplain wetlands will assist in the development of element (species and natural community) occurrence specifications that will guide the identification and ranking of natural communities. In the northeastern United States, this effort is underway or has been completed in several states. New Hampshire has recently completed a survey of floodplain forests along major rivers (Bechtel and Sperduto 1998) and minor rivers and large streams (Nichols et al. 2000). Maryland has also completed an intensive classification of floodplain forests in the Potomac River watershed (Thomson et al. 1999). Other states in the northeast include forested floodplain wetlands in their state community classifications, but as in Pennsylvania (Fike 1999), the classification is based on existing data rather than data collected specifically for classifying floodplain forests. The results of this project will provide much needed information to complement work in other states in the northeastern United States and to help guide future conservation of the remaining high quality floodplain forests of the Susquehanna River Basin.

PURPOSE

Assessing and monitoring the ecological integrity of wetlands and promoting wetland conservation were identified as priorities in the 1998 EPA guidelines (EPA 1997). It is impossible to assess or monitor the ecological integrity of a group of wetland and related communities without fundamental baseline data to define and characterize specific community types.

The Pennsylvania Natural Diversity Inventory (PNDI) published the Terrestrial and Palustrine Plant Communities of Pennsylvania (Fike 1999) which defined community types for palustrine forests, woodlands and shrublands. However, very little quantitative data exists to elucidate and further define these tentative community types. The variation, geographic extent, quality, rarity and value of these community types to other groups of organisms are yet to be determined.

It is this type of baseline information that this project collected. These data, in turn, will be entered into the PNDI database for use by a variety of interests to identify, investigate and protect the forested floodplain wetlands remaining in the Susquehanna River Basin. The development community, state agencies, conservation groups and environmental consultants will be able to use these data to consider possible conflicts or assess various impacts during project planning stages.

METHODS

Site Selection

In the early stages of this study, we performed winter and early spring aerial surveys over the entire length of the mainstem of the Susquehanna River from Maryland to New York, as well as the entire length of the two largest tributaries; the Juniata River and the West Branch of the Susquehanna. We flew over and observed other major tributaries including, Sinnemahoning Creek, Pine Creek, Kettle Creek, Towanda Creek, Meehoopany Creek, Tunkhannock Creek, Shermans Creek, Mahoning Creek, Conodoguinet Creek, Octoraro Creek, Codorus Creek, Swatara Creek, Conewago Creek and others. Aerial surveys identified approximately 130 potential forested floodplain wetlands. Of these, we ground-truthed and evaluated over 100 potential study sites distributed throughout the Susquehanna River Basin, eventually choosing 42 for sampling. Of those 42 sites, we designated 8 for paired studies comparing the plant and animal communities of highly disturbed sites with those of relatively undisturbed sites. For the remaining sites, we sampled and characterized only the plant communities. Figures 1 and 2 show the distribution of study sites across TNC ecoregions and the Susquehanna River Basin, respectively.

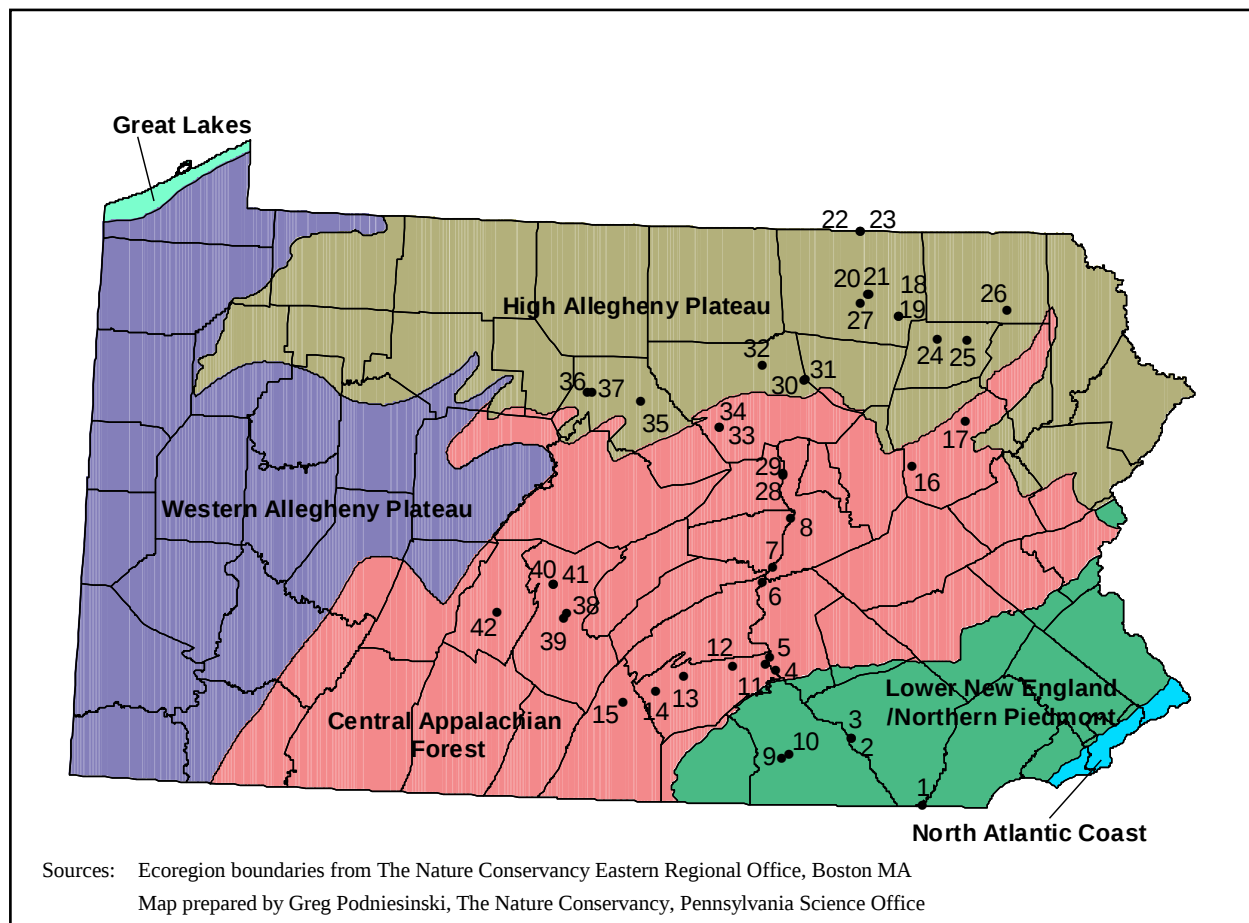


Figure 1. Ecoregional boundary map of Pennsylvania showing locations of 42 forested floodplain wetland sites. County boundaries are for reference.

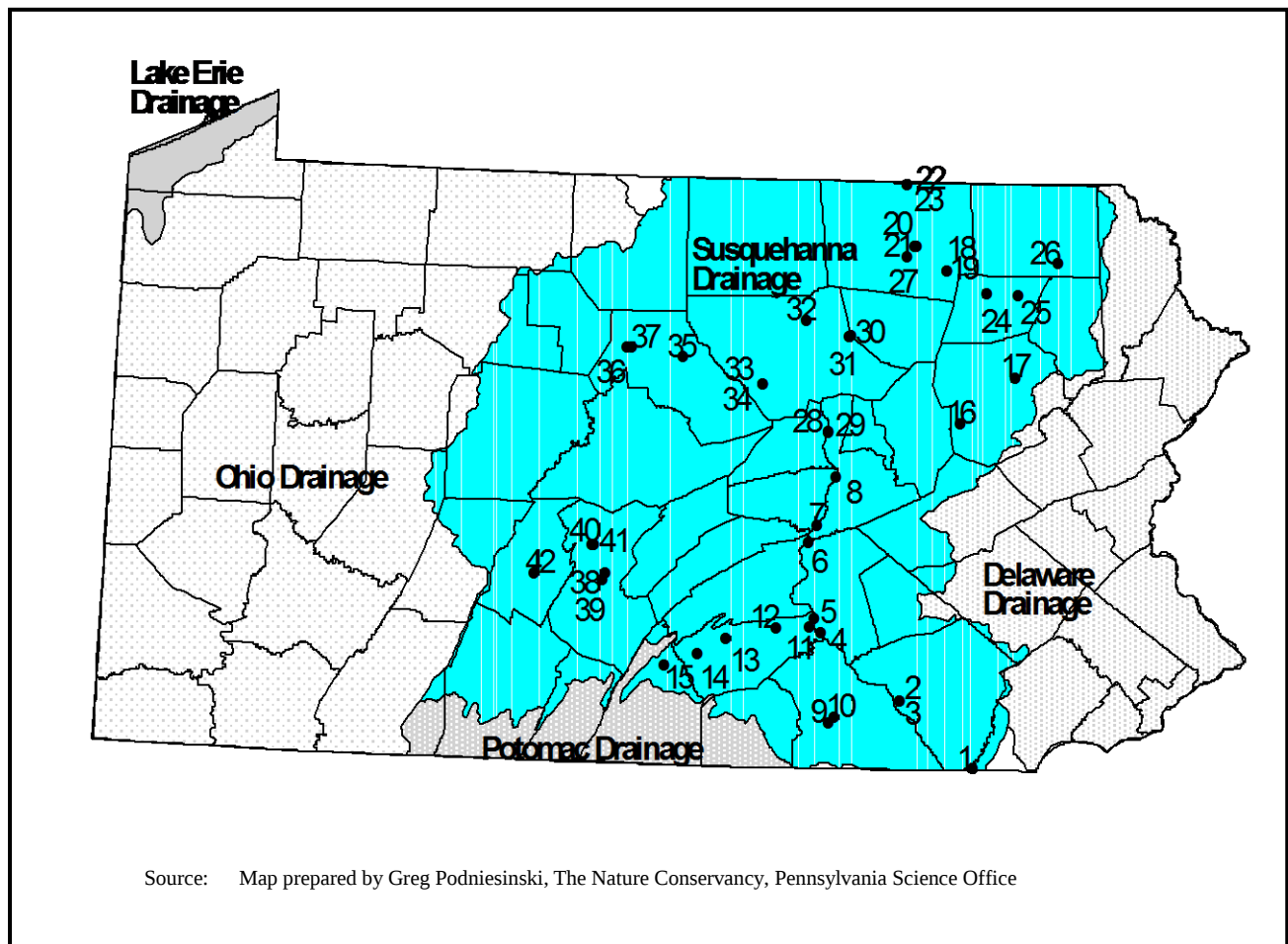


Figure 2. Major drainage basin map of Pennsylvania showing 42 forested floodplain wetland site locations. County Boundaries are shown for reference.

Site selection criteria were stratified by community type and ecoregion. Our objective was to sample at least three examples of each community type in each ecoregion where it occurred. At least one disturbed – undisturbed pair of sites were selected in each ecoregion within the Susquehanna River Basin (eight total). Detailed location information and general descriptions of the sites sampled as part of this study are found in Appendix I.

The primary characteristics considered when evaluating potential sites included: 1) forested areas adjacent to or within major drainages, 2) areas subjected to frequent flooding as evidenced by scour lines, flooding debris, sediment deposits or local stream gauging station data, and 3) areas with typically high water tables as evidenced by active site hydrology and presence of hydric vegetation.

We noted natural community composition and structure of each potential study site we visited as part of the initial reconnaissance. Of the sites that met the criteria described above, we selected sites representing as many different tentative community types as possible within each ecoregion. For the disturbed – undisturbed paired site comparison, we selected sites that had similar characteristics, particularly community type and dominant vegetation. Site pairs were selected from within the same drainage wherever possible.

DATA COLLECTION

Vegetation Sampling

We collected vegetation data at all sites and followed accepted Natural Heritage sampling methodology and the protocols developed for the quantitative characterization of plant communities (Strakosch-Walz, 2000). We utilized releve sampling plots of 20m x 20m (400 m²), non-randomly located to be representative of the community (Mueller-Dombois and Ellenberg 1974). Rectangular plots, 15 m x 27 m (405 m²), were used in some instances where the stand was too narrow to allow a 20 m x 20 m plot (i.e. several island sites and narrow floodplains).

Estimated cover values were recorded for each vascular and nonvascular plant species present by strata based on the Braun-Blanquet method. Bryophyte cover values were estimated in three 1 m X 1 m subplots selected at random at the corners of the larger releve plot. Any plants which could not be positively identified in the field were collected for later identification. Collected specimens were deposited in the herbaria of either the Carnegie Museum of Natural History in Pittsburgh or the Academy of Natural Sciences in Philadelphia.

Vegetation data were collected twice during the growing season – once between June and early July and once in September. Soil pits were excavated near each releve plot and soil profile data collected (soil horizons, when present; texture; color; mottling; evidence of gleying; etc.). Soil samples were also taken for laboratory determination of soil pH. Soil pH was determined using a Lamotte Morgan Soil Test Kit (model ST-M). Using a survey staff incremented in hundredths of a foot and a hand level, the height of the plot above water level and the date and time for each measurement were recorded. This allowed water levels at the study site to be linked to water levels reported at local stream gauges on the same date and at the same time. This information allowed the estimation of the flood frequency and duration for each site. All plots were georeferenced with a GPS unit.

Bird Censusing

Breeding bird census data was collected by professional ornithologists at four paired disturbed – undisturbed sites (eight sites in total) as described above under site selection. All pairs were within the same immediate watershed and in close proximity to one another. At least two surveys were conducted at each site. An additional third survey was conducted at EPA 1.28 and EPA 1.29 (Milton State Park) during an initial reconnaissance visit.

Two “listening points” were established at either end of each plot creating a transect crossing the middle of the plot. Each “listening post” was treated as a point count within the established protocol for breeding bird monitoring (Ralph et al. 1993). This was done to allow the possible comparison of these data with other standardized point count or Breeding Bird Survey data collected elsewhere (Robbins et al. 1986, Ralph et al. 1993). At each point, the surveyor listened and visually searched for birds for a standard 5-minute period.

All bird species heard singing, displaying mating behavior or nesting behavior were assumed to be breeding. Species presence, type of behavior and degree of confidence of breeding (PA

Breeding Bird Atlas criteria, Brauning 1992) were logged at each station, however the data were pooled by site. Evidence for breeding was also collected in and around each plot. These data were collected before, during, and after the point counts. The behavior of species was observed and noted, using codes developed for breeding bird atlas survey work. These codes were used in the Pennsylvania Atlas (Brauning 1992) and were refined somewhat in the Pennsylvania Society for Ornithology Special Areas Project (Gross 1990).

Macroinvertebrate Sampling

Macroinvertebrate populations were sampled at the same four disturbed – undisturbed site pairs used for bird censusing. Light traps were used (one per site) during the darker phases of the moon to ensure that the light trap projected the largest sample radius. Light traps were run four times between April and September and samples were collected the next morning. Pitfall arrays consisting of 10 to 12 traps were laid out systematically in two or three rows. Pitfall traps were emptied and recharged with preservative monthly. Zoologists conducted daytime sweep sampling for a minimum of 15 sweeps per site visit. Light trap and sweep samples were frozen and pitfall samples preserved in alcohol. All samples were sent to Carnegie Museum of Natural History where determinations to species was performed, where possible, based on condition of specimen. Species counts were recorded for selected groups, primarily within the orders Lepidoptera, Diptera and Coleoptera. Carnegie Museum will ultimately curate these specimens.

RESULTS

Physical Setting

The 42 sites selected for the study were distributed across three TNC ecoregions (Figure 1): 5 were located in the Lower New England/Northern Piedmont Ecoregion, 21 in the Central Appalachian Forest Ecoregion, and 16 in the High Allegheny Plateau Ecoregion. Sites were distributed across 12 separate drainages within the Susquehanna River Basin – a third (16) of the sites were associated with the main stem of the river (Figure 2).

The majority of sites were on low terraces with a few on high terraces or in backwater depressions or sloughs. Soil textures ranged broadly from clay loam to pure sand with the bulk of sites having sands or loams as their primary soil texture class. Soil pH fell between 5.2 and 7.8 with higher pH values associated with soils containing some clay and lower values associated with sands (Table 1.).

Flooding frequency varied greatly across the sites. Seven sites showed less than five days of flooding and 15 sites experienced greater than 20 days of flooding per year. Of these 15 sites, 9 were located on the main stem or the West Branch of the Susquehanna River. The mean flooding frequency was 34.7 days and the median 19.1 days. We did not extrapolate and establish flooding frequency for several sites due to lack of nearby gauging stations. Also, flooding frequency does not imply days of complete inundation, rather it indicates the number of days that a peak in water depth would have been equal to or greater than the elevation of the sampling plot. Therefore, some events may have lasted hours and others potentially days. Table 3 details the physical site characteristics for each of the 42 plots sampled for this study.

Table 1. Physical Characteristics of Susquehanna River Basin Floodplain Wetland Sites

Site Code	Immediate Watershed	Topographic position	Soil Drainage	Soil Texture	Soil pH	Days of Flooding per Year (average)	Latitude	Longitude	UTM X	UTM Y	UTM Zone
EPA1.1	Octoraro Creek	low terrace	Poorly drained	Clay loam	5.2	-	394337	760558	405789	4397909	18
EPA1.2	Susquehanna River	low terrace	Poorly drained	Silt loam	5.2	1.6	395911	762820	374292	4427050	18
EPA1.3	Susquehanna River	low terrace	Poorly drained	Silt loam	5.8	26.0	395915	762822	374290	4427209	18
EPA1.4	Susquehanna River	low terrace/scour zone	Well drained	Sand	6.4	81.9	401449	765239	340368	4456819	18
EPA1.5	Susquehanna River	high terrace	Somewhat poorly drained	Silt loam	6.0	9.6	401755	765437	337658	4462444	18
EPA1.6	Susquehanna River	high terrace	Moderately well drained	Sandy loam	6.0	-	403544	765618	334821	4495391	18
EPA1.7	Susquehanna River	low terrace/scour zone	Well drained	Gravelly Sand	6.6	-	403921	765401	338969	4502498	18
EPA1.8	Susquehanna River	floodplain/low terrace	Poorly drained	silty sand	6.4	84.5	405052	764848	347114	4523259	18
EPA1.9	Codorus Creek	floodplain/low terrace	Poorly drained	Clayey silt	7.4	1.4	395352	764951	343329	4417955	18
EPA1.10	Codorus Creek	floodplain/low terrace	Poorly drained	Silt	7.4	0.3	395514	764758	346172	4420292	18
EPA1.11	Conodoguinet Creek	slough	Poorly drained	Silty clay	7.8	7.0	401608	765555	335758	4459385	18
EPA1.12	Conodoguinet Creek	high terrace	Very poorly drained	Silty clay loam	6.8	1.6	401539	770411	321225	4458841	18
EPA1.13	Conodoguinet Creek	floodplain	Poorly drained	Silty-Clay loam	6.4	7.7	401238	772130	299397	4453919	18
EPA1.14	Conodoguinet Creek	backswamp	Very poorly drained	Clay loam	5.6	4.0	400909	773000	287027	4447668	18
EPA1.15	Conodoguinet Creek	floodplain	Well drained	Sandy loam	5.2	124.2	400626	774002	272838	4443145	18
EPA1.16	Susquehanna River	low terrace	Somewhat poorly drained	Fine Silty Sand	6.2	-	410357	761059	400764	4546774	18
EPA1.17	Susquehanna River	floodplain/low terrace	Somewhat poorly drained	Silty Fine Sand	6.2	50.9	411449	755340	424723	4566629	18
EPA1.18	Susquehanna River	floodplain/low terrace	Somewhat poorly drained	silt loam	6.2	-	413933	761552	394964	4612384	18
EPA1.19	Susquehanna River	levee/high terrace	Somewhat poorly drained	Silt loam	6.2	-	413933	761552	395029	4612389	18
EPA1.20	Towanda Creek/Susquehanna River	low terrace	Somewhat poorly drained	Sandy loam	-	44.5	414452	762536	381726	4622703	18
EPA1.21	Towanda Creek/Susquehanna River	low terrace	Somewhat poorly drained	Sandy loam	-	22.5	414448	762546	381339	4622751	18
EPA1.22	Susquehanna River	high terrace	Moderately well drained	Silty fine Sand	6.2	72.1	415941	762826	377890	4650262	18
EPA1.23	Susquehanna River	floodplain	Somewhat poorly drained	Silt loam	5.2	3.1	415943	762827	377909	4650217	18
EPA1.24	Susquehanna River	floodplain	Somewhat poorly drained	Silt loam	6.2	-	413410	760313	412266	4602483	18
EPA1.25	Tunkhannock Creek	low terrace	Somewhat poorly drained	Silty Fine Sand	4.6	166.7	413407	755315	425610	4602049	18

Table 1. Physical Characteristics of Susquehanna River Basin Floodplain Wetland Sites (continued)

EPA1.26	Tunkhannock Creek	low terrace	Somewhat poorly drained	fine sand	5.6	13.3	414121	754115	442829	4615533	18
EPA1.27	Towanda Creek	low terrace	Somewhat poorly drained	Sandy Silt loam	6.8	15.7	414232	762808	377823	4618485	18
EPA1.28	Susquehanna River	low terrace	Moderately well drained	Sandy loam	5.4	4.6	410123	765140	343539	4542973	18
EPA1.29	Susquehanna River	low terrace/levee	Moderately well drained	Silt loam	5.2	19.0	410135	765130	343811	4543390	18
EPA1.30	Loyalsock Creek	floodplain/low terrace	Moderately well drained	Sandy loam	6.8	7.3	412405	764538	352831	4584521	18
EPA1.31	Loyalsock Creek	low terrace	Moderately well drained	loamy sand	6.2	3.8	412418	764502	353801	4585150	18
EPA1.32	Lycoming Creek	low terrace	Somewhat poorly drained	sandy silt loam	5.6	-	412728	765836	334585	4591238	18
EPA1.33	West Branch Susquehanna River	low terrace	Moderately well drained	Sand	5.4	43.8	411213	771328	315549	4563849	18
EPA1.34	West Branch Susquehanna River	floodplain/low terrace	Moderately well drained	Sand	5.4	14.9	411213	771157	315565	4563813	18
EPA1.35	West Branch Susquehanna River	floodplain	Poorly drained	Silt loam	5.6	19.1	411803	773659	280920	4575474	18
EPA1.36	Kettle Creek	floodplain	Somewhat poorly drained	slity fine sand	6.0	82.9	411954	775413	257191	4579415	18
EPA1.37	Kettle Creek	bar	Moderately well drained	silty fine sand	5.6	53.2	411946	775251	258914	4579347	18
EPA1.38	West Branch Susquehanna River	low terrace/scour zone	Moderately well drained	gravelly sand	7.0	30.4	402708	775827	247777	4482104	18
EPA1.39	Raystown Branch Juniata River	scour zone	Moderately well drained	Sand	7.2	94.8	402544	775936	246223	4479608	18
EPA1.40	Frankstown Branch Juniata River	backswamp	Poorly drained	silty Clay loam	7.2	31.5	403349	780304	750070	4494797	17
EPA1.41	Frankstown Branch Juniata River	floodplain/low terrace	Very poorly drained	Silty clay loam	7.0	16.8	403357	780304	750039	4494723	17
EPA1.42	Frankstown Branch Juniata River	low terrace	Somewhat poorly drained	Loam	7.2	20.5	402644	782027	725562	4480672	17

Vascular and Non-vascular Flora

Over 343 species of vascular plants representing 189 genera and 61 families were recorded within floodplain releve plots over the course of this study (Tables 2 and 3). Five of the most well represented families – Asteraceae, Cyperaceae, Lamiaceae, Poaceae, and Rosaceae – accounted for about 34% of the total genera and 42% of the total species identified within the sampling plots. Asteraceae and Poaceae each provided more than 10% of the total genera and species identified in the study. The species which occurred in the largest number of plots (as indicated) included: *Acer saccharinum* (26), *Platanus occidentalis* (19), *Solidago gigantea* (17), *Pilea pumila* (21), *Toxicodendron radicans* (17), *Boehmeria cylindrica* (23), *Leersia virginica* (23), *Onoclea sensibilis* (21), *Oxalis stricta* (23), *Teucrium canadensis* (17), *Eupatorium rugosum* (17), *Phalaris arundinacea* (17), *Laportea canadense* (18) and the exotics *Alliaria petiolata* (25), *Rosa multiflora* (17), and *Polygonum cuspidatum* (18). Taxonomy for vascular flora follows Rhoads and Klein (1992).

Bryophyte cover and diversity within the sites was low with only 44 species representing 31 genera and 15 families. A number of sites held no bryophytes and most supported minimal cover. Most species occurred in less than five plots and only four occurred with any frequency – *Leskea gracilens* (13), an undetermined *Brachythecium* sp. (13), *Campylium stellatum* (12), and *Entodon seductrix* (7). Appendix II details vascular and non-vascular species and cover value category by site. Taxonomy for bryophytes follows Crum and Anderson (1981).

Table 2. Vascular Plants Identified for Forested Floodplain Wetlands in the Susquehanna River Basin

Family	Scientific Name	Family	Scientific Name
Aceraceae	Acer negundo	Asteraceae (cont.)	Bidens cernua
	Acer platanoides		Bidens connata
	Acer rubrum		Bidens frondosa
	Acer saccharinum		Bidens sp.
	Acer saccharum		Bidens vulgata
Alismataceae	Alisma subcordatum		Chrysanthemum leucanthemum
			Erechtites hieracifolia
Anacardiaceae	Toxicodendron radicans		Eupatorium album
			Eupatorium fistulosum
Andiantaceae	Athyrium filix-femina		Eupatorium sp.
			Eupatorium maculatum
Annonaceae	Asimina triloba		Eupatorium perfoliatum
			Eupatorium rugosum
Apiaceae	Conioselinum chinense Conium maculatum Daucus carota Hydrocotyle americana Pastinaca sativa Zizia aurea		Euthamia graminifolia
			Helenium autumnale
		Heliopsis helianthoides	
		Hieracium caespitosum	
		Prenanthes alba	
		Prenanthes sp.	
Apocynanceae	Apocynum cannabinum	Rudbeckia laciniata	
		Senecio aureus	
Araceae	Arisaema dracontium Arisaema triphyllum Symplocarpus foetidus	Solidago altissima	
		Solidago canadensis	
		Solidago gigantea	
		Solidago graminifolia	
Araliaceae	Aralia nudicaulis	Solidago sp.	
		Solidago rigida	
Asclepidaceae	Asclepias incarnata Asclepias syriaca	Solidago rugosa	
		Tanacetum vulgare	
		Verbesina alternifolia	
Asteraceae	Achillea millefolium Ambrosia artemisiifolia Ambrosia trifida Arctium minus Artemisia vulgaris Aster acuminatus Aster divaricatus Aster ericoides Aster sp. Aster lanceolatus Aster lateriflorus Aster prenanthoides	Xanthium strumarium	
		Balsaminaceae	Impatiens capensis
			Impatiens pallida
		Berberidaceae	Berberis thunbergii
			Podophyllum peltatum
		Betulaceae	Alnus serrulata
			Betula alleghaniensis
			Carpinus caroliniana
		Bignoniaceae	Catalpa speciosa

Table 2. (cont.)

Family	Scientific Name	Family	Scientific Name
Boraginaceae	Myosotis sp. Myosotis laxa Myosotis scorpioides	Cucurbitaceae	Echinochloa muricata Echinocystis lobata Sicyos angulatus
Brassicaceae	Alliaria petiolata Barbarea vulgaris Cardamine pensylvanica Erysimum cheiranthoides Hesperis matronalis Raphanus raphanistrum Rorippa sylvestris	Cuscutaceae	Cuscuta gronovii
Buxaceae	Acalypha rhomboidea	Cyperaceae	Carex annectens Carex bromoides Carex cephaloidea Carex crinita Carex folliculata Carex frankii Carex granularis Carex grayi Carex grisea Carex gynandra Carex heleonastes Carex hystericina Carex intumescens Carex laevivaginata Carex lupulina Carex normalis Carex oligocarpa Carex projecta Carex radiata Carex scabrata Carex squarrosa Carex stipata Carex torta Unknown Carex (18)
Campanulaceae	Lobelia inflata		
Cannabaceae	Humulus lupulus		
Caprifoliaceae	Diervilla lonicera Lonicera japonica Lonicera sp. Lonicera maackii Lonicera tatarica Sambucus canadensis Viburnum dentatum.		
Caryophyllaceae	Stellaria graminea Stellaria sp. Stellaria media Stellaria pubera		
Celastraceae	Celastrus orbiculatus	Dennstaedtiaceae	Dennstaedtia punctilobula
Chenopodiaceae	Chenopodium album	Dryopteridaceae	Matteuccia struthiopteris Onoclea sensibilis L. Polystichum acrostichoides
Clusiaceae	Hypericum sp. Hypericum pyramidatum Hypericum spathulatum	Elaeagnaceae	Elaeagnus umbellata
Convolvulaceae	Convolvulus sepium	Equisetaceae	Equisetum arvense
Cornaceae	Cornus amomum Cornus racemosa	Fabaceae	Amphicarpaea bracteata Apios americana Cassia hebecarpa Coronilla sp. Gleditsia triacanthos Robinia pseudoacacia

Table 2. (cont.)

Family	Scientific Name	Family	Scientific Name
Fagaceae	Quercus sp. Quercus palustris Quercus rubra	Liliaceae	Allium canadense Erythronium americanum Hemerocallis fulva var. fulva Lilium superbum Polygonatum biflorum Smilacina racemosa Veratrum viride
Fumariaceae	Stylophorum diphyllum	Linaceae	Linum sp.
Grossulariaceae	Ribes americanum	Lythraceae	Lythrum salicaria
Hamamelidaceae	Hamamelis virginiana	Magnoliaceae	Liriodendron tulipifera
Hydrophyllaceae	Hydrophyllum canadense	Moraceae	Maclura pomifera Morus alba Morus rubra
Iridaceae	Sisyrinchium angustifolium Sisyrinchium sp.	Oleaceae	Fraxinus americana Fraxinus pennsylvanica Ligustrum vulgare
Juglandaceae	Carya cordiformis Carya sp. Juglans cinerea Juglans nigra	Onagraceae	Circaea lutetiana Epilobium ciliatum Oenothera perennis
Juncaceae	Juncus effusus Juncus tenuis Luzula multiflora	Oxalidaceae	Oxalis stricta
Lamiaceae	Blephilia ciliata Collinsonia canadensis Galeopsis tetrahit Glechoma hederacea Leonurus cardiaca Lycopus americanus Lycopus uniflorus Lycopus virginicus Mentha arvensis Mentha sp. Prunella vulgaris Satureja vulgaris Scutellaria incana Scutellaria sp. Scutellaria ovata Scutellaria serrata Teucrium canadense Unknown Mint species (4)	Phytolaccaceae	Phytolacca americana
Laureaceae	Lindera benzoin	Pinaceae	Pinus strobus Tsuga canadensis
		Plantaginaceae	Plantago lanceolata Plantago major
		Platanaceae	Platanus occidentalis
		Poaceae	Agrostis tenuis Agrostis perennans Agrostis sp. Agrostis stolonifera Andropogon gerardii Anthoxanthum odoratum Brachyelytrum erectum

Table 2. (cont.)

Family	Scientific Name	Family	Scientific Name
Poaceae (cont.)	Bromus ciliatus Bromus sp. Cinna arundinacea Cinna latifolia Dactylis glomerata Echinochloa sp. Echinochloa crus-galli Elymus hystrix Elymus sp. Elymus virginicus Festuca elatior Festuca sp. Glyceria melicaria Glyceria sp. Glyceria striata Holcus lanatus Leersia virginica Microstegium vimineum Muhlenberia frondosa Panicum clandestinum Panicum dichotomiflorum Panicum sp. Panicum microcarpum Phalaris arundinacea Poa alsodes Poa sp. Poa nemoralis Poa palustris Poa pratensis Poa trivialis Setaria sp. Sphenopholis obtusata var. major Tridens flavus Triodia flava Unknown Grasses (9)	Polygonaceae (cont.)	Polygonum sp. Polygonum pensylvanicum Polygonum perfoliatum Polygonum persicaria Polygonum punctatum Polygonum sachalinense Polygonum sagittatum Polygonum scandens Polygonum virginianum Rumex acetosella Rumex sp. Rumex obtusifolius
		Primulaceae	Lysimachia ciliata Lysimachia nummularia Lysimachia quadrifolia
		Ranunculaceae	Clematis virginiana Ranunculus abortivus Ranunculus hispidus Ranunculus sp. Ranunculus repens Ranunculus septentrionalis Thalictrum sp. Thalictrum pubescens
		Rhamnaceae	Rhamnus cathartica
		Rosaceae	Agrimonia gryposepala Crataegus sp. Fragaria virginiana Geum canadense Geum sp. Geum rivale Potentilla sp. Prunus sp. Prunus serotina Rosa multiflora Rubus allegheniensis Rubus hispidus Rubus idaeus Rubus sp. Spiraea sp. Spiraea latifolia Waldsteinia fragarioides
Polygonaceae	Polygonum amphibium Polygonum arifolium Polygonum cespitosum Polygonum cilinode Polygonum coccineum Polygonum cuspidatum Polygonum hydropiper Polygonum hydropiperoides		

Table 2. (cont.)

Family	Scientific Name	Family	Scientific Name
Rubiaceae	Cephalanthus occidentalis Galium aparine Galium asprellum Galium boreale Galium sp. Galium mollugo Galium tinctorium Galium triflorum	Vitaceae	Parthenocissus quinquefolia Parthenocissus vitacea Vitis aestivalis Vitis sp.
Salicaceae	Populus deltoides Salix nigra		
Saxifragaceae	Penthorum sedoides Tiarella cordifolia		
Scrophulariaceae	Chelone glabra Scrophularia marilandica Veronica americana Veronica officinalis		
Smilacaceae	Smilax rotundifolia		
Solanaceae	Solanum carolinense Solanum dulcamara Solanum nigrum		
Staphyleaceae	Staphylea trifolia		
Thelypteridaceae	Thelypteris noveboracensis Thelypteris palustris		
Ulmaceae	Celtis occidentalis Ulmus americana		
Urticaceae	Boehmeria cylindrica Laportea canadensis Pilea pumila Urtica dioica Urtica procera		
Verbenaceae	Verbena urticifolia		
Violaceae	Viola sp. Viola renifolia Viola repens		

Table 3. Non-vascular Plants Identified for Forested Floodplain Wetlands in the Susquehanna River Basin

Family	Species	Family	Species
Amblystegiaceae	Amblystegium varium	Hypnaceae	Callicladium haldanianum
	Calliergon cordifolium		Hypnum curvifolium
	Campylium chrysophyllum		Hypnum lindbergii
	Campylium hispidulum		Hypnum pratense
	Campylium polygamum		Hypnum sp.
	Campylium stellatum		Platygyrium repens
	Drepanocladus aduncus		Pylaisia selwynii
	Leptodictyum riparoides		Pylaisia sp.
	Platydicta confervoides		
Brachytheciaceae	Brachythecium rivulare	Leskeaceae	Leskea gracilens
	Brachythecium sp.		Pseudoleskeella nervosa
	Brachythecium velutinum	Leucobryaceae	Leucobryum glaucum
	Bryhnia nova-angliae		
	Eurhynchium hians	Mniaceae	Mnium affine
	Rhyncostegium serrulatum		Mnium cuspidatum
Bryaceae	Bryum pseudotriquetrum		Mnium punctatum
	Leptobryum pyriforme		Mnium thompsonii
Cephaloziaceae	Cephalozia sp.	Orthotrichaceae	Ulota crispa
		Polytrichaceae	Atrichum undulatum
Climaciaceae	Climacium dendroides	Thuidiaceae	Anomodon minor
Entodontaceae	Entodon seductrix		Anomodon rugellii
	Pleurozium schreberi		Helodium blandowii
Fissidentaceae	Fissidens taxifolius		Thuidium delicatulum
Funariaceae	Physcomitrium pyriforme		

Bird Censusing

A total of 66 species of birds were recorded for all eight disturbed – undisturbed paired sites combined, representing a total of 730 breeding birds. The number of breeding pairs is estimated at half of that total. Birds which occurred in at least 75% of the sites were Eastern Wood-Pewee, Wood Thrush, Song Sparrow, Red-eyed Vireo, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal, Indigo Bunting, Northern Flicker, Blue Jay, American Crow, Carolina Wren, Cedar Waxwing, American Redstart, and American Goldfinch. Of these species, the Eastern Wood-Pewee, Wood thrush, and Song Sparrow occurred at all sites. The most abundant breeders, having greater than 30 individuals among all sites, were Gray Catbird, Song Sparrow, Cedar Waxwing, American Robin, and Common Yellowthroat.

Edge nesters and feeders like American Robin, Northern Flicker, and Grey Catbird were absent or present in reduced numbers at EPA 1.31, located in the relatively undeveloped and contiguously forested upper Loyalsock Valley. Additionally, this site appeared to support species such as Black-throated green Warbler, Blackburnian Warbler, Hermit thrush and Northern Raven, all of which are characteristic of isolated and heavily forested areas. These species were absent from all other sites. An Osprey was apparently nesting in the Loyalsock Valley, using this site as part of its habitat.

Yellow-rumped and Black-throated Blue warbler – other forest nesters – occurred at EPA 1.20, located at the mouth of Towanda Creek. This site supported other forest dwellers including Scarlet Tanager (found at no other site), Warbling Vireo (found only at the other Towanda Creek site, EPA 1.32) and Swainsons Thrush (a northern latitude nester). Bald Eagle was also associated with the Towanda sites, utilizing adjacent habitat for feeding.

Ruby-throated Hummingbird were found only at the Milton State Park islands (EPA 1.28 and 1.29). Canada Goose also occurred only at the Milton sites. Both species were perhaps attracted to habitat and human-provided food sources in this highly managed context. Of additional note, American Redstart, a species common in floodplain habitat, occurred at all sites but those along Codorus Creek. Tables 4 and 5 provide summary data for all bird census work.

Table 4. Breeding Bird Count Totals per Site for Forested Floodplain Wetlands in the Susquehanna Basin, Disturbed Vs. Undisturbed Site Comparison

Breeding Bird Species	Pair 1		Pair 2		Pair 3		Pair 4	
	Undisturbed	Disturbed	Undisturbed	Disturbed	Undisturbed	Disturbed	Undisturbed	Disturbed
	Site EPA 1.9	EPA 1.10	EPA 1.29	EPA 1.28	EPA 1.31	EPA 1.32	EPA 1.21	EPA 1.20
Great Blue Heron	-	-	1	-	2	-	1	-
Canada Goose	-	-	6	-	-	-	-	-
Wood Duck	-	-	-	-	1	-	-	-
Common Merganser	-	-	-	1	1	-	-	-
Osprey *	-	-	-	-	1	-	-	-
Bald Eagle *	-	-	-	-	-	-	-	1
Red-tailed Hawk	-	-	-	-	1	1	-	2
Killdeer	-	-	1	-	-	-	1	-
Spotted Sandpiper	-	-	-	-	-	-	-	1
Mourning Dove	2	-	-	-	-	-	-	-
Black-billed Cuckoo	-	-	-	1	4	-	1	-
Chimney Swift	-	-	13	2	-	-	-	-
Ruby-thr'd Hummingbird	-	-	3	-	-	-	-	2
Belted Kingfisher	-	-	-	-	1	-	-	2
Red-bellied Woodpecker	3	4	1	1	-	-	-	-
Yellow-bellied Sapsucker	5	-	-	-	-	1	-	-
Downy Woodpecker	-	1	3	4	1	-	1	-
Northern Flicker	2	2	3	1	-	-	2	2
Pileated Woodpecker	-	-	-	-	2	-	-	-
Eastern Wood-Pewee	3	3	1	7	1	1	3	5
Least Flycatcher	-	-	-	-	-	-	-	1
Eastern Phoebe	-	-	1	-	-	-	-	1
Great Crested Flycatcher	-	2	2	2	-	-	7	1
Eastern Kingbird	-	1	-	-	-	5	-	-
Yellow-throated Vireo	-	-	-	-	-	1	-	2
Warbling Vireo	-	-	-	-	-	-	5	1
Red-eyed Vireo	1	-	1	2	5	4	4	5
Blue Jay	6	3	1	5	4	1	-	-
American Crow	-	-	2	2	1	8	8	2
Fish Crow	-	-	3	1	-	-	-	-
Common Raven	-	-	-	-	1	-	-	-
N. Rough-winged Swallow	-	-	1	-	-	-	-	2
Tree Swallow	-	-	-	-	4	-	-	-
Barn Swallow	2	-	-	-	5	-	-	-

**Table 4. Breeding Bird Count Totals per Site for Forested Floodplain Wetlands in the Susquehanna Basin,
Disturbed vs. Undisturbed Site Comparison (cont.)**

	Pair 1		Pair 2		Pair 3		Pair 4	
	Undisturbed	Disturbed	Undisturbed	Disturbed	Undisturbed	Disturbed	Undisturbed	Disturbed
Site	EPA 1.9	EPA 1.10	EPA 1.29	EPA 1.28	EPA 1.31	EPA 1.32	EPA 1.21	EPA 1.20
Carolina Chickadee	-	6	-	-	-	-	-	-
Black-capped Chickadee	-	-	-	-	2	2	-	-
Tufted Titmouse	1	-	-	8	-	-	2	-
White-breasted Nuthatch	2	-	1	2	2	-	-	1
Carolina Wren	3	-	2	10	5	-	4	3
Golden-crowned Kinglet	-	-	-	-	-	3	-	-
Eastern Bluebird	-	-	-	-	-	-	-	1
Swainson's Thrush *	-	-	-	-	-	-	-	3
Hermit Thrush	-	-	-	-	2	-	-	-
Wood Thrush	1	1	6	9	3	1	1	2
American Robin	7	6	4	9	-	1	5	11
Gray Catbird	13	15	24	14	2	-	2	8
Cedar Waxwing	-	-	9	4	6	20	4	7
Black-throated Blue Warbler	-	-	-	-	-	2	-	1
Yellow-rumped Warbler	-	-	-	-	-	-	-	1
Blackburnian Warbler	-	-	-	-	6	-	-	-
Black-throated Green Warbler	-	-	-	-	6	-	-	-
American Redstart	-	-	2	1	4	3	4	4
Common Yellowthroat	3	3	2	-	9	12	4	1
Scarlet Tanager	-	-	-	-	-	-	-	1
Eastern Towhee	-	1	-	-	-	-	-	-
Henslow's Sparrow	-	-	1	-	-	-	-	-
Song Sparrow	10	10	10	6	8	8	5	13
Northern Cardinal	5	4	8	3	1	-	2	1
Rose-breasted Grosbeak	-	-	-	-	1	-	1	3
Indigo Bunting	5	3	1	-	6	3	3	6
Red-winged Blackbird	-	-	-	2	-	-	3	-
Common Grackle	-	-	-	-	-	-	-	2
Brown-headed Cowbird	-	1	-	-	-	-	-	-
Baltimore Oriole	-	1	1	-	-	-	1	3
American Goldfinch	4	-	6	3	-	2	3	5
House Sparrow	-	-	-	-	4	-	-	-
No. Birds (all species)	78	67	120	100	102	79	77	107
Number of Species	19	18	30	24	32	19	25	35

* Not nesting on site but utilizing adjacent habitat

**Table 5. Ranked Frequency and Abundance of Breeding Bird Species
(Disturbed Vs. Undisturbed Sites Pooled) in Forested
Floodplain Wetlands in the Susquehanna Basin.**

Ranked Frequency All Plots		Ranked Abundance All Plots	
Eastern Wood-Pewee	100%	Gray Catbird	78
Wood Thrush	100%	Song Sparrow	70
Song Sparrow	100%	Cedar Waxwing	50
Red-eyed Vireo	88%	American Robin	43
American Robin	88%	Common Yellowthroat	34
Gray Catbird	88%	Carolina Wren	27
Common Yellowthroat	88%	Indigo Bunting	27
Northern Cardinal	88%	Eastern Wood-Pewee	24
Indigo Bunting	88%	Wood Thrush	24
Northern Flicker	75%	Northern Cardinal	24
Blue Jay	75%	American Crow	23
American Crow	75%	American Goldfinch	23
Carolina Wren	75%	Red-eyed Vireo	22
Cedar Waxwing	75%	Blue Jay	20
American Redstart	75%	American Redstart	18
American Goldfinch	75%	Chimney Swift	15
Downy Woodpecker	63%	Great Crested Flycatcher	14
Great Crested Flycatcher	63%	Northern Flicker	12
White-breasted Nuthatch	63%	Tufted Titmouse	11
Red-bellied Woodpecker	50%	Downy Woodpecker	10
Baltimore Oriole	50%	Red-bellied Woodpecker	9
Great Blue Heron	38%	White-breasted Nuthatch	8
Red-tailed Hawk	38%	Barn Swallow	7
Black-billed Cuckoo	38%	Canada Goose	6
Tufted Titmouse	38%	Black-billed Cuckoo	6
Rose-breasted Grosbeak	38%	Yellow-bellied Sapsucker	6
Common Merganser	25%	Eastern Kingbird	6
Killdeer	25%	Warbling Vireo	6
Chimney Swift	25%	Carolina Chickadee	6
Ruby-thr'd Hummingbird	25%	Blackburnian Warbler	6
Belted Kingfisher	25%	Black-throated Green Warbler	6
Yellow-bellied Sapsucker	25%	Baltimore Oriole	6
Eastern Phoebe	25%	Ruby-thr'd Hummingbird	5
Eastern Kingbird	25%	Rose-breasted Grosbeak	5
Yellow-throated Vireo	25%	Red-winged Blackbird	5
Warbling Vireo	25%	Great Blue Heron	4
Fish Crow	25%	Red-tailed Hawk	4
N. Rough-winged Swallow	25%	Fish Crow	4
Barn Swallow	25%	Tree Swallow	4
Black-capped Chickadee	25%	Black-capped Chickadee	4
Black-throated Blue Warbler	25%	House Sparrow	4
Red-winged Blackbird	25%	Belted Kingfisher	3

**Table 5. Ranked Frequency and Abundance of Breeding Bird Species
(Disturbed Vs. Undisturbed Sites Pooled) in Forested
Floodplain Wetlands in the Susquehanna Basin (cont.)**

Ranked Frequency All Plots		Ranked Abundance All Plots	
Canada Goose	13%	Yellow-throated Vireo	3
Wood Duck	13%	N. Rough-winged Swallow	3
Osprey	13%	Golden-crowned Kinglet	3
Bald Eagle	13%	Swainson's Thrush *	3
Spotted Sandpiper	13%	Black-throated Blue Warbler	3
Mourning Dove	13%	Common Merganser	2
Pileated Woodpecker	13%	Killdeer	2
Least Flycatcher	13%	Mourning Dove	2
Common Raven	13%	Pileated Woodpecker	2
Tree Swallow	13%	Eastern Phoebe	2
Carolina Chickadee	13%	Hermit Thrush	2
Golden-crowned Kinglet	13%	Common Grackle	2
Eastern Bluebird	13%	Wood Duck	1
Swainson's Thrush	13%	Osprey	1
Hermit Thrush	13%	Bald Eagle	1
Yellow-rumped Warbler	13%	Spotted Sandpiper	1
Blackburnian Warbler	13%	Least Flycatcher	1
Black-throated Green Warbler	13%	Common Raven	1
Scarlet Tanager	13%	Eastern Bluebird	1
Eastern Towhee	13%	Yellow-rumped Warbler	1
Henslow's Sparrow	13%	Scarlet Tanager	1
Common Grackle	13%	Eastern Towhee	1
Brown-headed Cowbird	13%	Henslow's Sparrow	1
House Sparrow	13%	Brown-headed Cowbird	1
		No. Birds (all species)	730
		Number of Species	66

Invertebrate Sampling

The insects collected from the eight paired disturbed–undisturbed sites were sorted, cleaned, prepared, labeled, curated, and documented. In total, 5,702 specimens were entered into the database for this project, of which 5,619 were provided as data for this report, representing three orders (Coleoptera, Diptera, and Lepidoptera), over 360 genera and 540 species of insects, all determined authoritatively to species-level, except one. Emphasis was placed on all macro moths in the light trap samples, all Carabidae in both light trap and pitfall samples, and all representatives of a few other families as found in the samples, specifically Tipulidae (Diptera), and Scarabaeidae, Silphidae, and Cerambycidae in the Coleoptera. About 400-500 additional insect specimens, primarily adults of Diptera, Trichoptera, and Plecoptera, were prepared but not included in the above data compilations, as these taxa were not specifically targeted in this study. All specimens are deposited at Carnegie Museum of Natural History.

Of the total species collected, only 10 occurred at all sites: *Paratachys proximus* (ground beetle), *Stenolophus (Stenolophus) ochropezus* (ground beetle), *Poecilus lucublandus* (ground beetle), *Aphodius ruricola* (carrion beetle), *Nicrophorus orbicollis* (burying beetle), *Xestia (Megasema) dolosa* (greater black letter dart), *Lacinipolia renigera* (bristly cutworm), *Notiobia (Anisotarsus) terminata* (ground beetle), *Ochropleura implecta* (flame shouldered dart), and *Ataenius strigatus* (carrion beetle). About a fifth (112) occurred within at least one half of the sites whereas over half (230) of the species were found within collections of only a single site. Also, the majority of those species collected at only one site were represented by only a single specimen.

Several ground beetle species were collected in large numbers at specific sites. Included in this group are *Agonum (Agonum) melanarium*, *Bembidion (Notaphus) castor*, *Pterostichus (Lamenius) caudicalis*, and *Anisodactylus (Anadaptus) discoideus* at EPA1.21, *Pterostichus (Euferonia) stygicus* at EPA1.31, and *Anisodactylus (Anisodactylus) Kirbyi* at EPA1.20.

A number of ground beetle species represented state records (though many may be known from unpublished Pennsylvania records) and often represent species at the northern or southern limits of their known ranges. State record species include: *Acupalpus (Acupalpus) canadensis*, *Acupalpus (Philodes) rectangulus*, *Bradycellus (Stenocellus) nigriceps*, *Stenolophus (Agonoleptus) rotundatus*, *Badister (Badister) neopulchellus*, *Badister (Baudia) grandiceps*, *Badister (Trimorphus) transverses*, *Agonum (Agonum) tenue*, *Agonum (Europhilus) canadense*, *Tetraleucus picticornis*, *Amara (Amara) ovata*, *Paratachys oblitus*, *Blemus discus*, *Trechus (Trechus) quadrisulcatus*, and *Dyschirus politus*.

Table 6. Insect Species Collected by Site for Forested Floodplain Wetlands in the Susquehanna Basin, Disturbed Vs. Undisturbed Site Comparison

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Carabus (Archicarabus) nemoralis	0	0	0	7	0	0	0	0	7
Carabus (Carabus) vinctus	0	0	9	1	0	0	0	0	10
Cicindela (Cicindela) sexguttata	0	0	0	0	0	0	0	1	1
Sphaeroderus stenostomus lecontei	0	0	0	2	1	9	0	0	12
Sphaeroderus stenostomus stenostomus	7	8	0	0	0	0	0	0	15
Loricera pilicornis	0	0	0	0	0	0	0	1	1
Nebria pallipes	0	0	0	0	6	4	0	1	11
Nebria (Boreonebria) lacustris lacustris	0	0	0	0	2	5	0	0	7
Notiophilus aeneus	0	2	1	0	1	0	0	0	4
Omophron americanum	0	0	8	0	0	0	0	1	9
Chlaenius (Anomoglossus) emarginatus	3	29	10	9	1	0	0	1	53
Chlaenius (Chlaeniellus) impunctifrons	0	0	4	1	0	0	9	3	17
Chlaenius (Chlaeniellus) pennsylvanicus pennsylvanicus	4	3	1	2	0	2	2	0	14
Chlaenius (Chlaeniellus) tricolor tricolor	4	0	0	0	0	0	4	12	20
Chlaenius (Chlaenius) aestivus	1	4	1	0	0	0	0	0	6
Chlaenius (Chlaenius) sericeus sericeus	0	0	0	0	0	1	0	2	3
Leptotrachelus dorsalis	0	0	0	0	0	1	0	0	1
Galerita (Progaleritina) bicolor	1	0	0	0	0	0	1	2	4
Acupalpus (Acupalpus) canadensis	0	0	0	0	0	5	0	0	5
Acupalpus (Acupalpus) carus	0	0	0	0	0	4	0	0	4
Acupalpus (Acupalpus) hydropicus	0	0	0	0	0	1	0	0	1
Acupalpus (Philodes) rectangulus	0	0	1	0	0	0	0	0	1
Acupalpus (Tachistodes) indistinctus	0	0	0	0	1	4	0	0	5
Acupalpus (Tachistodes) pauperculus	0	0	0	0	0	13	0	0	13
Amphasia (Amphasia) interstitialis	3	1	2	2	7	2	0	0	17
Amphasia (Pseudamphasia) sericea	0	0	0	1	4	13	17	4	39
Anisodactylus (Anadaptus) discoideus	0	0	5	1	4	18	159	22	209
Anisodactylus (Anadaptus) sanctaetrucis	0	0	0	0	0	1	0	2	3
Anisodactylus (Anisodactylus) agricola	2	2	0	0	0	0	0	22	26
Anisodactylus (Anisodactylus) harrisii	0	0	1	0	0	0	0	1	2
Anisodactylus (Anisodactylus) kirbyi	0	0	0	0	0	0	1	119	120
Anisodactylus (Anisodactylus) nigerrimus	0	0	0	0	0	1	0	0	1
Anisodactylus (Anisodactylus) nigrita	0	0	0	0	6	0	0	0	6
Bradycellus (Stenocellus) nigriceps	0	0	0	1	0	22	0	1	24
Bradycellus (Stenocellus) rupestris	0	0	0	0	0	0	4	4	8
Bradycellus (Stenocellus) tantillus	0	0	0	0	0	1	0	0	1
Bradycellus (Triliarthrus) atrimeus	0	0	2	0	0	0	20	6	28
Bradycellus (Triliarthrus) badipennis	0	0	0	0	0	1	0	0	1
Bradycellus (Triliarthrus) kirbyi	0	0	0	0	0	1	0	0	1
Bradycellus (Triliarthrus) lugubris	0	0	0	0	1	0	0	0	1
Harpalus somnulentus	0	0	0	0	0	3	0	3	6

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Harpalus (Pseudoophonus) compar	0	0	0	1	0	0	1	0	2
Harpalus (Pseudoophonus) longicollis	3	1	2	0	0	0	6	16	28
Harpalus (Pseudoophonus) pennsylvanicus	0	0	0	3	1	2	6	31	43
Notiobia (Anisotarsus) terminata	1	1	1	2	2	7	2	4	20
Selenophorus (Selenophorus) opalinus	0	0	1	1	2	2	2	0	8
Stenolophus (Agonoderus) comma	0	1	0	0	3	9	9	4	26
Stenolophus (Agonoderus) lecontei	1	1	1	0	1	9	16	1	30
Stenolophus (Agonoleptus) conjunctus	0	0	0	0	1	0	1	0	2
Stenolophus (Agonoleptus) rotundatus	1	0	0	0	0	0	0	0	1
Stenolophus (Agonoleptus) rotundicollis	27	33	0	0	0	0	0	0	60
Stenolophus (Stenolophus) ochropeus	9	6	5	6	7	13	15	7	68
Trichotichnus autumnalis	0	1	0	0	0	0	0	0	1
Trichotichnus fulgens	3	0	0	0	0	0	0	0	3
Trichotichnus vulpeculus	7	19	0	3	0	0	0	1	30
Xestonotus lugubris	0	0	0	1	1	3	0	0	5
Apenes (Apenes) lucidulus	0	1	0	0	0	0	0	0	1
Cymindis (Cymindis) americanus	0	0	0	0	4	0	0	0	4
Dromius (Dromius) piceus	0	0	0	2	0	1	0	0	3
Lebia (Lebia) analis	1	0	0	0	0	0	0	0	1
Lebia (Lebia) fuscata	0	0	0	0	0	1	1	0	2
Lebia (Lebia) solea	1	0	0	0	0	3	1	0	5
Lebia (Lebia) viridipennis	0	0	0	0	1	1	0	0	2
Lebia (Lebia) viridis	1	1	2	1	1	2	0	1	9
Lebia (Loxopeza) atriventris	0	0	0	0	1	0	0	0	1
Lebia (Loxopeza) grandis	0	0	0	0	2	5	2	0	9
Lebia (Loxopeza) tricolor	0	1	0	0	0	0	0	1	2
Badister (Badister) flavipes	0	0	3	0	0	0	0	0	3
Badister (Badister) neopulchellus	1	0	0	0	1	0	0	1	3
Badister (Badister) notatus	0	2	0	2	0	2	0	0	6
Badister (Baudia) grandiceps	0	0	0	0	0	1	0	0	1
Badister (Baudia) ocularis	0	0	0	0	0	1	2	0	3
Badister (Baudia) reflexus	0	0	1	0	0	0	0	0	1
Badister (Trimorphus) transversus	0	0	0	0	1	0	0	1	2
Dicaelus (Paradicaelus) elongatus	9	4	0	0	0	0	0	0	13
Loxandrus ?vitosus	0	0	0	1	0	1	0	0	2
Agonum (Agonum) harrisii	0	0	0	0	0	1	0	0	1
Agonum (Agonum) melanarium	0	0	31	2	3	1	253	74	364
Agonum (Agonum) muelleri	0	0	0	0	0	0	9	26	35
Agonum (Agonum) placidum	0	0	0	0	0	3	0	1	4
Agonum (Agonum) tenue	0	0	0	0	0	1	1	0	2
Agonum (Circinalidia) aeruginosum	1	0	0	0	0	3	0	0	4
Agonum (Euophilus) anchomenoides	0	0	1	0	0	1	66	11	79

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Agonum (Europhilus) canadense	0	0	0	0	0	1	0	0	1
Agonum (Europhilus) gratiosum	0	0	0	0	3	0	0	1	4
Agonum (Europhilus) lutulentum	0	0	0	0	1	7	0	1	9
Agonum (Europhilus) palustre	0	0	19	1	3	6	1	2	32
Agonum (Europhilus) thoreyi	0	0	0	0	0	8	3	0	11
Agonum (Olisares) punctiforme	1	0	0	0	0	0	0	0	1
Agonum (Stictanhus) decorum	0	0	0	0	0	0	1	3	4
Agonum (Stictanhus) extensicolle	0	0	0	0	0	0	4	14	18
Atraneus pubescens	0	0	13	1	5	0	0	0	19
Calathus (Neocalathus) gregarius	1	0	0	0	0	0	0	0	1
Olisthopus parvatus	3	4	12	3	0	0	0	0	22
Oxypselaphus pusillus	0	0	8	1	0	16	7	1	33
Platynus (Batenus) cincticollis	1	0	0	0	0	0	0	0	1
Platynus (Batenus) hypolithos	0	0	0	0	0	7	1	66	74
Platynus (Platynus) decentis	0	1	0	0	0	0	0	2	3
Platynus (Platynus) parmarginatus	0	0	0	0	0	1	0	0	1
Platynus (Platynus) tenuicollis	0	0	0	0	0	1	0	0	1
Synuchus (Pristodactyla) impunctatus	0	0	0	0	1	0	0	1	2
Tetraleucus picticornis	0	1	0	0	0	0	0	0	1
Cyclotrachelus (Evarthrus) furtivus	41	7	0	0	0	0	0	0	48
Gastrellarius honestus	0	0	0	1	1	0	0	0	2
Myas cyanescens	0	0	0	0	1	0	0	0	1
Poecilus lucublandus	3	2	10	13	12	8	2	7	57
Pterostichus (Argutor) commutabilis	0	0	3	4	0	1	0	0	8
Pterostichus (Bothriopterus) mutus	5	15	20	30	14	2	0	1	87
Pterostichus (Euferonia) coracinus	0	0	0	0	10	1	0	0	11
Pterostichus (Euferonia) novus	0	0	0	0	2	0	0	0	2
Pterostichus (Euferonia) stygicus	11	3	0	0	72	57	0	0	143
Pterostichus (Lamenius) caudicalis	0	0	2	0	6	1	240	52	301
Pterostichus (Morphnosoma) melanarius	0	0	0	0	1	2	17	18	38
Pterostichus (Pseudomaseus) luctuosus	0	0	0	0	0	0	0	1	1
Amara (Amara) aenea	4	1	0	0	0	0	0	0	5
Amara (Amara) crassispina	0	0	0	0	3	0	0	0	3
Amara (Amara) cupreolata	0	1	0	0	1	0	0	0	2
Amara (Amara) familiaris	0	0	0	0	1	1	0	0	2
Amara (Amara) littoralis	1	1	0	0	0	3	0	0	5
Amara (Amara) lunicollis	0	0	0	0	0	3	0	0	3
Amara (Amara) ovata	6	10	0	0	0	27	0	0	43
Amara (Bradytus) avida	0	0	0	0	0	0	0	3	3
Amara (Bradytus) exarata	6	11	0	0	8	34	2	13	74
Amara (Zezea) angustata	0	1	0	0	0	1	0	0	2
Brachinus (Neobrachinus) cordicollis	0	0	0	0	0	0	0	7	7

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Brachinus (Neobrachinus) cyanipennis	0	0	0	0	0	0	0	11	11
Brachinus (Neobrachinus) cyanochoaticus	0	0	0	0	0	0	0	1	1
Brachinus (Neobrachinus) fumans	0	0	0	0	0	0	0	5	5
Brachinus (Neobrachinus) janthinipennis	0	0	0	0	0	0	0	1	1
Bembidion (Bembidion) quadrimaculatum oppositum	0	0	0	0	0	0	0	4	4
Bembidion (Chrysobraceon) inaequale	0	0	0	0	0	0	0	5	5
Bembidion (Eupetiedromus) graciliforme	0	0	0	0	0	0	1	0	1
Bembidion (Furcampa) affine	8	7	9	8	0	9	17	1	59
Bembidion (Furcampa) impotens	3	0	0	0	0	0	1	1	5
Bembidion (Furcampa) mimus	0	0	0	0	0	3	7	5	15
Bembidion (Notaphus) castor	1	1	0	1	1	1	317	4	326
Bembidion (Notaphus) patrule	3	3	4	0	8	3	23	3	47
Bembidion (Notaphus) rapidum	0	0	1	1	0	0	0	1	3
Bembidion (Notaphus) variegatum	0	0	0	0	1	0	20	2	23
Bembidion (Peryphus) postremum	0	0	0	0	0	0	25	25	50
Bembidion (Peryphus) tetracolum	0	0	1	0	0	0	21	29	51
Bembidion (Trepanedoris) frontale	0	0	29	0	0	0	0	1	30
Bembidion (Trichoplataphus) planum	0	0	0	0	0	13	0	0	13
Elaphropus tripunctatus	0	0	0	0	0	4	0	0	4
Elaphropus vivax	0	0	0	0	4	0	1	1	6
Elaphropus xanthopus	1	0	0	0	0	0	0	0	1
Paratachys oblitus	1	1	0	0	0	1	2	0	5
Paratachys proximus	14	1	1	1	4	4	47	1	73
Paratachys pumilus	3	0	0	0	0	0	0	0	3
Paratachys scitulus	0	1	0	0	2	6	7	6	22
Porotachys bisulcatus	0	0	0	0	0	0	3	0	3
Patrobus (Neopatrobus) longicornis	0	0	1	0	1	0	5	11	18
Blemus discus	0	0	0	0	0	0	0	2	2
Trechus (Trechus) quadristriatus	5	18	0	0	0	0	2	0	25
Clivina (Clivina) impressifrons	0	0	8	1	5	15	18	6	53
Clivina (Paraclivina) bipustulata	1	0	3	2	0	1	2	1	10
Clivina (Reichardtula) acuducta	0	0	1	0	0	5	0	0	6
Clivina (Semiclivina) dentipes	1	0	0	0	1	0	1	3	6
Dyschirius haemorrhoidalis	0	0	0	0	1	0	1	0	2
Dyschirius pilosus	0	7	25	0	0	0	0	1	33
Dyschirius politus	0	0	0	0	0	0	1	0	1
Dyschirius ?longulus	0	0	1	0	0	0	0	0	1
Schizogenius (Schizogenius) lineolatus	0	0	0	0	0	3	0	0	3
Cupes capitatus	0	0	0	1	0	0	0	0	1
Hyperplatys maculata	0	0	0	0	1	0	0	0	1
Liopinus alpha	0	1	0	0	0	0	0	0	1
Urographis fasciatus	0	0	0	0	0	0	0	1	1

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
<i>Oberea perspicillata</i>	1	0	0	0	0	1	0	0	2
<i>Oberea tripunctata</i>	1	0	0	0	0	0	0	0	1
<i>Strangalepta abbreviata</i>	0	0	0	0	0	1	0	0	1
<i>Parandra (Neandra) brunnea brunnea</i>	0	0	1	0	0	0	1	0	2
<i>Orthosoma brunneum</i>	1	0	0	1	0	1	1	3	7
<i>Prionus (Prionus) laticollis</i>	0	0	0	1	0	0	0	0	1
<i>Geotrupes balyi</i>	0	0	0	0	1	0	0	0	1
<i>Geotrupes semiopacus</i>	0	0	15	3	8	1	0	0	27
<i>Pseudolucanus capreolus</i>	1	0	2	0	0	0	9	1	13
<i>Nicagus obscurus</i>	0	0	12	0	0	0	0	0	12
<i>Ceruchus piceus</i>	0	0	2	3	0	2	2	0	9
<i>Aegialia blanchardi</i>	0	0	75	4	2	1	0	1	83
<i>Aphodius lentus</i>	0	0	0	0	0	2	0	0	2
<i>Aphodius rubeolus</i>	0	0	0	0	0	1	0	0	1
<i>Aphodius rufipes</i>	0	0	1	4	1	0	3	3	12
<i>Aphodius ruricola</i>	7	6	7	9	4	8	6	7	54
<i>Aphodius stercorosus</i>	5	6	2	2	2	1	0	6	24
<i>Ataenius abditus</i>	0	0	6	0	0	2	15	0	23
<i>Ataenius gracilis</i>	0	0	10	0	0	0	0	0	10
<i>Ataenius spretulus</i>	0	0	0	0	0	0	1	2	3
<i>Ataenius strigatus</i>	2	2	3	2	2	3	2	2	18
<i>Dialytellus dialytoides</i>	0	0	0	0	2	0	0	0	2
<i>Dialytes striatulus</i>	0	7	2	2	20	4	0	0	35
<i>Dialytes truncatus</i>	0	2	0	5	8	1	3	0	19
<i>Dialytes ulkei</i>	0	0	1	4	4	1	3	1	14
<i>Cyclocephala borealis</i>	2	2	0	1	0	0	0	0	5
<i>Hoplia modesta</i>	0	0	0	0	2	0	0	0	2
<i>Phyllophaga crenulata</i>	0	0	0	1	0	0	0	0	1
<i>Phyllophaga fusca</i>	0	0	0	1	0	0	0	0	1
<i>Phyllophaga marginalis</i>	0	0	0	0	0	1	0	0	1
<i>Popillia japonica</i>	0	0	0	1	0	0	1	1	3
<i>Pelidnota punctata</i>	0	0	0	0	0	1	0	0	1
<i>Onthophagus taurus</i>	0	0	1	0	0	0	0	0	1
<i>Trox aequalis</i>	1	1	0	0	0	0	1	0	3
<i>Trox hamatus</i>	2	3	1	0	0	1	0	0	7
<i>Trox variolatus</i>	0	0	0	0	0	1	0	0	1
<i>Nicrophorus orbicollis</i>	9	6	12	4	6	7	2	6	52
<i>Nicrophorus pustulatus</i>	0	0	0	0	0	1	0	0	1
<i>Nicrophorus tomentosus</i>	0	0	1	0	1	0	0	1	3
<i>Necrophila americana</i>	0	0	0	0	0	1	0	1	2
<i>Oiceoptoma noveboracense</i>	3	1	0	0	8	0	0	0	12
<i>Epiphragma (Epiphragma) fasciapennis</i>	0	0	2	3	0	0	0	0	5

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Epiphragma (Epiphragma) solatrix	0	2	0	0	0	0	0	0	2
Hexatoma (Eriocera) spinosa	0	0	0	0	2	1	0	0	3
Limonia (Discobola) annulata	0	0	0	0	0	0	2	0	2
Limonia (Metalimnobia) cinctipes	0	0	0	1	0	0	0	0	1
Limonia (Metalimnobia) immatura	1	0	1	4	0	0	2	0	8
Pedicia (Tricyphona) inconstans	0	0	0	0	0	0	1	0	1
Nephrotoma ferruginea	0	0	2	1	0	0	0	0	3
Tipula (Lunatipula) bicornis	1	0	0	0	0	1	0	0	2
Tipula (Lunatipula) duplex	0	0	1	0	2	0	0	0	3
Tipula (Platytipula) ultima	0	0	0	0	0	0	1	0	1
Tipula (Yamatotipula) caloptera	0	0	0	0	0	2	0	0	2
Tipula (Yamatotipula) concava	0	0	5	1	6	0	0	0	12
Tipula (Yamatotipula) furca	0	0	7	2	0	0	2	2	13
Tipula (Yamatotipula) sayi	0	0	4	0	0	0	6	2	12
Olceclostera angelica	1	0	0	0	0	0	0	0	1
Malacosoma americanum	5	5	0	2	0	1	0	0	13
Malacosoma disstria	0	0	1	0	0	0	0	0	1
Tolyte velleda	0	0	0	0	1	1	0	0	2
Dryocampa rubicunda	0	0	0	0	2	0	0	0	2
Automeris io io	1	1	0	0	0	0	0	1	3
Darapsa myron	0	0	0	0	1	0	0	0	1
Paonias excaecatus	0	0	1	0	1	0	0	1	3
Paonias myops	0	0	0	0	0	1	0	0	1
Smerinthus jamaicensis	0	0	0	0	0	0	0	1	1
Ceratomia amyntor	0	0	0	0	0	1	0	0	1
Dolba hyloeus	0	0	0	0	0	1	0	0	1
Sphinx kalmiae	0	0	0	0	1	1	0	0	2
Machimia tentoriferella	2	0	0	0	1	0	0	0	3
Antaeotricha leucillana	1	0	6	3	0	0	0	0	10
Drepana arcuata	0	0	0	0	6	5	0	2	13
Calledapteryx dryopterata	2	1	0	0	0	0	0	0	3
Protitame virginalis	0	0	0	0	0	0	1	0	1
Cepphis armataria	1	0	0	0	0	0	0	0	1
Metanema inatomaria	0	0	0	0	0	0	0	1	1
Metarranthis duaria duaria	0	0	1	0	0	0	0	0	1
Metarranthis hypochraria	0	0	0	0	0	0	0	1	1
Plagodis alcoolaria	0	0	0	0	0	1	0	0	1
Plagodis fervidaria	0	0	1	0	0	0	0	0	1
Plagodis serinaria	0	0	0	0	2	3	0	0	5
Probole alienaria	0	0	0	0	2	2	0	0	4
Probole nepiasaria	0	0	0	0	1	0	0	0	1
Xanthotype sospeta	2	2	0	0	0	0	1	0	5

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Xanthotype urticaria	0	0	0	0	2	1	0	0	3
Euchlaena amoenaria amoenaria	1	0	0	0	0	0	0	0	1
Euchlaena muzaria	0	0	0	0	0	1	1	0	2
Euchlaena obtusaria	1	0	0	0	0	0	0	0	1
Euchlaena serrata	0	0	1	0	0	0	0	0	1
Euchlaena tigrinaria	0	1	0	0	5	5	1	6	18
Lytrosis unitaria	0	0	1	1	0	0	0	0	2
Pero honestaria	1	0	0	1	0	9	1	0	12
Pero hubneraria	1	0	4	8	0	0	0	0	13
Pero morrisonaria	0	0	0	0	0	2	1	1	4
Lomographa vestaliata	0	0	0	0	0	2	0	0	2
Biston betularia cognataria	1	1	0	1	3	2	0	0	8
Hypagyrtis unipunctata	2	1	6	2	0	2	5	1	19
Anavitrinella pampinaria	1	2	2	0	0	2	1	0	8
Ectropis crepuscularia	1	0	4	5	0	0	2	0	12
Glenoides texanaria	2	0	0	0	0	0	0	0	2
Hypomecis umbrosaria	0	0	0	0	0	2	0	0	2
Iridopsis larvaria	1	2	0	0	0	0	0	1	4
Cabera erythemaria	0	0	0	0	0	1	0	2	3
Cabera variolaria	0	0	0	0	0	2	0	0	2
Campaea perlata	2	0	1	0	4	1	3	1	12
Digrammia gnophosaria	0	0	0	0	0	0	2	0	2
Digrammia ocellinata	0	0	0	0	0	0	0	1	1
Macaria aemulataria	1	0	4	7	0	1	10	2	25
Macaria minorata	0	0	0	0	2	0	0	0	2
Macaria pinistrobata	0	0	0	0	1	0	0	0	1
Macaria pustularia	1	0	4	2	0	0	4	0	11
Melanolophia canadaria crama	2	2	2	2	0	1	1	1	11
Nacophora quernaria	0	0	0	0	2	0	0	0	2
Antepione thisoaria	1	0	0	0	0	0	0	0	1
Besma endropiaria	0	0	0	0	0	1	0	0	1
Eugonobapta nivosaria	6	2	0	0	0	0	0	0	8
Eusarca confusaria	0	1	0	0	3	5	1	0	10
Eutrapela clemataria	1	0	3	2	0	0	0	0	6
Lambdina fervidaria athasaria	0	0	1	0	0	0	0	0	1
Lambdina fiscellaria fiscellaria	0	0	0	0	4	1	0	0	5
Nematocampa resistaria	1	1	3	0	0	0	3	2	10
Prochoerodes transversata	3	0	0	0	0	2	1	1	7
Tetracis cachexiata	1	0	0	0	1	5	0	2	9
Chlorochlamys chloroleucaria	0	0	0	0	0	1	0	0	1
Nemoria bistriaria bistriaria	0	0	4	1	0	1	0	1	7
Synchlora aerata aerata	0	0	0	0	1	0	0	0	1

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Hydrelia albifera	0	0	0	0	0	0	1	0	1
Hydrelia inornata	0	0	0	0	0	1	0	0	1
Trichodezia albovittata	2	0	3	2	0	1	0	0	8
Eubaphe mendica	0	2	0	0	0	0	0	0	2
Eupithecia sp.	0	0	0	1	2	0	2	0	5
Horisme intestinata	0	1	1	0	0	2	0	0	4
Dysstroma hersiliata hersiliata	0	0	0	0	1	0	0	0	1
Eulithis diversilineata	2	1	0	0	1	2	2	0	8
Eulithis explanata	0	0	0	0	0	0	1	0	1
Rheumaptera prunivorata	0	0	0	1	1	0	0	0	2
Dyspteris abortivaria	0	0	0	0	0	0	1	0	1
Heterophleps triguttaria	0	0	0	0	0	1	0	0	1
Costaconvexa centrostrigaria	0	0	0	1	0	0	0	0	1
Euphyia intermediata	0	0	0	0	2	10	2	3	17
Orthonama obstipata	0	1	0	0	0	1	0	0	2
Xanthorhoe ferrugata	0	1	0	0	0	1	0	0	2
Xanthorhoe labradorensis	0	0	0	0	0	2	0	0	2
Xanthorhoe lacustrata	2	1	1	0	0	1	0	0	5
Cyclophora pendulinaria	0	0	0	1	0	0	0	0	1
Pleuroprucha insulsaria	0	1	0	2	0	0	0	0	3
Scopula limboundata	0	0	1	1	1	1	0	1	5
Scopula quadrilineata	0	0	0	0	0	1	0	0	1
Haematopsis grataria	1	0	0	0	0	0	0	0	1
Timandra amaturaria	1	1	0	0	0	0	0	0	2
Pseudothyatira cymatophoroides	1	1	0	0	0	0	0	0	2
Apantesis phalerata	0	0	0	0	0	2	0	5	7
Grammia parthenice intermedia	0	0	0	0	0	1	0	0	1
Grammia virgo	0	0	0	0	1	0	0	1	2
Grammia virguncula	0	0	0	0	0	3	0	0	3
Holomelina opella	0	0	1	0	0	0	0	0	1
Hyphantria cunea	3	1	1	1	0	0	0	0	6
Phragmatobia fuliginosa rubricosa	0	0	0	0	3	8	0	0	11
Pyrrharctia isabella	3	1	1	0	2	4	1	3	15
Spilosoma congrua	0	0	0	0	0	0	1	1	2
Spilosoma latipennis	1	0	2	0	0	1	0	0	4
Spilosoma virginica	8	1	0	0	2	1	3	3	18
Haploa clymene	0	0	0	0	0	2	0	0	2
Haploa confusa	0	0	0	0	1	1	0	0	2
Haploa lecontei	0	0	0	0	4	5	0	0	9
Ciseps fulvicollis	0	1	0	0	1	11	2	3	18
Ctenucha virginica	0	0	0	0	0	3	0	0	3
Cynia inopinatus	0	1	0	0	0	0	0	0	1

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
<i>Cynia oregonensis</i>	0	0	0	0	0	0	1	0	1
<i>Cynia tenera</i>	7	0	1	0	1	4	0	1	14
<i>Euchaetes egle</i>	0	0	0	0	0	2	0	0	2
<i>Halysidota harrisii</i>	0	0	1	0	2	5	0	0	8
<i>Halysidota tessellaris</i>	6	4	2	4	0	0	1	2	19
<i>Lophocampa caryae</i>	0	0	0	0	4	7	2	1	14
<i>Clemensia albata</i>	3	1	0	0	2	0	2	0	8
<i>Crambidia pallida</i>	0	0	0	0	0	1	0	0	1
<i>Hypoprepia fucosa</i>	0	0	1	0	4	3	3	1	12
<i>Dasychira vagans vagans</i>	0	0	0	0	0	1	0	0	1
<i>Lymantria dispar</i>	0	0	0	1	1	0	0	0	2
<i>Orgyia definita</i>	0	0	0	0	0	1	2	0	3
<i>Orgyia leucostigma</i>	1	0	0	0	0	1	0	1	3
<i>Lithacodia albidula</i>	0	0	0	0	0	1	0	1	2
<i>Lithacodia muscosula</i>	3	8	1	0	0	0	1	0	13
<i>Maliattha synochitis</i>	2	1	0	0	0	0	0	0	3
<i>Pseudeustrotia carneola</i>	7	14	3	3	0	1	19	7	54
<i>Tarachidia candefacta</i>	0	0	0	1	0	0	0	1	2
<i>Tarachidia erastrionides</i>	0	0	0	0	0	1	0	2	3
<i>Thioptera nigrofimbria</i>	3	1	1	1	0	0	0	0	6
<i>Acronicta americana</i>	0	0	0	1	0	0	0	0	1
<i>Acronicta dactylina</i>	0	0	0	0	0	1	0	0	1
<i>Acronicta impressa</i>	0	0	0	0	0	3	0	0	3
<i>Acronicta increta</i>	0	0	0	0	1	7	0	0	8
<i>Acronicta innotata</i>	0	0	0	0	1	0	0	0	1
<i>Acronicta interrupta</i>	0	0	0	0	0	1	0	0	1
<i>Acronicta modica</i>	0	0	0	0	0	0	0	1	1
<i>Acronicta obliqua</i>	0	0	0	0	1	0	1	0	2
<i>Simyra henrici</i>	0	0	0	0	0	1	0	0	1
<i>Eudryas grata</i>	0	0	1	0	0	0	0	0	1
<i>Amphipoea americana</i>	0	0	0	0	1	2	0	0	3
<i>Amphipoea velata</i>	0	1	0	0	0	0	0	0	1
<i>Amphipyra pyramidoides</i>	2	0	1	0	0	0	0	0	3
<i>Anorthodes tarda</i>	0	1	1	0	0	0	0	0	2
<i>Apamea dubitans</i>	0	0	1	0	0	1	0	0	2
<i>Apamea remissa indocilis</i>	0	0	0	0	0	0	0	1	1
<i>Apamea vulgaris</i>	0	1	0	0	0	0	0	0	1
<i>Athetis miranda</i>	1	1	0	0	0	2	0	0	4
<i>Balsa labecula</i>	0	1	0	0	0	0	0	0	1
<i>Condica vecors</i>	0	0	0	0	12	1	0	0	13
<i>Condica videns</i>	0	0	0	0	0	3	0	0	3
<i>Crambodes talidiformis</i>	0	0	0	0	0	3	0	3	6

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
<i>Crymodes devastator</i>	0	0	0	0	0	0	0	1	1
<i>Elaphria festivoidea</i>	0	0	0	0	1	0	0	0	1
<i>Elaphria grata</i>	0	1	0	0	0	0	0	0	1
<i>Elaphria versicolor</i>	0	0	0	0	0	1	0	0	1
<i>Euplexia benesimilis</i>	2	0	5	1	0	2	0	0	10
<i>Galgula partita</i>	2	0	0	0	0	4	0	0	6
<i>Hydraecia micacea</i>	0	0	0	0	0	3	0	0	3
<i>Hydraecia stramentosa</i>	0	0	0	0	2	0	0	0	2
<i>Hyppa xylinoides</i>	0	0	0	0	0	0	0	1	1
<i>Leuconycta diphteroides</i>	0	1	0	0	0	1	0	0	2
<i>Leuconycta lepidula</i>	0	0	0	0	0	1	0	0	1
<i>Luperina passer</i>	0	0	1	9	3	2	2	22	39
<i>Nedra ramosula</i>	0	0	0	0	1	0	0	0	1
<i>Ogdoconta cinereola</i>	1	0	0	0	0	0	1	0	2
<i>Papaipema cataphracta</i>	1	0	0	0	0	0	0	0	1
<i>Papaipema inquaesita</i>	0	0	0	0	1	1	0	1	3
<i>Papaipema nebris</i>	0	0	0	0	1	0	0	0	1
<i>Papaipema pterisii</i>	0	0	0	0	0	6	0	4	10
<i>Papaipema rigida</i>	0	0	0	0	0	2	0	0	2
<i>Papaipema rutila</i>	3	0	0	0	0	0	0	0	3
<i>Papaipema unimoda</i>	0	1	0	0	0	0	0	0	1
<i>Stiriodes obtusa</i>	0	2	0	0	0	0	0	0	2
<i>Caenurgina crassiuscula</i>	1	1	0	0	4	3	0	2	11
<i>Caenurgina erechtea</i>	1	0	0	0	0	1	1	0	3
<i>Catocala crataegi</i>	0	0	0	0	0	1	0	0	1
<i>Catocala habilis</i>	0	0	0	0	2	0	0	0	2
<i>Catocala neogama</i>	0	0	0	0	1	0	0	0	1
<i>Catocala palaeogama</i>	0	0	0	0	0	1	0	0	1
<i>Parallelia bistriaris</i>	0	0	0	0	0	0	2	0	2
<i>Plusiodonta compressipalpis</i>	0	0	0	0	0	0	0	1	1
<i>Spargaloma sexpunctata</i>	3	1	0	0	0	0	0	1	5
<i>Zale galbanata</i>	0	0	0	1	0	0	0	0	1
<i>Zale helata</i>	0	0	0	0	1	0	0	0	1
<i>Zale undularis</i>	0	0	0	1	0	0	0	0	1
<i>Calophasia lunula</i>	0	0	0	0	0	0	0	1	1
<i>Aletia oxygala oxygala</i>	0	0	0	0	3	3	0	2	8
<i>Laciniolia olivacea</i>	0	0	0	0	0	0	0	1	1
<i>Laciniolia renigera</i>	2	1	2	3	2	5	1	10	26
<i>Leucania commoides</i>	0	0	0	0	0	2	0	0	2
<i>Leucania linda</i>	0	0	0	0	0	0	0	1	1
<i>Leucania multilinea</i>	0	0	0	0	0	0	0	1	1
<i>Leucania ursula</i>	0	0	0	0	1	0	0	1	2

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Melanchra adjuncta	2	0	0	0	0	0	0	0	2
Morrisonia confusa	0	0	1	0	0	0	0	0	1
Nephelodes minians	0	0	0	0	3	3	1	0	7
Orthodes crenulata	1	1	1	0	0	1	0	1	5
Orthodes cynica	3	0	2	0	4	4	0	4	17
Orthodes goodelli	1	0	0	0	0	0	0	0	1
Polia imbrifera	0	0	0	0	0	6	0	0	6
Polia nimbose	0	0	0	0	0	0	0	1	1
'Polia' detracta	0	0	0	0	1	0	0	0	1
Pseudaletia unipuncta	0	0	2	0	2	3	0	2	9
Pseudorthodes vecors	2	11	2	0	2	10	0	0	27
Tricholita signata	0	3	1	0	1	5	0	0	10
Schinia arcigera	0	0	0	0	2	0	0	0	2
Schinia rivulosa	0	0	0	0	0	0	0	1	1
Bleptina caradrinalis	1	0	1	0	0	0	0	0	2
Chytolita morbidalis	0	0	1	0	0	1	0	1	3
Idia aemula	1	0	0	0	0	2	0	1	4
Idia americalis	6	1	4	2	2	2	1	0	18
Idia lubricalis lubricalis	0	0	0	1	0	2	0	0	3
Idia rotundalis	0	0	0	0	1	0	1	1	3
Lascoria ambigualis	5	2	3	4	0	0	1	2	17
Macrochilo absorptalis	0	0	0	0	0	1	0	0	1
Macrochilo litophora	0	0	0	0	0	0	0	2	2
Macrochilo louisiana	0	0	0	0	0	1	0	0	1
Macrochilo orciferalis	1	1	0	0	0	0	1	0	3
Palthis angulalis	3	1	1	0	0	1	0	0	6
Palthis asopialis	0	2	0	0	1	0	3	2	8
Phalaenophana pyramusalis	5	0	0	0	0	0	0	0	5
Phalaenostola eumelusalis	5	3	0	0	0	0	0	4	12
Phalaenostola larentioides	0	0	1	0	0	0	0	1	2
Phalaenostola metonalis	0	2	0	1	0	0	0	0	3
Renia factiosalis	0	1	0	1	3	2	1	0	8
Renia flavipunctalis	0	0	1	0	0	1	0	0	2
Renia salusalis	0	1	0	0	0	0	0	0	1
Tetanolita floridana	1	1	0	2	0	0	0	0	4
Zanclognatha cruralis	0	0	0	1	0	0	0	0	1
Zanclognatha jacchusalis	0	0	0	0	0	0	1	0	1
Zanclognatha laevigata	0	0	0	0	0	1	1	0	2
Zanclognatha lituralis	1	0	0	0	0	0	0	2	3
Zanclognatha obscuripennis	0	0	0	0	0	0	1	0	1
Zanclognatha ochreipennis ochreipennis	0	0	0	0	1	1	0	0	2
Zanclognatha pedipilalis	1	0	1	0	0	2	2	1	7

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Zanclognatha protumnusalis	0	0	1	0	0	0	0	0	1
Bomolocha baltimoralis	1	1	7	2	1	1	0	0	13
Bomolocha edictalis	0	0	0	0	1	0	2	0	3
Bomolocha manalis	2	0	4	1	1	0	0	0	8
Plathypena scabra	0	0	1	0	0	0	0	0	1
Hypenodes caducus	0	0	0	0	0	0	1	0	1
Agnorisma badinodis	0	0	0	0	0	0	0	1	1
Agrotis gladiaria	2	0	0	0	0	0	0	1	3
Agrotis ipsilon	0	1	1	1	1	0	1	2	7
Agrotis venerabilis	0	0	0	0	2	2	0	0	4
Anaplectoides prasina	0	0	1	0	0	0	0	0	1
Euretagrotis sigmoides	0	0	0	0	0	1	0	0	1
Feltia herilis	0	1	1	2	5	9	0	0	18
Feltia jaculifera	1	0	0	0	0	5	0	1	7
Feltia subgothica	0	0	0	0	1	2	0	1	4
Feltia tricola	0	0	0	0	0	1	0	0	1
Loxagrotis acclivis	0	1	0	0	0	0	0	0	1
Noctua pronuba	0	0	2	2	1	2	2	1	10
Ochropleura implecta	4	1	1	1	1	3	1	7	19
Peridroma saucia	0	0	0	0	0	0	1	0	1
Protolampra brunneicollis	0	0	0	0	0	1	0	0	1
Pseudohermonassa bicarnea	4	0	0	1	0	0	0	0	5
Trichosilia geniculata	0	0	0	0	1	0	0	0	1
Xestia (Megasema) c-nigrum adela	0	0	0	0	1	3	6	2	12
Xestia (Megasema) dolosa	1	7	2	2	7	4	4	5	32
Xestia (Xestia) normaniana	0	0	0	0	1	1	0	0	2
Xestia (Xestia) smithii	12	0	2	5	2	4	0	0	25
Colocasia propinquilinea	0	0	0	0	1	0	0	1	2
Panthea furcilla	0	0	0	0	0	1	0	0	1
Raphia frater	0	0	0	0	0	1	0	1	2
Abrostola urentis	0	2	0	0	0	0	1	0	3
Allagrapha aerea	3	0	0	0	0	1	0	0	4
Autographa precationis	0	0	0	0	0	0	1	0	1
Megalographa biloba	0	0	0	0	0	1	0	0	1
Rivula propinquialis	0	0	0	1	1	0	0	2	4
Baileya australis	2	1	0	0	0	0	0	0	3
Baileya dormitans	0	0	0	0	1	1	0	0	2
Basilodes pepita	0	3	0	0	0	0	0	0	3
Plagiomimicus pityochromus	1	0	0	0	0	0	1	0	2
Heterocampa biundata	1	0	0	0	0	2	0	0	3
Heterocampa guttivitta	0	0	0	0	0	3	0	0	3
Lochmaeus bilineata	0	0	0	0	0	2	0	0	2

Table 6. (cont.)

	Pair 1		Pair 2		Pair 3		Pair 4		TOTAL
EPA Site no.	1.9	1.10	1.29	1.28	1.31	1.32	1.21	1.20	
Insect Species									
Lochmaeus manteo	0	0	1	0	0	2	0	0	3
Oligocentria semirufescens	0	0	0	0	0	0	0	1	1
Schizura ipomoeae	1	1	0	0	0	0	0	0	2
Schizura unicornis	0	0	0	0	0	1	0	0	1
Ellida caniplaga	1	0	0	0	0	0	0	0	1
Furcula cinerea	0	0	0	0	0	1	0	0	1
Gluphisia septentrionis septentrionis	0	0	0	0	1	0	0	0	1
Nadata gibbosa	0	0	0	0	2	1	1	0	4
Nerice bidentata	0	0	0	0	0	1	0	0	1
Odontosia elegans	0	0	0	1	0	0	0	0	1
Peridea basitriens	0	0	0	0	0	1	0	0	1
Peridea ferruginea	0	0	0	0	1	1	0	0	2
Pheosia rimosa	0	0	0	0	0	2	1	0	3
Dasylophia anguina	0	0	0	1	0	1	0	0	2
Symmerista canicosta	0	0	0	0	0	1	0	0	1
Symmerista leucitys	0	0	0	0	3	1	0	0	4
Datana angusii	1	3	0	0	0	0	0	0	4
Datana drexellii	0	0	0	0	0	0	0	1	1
Datana integerrima integerrima	3	1	0	0	0	0	2	1	7
Clostera inclusa	0	0	0	1	0	0	0	0	1
Clostera strigosa	0	0	0	0	2	1	0	0	3
Galleria mellonella	0	0	0	0	0	0	0	1	1
Desmia funeralis	1	1	0	1	0	1	0	0	4
Desmia maculalis	2	0	0	0	0	0	1	0	3
Pantographa limata	0	1	1	0	2	2	1	1	8
Acrolophus arcanelus	5	6	0	0	0	0	0	0	11
Acrolophus popeanellus	0	0	1	2	0	0	0	0	3
Atteva punctella	5	0	0	0	1	0	0	0	6
Yponomeuta multipunctella	1	2	0	0	0	0	0	0	3
Apoda y-inversum y-inversum	1	0	0	0	0	0	0	0	1
Euclea delphinii	0	0	0	0	1	0	0	1	2
Lithacodes fasciola fasciola	1	0	4	2	0	0	0	0	7
Prolimacodes badia	0	0	1	0	0	1	2	0	4
Sibine stimulea	1	0	0	0	0	0	0	0	1
Tortricidia flexuosa	0	0	0	0	2	0	0	0	2
Tortricidia pallida	0	0	0	0	1	0	0	0	1
Tortricidia testacea testacea	0	1	0	0	0	0	0	0	1

ANALYSIS

Data Analysis

Two-way indicator species analysis (TWINSpan) and non-metric multidimensional ordination analysis were performed using data from all 42 forested floodplain wetland sites. For the analysis, the size of the database was reduced from 498 to 189 taxa (species occurrences in multiple strata were treated as distinct taxa for analysis) by eliminating taxa with a frequency of 2 or less (e.g., occurred in less than about 5 % of sites). TWINSpan results are shown in Figure 3. The removal of rare species (rare in the sense of low frequency in study sites) greatly improved computational speed and limited the potential for rare species to skew ordination and classification results.

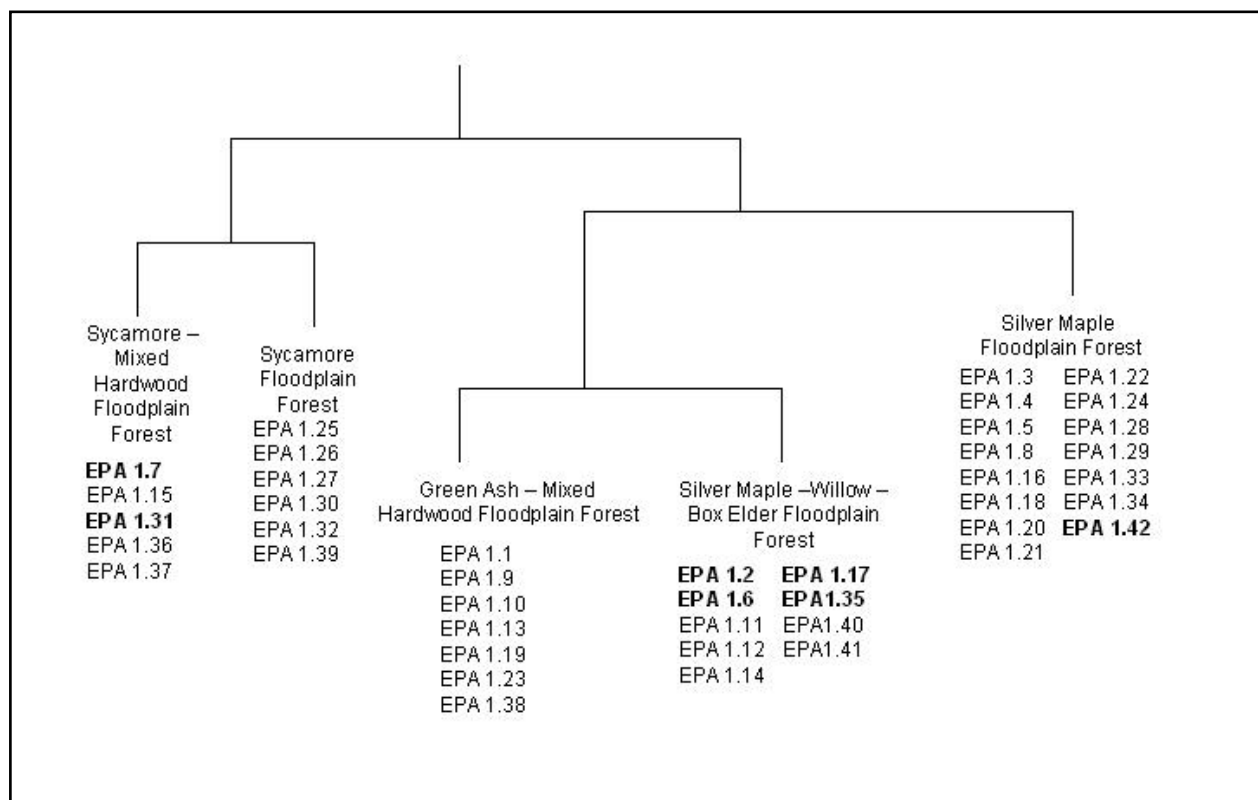


Figure 3. Dendrogram based on TWINSpan results for forested floodplain wetland study sites. Groupings have been modified slightly to reflect additional information from NMS ordination analysis. Sites in bold were reclassified (see text).

The first division of the TWINSpan separated the *Platanus occidentalis* - dominated stands from those where *P. occidentalis* was absent to co-dominant and *Acer saccharinum* was largely absent. The *Platanus*-dominated stands were subsequently divided into two groups, a sycamore – mixed hardwood floodplain forest and a sycamore floodplain forest. Site EPA 1.31 was misclassified as sycamore floodplain forest due to the removal of infrequent species from analysis. The tree canopy at EPA1.31 was dominated by *P. occidentalis* as well as *Acer*

saccharum and *Acer rubrum*, and fit much better in the sycamore – mixed hardwood floodplain forest type. EPA 1.35 was also misclassified since *P. occidentalis* was absent from the plot and the canopy was dominated by river birch and black willow. EPA 1.35 was placed in the silver maple – willow – box elder floodplain forest (described below).

The stands in which *P. occidentalis* was absent or of minor importance were divided into two groups: 1) stands dominated by *Fraxinus pennsylvanica* and/or *Acer saccharinum* with a mix of other hardwoods, and 2) stands in which *A. saccharinum* was the sole dominant canopy species. Examination of releve plot data indicated that several additional sites were misclassified. EPA 1.42 was reassigned to the silver maple floodplain forest type as the stand was dominated by a nearly closed *A. saccharinum* canopy with only scattered *Robinia pseudoacacia* in the canopy (cover <10%). Sites EPA 1.6, EPA 1.7, and EPA 1.17 were classified as silver maple floodplain forest but were reassigned to other groups after evaluation of releve plot data. EPA 1.6 was reclassified as a silver maple – willow – box elder type on the basis of *A. saccharinum*, *F. pennsylvanica* and *P. occidentalis* sharing dominance in the canopy and a nearly monotypic cover of *Polygonum cuspidatum* in the herbaceous layer. High *P. cuspidatum* cover appeared to be most common in silver maple dominated stands. This stand appears to be intermediate between the silver maple and sycamore types and could have been equally well reclassified as a sycamore – mixed hardwood floodplain forest type. EPA 1.17 was also reclassified from the silver maple floodplain forest type to the silver maple – willow – box elder type, to reflect the dominance of the canopy by *Salix nigra* (51-75%) with *A. saccharinum* only a sub-dominant (13-25%). *Acer negundo* and *F. pennsylvanica* were also present but only in the shrub layer. EPA 1.7 was reclassified from the silver maple floodplain forest type to the sycamore – mixed hardwood type on the basis of *P. occidentalis* having high canopy cover (51-75%) and *A. saccharinum* being only a canopy subdominant (13-25%). The understory was sparse and characterized by *A. saccharinum* and *Betula nigra*.

The third division separated the *F. pennsylvanica* – *A. saccharinum* – mixed hardwood group into a green ash – mixed hardwood floodplain forest type and a silver maple – willow – box elder floodplain forest type. The canopy in the green ash – mixed hardwood type is characterized by *F. pennsylvanica* as a dominant or co-dominant whereas the silver maple – willow – box elder type had *A. saccharinum* as a canopy dominant to sub-dominant. Where *A. saccharinum* was not dominant, the canopy was typically dominated by either *S. nigra* or *A. negundo*. TWINSpan also identified the invasive exotic, *Lysimachia nummularia* (moneywort) as an indicator of the silver maple – willow – box elder type. *L. nummularia* often attained very high cover (>75%) in the herbaceous layer in this community. EPA 1.2 was misclassified as a green ash – mixed hardwoods type and was reassigned to silver maple – willow – box elder type. The canopy in EPA 1.2 was dominated by *A. saccharinum* (51-75%) while *F. pennsylvanica* was only a sub-dominant (13-25%). The subcanopy was absent but the shrub layer contained low to moderate densities of several hardwood species, including *A. negundo*, *F. pennsylvanica*, *Celtis occidentalis* and *Morus rubra*.

Non-Metric Multi-Dimensional Scaling Ordination (NMS)

Results of non-metric multi-dimensional scaling analysis were similar to TWINSpan with the same plots being misclassified. Figure 4 shows the results of the NMS analysis with plots color

coded as classified in Figure 3. Excepting misclassified plots, the NMS ordination suggests a gradient from low energy, fine textured soil sites dominated by *Acer saccharinum* in the lower left corner of the ordination (silver maple floodplain forests, silver maple – willow – box elder floodplain forests) to high energy, coarse textured sites dominated by *Platanus occidentalis* in the upper right corner of the ordination (sycamore floodplain forests, sycamore – mixed hardwood floodplain forests). The green ash – mixed hardwood type is somewhat intermediate between the two groups, but also tends to be in low energy, fine textured soil sites. Green ash – mixed hardwood sites differ from *Acer sacharinum* types in that they tend to be flooded or saturated for shorter periods during the growing season.

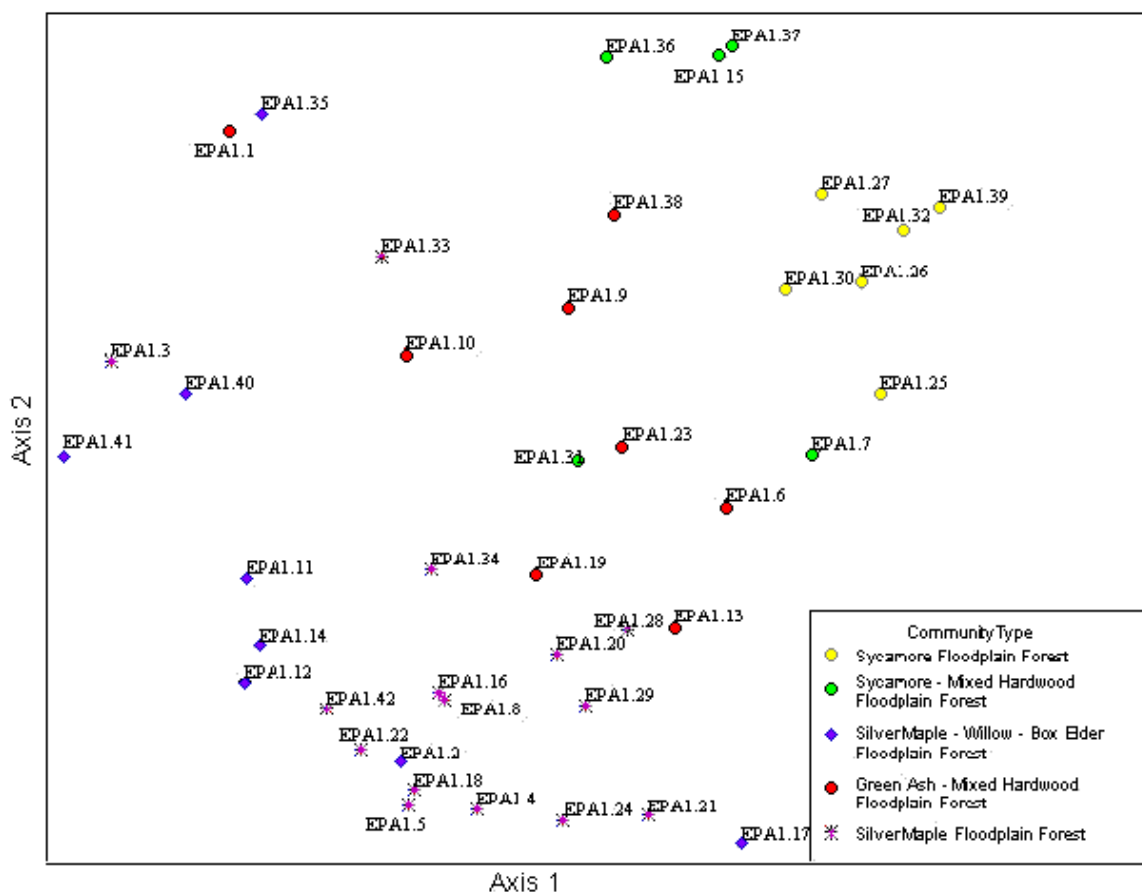


Figure 4. Ordination graph of non-metric multi-dimensional scaling analysis of forested floodplain wetland study sites.

Disturbed vs Undisturbed Sites

No clear trend was observed between pairs of undisturbed and disturbed sites with regards to vegetation or bird survey data (Appendix II, and Table 4). The lack of clear trends may reflect the difficulty in finding suitable paired sites experiencing the same type of disturbance (i.e., one disturbed site, EPA 1.32, was considered disturbed due to severe landscape fragmentation and

narrow, linear shape of remaining stand; EPA 1.20 on the other hand was considered disturbed due to selective removal of approximately 50 % of the canopy).

In addition, the relative importance of anthropogenic disturbance may have been minor in comparison to the disturbance associated with annual flooding events (e.g., anaerobic soils, sedimentation, ice scouring, erosion, etc.). All of the sites were fairly disturbed, experiencing frequent scour from flooding and ice. These disturbance cycles may cause stresses on the avian communities which may manifest themselves in diminished diversity and populations.

Vegetative diversity is a fairly strong predictor of bird diversity, but high foliage diversity is even a better correlate with high breeding bird diversity (MacArthur and MacArthur 1961, Mills et al. 1991). Foliage and vegetative diversity were not directly measured during these bird surveys, but it was observed that the lower elevation sites probably suffered regular flooding and tended to have less vegetative density near the ground. Likewise, plots with higher bird densities generally appeared to have higher vegetative densities, especially near the ground.

Most plots suffered from low woody plant diversity. This is especially true at EPA 1.28, 1.29 and 1.32. As flooding stresses these systems, tree and shrub diversity are severely limited. Scouring may periodically eliminate shrubs, perennial herbs, seedlings, and seeds from the ground surface. EPA 1.31 is a possible exception since nearby conifers added to the observed bird diversity. Black-throated Green and Blackburnian warblers were both attracted to the conifer component at that site.

Although the paired sites were of similar or equal size and the breeding bird samples were taken in standardized circles, the size of the adjacent forest blocks and types of land uses surrounding the plots differed. For example, EPA 1.31 was part of a much larger forest than EPA 1.32, which was highly fragmented. EPA 1.21 was less effected by humans, but seemed more isolated than EPA 1.20, which was adjacent to an extensive forest crowned by “Tip Top” – the local high point of the plateau. Similarly, the local agricultural landscapes of EPA 1.20 and 1.32 contributed to the diversity of birds found near the sites, but helped to isolate each of these wooded plots from similar habitat. Even in carefully controlled sampling, the size of nearby forest may play an important role in bird distribution such that smaller forest blocks are more likely to have lower diversity of species (MacArthur and Wilson 1967, Martin 1981).

The bird communities of all plots were principally composed of species that are tolerant of disturbances. With the possible exception of a few forest thrushes and warblers, bird species commonly associated with higher quality floodplain forest were absent from these sites. By contrast, a stream valley- mixed mesophytic forest in Butler County, Pennsylvania, included Acadian Flycatcher, Scalet Tanager, Kentucky Warbler, Cerulean Warbler, and Louisiana Waterthrush among its more common summer residents (Bier 1977). The breeding bird data do not paint a bleak picture of these locations, however, as Neotropical forest species like Eastern Wood-Pewee, Great Crested Flycatcher, Yellow-throated Vireo, Wood Thrush, and American Redstart were found at more than one site. A larger sample of floodplain wetland forests may reveal higher quality forests with great vegetative and avian diversity.

Non-metric multidimensional scaling (NMS) ordination and TWINSpan results indicate that the insect fauna among the eight disturbed-undisturbed sites was most similar within the same vegetation type. The disturbed sites were very similar to the undisturbed sites for the green ash – mixed hardwood sites (EPA1.9, EPA1.10) and the sycamore-dominated sites (EPA1.31, EPA1.32). The four silver maple sites (EPA1.20, EPA1.21, EPA1.28, EPA1.29) showed less similarity between pairs. The TWINSpan analysis placed the disturbed Milton State Park site (EPA1.28) with the green ash – mixed hardwood sites. This site, while dominated by silver maple, did contain some other hardwood species. In contrast the undisturbed site (EPA1.29) had a nearly monotypic (and denser) silver maple canopy. The TWINSpan analysis placed EPA1.29 and both Towanda silver maple sites (EPA1.20 and EPA1.21) in the same group, with the undisturbed sites (EPA1.21 and EPA1.29) ranked most similar. These sites both had dense silver maple-dominated canopies, while the disturbed Towanda site likely had a closed silver maple canopy prior to an approximately 50 percent canopy reduction due to logging. NMS results were similar to the TWINSpan results, except the for silver maple sites. The Towanda and Milton State Park sites showed the greatest similarity between pairs, but were not tightly grouped, suggesting significant non-overlap in the insect fauna.

Species richness showed no consistent trend across vegetation type or between disturbed and undisturbed sites. Both maximum and minimum species richness occurred at disturbed sites, EPA1.32 (255 species) and EPA1.28 (115 species), respectively. Sample effort was not sufficient to make reasonable estimates of diversity indices by vegetation type or site type (disturbed vs. undisturbed). The number of state records and rare species reported above does suggest that more intensive and representative sampling should be pursued.

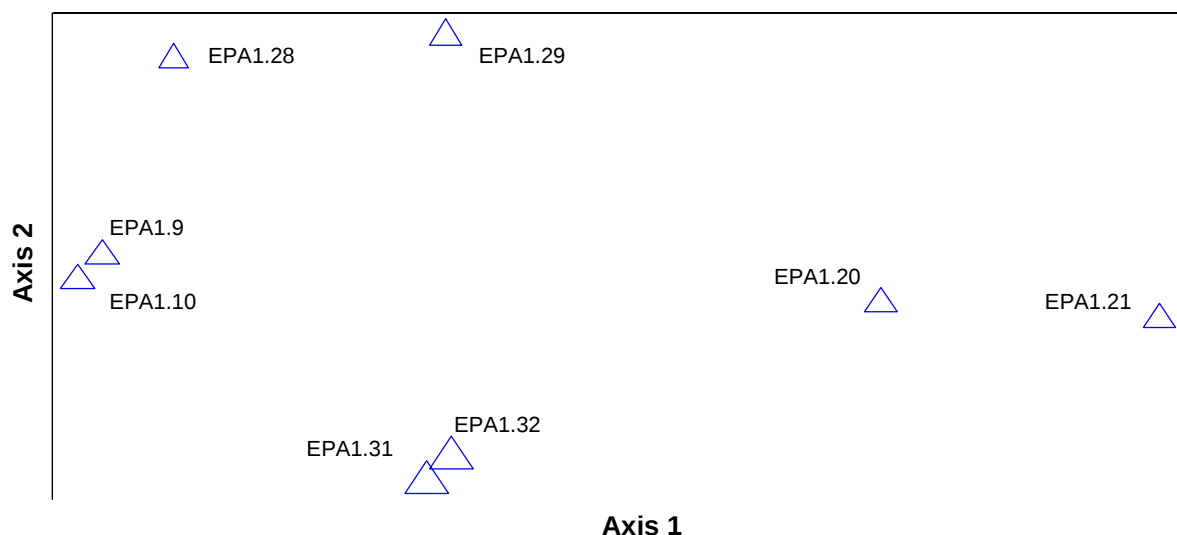


Figure 5. Non-metric multidimensional scaling ordination results for insect data from eight paired disturbed-undisturbed sites.

PLANT COMMUNITY CLASSIFICATION AND DESCRIPTIONS

Sycamore Floodplain Forest

GENERAL DESCRIPTION / ECOLOGICAL PROCESSES: The sycamore floodplain forest community typically occurs on intermediate order tributaries to the Susquehanna River subject to extended periods of flooding and high stream velocity. These sites are normally small islands, low bars and lower terraces. The substrate is usually saturated or inundated for two weeks or longer each year and is typically very well-drained coarse sand, gravel and cobbles. The majority of stands appear to be roughly even aged, suggesting the colonization of newly formed gravel/cobble bars after flood events. Where coarse sediment is accreting on the edge of existing sycamore stands, there may be several distinct cohorts of sycamore trees, with the oldest cohort furthest from the active stream channel. This community may also occur on the upstream end of islands on intermediate tributaries as well as free-flowing portions of the main stem. Here it typically occurs adjacent to shrub and emergent vegetation (upstream) and other floodplain forest types (down stream). Where stream energy and velocity are slightly lower and the proportion of silt and clay in the substrate increases, this community may transition into the green ash – mixed hardwood type or one of the silver maple types. In smaller tributaries and on slightly higher terraces with coarse substrates, this community is replaced by the sycamore – mixed hardwood type.

CHARACTERISTIC VEGETATION: This community is characterized by a somewhat open to completely closed canopy dominated by *Platanus occidentalis* (sycamore). Other hardwood species, such as *Celtis occidentalis* (hackberry), *Populus deltoides* (cottonwood), and *Ulmus americana* (American elm), may be present in the canopy but are typically a minor component of the stand. The subcanopy is generally sparse to moderately well developed, often dominated by sycamore and American elm. The shrub layer may be open to quite dense. When present, the shrub layer is typically a dense growth of *Rosa multiflora* (multifloral rose). The herbaceous layer in most stands is heavily impacted by exotic species, particularly *Polygonum cuspidatum* (Japanese knotweed), *Alliaria petiolata* (garlic mustard), and *Microstegium vimineum* (Japanese stiltgrass). In higher quality stands, the herbaceous layer is sparse to moderately dense, and characterized by *Solidago gigantea* (smooth goldenrod), *Teucrium canadense* (germander), *Solidago rugosa* (rough-leaved goldenrod), *Matteuccia struthiopteris* (ostrich fern), *Urtica procera* (stinging nettle) and other native species.

DISTRIBUTION: Entire State

STATE RANK: S4

GOOD EXAMPLES: Loyalsock Creek, Tunkhannock Creek

NATIONAL VEGETATION CLASSIFICATION ASSOCIATION: *Betula nigra* – *Platanus occidentalis* / *Impatiens pallida* Forest, Cegl006184, (in part).

SOURCES : PNFI field surveys

Sycamore – Mixed Hardwood Floodplain Forest

GENERAL DESCRIPTION / ECOLOGICAL PROCESSES: This community is primarily associated with intermediate and smaller tributaries on low to intermediate elevation islands and terraces. The presence of several tree species with low to moderate flood tolerance suggests the substrate is sufficiently coarse and the rheotrophic flow is sufficiently rapid to prevent significant development of anaerobic soil conditions. The substrate is saturated or inundated from less than a week to as long as three months each year (typically more than 7 weeks each year). The substrate was usually coarse sand and gravel, often with inclusions of cobble-lined scour channels.

CHARACTERISTIC VEGETATION: This community is clearly dominated by *Platanus occidentalis* (sycamore) in the forest canopy, but usually has significant cover of one or more other hardwood species. Typical canopy associates include *Acer saccharum* (sugar maple) (on smaller tributaries), *A. saccharinum* (silver maple), and *Betula nigra* (river birch). The sub-canopy may be sparse to moderately dense, consisting of canopy species as well as *Carpinus caroliniana* (ironwood). Typical shrubs include *Lindera benzoin* (spice bush) and *Alnus serrulata* (smooth alder). Common herb species include *Anthoxanthum odoratum* (sweet vernal grass), *Microstegium vimineum* (Japanese stiltgrass), *Panicum clandestinum* (deer-tongue grass), and *Thelypteris palustris* (marsh fern).

DISTRIBUTION: Entire State

STATE RANK: S4

GOOD EXAMPLES: Loyalsock Creek, Kettle Creek

NATIONAL VEGETATION CLASSIFICATION ASSOCIATION: *Betula nigra – Platanus occidentalis* / *Impatiens pallida* Forest, CEG006184

SOURCES : PNDI field surveys

Silver Maple – Black Willow – Box Elder Floodplain Forest

GENERAL DESCRIPTION / ECOLOGICAL PROCESSES: This community typically occurs where the substrate remains saturated for extended periods during the growing season, such as back channels, sloughs and other floodplain depressions. This community was most often associated with low and upper terraces of major tributaries of the main stem. These sites are saturated or inundated by floodwaters for as little as a few days to more than 7 weeks each year. However, due to their topographic position (low elevation areas within the floodplain), they likely remain flooded or saturated for extended periods due to high ground water levels. The substrate is usually silt loam to clay loam, reflecting the deposition of fine sediment outside the active stream channel during flood events.

CHARACTERISTIC VEGETATION: The canopy is often dominated by *Acer saccharinum* (silver maple) with *Salix nigra* (black willow) and *Acer negundo* (box elder) co-dominant to sub-dominant. *Fraxinus pennsylvanica* (green ash) and *Platanus occidentalis* (sycamore) may also be present, though typically not as canopy dominants. The subcanopy is usually sparse, consisting of canopy species, while the shrub layer is often sparse to absent. The herb layer is usually dense and varies from near monotypic stands of invasive species, particularly *Lysimachia nummularia* (moneywort), *Alliaria petiolata* (garlic mustard) and *Polygonum cuspidatum* (Japanese knotweed), to fairly diverse stands of native grasses and forbs. Typical native species include the ground creeping form of *Toxicodendron radicans* (poison ivy), *Verbesina alternifolia* (wingstem), *Leersia virginica* (white grass), *Parthenocissus quinquefolia* (Virginia creeper), *Polygonum hydropiper* (water-pepper), *Boehmeria cylindrica* (false nettle) and *Ranunculus hispidus* (hispid buttercup).

DISTRIBUTION: Entire state

STATE RANK: S4

GOOD EXAMPLES: Kirby Park, Kingston; Lake Clarke Reservoir, Conodoguinet Creek

NATIONAL VEGETATION CLASSIFICATION ASSOCIATION: *Acer saccharinum* – *Ulmus americana* – (*Populus deltoides*) Forest, Cegl 002586

SOURCES: PNDI field surveys

Green Ash - Mixed Hardwood Floodplain Forest

GENERAL DESCRIPTION / ECOLOGICAL PROCESSES: The green ash – mixed hardwood community occurs behind levees and on low terraces which may frequently be temporarily flooded but with a shorter duration of flooding (usually less than one week each year) than the silver maple – black willow – box elder type. However, soil characteristics suggest that the ground water level is high for much of the growing season (hydric soil indicators present, soils typically somewhat poorly drained to poorly drained). Soil texture varies from silt to clay loam. On more exposed sites with higher flood flow velocities and coarser substrates, this community may more closely resemble the sycamore – mixed hardwood floodplain forest

CHARACTERISTIC VEGETATION: The canopy of this community is dominated by *Fraxinus pennsylvanica* (green ash) and may contain one or more other hardwood species as sub-dominants, including *Juglans nigra* (black walnut) and *Platanus occidentalis* (sycamore). Other less common canopy species include *Ulmus americana* (American elm), *Celtis occidentalis* (hackberry), *Acer rubrum* (red maple), *Acer saccharinum* (silver maple) and *Quercus palustris* (pin oak) (in southern half of basin). The subcanopy and shrub layers are often sparse (occasionally dense at some sites) and are characterized by regeneration of canopy tree species and some shrub species such as *Rosa multiflora* (multiflora rose) and *Lindera benzoin* (spice bush). Where exotic species are not rampant, the herbaceous layer is characterized by *Impatiens pallida* (yellow jewelweed), *Impatiens capensis* (orange jewelweed), *Laportea canadensis* (wood

nettle) and *Verbesina alternifolia* (wingstem), *Hydrophyllum canadense* (broad-leaved waterleaf), *Toxicodendron radicans* (poison ivy), and *Parthenocissus quinquefolia* (Virginia creeper). A number of examples of this community have been heavily impacted by exotic herbaceous species, which may attain a total cover in excess of 90 percent. Common exotic species include *Alliaria petiolata* (garlic mustard), *Glechoma hederacea* (ground ivy), and *Microstegium vimineum* (Japanese stiltgrass).

DISTRIBUTION: Entire state

STATE RANK: S4

GOOD EXAMPLES: Conoduignet Creek, Susquehanna River near Wyalusing

NATIONAL VEGETATION CLASSIFICATION ASSOCIATION: None

SOURCES: PNDI field surveys

Silver Maple Floodplain Forest

GENERAL DESCRIPTION / ECOLOGICAL PROCESSES: This community is most common on low and occasionally high terraces of the floodplain and islands of major tributaries and the main stem of the Susquehanna River. Young stands of this community may also occur along active scour channels. Soils vary from moderately well-drained (scour zone stands, coarse sand, gravel and/or cobble substrate) to poorly drained (low flood flow velocity areas, sandy loam to silt loam substrate). Island stands tend to have the largest canopy trees on downstream half of the island with trees becoming progressively smaller and younger towards the upstream end.

CHARACTERISTIC VEGETATION: The canopy in this community is strongly dominated by *Acer saccharinum* (silver maple), often occurring as monotypic stands. Other canopy species, when present, comprise a minor component of the stand. Typical canopy associates include *Betula nigra* (river birch) and *Platanus occidentalis* (sycamore). The canopy may be moderately open to completely closed. The subcanopy and shrub layers are usually sparse, limited to some silver maple regeneration and a few shrub species such *Lindera benzoin* (spice bush) and a low shrub form of *Toxicodendron radicans* (poison ivy). The herbaceous layers in most stands are heavily impacted by exotic species. The most common exotic species is *Polygonum cuspidatum* (Japanese knotweed), which often forms near monotypic stands under a silver maple canopy. *P. cuspidatum* stands are often two to three meters or more in height, have high stem densities and densely shade the substrate. Native herbaceous species, when present, occur in low densities. One exception may be spring ephemerals such as *Erythronium americanum* (trout lily), which can complete most of its annual cycle of growth and reproduction before *P. cuspidatum* reaches full stature. Other common exotic species present in moderate to high densities include *Microstegium vimineum* (stiltgrass), *Alliaria petiolata* (garlic mustard), *Lysimachia nummularia* (moneywort), and *Celastrus orbiculatus* (oriental bittersweet), mainly along the main stem south of the Central Appalachian Forest ecoregion). In the few examples where exotic species are not dominant, characteristic species include *Onoclea sensibilis* (sensitive fern), *Toxicodendron*

radicans (poison ivy), *Laportea candensis* (wood nettle), *Leersia virginica* (white grass), *Impatiens* spp. (touch-me-not), *Boehmeria cylindrica* (false nettle), and *Arisaema draconitum* (green dragon).

DISTRIBUTION: Entire state along major rivers and larger tributaries

STATE RANK: S5

GOOD EXAMPLES: Mouth of Mehoopany Creek, North Branch Susquehanna River near Wyalusing and Sayre

NATIONAL VEGETATION CLASSIFICATION ASSOCIATION: *Acer saccharinum* / *Onoclea sensibilis* – *Boehmeria cylindrica* Forest, CEG006176

SOURCES: PNDI field surveys

COMPARISON TO EXISTING PENNSYLVANIA FORESTED FLOODPLAIN WETLAND COMMUNITY CLASSIFICATION

The current Pennsylvania plant community classification (Fike 1999) recognizes three forested floodplain wetland communities: 1) Sycamore – (River Birch) – Box Elder Floodplain Forest, 2) Silver Maple Floodplain Forest, 3) Red Maple – Elm – Willow Floodplain Forest.

In this study, the sycamore type of Fike (1999) is divided into two communities: Sycamore Floodplain Forest (sycamore is typically the sole dominant canopy species), and Sycamore – Mixed Hardwood Floodplain Forest (sycamore shares canopy dominance with one or more other hardwood species). Common associated shrubs of the Fike (1999) sycamore type included *Cornus amomum*, *C. racemosa*, *Lindera benzoin*, and *Salix sericea*, all of which were rare or absent in sycamore stands observed in this study.

The silver maple type of Fike (1999) was also split into two communities in a similar manner, with one type characterized by *Acer saccharinum* as the sole canopy dominant and a second type with *A. saccharinum* sharing canopy dominance with other hardwood species. As with the sycamore type, some shrub species considered typical in the Fike (1999) silver maple type were rare or absent in this study, including: *Cornus amomum*, *C. racemosa*, *Sambucus canadensis*, and *Viburnum recognitum*.

The last Fike (1999) community type, the red maple – elm – willow type is similar to the green ash – mixed hardwood type described in this study, though stands with high black willow cover might fit better in the silver maple – black willow – box elder floodplain forest. Unlike the red maple – elm – willow floodplain forest type, the green ash – mixed hardwood type may occur on the floodplain of the main stem or (more typically) on the floodplain of smaller tributaries.

It should be noted that all three Fike (1999) floodplain forest community types include red maple as a possible co-dominant canopy species, however, red maple is rare or absent from most

forested floodplain sites in the Susquehanna basin. The absence of red maple from most Susquehanna floodplain forests is puzzling, since the majority of upland forest in the basin has been cut several times in the past 300 years, favoring the increase of red maple as a stand dominant or co-dominant over much of the basin. As a result, it was assumed that propagules of red maple are relatively abundant and disperse into the floodplain.

Comparisons to other State Forested Floodplain Classifications

The results from work in the Mid-Atlantic and Northeastern United States can help provide context for this study. The level of detail and refinement in the classification of forested floodplain communities varies considerably across the region. Several states have only a single broad type that likely contains several floodplain community types [e.g., New York (Edinger et al. 2002) and New Jersey (Breden 1989) both have a single type, “Floodplain Forest”]. Several other states have very detailed floodplain forest classifications, especially New Hampshire, and Massachusetts and, to a lesser extent, Virginia. Maryland (Thomson et al. 1999) recently completed a similar forested floodplain community classification. The Vermont plant community classification was not available at the time of this draft (available on Internet only as cross-referenced community list). A plant community classification of any type did not appear to be available for Ohio. Below is a review of related types (where they exist) from other states.

Sycamore Floodplain Forest Types

Both New Hampshire and Massachusetts have identified sycamore dominated floodplain communities. In New Hampshire the “Sycamore Floodplain Forest” is uncommon (Nichols et al 2000) and is limited to the southern portion of the state. Compositionally, the New Hampshire sycamore type resembles the “Sycamore – Mixed Hardwood Floodplain Forest” described in this study, with a number of co-occurring hardwood species. The habitat is similar: coarse sandy loam, sand or gravelly sand along cobbly stream beds. The hydro-regime tends to be flashy with flood events likely at any time of year. The Massachusetts type “Cobble Bar Forest” (Swain and Kearsley 2001) is described as a mix of sycamores and cottonwoods (*Populus deltoides*) on sand and cobble bars. While other tree species may occur in these stands, the physical setting (cobble bars in high-energy rivers) appears to be similar to many of the “Sycamore Floodplain Forest” sites in this study. Cottonwood, while rare in the Pennsylvania portion of the Susquehanna drainage, is most likely to occur in the Sycamore Floodplain Forest, perhaps due to similar germination and establishment requirements as needed by sycamores.

In the Virginia vegetation classification (Fleming 2001), floodplain forests are more generally described as ecological community groups (collections of one or more related community types sharing similar topographic, edaphic, physiognomic and gross floristic similarities). Several of the groups, Piedmont /Mountain Bottomland Forests, Piedmont / Low Mountain Alluvial Forests, and Montane Alluvial Forests all refer to sycamore-dominated communities, usually in relation to exposed sand and cobble bars and/or in association with smaller high energy streams and rivers. The descriptions are too cursory to determine the degree of floristic similarity to the sycamore types described in this study.

Silver Maple Types

All of the state classifications for which a community classification or list was available had at least one silver maple-dominated floodplain forest type. In New Hampshire, four silver maple-dominated floodplain forest community types are recognized (Bechtel and Sperduto 1998). The Silver Maple / Wood Nettle – Ostrich Fern Floodplain Forest type is similar to the Silver Maple Floodplain Forest in this study with a closed canopy of silver maple and little tree regeneration in the shrub and subcanopy layers. The New Hampshire Silver Maple / False Nettle – Wood Reed-Sedge Floodplain Forest, and the Sugar Maple – Silver Maple – White Ash Floodplain Forest types may be intermediate between the Pennsylvania Silver Maple Floodplain Forest and the Silver Maple – Box Elder – Willow Floodplain Forest types of this study, based on tree regeneration in the shrub and subcanopy layers and the increased cover of canopy species other than silver maple. It should be noted that black willow does not appear to be an important component of any of the New Hampshire types and that white ash rather than green ash is the common *Fraxinus* species in New Hampshire stands.

On higher floodplain terraces (not addressed in this study), New Hampshire floodplain forests include elements of mesic northern hardwood forests (*Quercus rubra*, *Betula alleghaniensis*, *Ostrya virginiana*, etc.). One notable difference between New Hampshire silver maple floodplain forests, especially low terrace stands, is the absence of low cover of *Toxicodendron radicans* (poison ivy), which in Pennsylvania silver maple floodplain forests can occur as large, nearly monotypic patches, resembling short shrubs 0.5 – 1.0 m in height.

Three silver maple-dominated types are described for Massachusetts, Major-River Floodplain Forest, Transitional Floodplain Forest, and Small River Floodplain Forest. While occurring in similar physical settings as the Pennsylvania silver maple types, the Massachusetts types differ in the composition of canopy co-dominants and sub-dominants, particularly *Fraxinus americana*, *Ulmus americana*, *Quercus palustris* and *Populus deltoides* which tend to be rare or absent from Pennsylvania floodplain forests. *Platanus occidentalis*, *Betula nigra*, *Acer negundo* and *Salix nigra*, potential co-dominants or sub-dominant species in Pennsylvania floodplain forests, are minor components in most Massachusetts floodplain forests. The understory and herbaceous layers seem to have a great deal of overlap except for *Matteuccia struthiopteris*, which is common and often abundant in New York and New England floodplain forests, but is only occasionally and rarely abundant in Pennsylvania floodplain forests. As in Massachusetts, exotic species are recognized as a significant threat to silver maple-dominated floodplain forests, especially *Polygonum cuspidatum*.

In Virginia, the Piedmont / Mountain Bottomland Forest ecological community group includes silver maple-dominated floodplain forests that appear to overlap with both the Pennsylvania silver maple types, though more data are needed for a better comparison.

Green Ash – Mixed Hardwood Types

In New Hampshire, *Fraxinus pennsylvanica* is limited to the low variant of the Swamp White Oak Floodplain Forest, where *F. pennsylvanica* is common to dominant in association with *Quercus bicolor* (swamp white oak), *Acer rubrum* and *Carpinus caroliniana*. In Pennsylvania, by

contrast, common co-dominants in Green Ash – Mixed Hardwood Floodplain Forests include *Platanus occidentalis*, *Celtis occidentalis*, and *Juglans nigra*, with *C. caroliniana* and *A. rubrum* occurring rarely to occasionally, and *Q. bicolor* completely absent. In Massachusetts, the Alluvial Red Maple Swamp community occurs in the same setting as the Green Ash - Mixed Hardwood Floodplain Forest in Pennsylvania (areas along smaller rivers receiving overbank flooding in floodplain depressions with poorly drained soils, typically clay to silt loams). In Pennsylvania, *F. pennsylvanica* is the canopy dominant with *A. saccharinum* and *A. rubrum* as sub-dominant, occasional or rare species (in Massachusetts, the reverse is the case). In Virginia, *F. pennsylvanica* dominated stands may occur in the Piedmont / Mountain Bottomland Forest and Piedmont / Low Mountain Alluvial Forest ecological community groups in poorly drained floodplain backwaters and depressions. Additional detailed information is needed for a full comparison to the Pennsylvania Green Ash – Mixed Hardwood community.

Comparisons to Allegheny and Delaware River Basins

The Allegheny and Delaware River Basins were not addressed in this study and have not been intensively surveyed for the purposes of plant community classification. However, some information is available regarding the forested floodplain communities of each basin in the form of incidental information from PNDR rare species surveys (e.g., riparian plant species, mussel surveys near Delaware River Islands) and scientific publications (e.g., floodplain research on the Allegheny River). Notes from PNDR rare species surveys on the Allegheny River suggests that silver maple and sycamore are the most common floodplain canopy species. Other canopy species reported included green and white ash, river birch, box elder, persimmon (*Diospyros virginiana*), black willow, cottonwood, black walnut, and hackberry (*Celtis occidentalis*). Understory information was very limited, though *Polygonum cuspidatum* invasion was noted as a threat to several stands. Several papers describe forested floodplain communities on the Allegheny River (Walters and Williams 1999, Whitbeck et al. 1997). Silver maple and sycamore were also noted as canopy dominants, while subcanopy tree species included white ash, bitternut hickory (*Carya cordiformis*) and black willow. Given the limited data available, it appears that most, if not all of the forested floodplain community types present in Susquehanna River Basin also occur in the Allegheny and Delaware River Basins. However, both the Allegheny and Delaware Basins include portions of other ecoregions (i.e., Western Allegheny Plateau and North Atlantic Coast ecoregions, respectively) and the potential exists for floodplain communities unique to those ecoregions as well as regional variants of the communities described in this study. Adequate description of the forested floodplain communities of the Allegheny and Delaware River Basins will require additional survey and classification analysis

SITES OF STATE SIGNIFICANCE

A number of sites in this study were considered to be good to excellent quality examples of their respective plant community types based upon size, condition and context. These sites will be entered in the Pennsylvania Natural Diversity Inventory database for reference and tracking as significant examples of their respective community types.

Site size was evaluated on a relative scale, given that communities more common on smaller tributaries are limited in extent by the narrowness of the floodplain. Also, because so much of the floodplain within the basin has been substantially altered or completely eliminated, few areas of any size remain even within those drainages that contain large areas of functional floodplain.

The condition of many floodplain forest stands has been compromised by a range of disturbances including logging, disease (elm mortality), and invasive (typically non-native) species. Invasive species are a particularly widespread problem in forested floodplain wetlands, as discussed below. Site condition was considered excellent if anthropogenic disturbances were not evident and exotic/invasive species were few or absent.

Site context refers to the relation of the site to its surrounding landscape. Context was considered excellent if the surrounding landscape was intact (cover in natural communities) and fragmenting features were minor or absent (e.g., roads, power lines, agricultural fields, developed land).

The following list of sites were considered the best examples of their respective community types sampled in this study, all of which range from good to excellent in overall quality. No candidate sites were identified for the Sycamore Floodplain Forest type. For a description of each site, see Appendix I.

- Sycamore – Mixed Hardwood Floodplain Forest
EPA1.36
- Green Ash – Mixed Hardwood Forest
EPA1.9
EPA1.19
EPA1.23
- Silver Maple – Willow- Box Elder Floodplain Forest
EPA1.14
- Silver Maple Floodplain Forest
EPA1.4
EPA1.5
EPA1.18
EPA1.20
EPA1.22
EPA1.24

CONSERVATION IMPLICATIONS

The ongoing loss of floodplain forest to industrial, commercial and residential development may have slowed in the last few decades given that large sections of floodplain have been already converted to other uses. Improved planning and informed decision-making have limited further floodplain development and favored the creation of conservation reserves in flood-prone areas.

However, substantial threats to floodplain forest communities remain, including floodplain forest wetlands.

Even though the Susquehanna River is essentially non-navigable, its floodplains have shared a similar fate to other large rivers. Floodplains have typically been favored for the development of transportation infrastructure, with railroads and highways built to connect goods and commerce along the drainages. Generally, the Susquehanna River watershed exhibits the extensive floodplain loss and retains few sections of intact floodplain that characterizes many of the major drainages throughout the northeast. The largest patches of remaining floodplain forest tend to be associated with major tributary confluences and island chains. These high energy and frequently inundated areas have not lent themselves to permanent development and have been favored instead by agriculture and forestry uses.

Issues of scale and context confront those remaining floodplains and their associated wetlands. Small size and isolation within largely non-forested settings expose these sites to various edge effects including invasion by exotic species, high levels of predation, rapid and frequent nutrient and pollution input, and greater impact from flooding and scouring events. Many of these areas have little or no functional forest interior and associated wetlands. Vernal wetlands, in particular, may not have sufficient surrounding habitat for dispersal of amphibians.

Those floodplains that are part of a larger, more intact, forested landscape are not free from these issues that confront their smaller counterparts. Invasive exotic species present an increasingly serious issue. Japanese knotweed (*Polygonum cuspidatum* and *Polygonum sachalinense*), mile-a-minute weed (*Polygonum perfoliatum*), purple loosestrife (*Lythrum salicaria*), common privet (*Ligustrum vulgare*), moneywort (*Lysimachia nummularia*), and Japanese silt grass (*Microstegium vimineum*) were species of particular interest during this study. These species demonstrated their proclivity to cover large areas and substantially diminish native plant cover. Japanese knotweed presents likely the most pernicious threat. *Polygonum cuspidatum* occurred on almost all sites and, within the highly active floodplains, often formed monocultures that excluded nearly all other vegetation, including overstory seedlings and saplings.

Control of these species is a daunting and perplexing task. The best hope may be for the eventual evolution of natural disease and predators to counter their growth and spread. Currently, seed and propagule sources for such wide-spread and highly fecund species are functionally everywhere. Disturbance, whether from human activities or natural cycles (e.g. flooding and scouring), creates favorable conditions for the continued spread and short-order dominance of many of these species, Japanese knotweed being again the prime example.

A number of sites that were included in this study are of sufficient quality to be considered of state significance. These high quality sites face many of the issues described above, but due to size, lack of disturbance, or circumstance, have retained some of the structure and composition characteristic of forested floodplain wetlands.

Conservation may best be accomplished, at least in the short-term, with the consideration of these high quality sites. Along with others yet to be identified, the higher quality sites included in this study can serve as reference sites and may be the most appropriate targets for restoration activities aimed at controlling exotic species, expanding adjacent habitats, and minimizing anthropogenic disturbances.

As more complete information comes available through a Pennsylvania Natural Diversity Inventory aquatic community classification effort ongoing in Pennsylvania, the sites selected for this study may provide a context for similar quantitative work focused on representative watersheds in each ecoregion throughout the state. Such efforts will facilitate the development of a more comprehensive approach to riparian/stream conservation.



Purple loosestrife (*Lythrum Salicaria*) patch typical of many shorelines on the Susquehanna River

Although the level of concern for water quality and general awareness of watershed issues has increased with the advent of several state-funded initiatives (e.g. Growing Greener), floodplains continue to suffer impacts from various sectors. The key to success in maintaining high quality examples of various floodplain communities will be increasing the awareness of riparian landowners of the importance of forest and canopy cover to wetland, stream and riparian corridor function. Fortunately, some land management entities including the Pennsylvania Bureau of Forestry and the Pennsylvania Bureau of State Parks do utilize the *Terrestrial Communities of Pennsylvania* (Fike 1999) and the finer community distinctions that derive from this study can be readily integrated into existing management plans and approaches (clarify). Wider use of the classification will help to inventory and prioritize management within sites throughout the Susquehanna Basin.



Disturbed bank with Japanese knotweed (*Polygonum cuspidatum*) and purple loosestrife (*Lythrum salicaria*) typical of many disturbed areas within the Susquehanna River Drainage

BIBLIOGRAPHY

- Bechtel, D. A. and D. D. Sperduto. 1998. Floodplain Forest Natural Communities along Major Rivers in New Hampshire. New Hampshire Natural Heritage Inventory, Department of Resources and Economic Development, Concord, NH.
- Brauning, D. W. 1992. Atlas of Breeding Birds in Pennsylvania. University of Pittsburgh Press. Pittsburgh, PA.
- Breden, T. 1989. A preliminary natural community classification for New Jersey. In: Karlin, E.F. (editor). 1989. New Jersey's rare and endangered plants and animals. Institute for Environmental Studies, Ramapo College, Mahwah, NJ. 280 p.
- Bickelhaupt, D. H. and E. H. White. 1982. Laboratory manual for soil and plant tissue analysis. SUNY- College of Environmental Science and Forestry, 67 pp.
- Bier, C. W. 1977. Stream valley - mixed mesophytic forest. Number 17 of Breeding Bird Census (W. T. Van Velzen, editor), American Birds 31: 33-34.
- Crum, H. A. and L. Anderson, 1981. *Mosses of Eastern North America*. Columbia Univ. Press, New York, NY.
- Deiller, A.F., J.M. Walter, M. Tremolieres. 2001. Effects of flood alteration on species richness, diversity and floristic composition of woody regeneration in the Upper Rhine alluvial hardwood forest. Regulated Rivers Research and Management 17 (4-5): 393-405.
- Diamond, J.M. and V.B. serveiss. 2001. Identifying the sources of stress to native aquatic fauna using a watershed ecological risk assessment framework. Environmental Science and Technology 35: 4711-4718.
- Doherty, P. F. and T. C. Grubb. 2002. Survivorship of permanent resident birds in a fragmented forested landscape. Ecology. 83(3): 844-857.
- Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. hunt and A.M. Olivero (editors). 2002. Ecological communities of New York State, second edition (draft for review). New York Natural Heritage Program, New York State department of Environmental Conservation, Albany NY.
- Fleming, G.P., P.P. Coulling, D.P. Walton, K.M. McCoy, and M.R. Parrish. 2001. The natural communities of Virginia: classification of ecological groups. Firest approximation. Natural Heritage Technical Report 01-1. Virginia Department of Conservation and Recreation, Diveision of natural heritage, Richmond, VA. Unpublished report. January 2001. 76 pp.

- Gauch, H. G., Jr. 1982. Multivariate analysis in community ecology. Cambridge University Press, New York.
- Gross, D. A. 1990. Pennsylvania Society for Ornithology Special Areas Project Instructions and Codes. Ecology III, 804 Salem Boulevard, Berwick, PA.
- Jones, E. B., G. S. Helfman, J. O. Harper, P. V. Bolstad. 1999. Effects of riparian forest removal on fish assemblages in Southern Appalachian streams. *Conservation Biology*. 13(6): 1454-1465.
- Kreutzweiser, D. P. and S. S. Capell. 2001. Fine sediment deposition in streams after selective forest harvesting without riparian buffers. *Canadian Journal of Forest Research*. 31(12): 2134-2142.
- MacArthur, R. H. and J.W. MacArthur. 1961. On bird species diversity. *Ecology* 42: 594-598.
- MacArthur, R. H. and E. O. Wilson. 1967. *The Theory of Island Biogeography*. Princeton Press, Princeton, NY.
- Martin, T. E. 1981. Limitation in small habitat islands: chance or competition. *Auk* 98:715-734.
- McCune, B., and M.J. Mefford. 1997. PC-ORD, multivariate analysis of ecological data, version 3.0. MjM Software Design, Gleneden Beach, Oregon.
- Mills, G. S., J. B. Dunning, and J. M. Bates. 1991. The relationship between breeding bird density and vegetative volume. *Wilson Bull.* 103: 468-479.
- Nichols, W. F., D. D. Sperduto, D. A. Bechtel, and K.F. Crowley. 2000. Floodplain Forest Natural Communities along Minor Rivers and Large Streams in New Hampshire. New Hampshire Natural Heritage Inventory, Department of Resources and Economic Development, Concord, NH.
- Ralph, C. J., G. R. Geupel, P. Pyle, T. E. Martin, and D. F. DeSante. 1993. *Handbook of Field Methods for Monitoring Landbirds*. Gen. Tech. Rep. PSW-GTR-144, Albany, Ca: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 41 p.
- Rhoads, A.F., and W.M. Klein Jr., 1993. *The Vascular Flora of Pennsylvania*. The American Philosophical Society, Philadelphia, PA.
- Shafroth, P. B., J. C. Stromberg, D. T. Patten. 2002. Riparian vegetation response to altered disturbance and stress regimes. *Ecological Applications*. 12(1):107-123.
- Smart, R.P., C. Soulsby, M.S. Cresser, A.J. Wade, T. Towend, M.F. Billet and S. Langan. 2001. Riparian influence on stream water chemistry at different spatial scales: A GIS-based

- modeling approach, an example for the Dee, NE Scotland. *Science of the Total Environment* 280: 173-193.
- Sponseller, R.A., E.F. Benfield, and H.M. Vallett. 2001. Relationships between land use, spatial scale and stream macroinvertebrate communities. *Freshwater Biology* 46: 1409-1424.
- Stranahan, S. Q. 1993. *Susquehanna, river of dreams*. Johns Hopkins University Press, Baltimore, MD, 322pp.
- The Nature Conservancy. 1993. Field form instructions for the description of sites and terrestrial, palustrine, and vegetated estuarine communities, Version 2.
- The Nature Conservancy and Environmental Systems Research Institute. 1994. Standardized national vegetation classification system.
- Thomson, D., A. M. A. Gould, and M. A. Berdine. 1999. Identification and Protection of Reference Wetland Natural Communities in Maryland: Potomac Watershed Floodplain Forests. United States Environmental Protection Agency Clean Water Act 1995 State Wetlands Protection Development Grant Program. 119pp.
- U.S. Environmental Protection Agency. 1997. Wetlands Protection--State/Tribal/Local Governments Wetlands Development Grants. U.S. Environmental Protection Agency, Wetlands Division: FY98 Grant Guidance.
- Walters, G.L. and C.E. Williams. 1999. Riparian forest overstory and herbaceous layer of two upper Allegheny River islands in northwestern Pennsylvania. *Castanea* 64: 81-89.
- Whitbeck, H.J., G.G. Hartman, and F.J. Grace. 1997. Botanical survey of two islands in the middle Allegheny River corridor. *Journal of the Pennsylvania Academy of Science* 71:3-9.
- Zalewski, M., B. Bis, P. Frankiewicz, M. Lapinska, and W. Pulchalski. 2001. Riparian ecotone as a key factor for stream restoration. *Ecohydrology and Hydrobiology* 1: 245-251.

APPENDICES

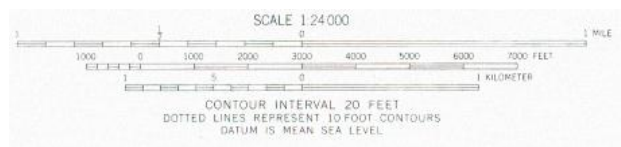
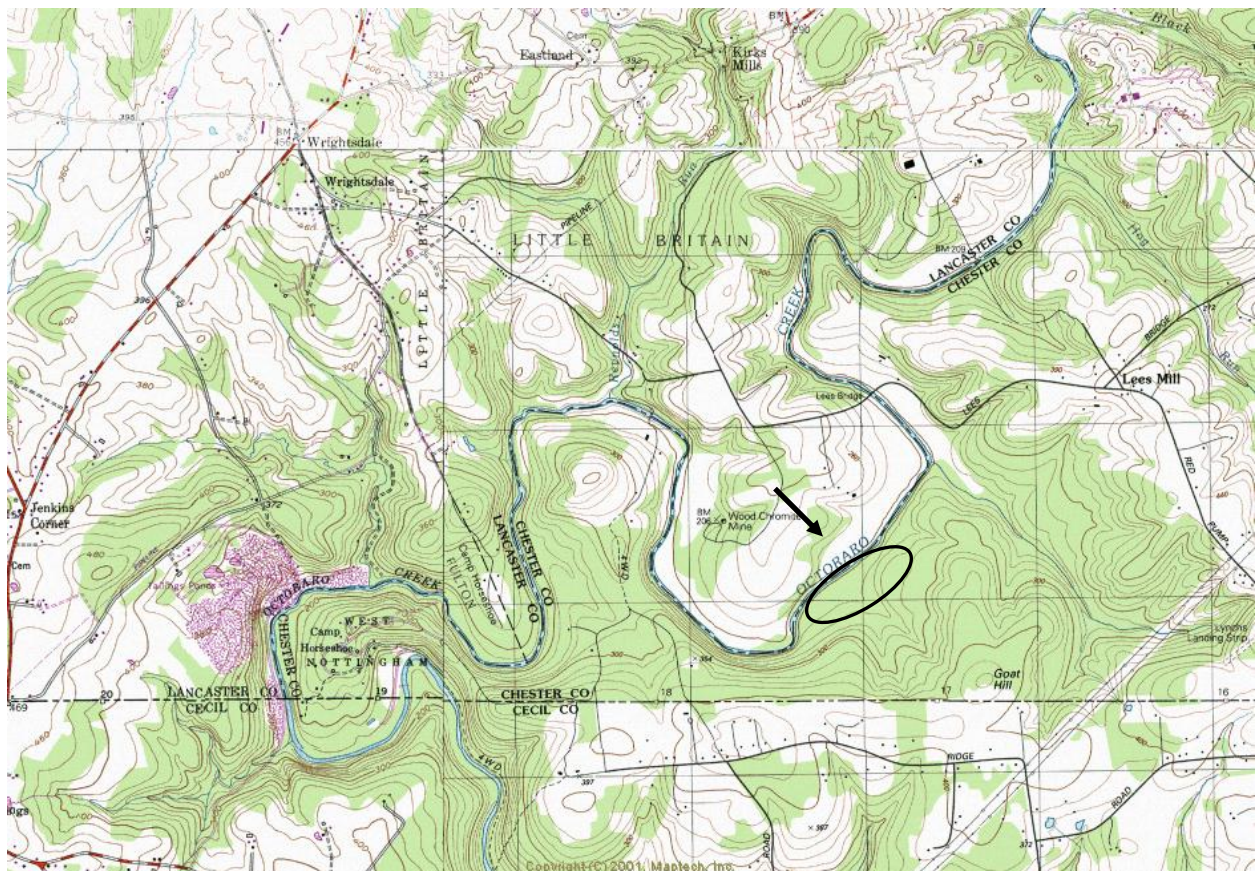
Appendix I. Location of Susquehanna Basin Floodplain Forest Wetland Sites

Site: EPA 1.1

USGS 7.5' Quadrangle: Rising Sun, PA
Chester County, West Nottingham Twp.
Location: Lee's Mill, 2.1 km WSW

UTM Zone: 18
Easting: 0405789 m
Northing: 4397909 m
Elevation: 197 ft.

EPA 1.1 lies within TNC's Northern Piedmont Ecoregion along Octoraro Creek in Chester County. This site includes a rather extensive, forested riparian and upland area on the southeastern side of the creek. Agricultural lands occupy the opposite shoreline and forested riparian areas are few. The plot represents a full canopy, *Quercus palustris*, *Acer rubrum*, *Fraxinus pennsylvanica* dominated community. Other prominent associates include *Acer negundo*, *Lindera benzoin*, *Carpinus caroliniana*, *Laportea canadensis*, and *Microstegium vimineum*.

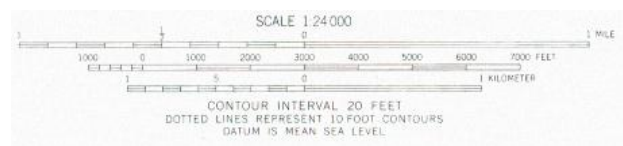
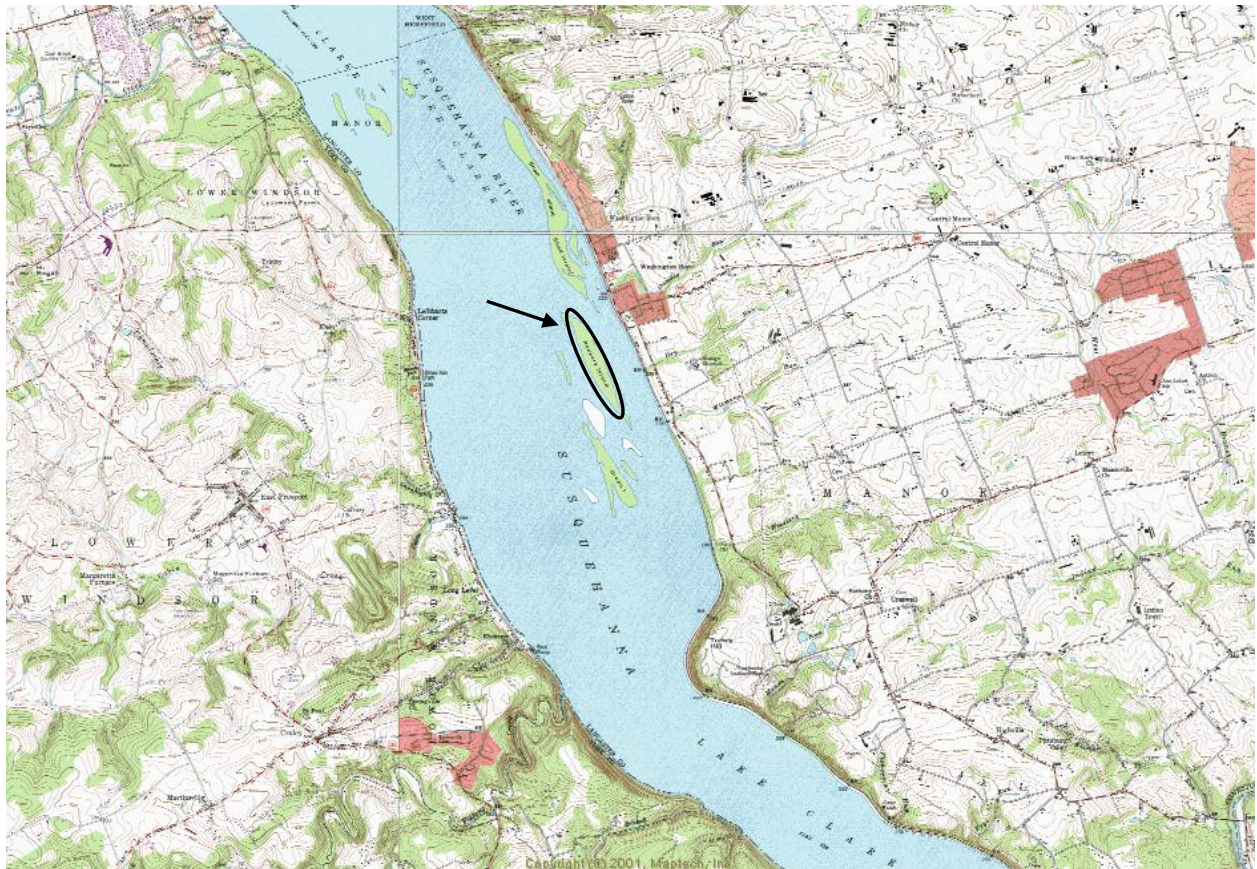


Site: EPA 1.2

USGS 7.5' Quadrangle: Safe Harbor, PA
Lancaster County, Manor Twp.
Location: Liebarts Corner, 2.3 km ESE

UTM Zone: 18
Easting: 0374292 m
Northing: 4427050 m
Elevation: 226 ft.

EPA 1.2 lies within TNC's Northern Piedmont Ecoregion and is situated on an island in the Lake Clark impoundment of the lower Susquehanna River in Lancaster County. This site sits on what can now be considered a low terrace of the floodplain. Relatively isolated from the shoreline, this island is one in a series of islands, surrounded by a predominantly agricultural landscape in this section of river. The plot represents a full canopy, *Acer saccharinum* dominated community containing lesser amounts of *Fraxinus pennsylvanica*. Other prominent associates include *Morus alba*, *Lindera benzoin*, *Sambucus canadensis*, *Impatiens pallida*, *Toxicodendron radicans*, and *Polygonum hydropiper*.

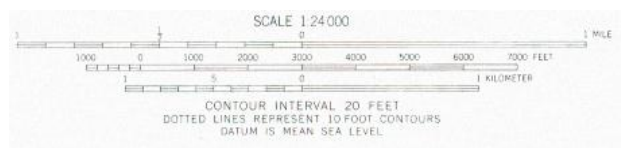
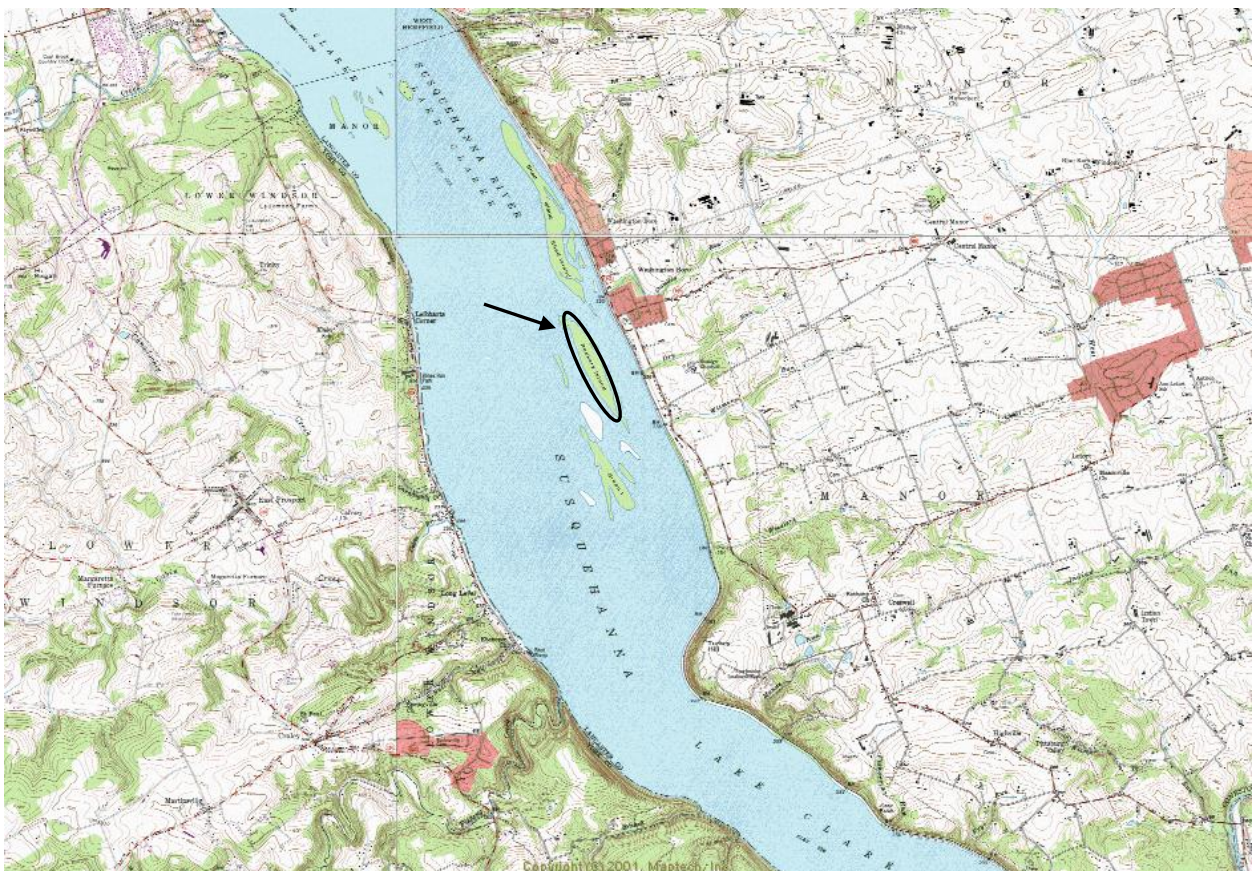


Site: EPA 1.3

USGS 7.5' Quadrangle: Safe Harbor, PA
Lancaster County, Manor Twp.
Location: Liebarts Corner, 2.3 km ESE

UTM Zone: 18
Easting: 0374290 m
Northing: 4427209 m
Elevation: 226 ft.

EPA 1.3 lies within TNC's Piedmont Ecoregion and is situated on an island in the Lake Clark impoundment of the lower Susquehanna River in Lancaster County. This site sits on what can now be considered a low terrace of the floodplain. Relatively isolated from the shoreline, this island is one in a series of islands, surrounded by a predominantly agricultural landscape in this section of river. The plot represents a full canopy, *Betula nigra* dominated community containing lesser amounts of *Acer saccharinum*. Other prominent associates include *Ulmus americana*, *Robinia pseudoacacia*, *Onoclea sensibilis*, *Laportea canadensis*, and *Lysimachia nummularia*.

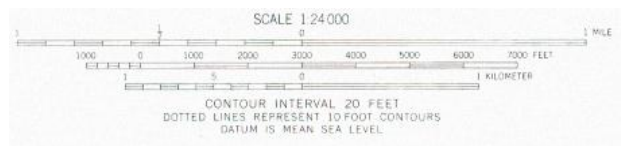
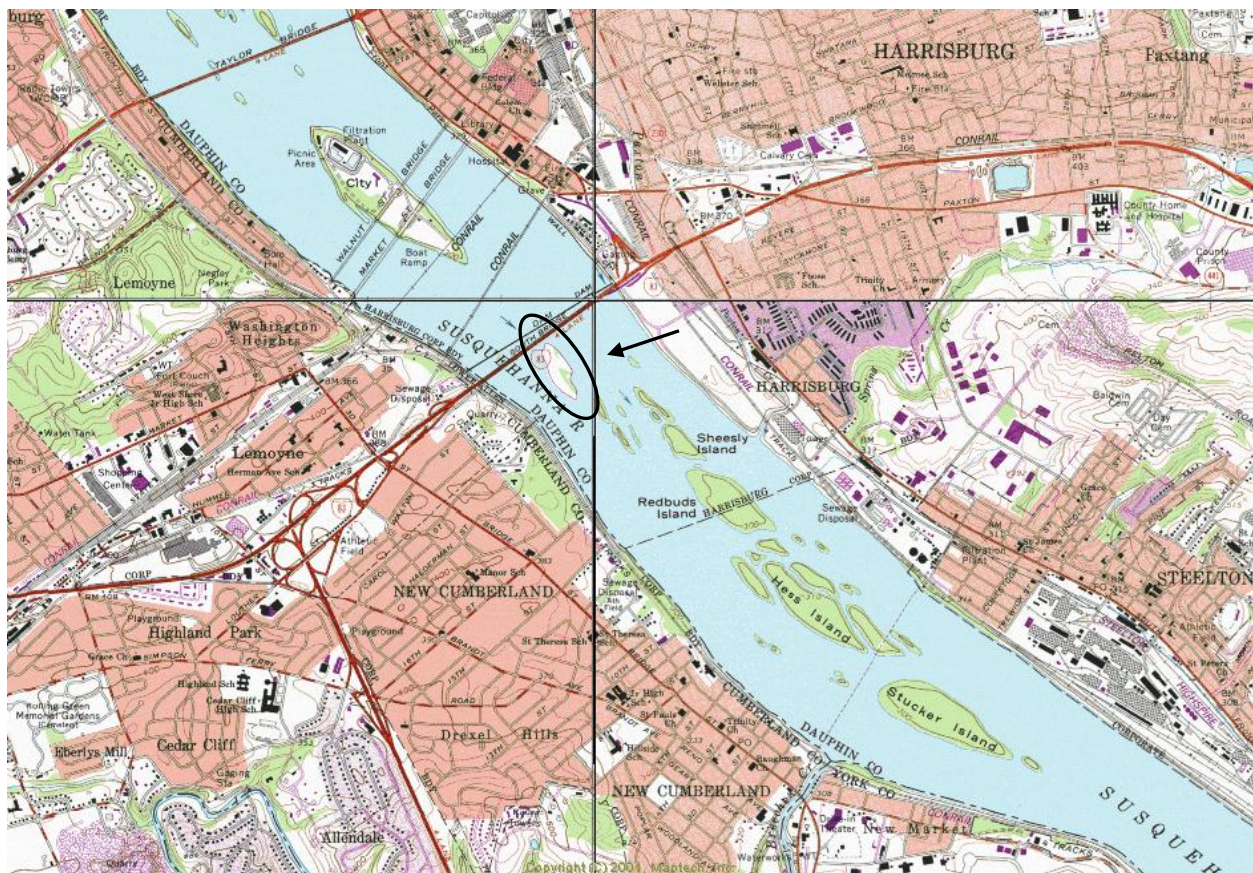


Site: EPA 1.4

USGS 7.5' Quadrangle: Frankstown, PA
Dauphin County, Harrisburg
Location: Lemoyne, 1.3 km E

UTM Zone: 18
Easting: 0340368 m
Northing: 4456819 m
Elevation: 278 ft.

EPA 1.4 lies within TNC's Central Appalachian Ecoregion on an island within the Susquehanna River at Harrisburg in Dauphin County. This site sits on a low terrace that receives heavy scouring from most high-water stages of the river. The island is situated within a series of islands and is relatively isolated from the shoreline. A bridge crossing just upstream constitutes the most significant, immediate land use. Broadly, this section of the river lies within a highly urbanized landscape. The plot represents a full canopy, *Acer saccharinum* dominated community containing some *Betula nigra* and *Acer saccharum*. Other associates are sparse and account for little cover. They include *Gleditsia tricanthos*, *Toxicodendron radicans*, *Lysimachia ciliata*, and *Impatiens capensis*.

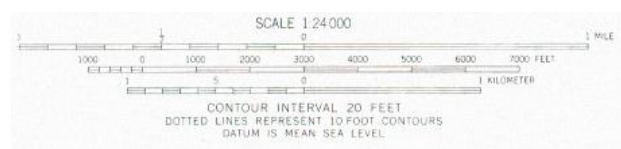
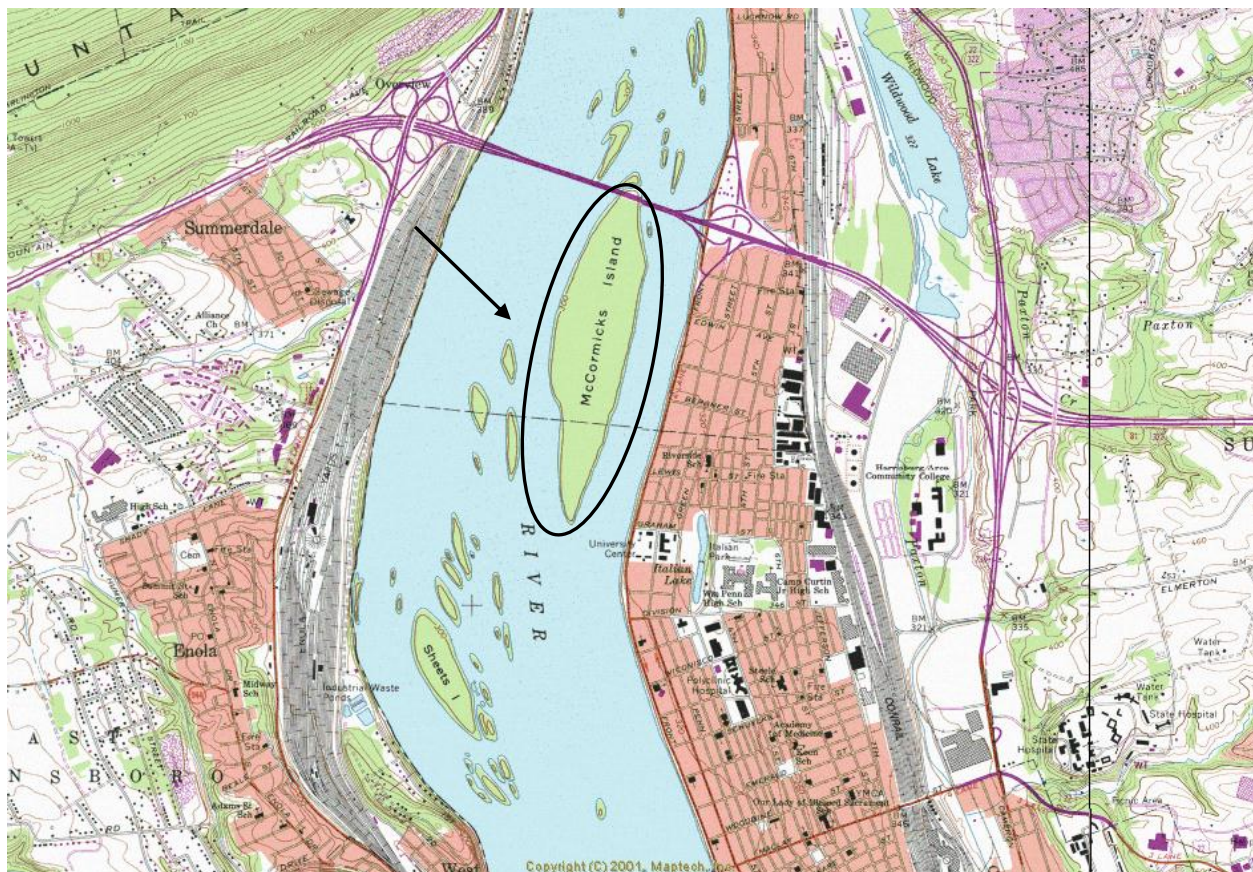


Site: EPA 1.5

USGS 7.5' Quadrangle: Harrisburg West, PA
Dauphin County, Harrisburg
Location: Summerdale, 2.3 km SE

UTM Zone: 18
Easting: 0337658 m
Northing: 4462444 m
Elevation: 357 ft.

EPA 1.5 lies within TNC's Central Appalachian Forest Ecoregion on an island within the Susquehanna River near Harrisburg. This site includes a large, forested island crossed on its north end by an interstate highway. Aside from this highway and some recreational use of the island, it is immediately isolated from the highly urbanized shoreline of the river. The plot represents a full canopy, *Acer saccharinum* dominated community containing some *Platanus occidentalis*. Other prominent associates include *Asimina triloba*, *Lindera benzoin*, *Toxicodendron radicans*, *Impatiens pallida*, and the exotic invasive – *Celastrus orbiculatus*.

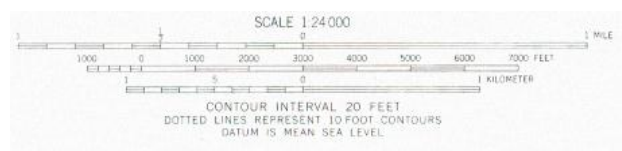
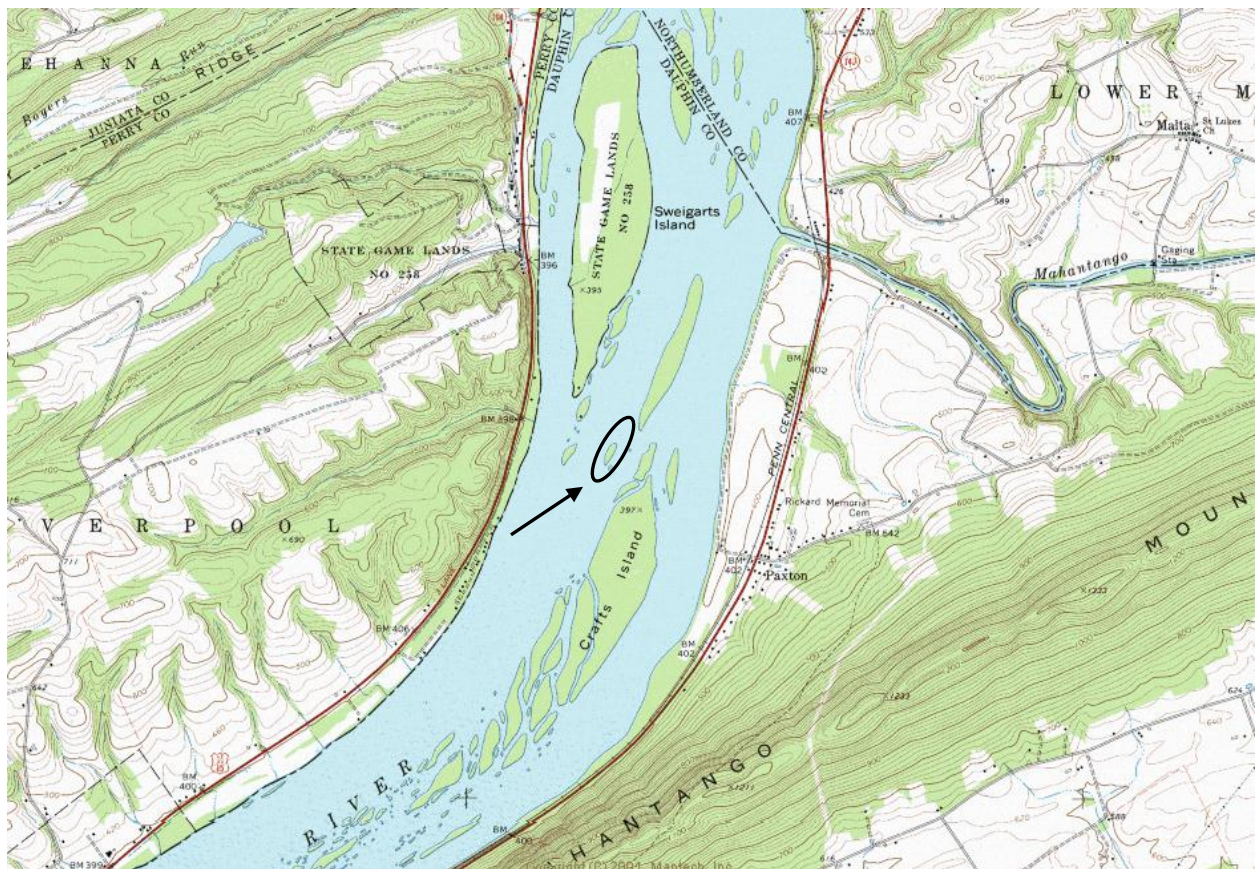


Site: EPA 1.6

USGS 7.5' Quadrangle: Millerburg, PA
Dauphin County, Upper Paxton Twp.
Location: Paxton, 1.1 km NW

UTM Zone: 18
Easting: 0334821 m
Northing: 4495391 m
Elevation: 380 ft.

EPA 1.6 lies within TNC's Central Appalachian Forest Ecoregion on a small island that is part of a larger chain of islands in this section of the Susquehanna River. These islands are relative undisturbed by human activity although subjected to a very active flooding regime. Shoreline land use includes a mixture of forest, concentrated residential, agriculture, and immediate to the shoreline, a highway corridor and associated infrastructure. The plot represents a partial to full canopy, *Platanus occidentalis* - *Acer saccharinum* co-dominated community containing significant amounts of *Fraxinus pennsylvanica*. The understory is sparse save for an abundance of *Polygonum cuspidatum* and *Toxicodendron radicans* vines.

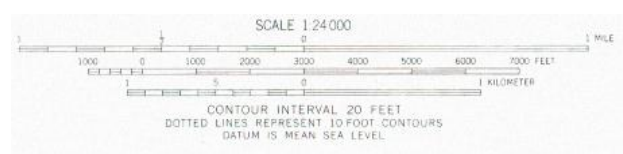
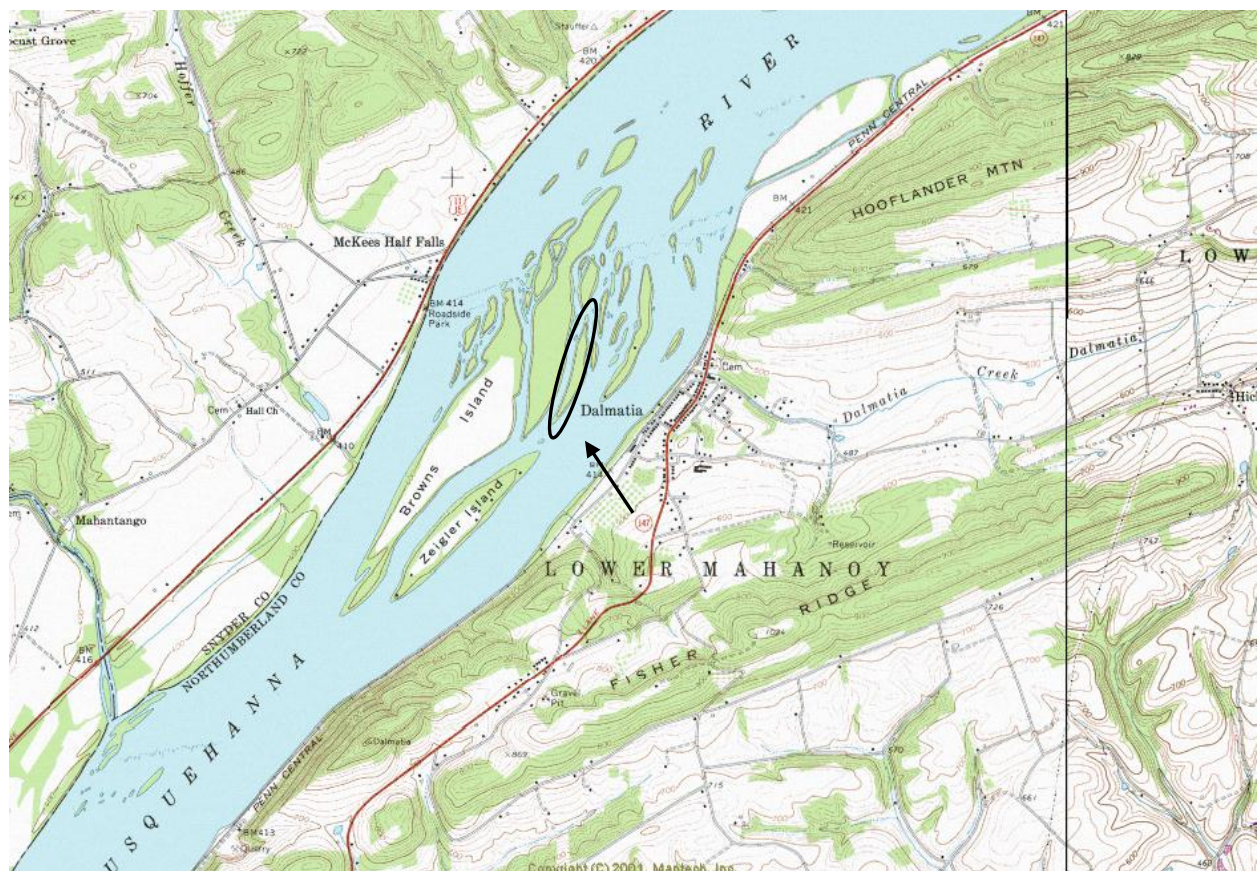


Site: EPA 1.7

USGS 7.5' Quadrangle: Dalmatia, PA
Northumberland County, Lower Mahanoy Twp.
Location: Dalmatia, 0.7 km W

UTM Zone: 18
Easting: 0338969 m
Northing: 4502498 m
Elevation: 380 ft.

EPA 1.7 lies within TNC's Central Appalachian Forest Ecoregion on an island embedded in a dense chain of islands within the Susquehanna River. Aside from the larger islands (Browns and Zeigler), these islands are relative undisturbed by human activity although subjected to a very active flooding regime. Shoreline land use includes a mixture of forest, concentrated residential development, agriculture, and immediate to the shoreline, a highway corridor and associated infrastructure. The plot represents a full canopy, *Platanus occidentalis* - *Acer saccharinum* co-dominated community containing some *Betula nigra*. The understory and herbaceous layers are sparse with *Toxicodendron radicans* and *Vitis aestivalis* being the most prominent associates.

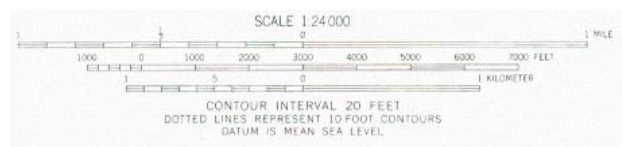
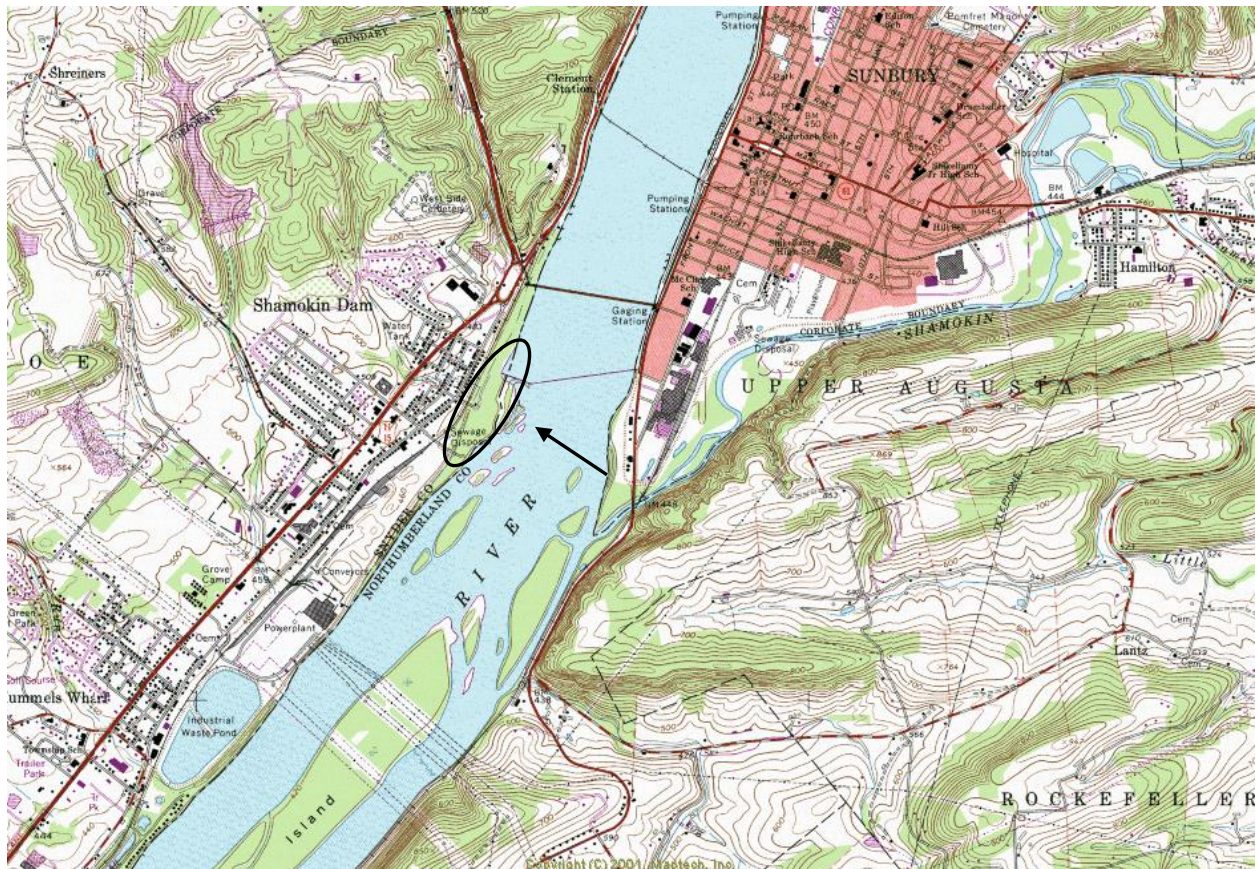


Site: EPA 1.8

USGS 7.5' Quadrangle: Sunbury, PA
Northumberland County, Upper Augusta Twp.
Location: Shamokin Dam, 0.9 km E

UTM Zone: 18
Easting: 0347114 E
Northing: 4523259 N
Elevation: 456 ft.

EPA 1.8 lies within TNC's Central Appalachian Forest Ecoregion along the Susquehanna River at the town of Shamokin Dam. This site sits on a low terrace of the river and is subject to heavy scouring. The site is located in a small forested patch surrounded by sections of formal parkland, urban development and flood control infrastructure. The plot represents a full canopy, *Acer saccharinum* dominated community containing some *Betula nigra* and understory *Fraxinus pennsylvanica*. Other prominent associates include *Polygonum cuspidatum*, *Toxicodendron radicans*, *Cornus amomum*, *Lysimachia ciliata*, and *Onoclea sensibilis*.

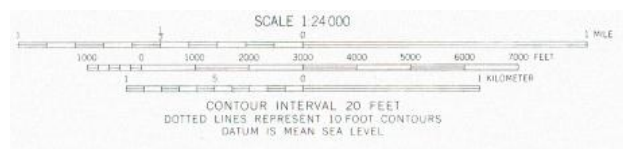
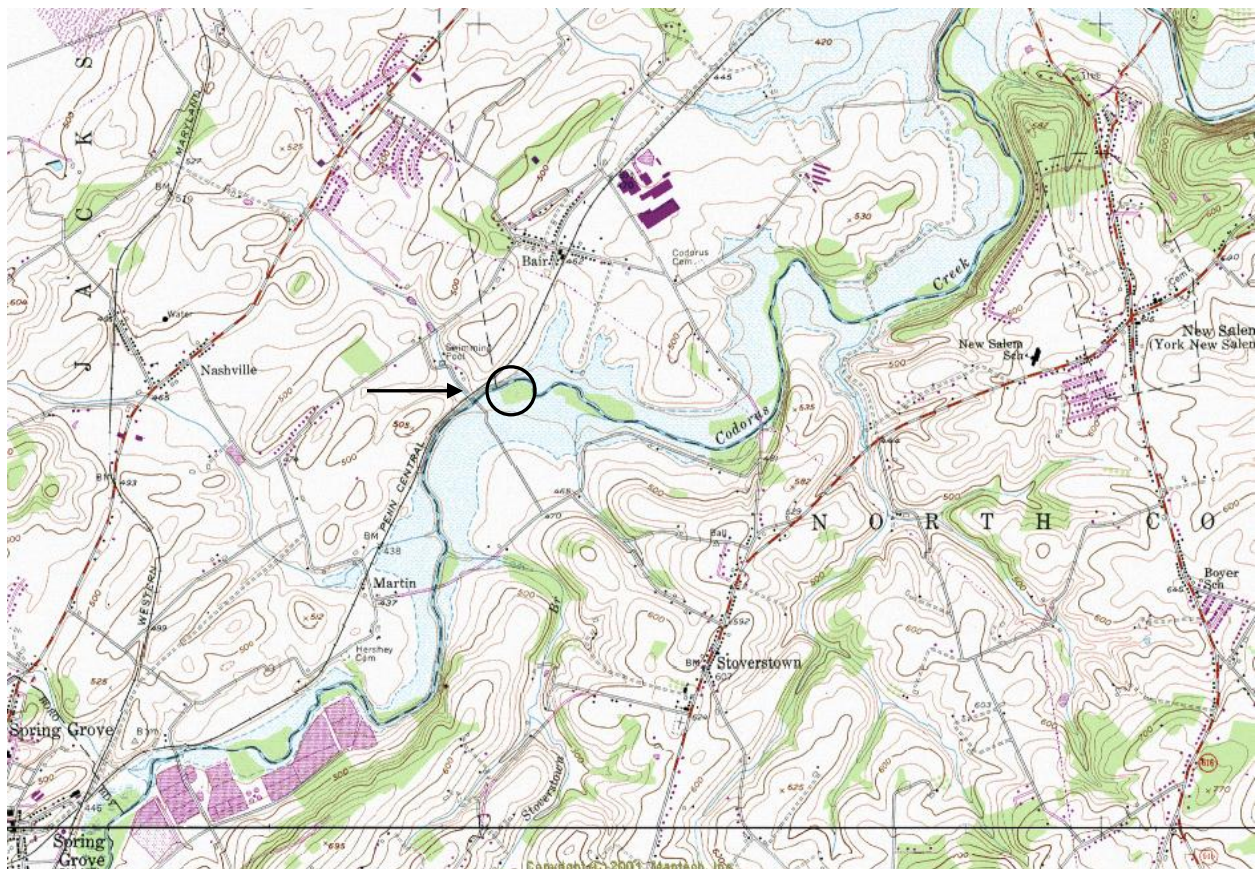


Site: EPA 1.9

USGS 7.5' Quadrangle: West York, PA
York County, North Codorus Twp.
Location: Bair, 0.9 km SSW

UTM Zone: 18
Easting: 0343329 m
Northing: 4417955 m
Elevation: 440 ft.

EPA 1.9 lies within TNC's Northern Piedmont Ecoregion along Codorus Creek in York County. This site sits on a low terrace of the creek within a small patch of floodplain forest surrounded by open, predominately agricultural land. A portion of this site appears to have been, at one time, pastures or otherwise included in agricultural use. The plot represents a partial to full canopy, *Fraxinus pennsylvanica* – *Platanus occidentalis* dominated community containing some *Ulmus americana* and *Celtis occidentalis*. The site supports a sparse shrub layer and dense herbaceous layer. Prominent associates include *Acer negundo*, *Rosa multiflora*, *Impatiens pallida*, *Circaea quadrisulcata*, and several *Carex* and grass species.

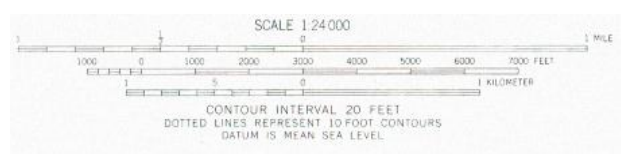
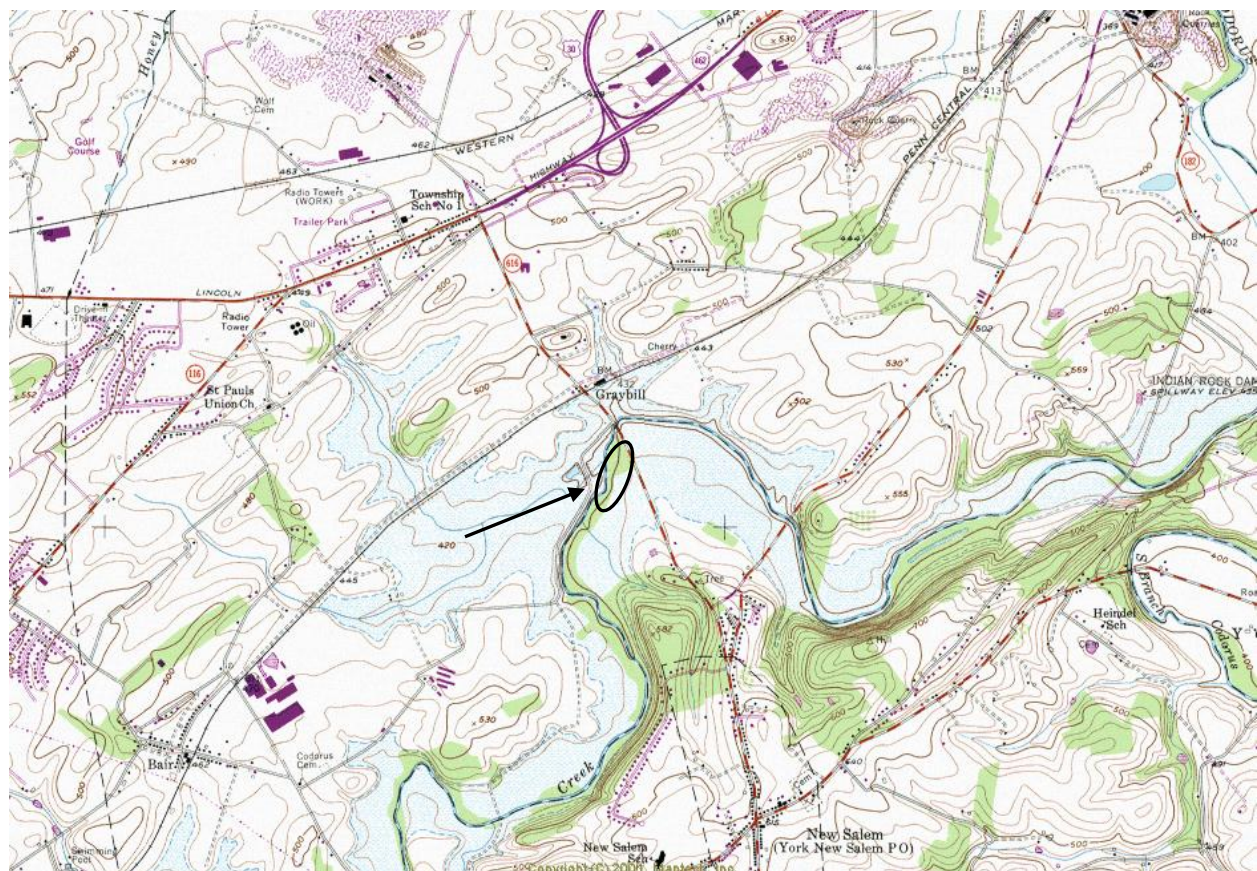


Site: EPA 1.10

USGS 7.5' Quadrangle: West York, PA
York County, North Codorus Twp.
Location: Graybill, 0.4 km SSE

UTM Zone: 18
Easting: 0346172 m
Northing: 4420292 m
Elevation: 410 ft.

EPA 1.10 lies within TNC's Northern Piedmont Ecoregion along Codorus Creek in York County. This site sits on a low terrace of the creek within a small patch of floodplain forest surrounded by open, predominately agricultural land. A portion of this site appears to have been, at one time, pasture or otherwise included in agricultural use. The plot represents a full canopy, *Juglans nigra* - *Fraxinus pennsylvanica* dominated community containing some *Robinia pseudoacacia*. The site supports a sparse shrub layer and dense herbaceous layer. Prominent associates include *Acer negundo*, *Rudbeckia laciniata*, *Verbesina alternifolia*, *Impatiens pallida* and the exotics *Rosa multiflora*, *Lonicera morrowii*, and *Glechoma hederacea*.

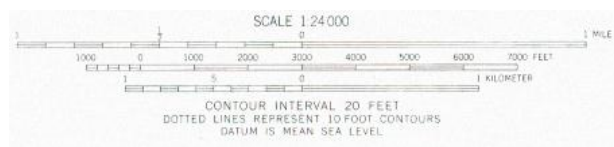
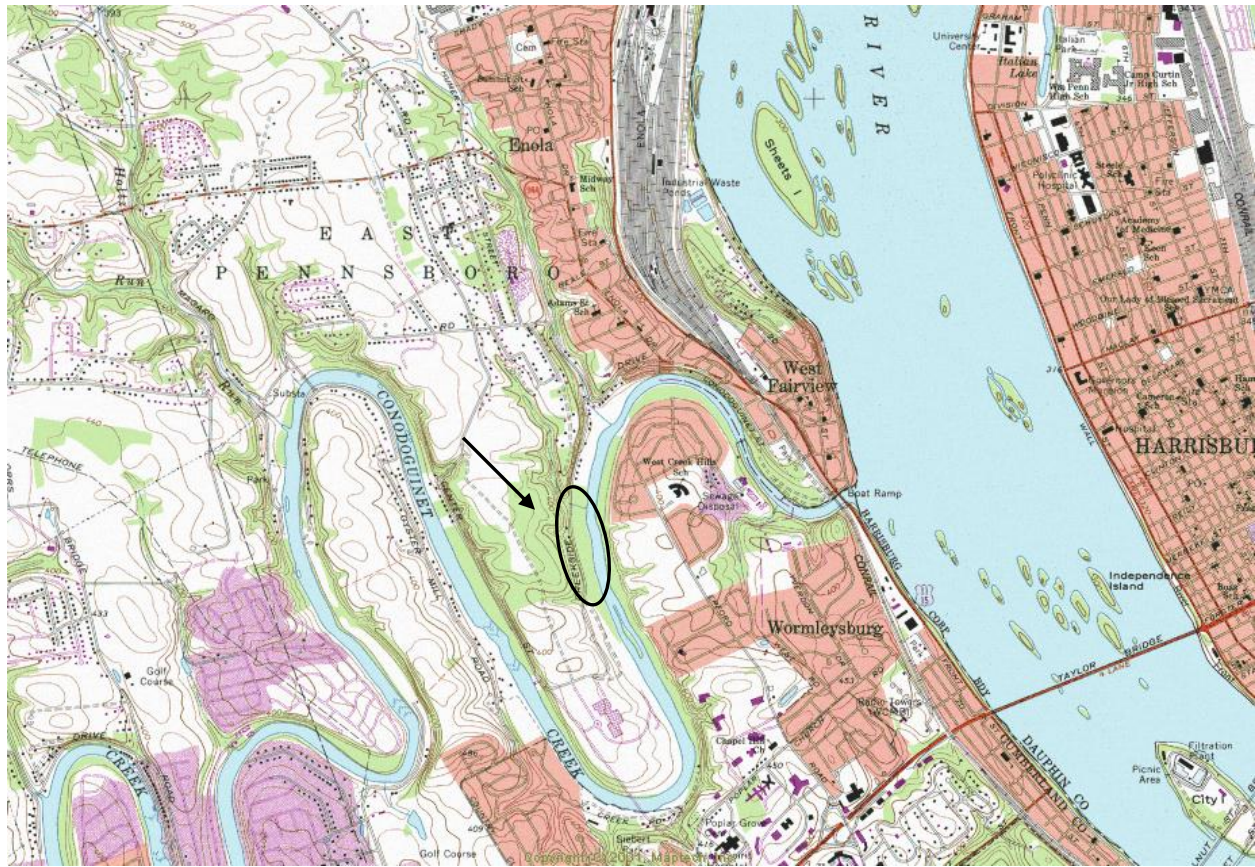


Site: EPA 1.11

USGS 7.5' Quadrangle: Harrisburg West, PA
Cumberland County, East Pennsboro Twp.
Location: West Fairview, 1.5 km WSW

UTM Zone: 18
Easting: 0335758 m
Northing: 4459385 m
Elevation: 331 ft.

EPA 1.11 lies within TNC's Central Appalachian Ecoregion along lower Conodoguinet Creek in Cumberland County. This site sits within a shallow back channel running parallel to the creek in a small patch of forested floodplain. Immediately surrounding land uses include post-agricultural land with sparse light industrial and residential development. The plot represents a full canopy, *Acer negundo* – *Acer saccharinum* – *Celtis occidentalis* dominated community containing some *Juglans nigra* in the subcanopy. A low shrub layer and dense herbaceous layer includes *Lindera benzoin*, *Verbesina alternifolia*, *Lysimachia nummularia*, *Alliaria petiolata*, and *Ranunculus hispidus*.

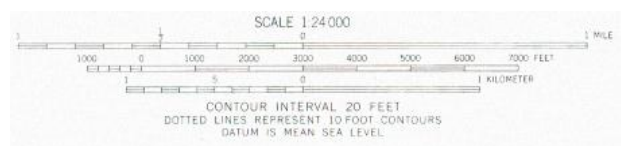
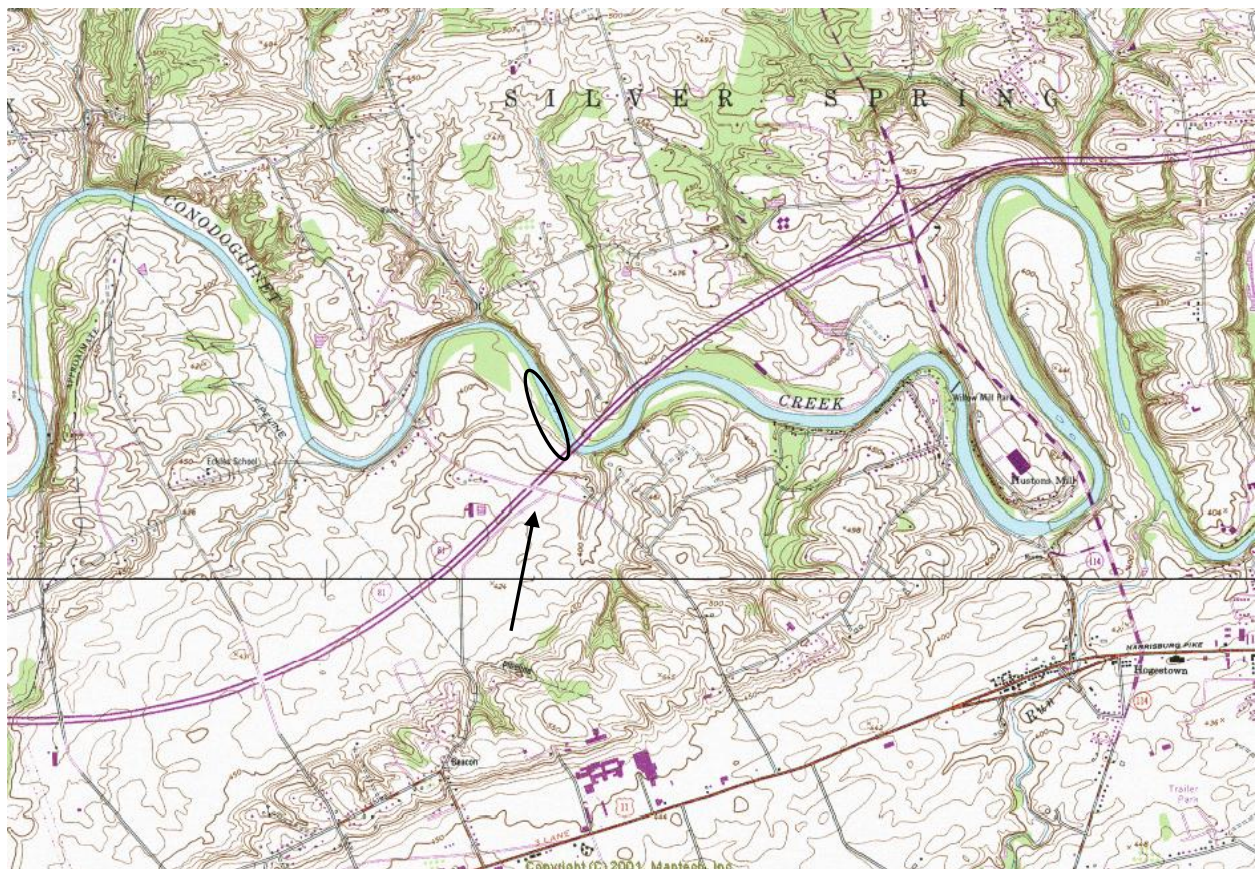


Site: EPA 1.12

USGS 7.5' Quadrangle: Wertzville, PA
Cumberland County, Silver Spring Twp.
Location: Wertzville, 3.4 km SW

UTM Zone: 18
Easting: 0321225 m
Northing: 4458841 m
Elevation: 353 ft.

EPA 1.12 lies within TNC's Central Appalachian Ecoregion along the mid-reaches of Conodoguinet Creek in Cumberland County. This site sits on a moderately high terrace of the creek within a small patch of floodplain forest in a highly agricultural section of the valley. The Pennsylvania Turnpike crosses the creek just south of the site and the Appalachian Trail crosses within the general site. The plot represents a full canopy, *Acer saccharinum* dominated community containing some *Fraxinus pennsylvanica*. Other prominent associates include *Acer negundo*, *Toxicodendron radicans*, numerous *Carex* sp., especially *Carex folliculata*, and the exotics *Lysimachia nummularia*, and *Alliaria petiolata*.

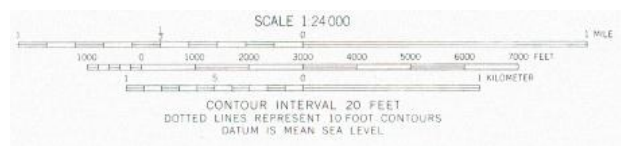
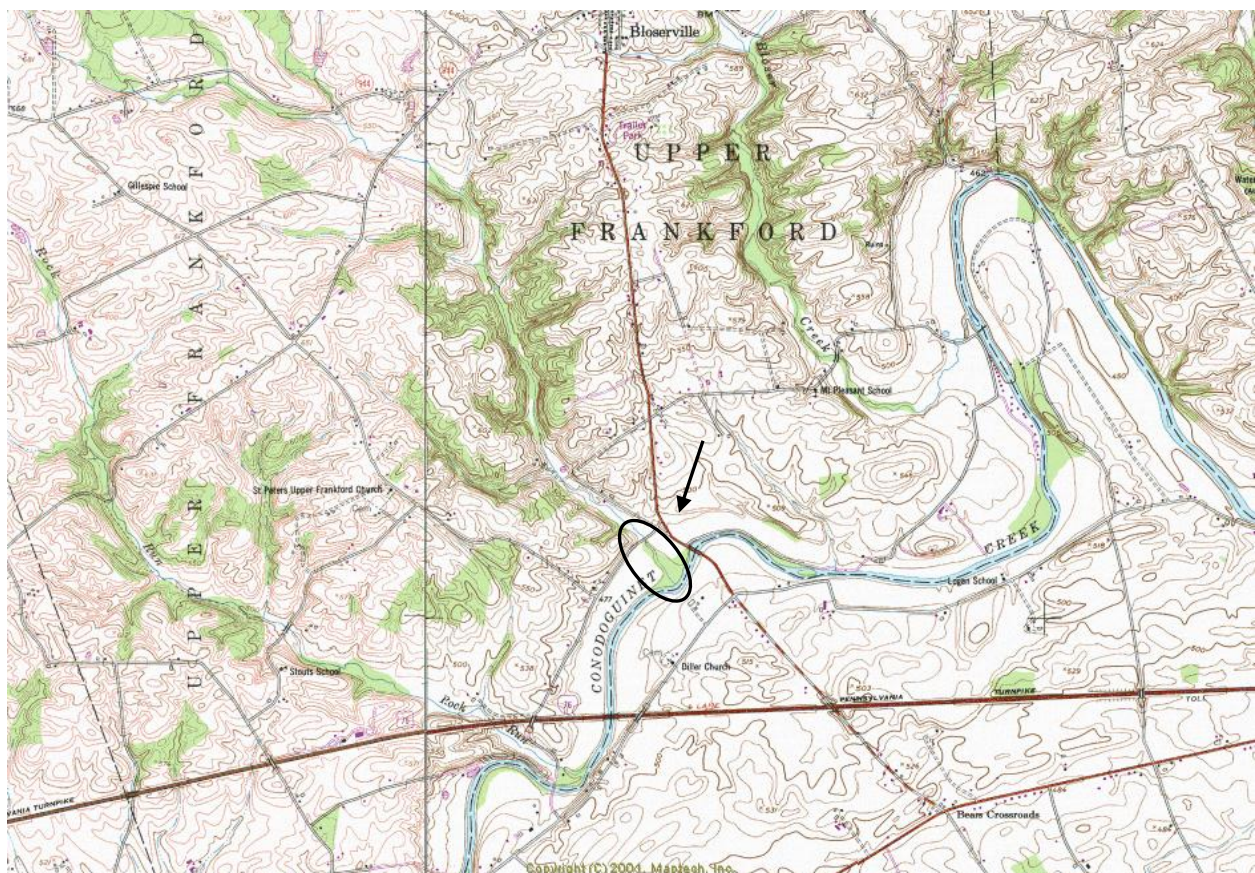


Site: EPA 1.13

USGS 7.5' Quadrangle: Plainfield, PA
Cumberland County, Upper Frankford Twp.
Location: Bloersville, 3.2 km S

UTM Zone: 18
Easting: 0299397 m
Northing: 4453919 m
Elevation: 446 ft.

EPA 1.13 lies within TNC's Central Appalachian Ecoregion along the mid reaches of the Conodoguinet Creek in Cumberland County. This site sits on a low floodplain at the confluence of a small tributary to the creek. Immediately surrounding land use is predominately agriculture with fields of row crops immediately adjacent to the site. The plot represents a full canopy forest with mix dominance from *Acer saccharinum*, *Platanus occidentalis*, *Juglans nigra*, and *Carya cordiformis*. With a sparse shrub layer and dense herbaceous layer, other prominent associates include *Acer negundo*, *Lindera benzoin*, *Laportea canadensis*, *Verbisina alternifolia*, and *Alliaria petiolata*.

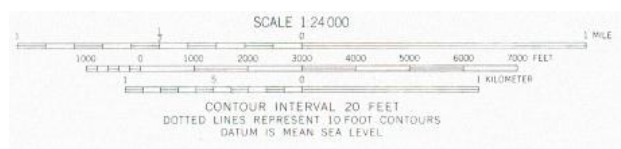
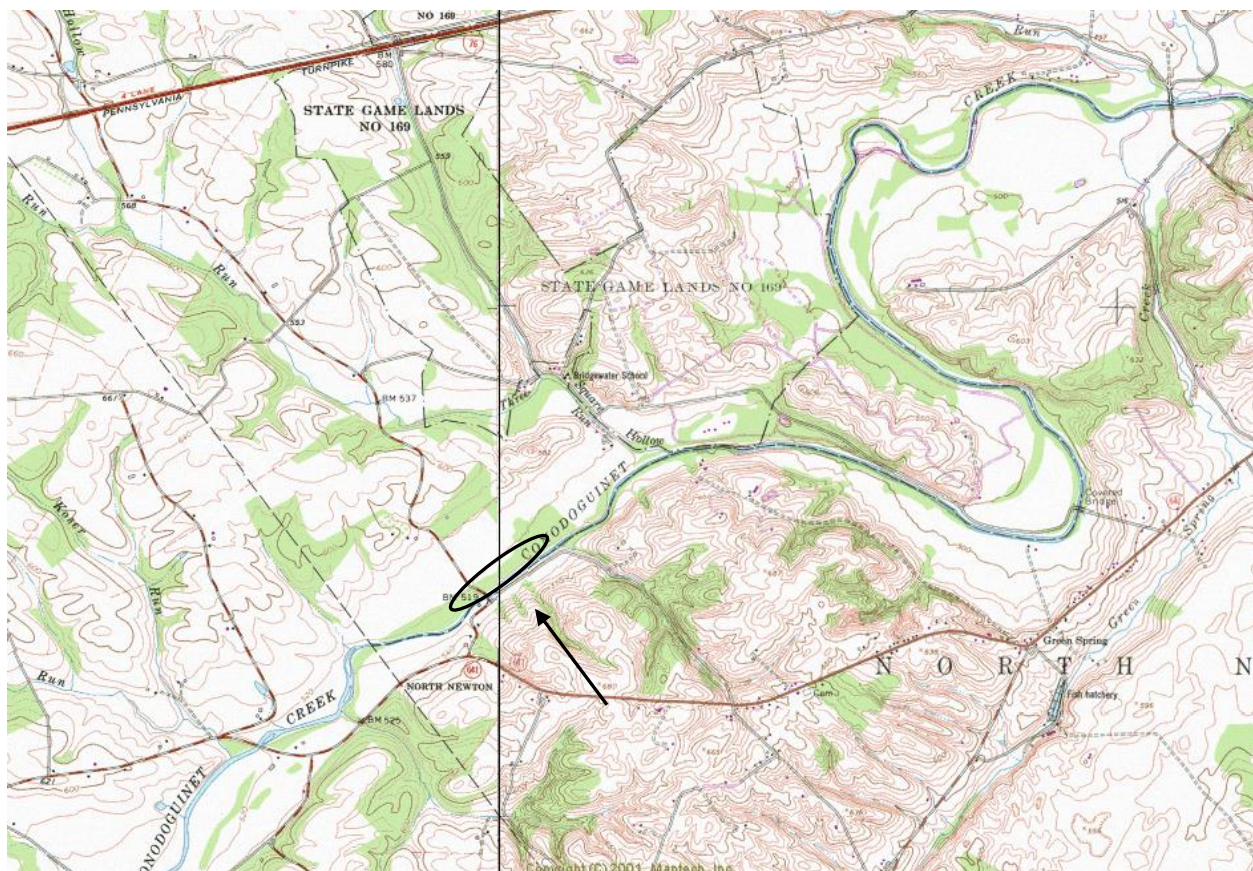


Site: EPA 1.14

USGS 7.5' Quadrangle: Newville, PA
Cumberland County, Upper Mifflin Twp., SGL #169
Location: Bridgewater School, 1.2 km SSW

UTM Zone: 18
Easting: 0287027 m
Northing: 4447668 m
Elevation: 547 ft.

EPA 1.14 lies within TNC's Central Appalachian Ecoregion along the mid reaches of Conodoguinet Creek in Cumberland County. This site sits on a low terrace of the river and includes a section of backwater which holds water through much of the season. Immediately surrounding land uses include agriculture and areas managed by the Pennsylvania Game Commission for wildlife habitat. The plot represents a partial canopy, *Acer saccharinum* – *Fraxinus pennsylvanica* dominated community containing some *Salix nigra* and, in the subcanopy, *Quercus palustris*. Other prominent associates include *Toxicodendron radicans*, *Lysimachia nummularia*, *Polygonum pensylvanicum*, and *Carex lupulina*.

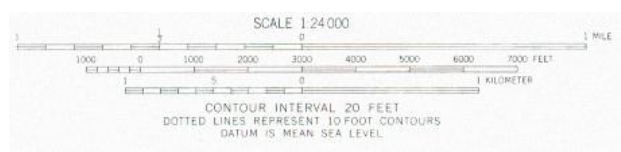
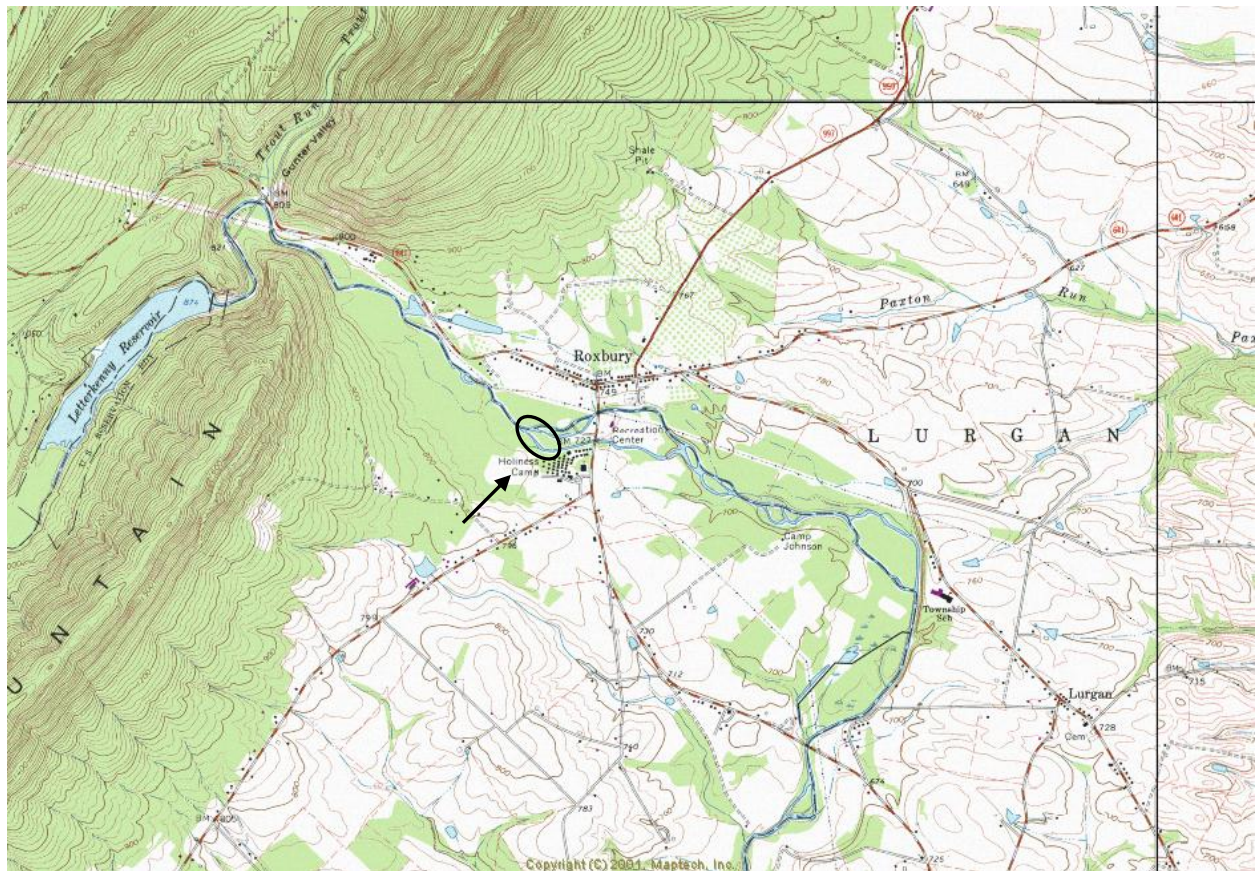


Site: EPA 1.15

USGS 7.5' Quadrangle: Roxbury, PA
Franklin County, Letterkenny Twp.
Location: Roxbury, 0.5 km SW

UTM Zone: 18
Easting: 0272838 m
Northing: 4443145 m
Elevation: 782 ft.

EPA 1.15 lies within TNC's Central Appalachian Ecoregion along the upper section of Conodoguinet Creek. This site sits on a small island within a contiguously forested section of the creek valley where it descends from the ridgeline immediately to the west. A church camp occupies the area adjacent to the site. The plot represents a full canopy forest with dominance shared by *Acer saccharum*, *Platanus occidentalis*, *Fraxinus pennsylvanica*, and *Liriodendron tulipifera*. Other prominent associates include *Juglans cinerea*, *Carpinus caroliniana*, *Lindera benzoin*, and a diverse assortment of herbs.

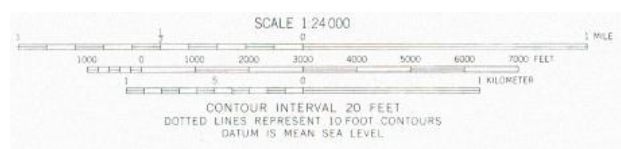
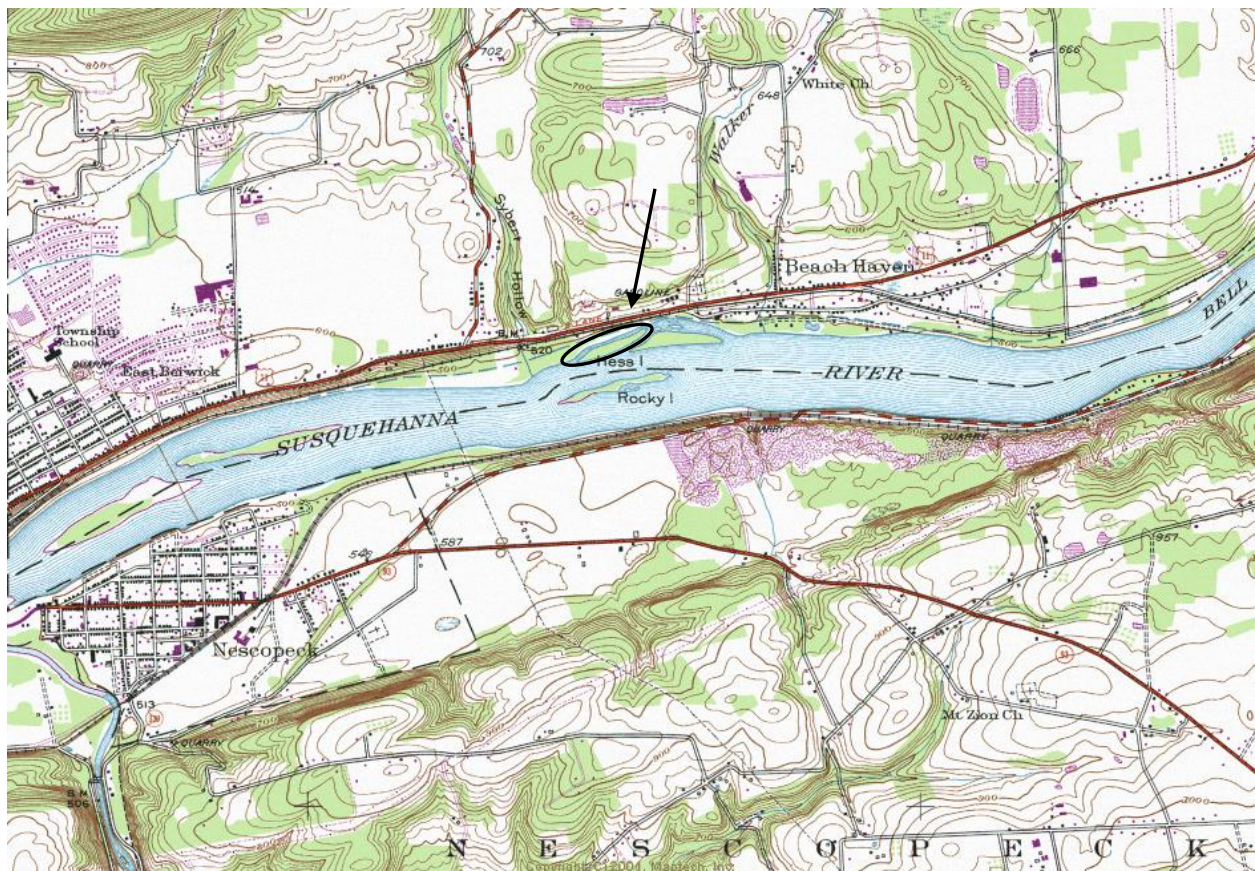


Site: EPA 1.16

USGS 7.5' Quadrangle: Berwick, PA
Luzerne County, Salem Twp.
Location: Beach Haven, 0.6 km WSW

UTM Zone: 18
Easting: 0400764 m
Northing: 4546774 m
Elevation: 490 ft.

EPA 1.16 lies within TNC's Central Appalachian Ecoregion on an island within the Susquehanna River in Luzerne County. This island sits within a small group of islands that are frequently flooded and scoured. Immediate shoreline land use consists of sparse residential, light industrial and highway-associated infrastructure. The plot represents a partial to full canopy, *Acer saccharinum* dominated community containing significant amounts of *Betula nigra*. Other prominent associates include *Fraxinus pennsylvanica*, *Toxicodendron radicans*, *Lysimachia ciliata*, *Teucrium canadense*, and the exotic – *Polygonum cuspidatum*.

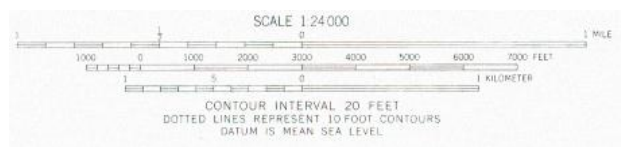
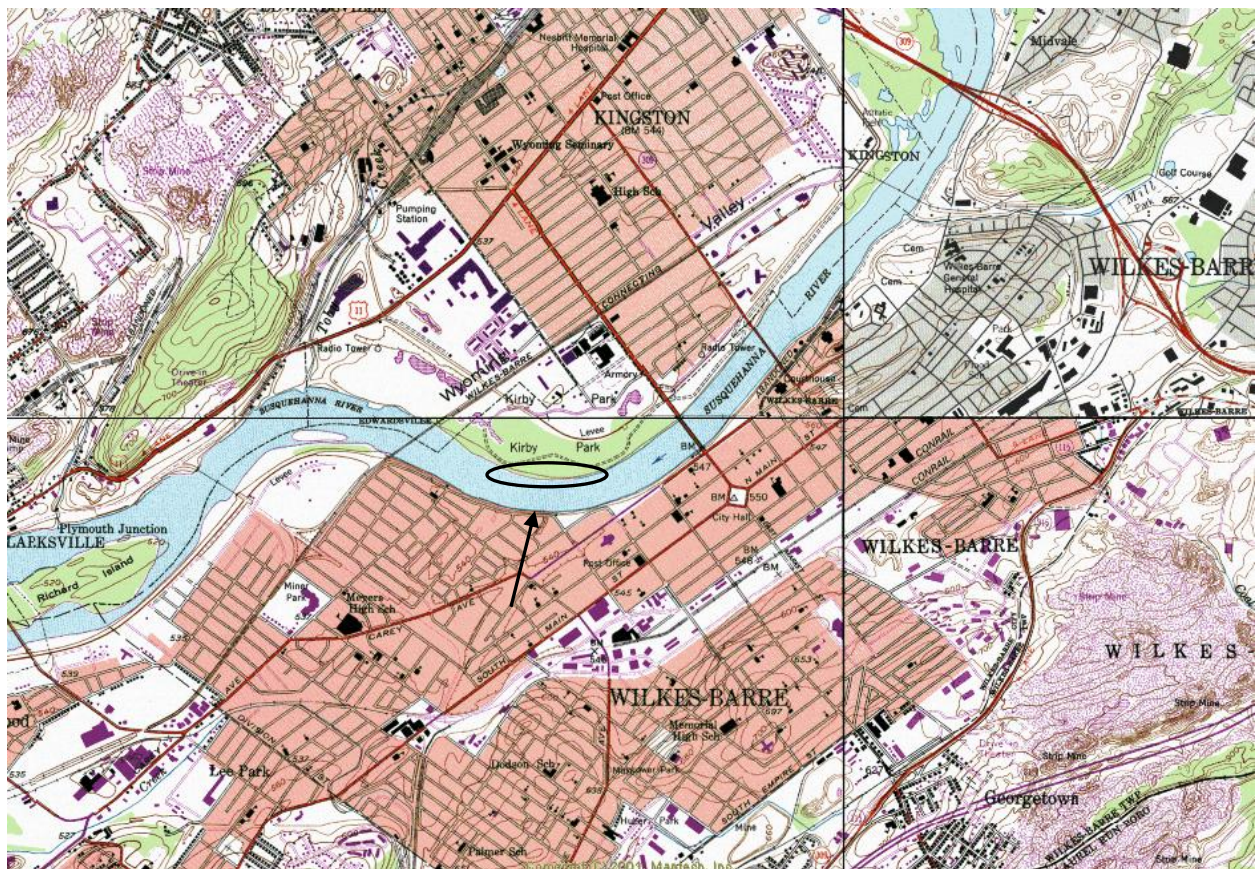


Site: EPA 1.17

USGS 7.5' Quadrangle: Wilkes-Barre West, PA
Luzerne County, Wilkes-Barre
Location: Larksville, 3.2 km E

UTM Zone: 18
Easting: 0424723 m
Northing: 4566629 m
Elevation: 537 ft.

EPA 1.17 lies within TNC's Central Appalachian Ecoregion along the Susquehanna River in Luzerne County at the city of Wilkes-Barre. This site sits on a low terrace of the river within a patch of floodplain forest. This forest is part of a recreational park centered around a flood control levee. Immediately surrounding land uses include the wooded and open sections of the park and, on the opposite shoreline, dense urban development. The plot represents a full canopy, *Salix nigra* - *Acer saccharinum* dominated community containing some *Fraxinus pennsylvanica* in the understory. The very sparse shrub layer and moderately dense herbaceous layer include *Leersia virginica*, *Laportea canadensis*, and the exotics *Alliaria petiolata*, *Polygonum cuspidatum*, and *Phalaris arundinacea*.

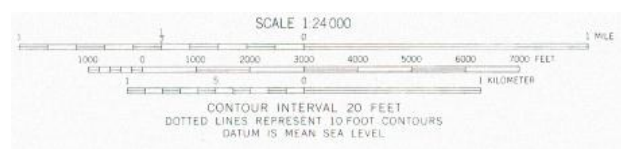
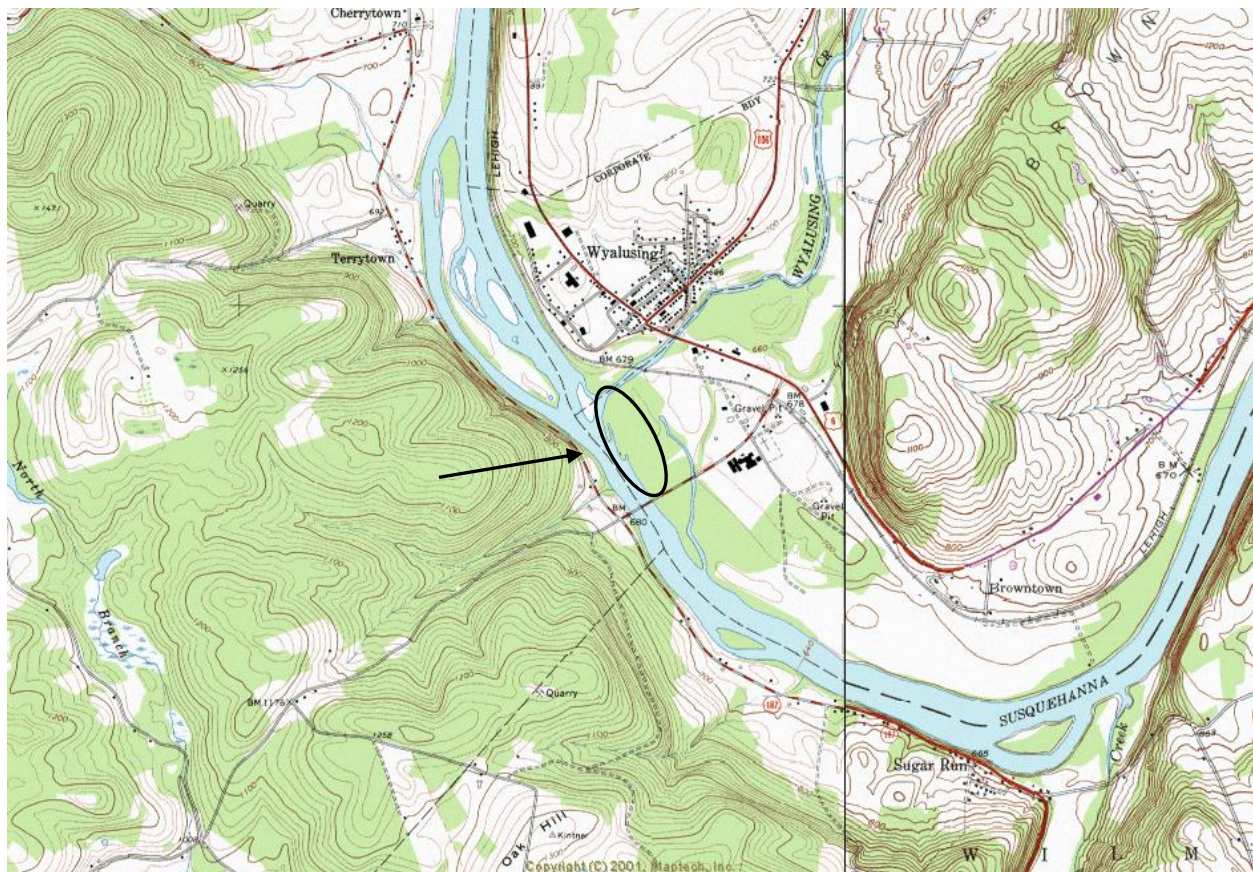


Site: EPA 1.18

USGS 7.5' Quadrangle: Wyalusing, PA
Bradford County, Wyalusing Twp.
Location: Wyalusing, 0.8 km S

UTM Zone: 18
Easting: 0394964 m
Northing: 4612384 m
Elevation: 676 ft.

EPA 1.18 lies within TNC's High Allegheny Plateau Ecoregion along the Susquehanna River in Braddford County. This site consists of a low and high terrace floodplain within a moderately large patch of forest across the river from the town of Wyalusing. Immediately surrounding land uses include open and wooded sections of public school property, trails and abandoned agricultural land. The plot occupies the lower terrace section of the site and represents a full canopy, *Acer saccharinum* dominated community with few other canopy or subcanopy species. An open understory and somewhat sparse herbaceous layer contain *Leersia virginica*, *Laportea canadensis*, *Onoclea sensibilis* and some *Polygonum cuspidatum*.

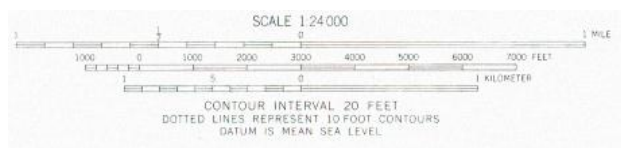
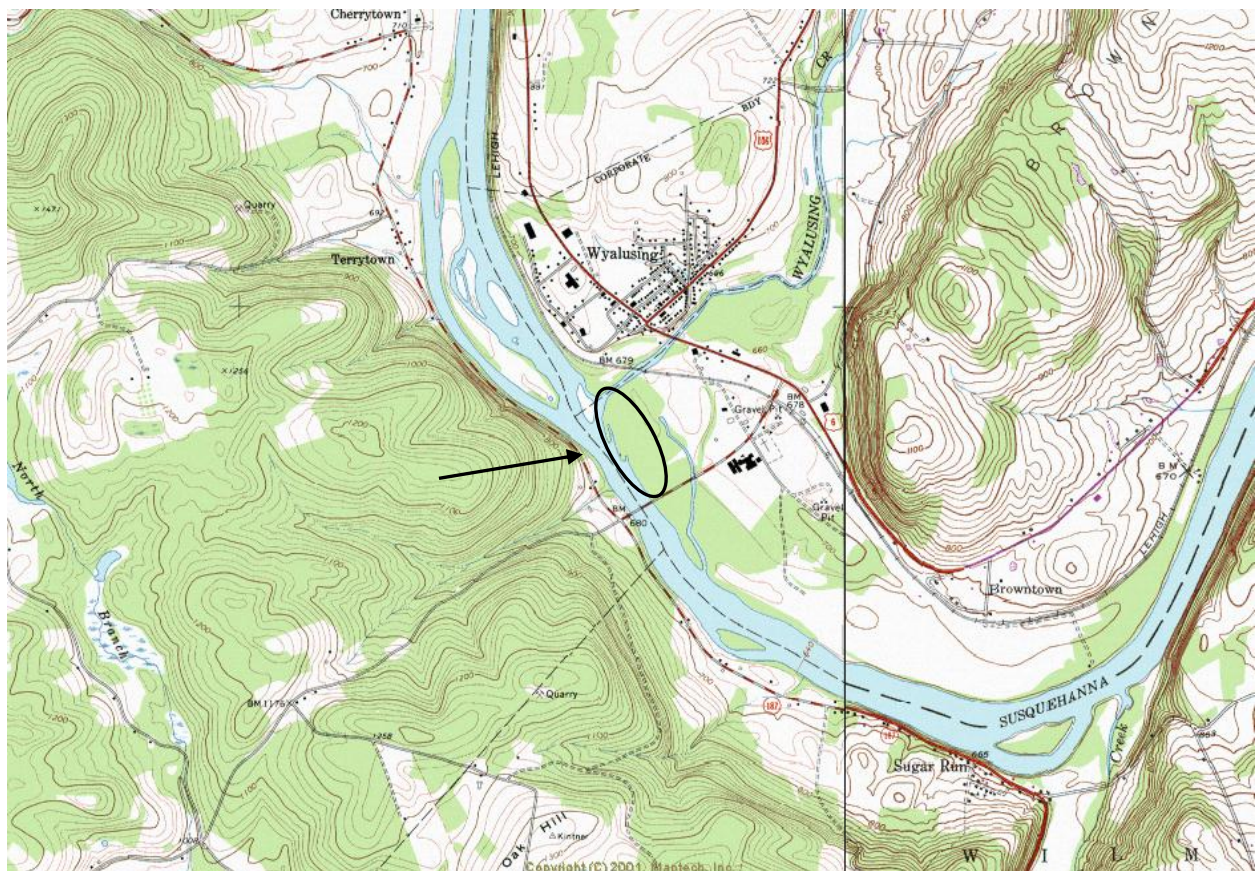


Site: EPA 1.19

USGS 7.5' Quadrangle: Wyalusing, PA
Bradford County, Wyalusing Twp.
Location: Wyalusing, 0.8 km S

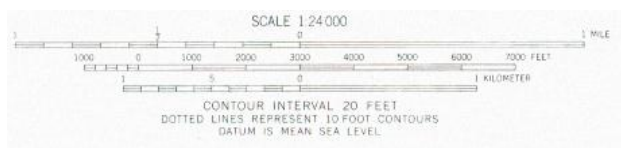
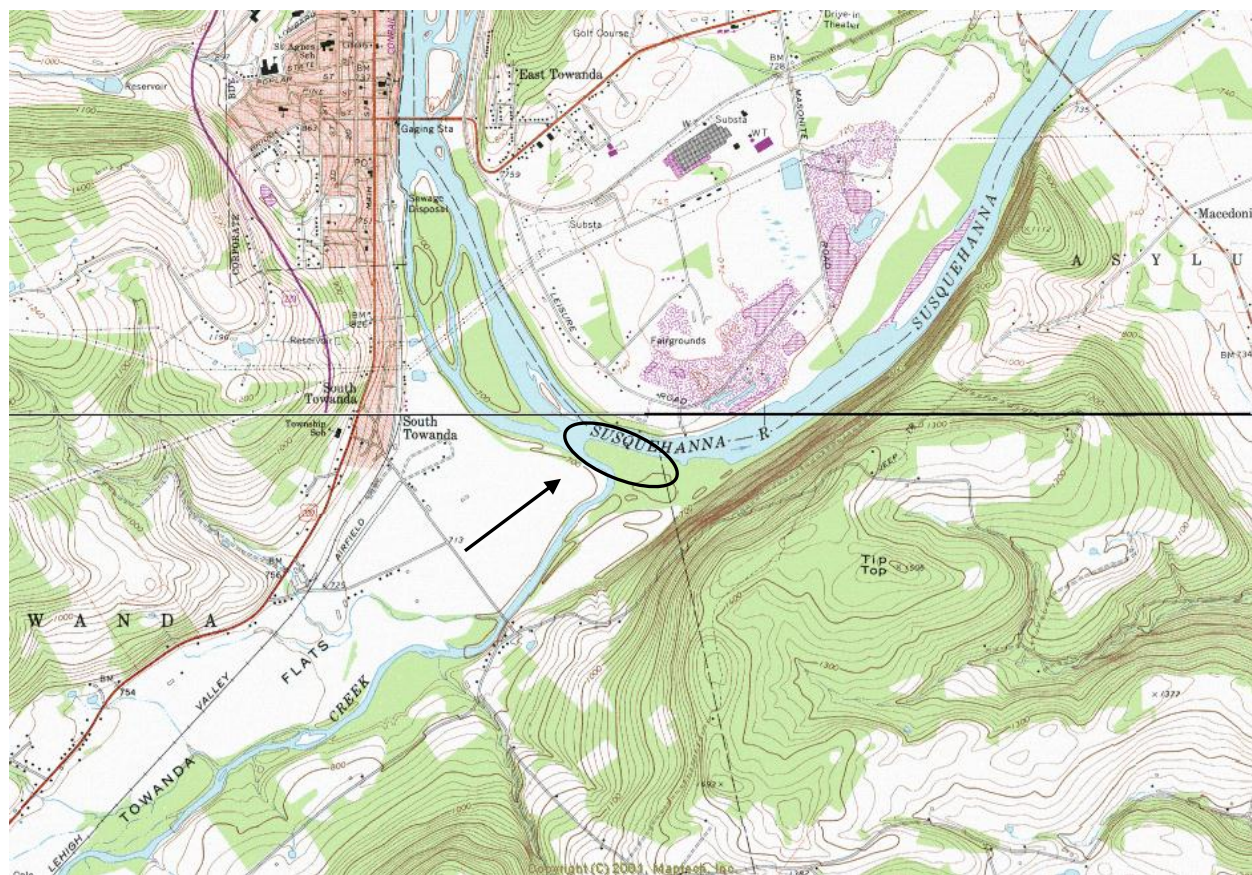
UTM Zone: 18
Easting: 0395029 m
Northing: 4612389 m
Elevation: 683 ft.

EPA 1.19 lies within TNC's High Allegheny Plateau Ecoregion along the Susquehanna River in Bradford County. This site consists of a low and high terrace floodplain within a moderately large patch of forest across the river from the town of Wyalusing. Immediately surrounding land uses include open and wooded sections of public school property, trails and abandoned agricultural land. The plot occupies the high terrace section of the site and represents a full canopy, *Fraxinus pennsylvanica* dominated community with significant amounts of *Carya cordiformis* and few other canopy or subcanopy species. An open understory and dense herbaceous layer contain *Impatiens pallida*, *Hydrophyllum canadense*, *Alliaria petiolata*, *Symplocarpus foetidus* and several grass species.



UTM Zone: 18
Easting: 0381726 m
Northing: 4622703 m
Elevation: 682 ft.

EPA 1.20 lies within TNC's High Allegheny Plateau Ecoregion at the confluence of Towanda Creek with the Susquehanna River in Bradford County. This site sits on a low terrace of the river within a relative large patch of forested floodplain that includes large islands to the north. The site is surrounded by agricultural land with row cropped fields and upland forest immediately adjacent. The plot represents a partial canopy, *Acer saccharinum* dominated community, many of the large trees having been recently removed. Herbaceous vegetation dominates the site with prominent associates including *Polygonum cuspidatum*, *Phalaris arundinacea*, *Polygonum amphibium*, *Onclea sensibilis* and *Matteucia struthiopteris*.

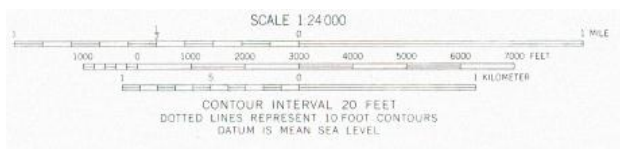
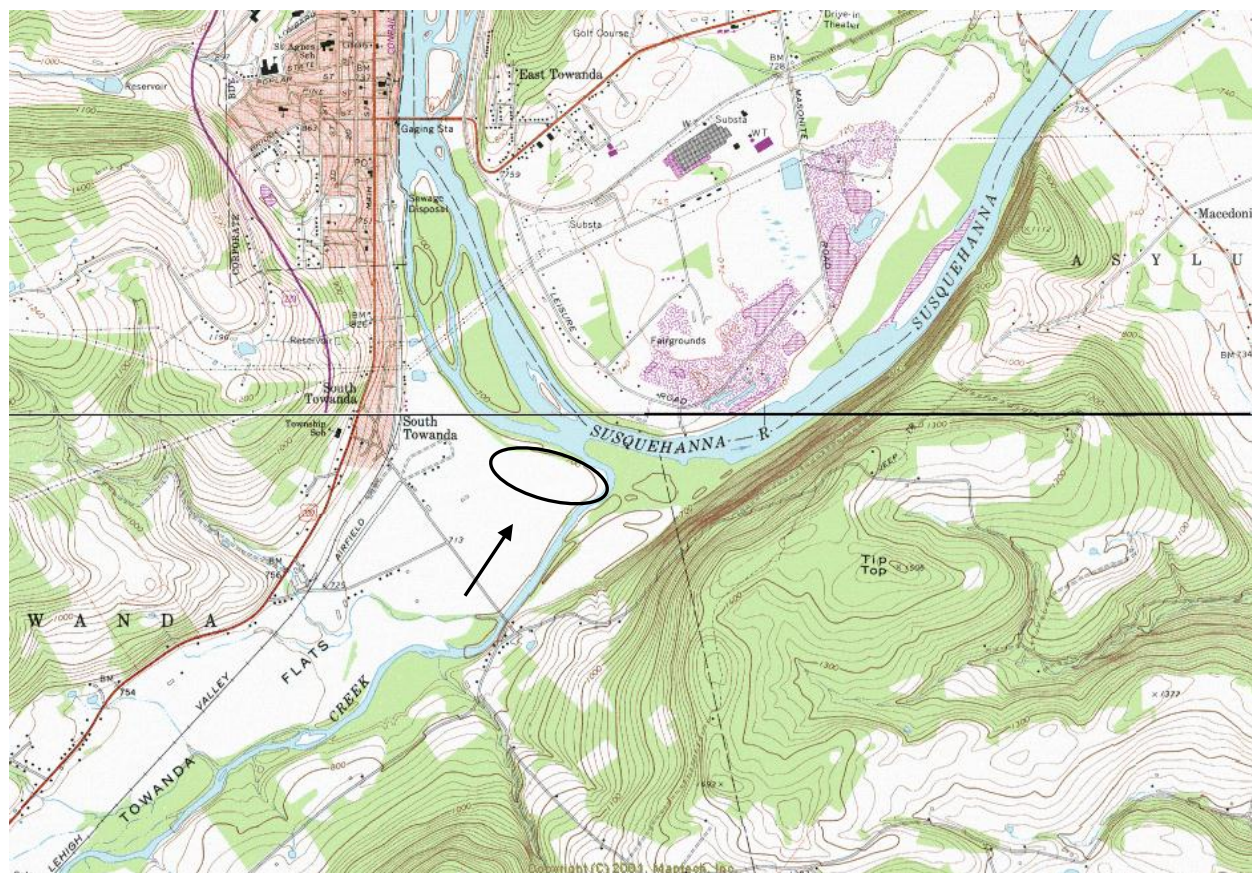


Site: EPA 1.21

USGS 7.5' Quadrangle: Monroeton, PA
Bradford County, Towanda Twp.
Location: East Towanda, 2.0 km S

UTM Zone: 18
Easting: 0381339 m
Northing: 4622751 m
Elevation: 693 ft.

EPA 1.21 lies within TNC's High Allegheny Plateau Ecoregion at the confluence of Towanda Creek with the Susquehanna River in Bradford County. This site sits on a low terrace of the river within a relative large patch of forested floodplain that includes large islands to the north. The site is surrounded by agricultural land with row cropped fields and upland forest immediately adjacent. The plot represents a full canopy, *Acer saccharinum* dominated community containing significant amounts of *Populus deltoides* and *Platanus occidentalis* with some *Salix nigra* in the understory. Other associates include *Laportea canadensis*, *Teucrium canadense*, *Leersia virginica*, *Polygonum hydropiperoides*, and *Bidens vulgata*.

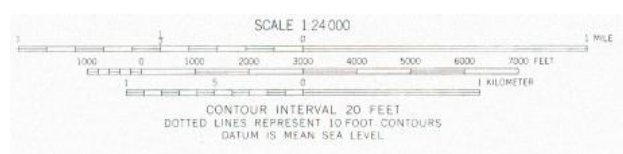
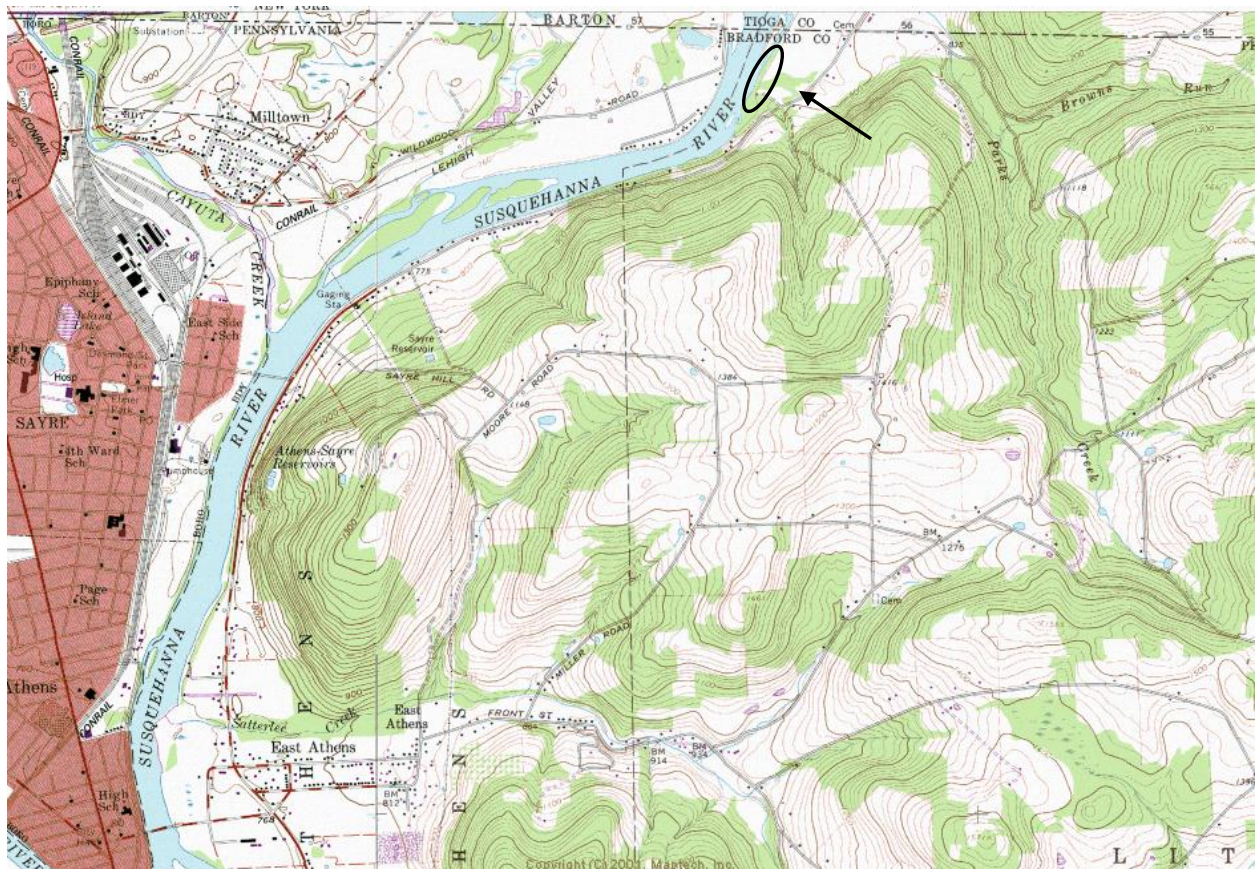


Site: EPA 1.22

USGS 7.5' Quadrangle: Sayre, PA
Bradford County, Litchfield Twp.
Location: Milltown, 3.0 km E

UTM Zone: 18
Easting: 0377890 m
Northing: 4650262 m
Elevation: 781 ft.

EPA 1.22 lies within TNC's High Allegheny Plateau Ecoregion along the Susquehanna River in northern Bradford County. This site consists of a low and high terrace floodplain within a small patch of forested floodplain adjoining a Pennsylvania Fish and Boat Commission access site. Immediately surrounding land uses include sparse residential and active and abandoned agricultural land. The plot occupies the high terrace section of the site and represents a partial to full canopy, *Acer saccharinum* dominated community containing little understory and shrub layer vegetation and a somewhat sparse herbaceous layer. Prominent associates include *Onoclea sensibilis*, *Leersia virginica*, *Boehmeria cylindrica*, and *Impatiens* sp..

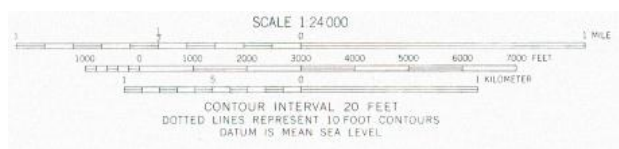
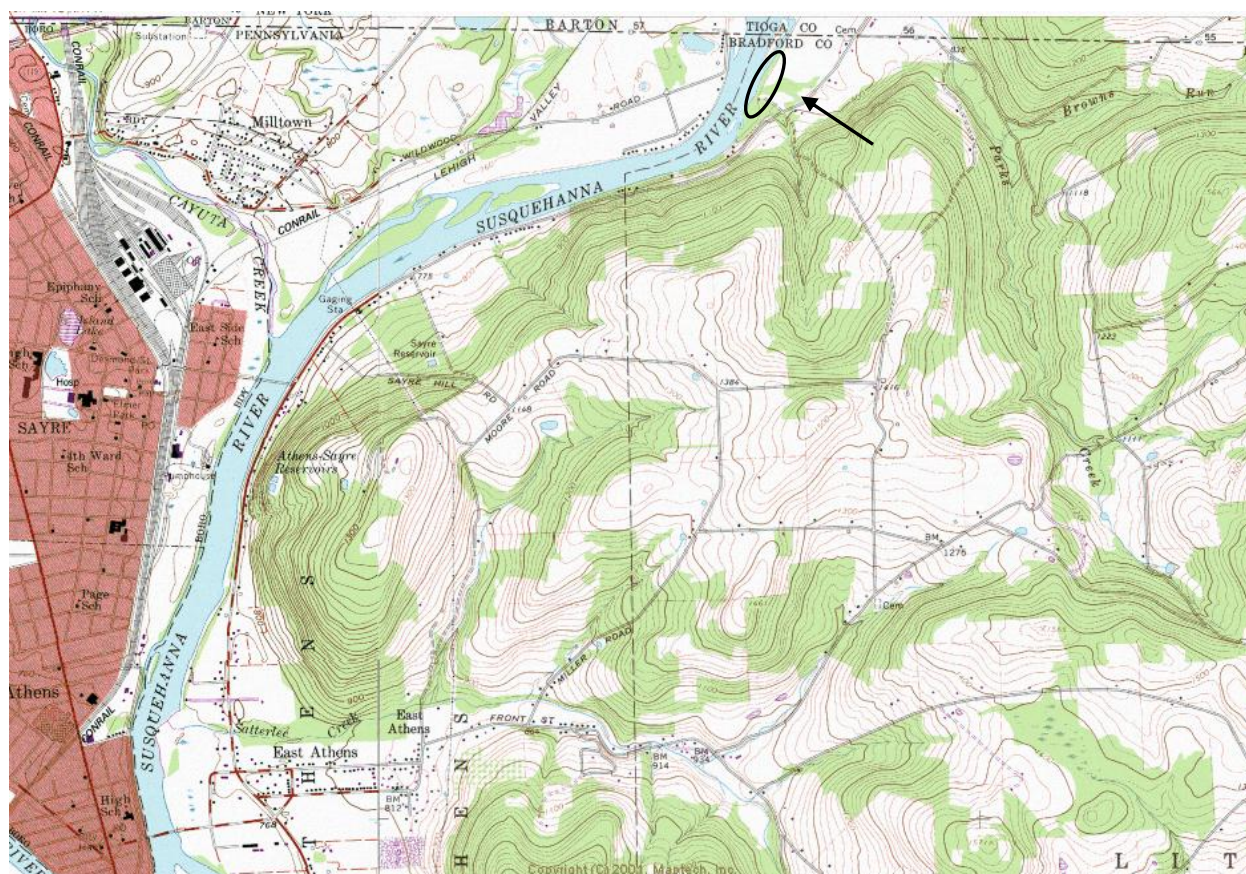


Site: EPA 1.23

USGS 7.5' Quadrangle: Sayre, PA
Bradford County, Litchfield Twp.
Location: Milltown, 3.0 km E

UTM Zone: 18
Easting: 0377909 m
Northing: 4650217 m
Elevation: 763 ft.

EPA 1.23 lies within TNC's High Allegheny Plateau Ecoregion along the Susquehanna River in northern Bradford County. This site consists of a low and high terrace floodplain within a small patch of forested floodplain adjoining a Pennsylvania Fish and Boat Commission access site. Immediately surrounding land uses include sparse residential and active and abandoned agricultural land. The plot occupies the low terrace section of the site and represents a full canopy, *Fraxinus pennsylvanica* dominated community containing significant amounts of *Juglans nigra* and small amounts of *Acer negundo* in the understory. A dense herbaceous layer includes *Impatiens pallida*, *Solidago gigantea*, *Alliaria petiolata*, *Eupatorium rugosum* and *Glechoma hederacea*.

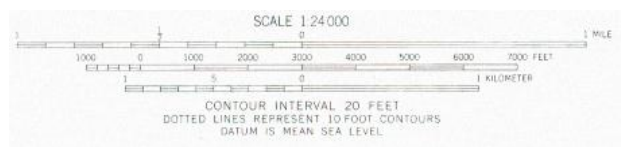
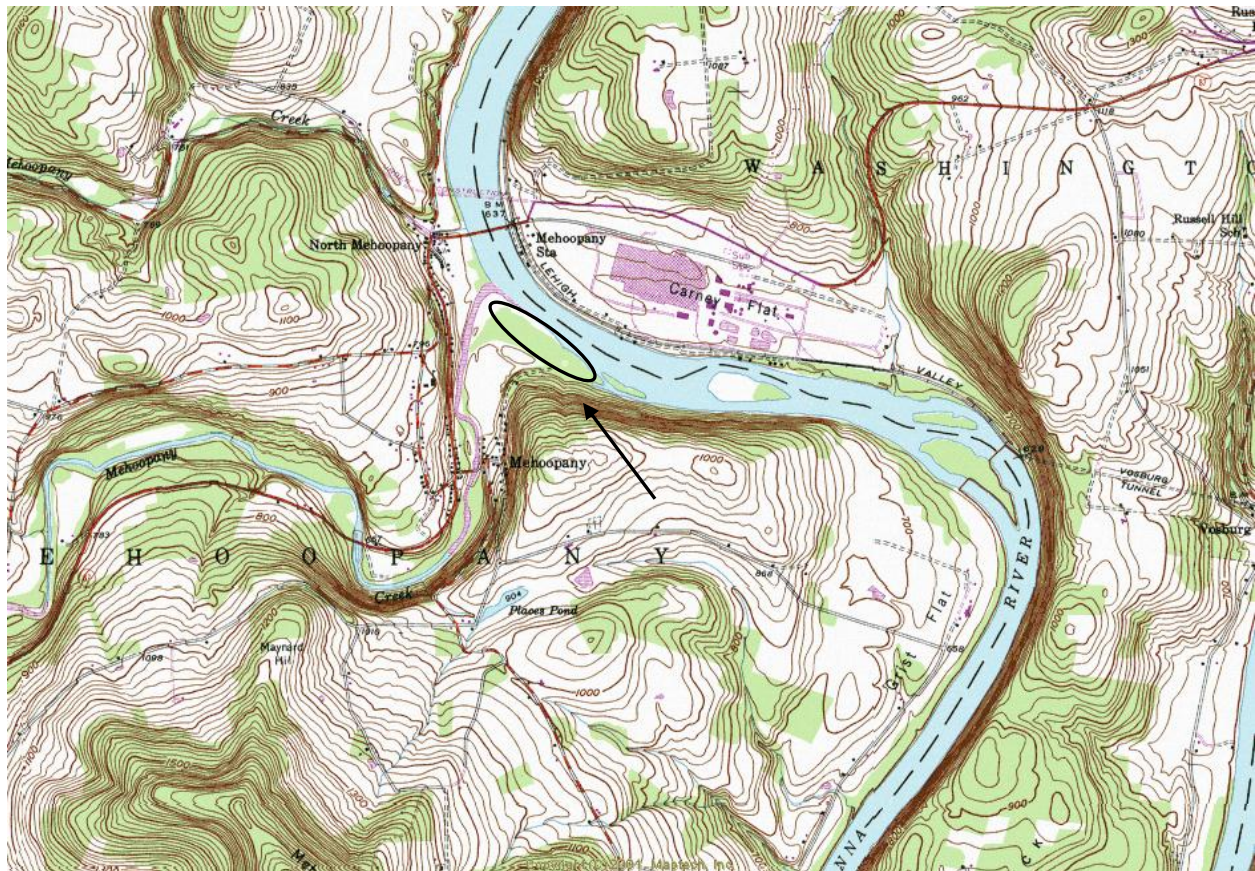


Site: EPA 1.24

USGS 7.5' Quadrangle: Meshoppen, PA
Wyoming County, Mehoopeny Twp.
Location: North Mehoopeny, 1.0 km SE

UTM Zone: 18
Easting: 0412266 m
Northing: 4602483 m
Elevation: 645 ft.

EPA 1.24 lies within TNC's High Allegheny Plateau Ecoregion at the mouth of Mehoopeny Creek where it meets the Susquehanna River. The site lies on an active and channellized terrace within a moderately large section of floodplain forest. Immediately surrounding land uses include upland forest and sparse residential development. The plot represents a partial to full canopy, *Acer saccharinum* dominated community with an open understory and dense herbaceous layer. Prominent associates include *Laportea canadensis*, *Leersia virginica*, *Alliaria petiolata*, and *Urtica procera*.

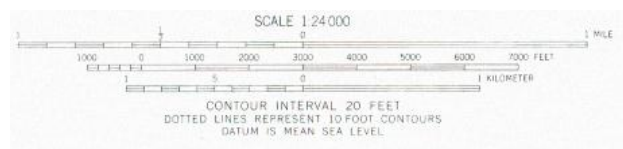
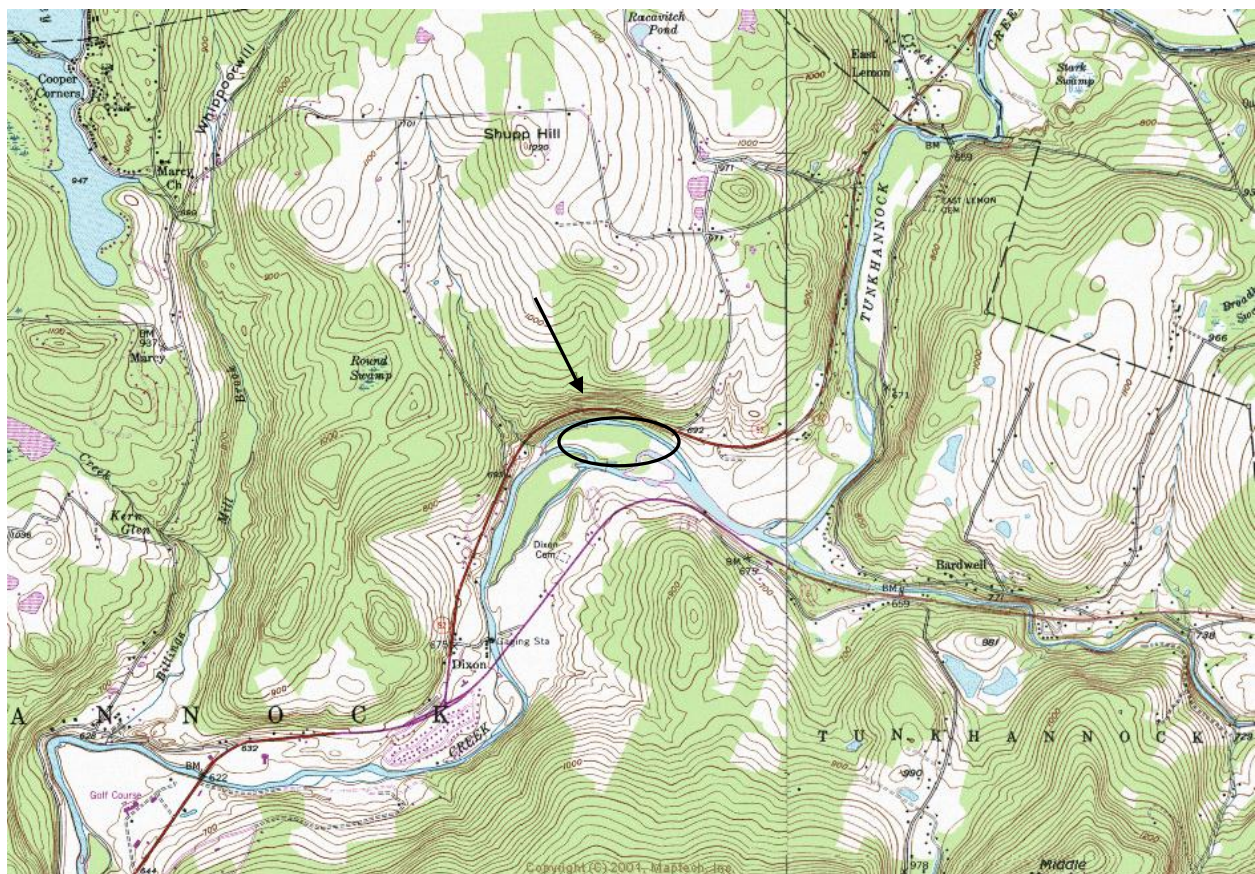


Site: EPA 1.25

USGS 7.5' Quadrangle:, PA
Wyoming County, Tunkhannock Twp.
Location: Bardwell, 2.4 km WNW

UTM Zone: 18
Easting: 0425670 m
Northing: 4602049 m
Elevation: 646 ft.

EPA 1.25 lies within TNC's High Allegheny Plateau Ecoregion on Tunkhannock Creek in Wyoming County. This site sits on an island in a predominately agricultural section of the valley. Land uses immediately surrounding the site include sparse residential development and row-cropped fields. The plot represents a partial canopy, *Platanus occidentalis* dominated community containing some *Celtis occidentalis* and relatively sparse shrub layer and dense herbaceous layer. Other prominent associates include *Ulmus americana*, *Rosa multiflora*, *Solidago gigantea*, *Alliaria petiolata*, and *Polygonum cuspidatum*.

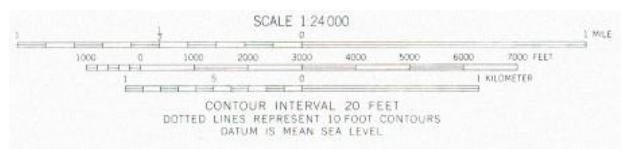
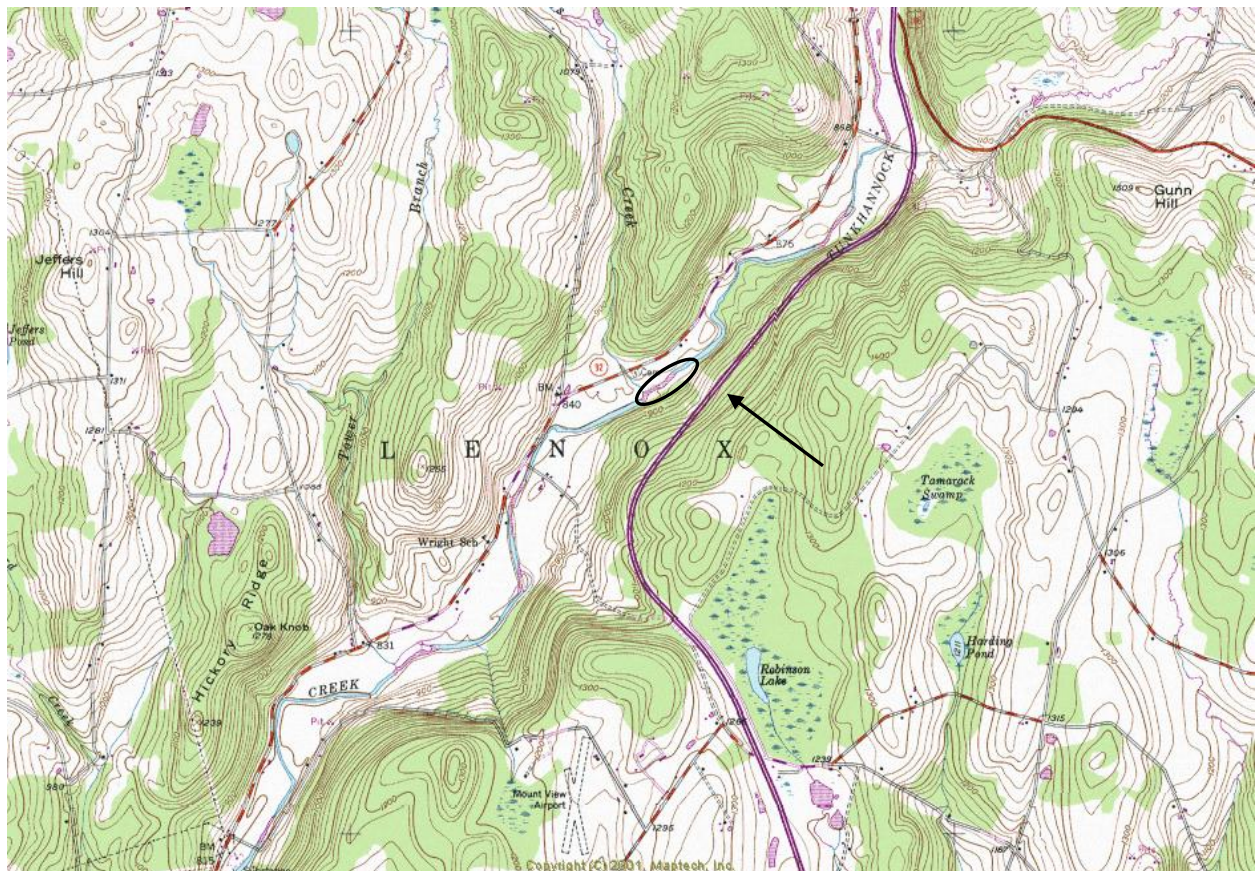


Site: EPA 1.26

USGS 7.5' Quadrangle: Lenoxville, PA
Susquehanna County, Lenox Twp.
Location: Lenox 2.7 km SSW

UTM Zone: 18
Easting: 0442829 m
Northing: 4615533 m
Elevation: 854 ft.

EPA 1.26 lies within TNC's High Allegheny Plateau Ecoregion on Tunkhannock Creek in Wyoming County. This site sits on an island in a predominately agricultural section of the valley. Land uses immediately surrounding the site include sparse residential development and row-cropped fields. The plot represents a partial canopy, *Platanus occidentalis* dominated community containing smaller amounts of *Celtis occidentalis* and *Ulmus americana*. A relatively sparse shrub layer and dense herbaceous layer include *Rosa multiflora*, *Solidago rugosa*, *Matteucia struthiopteris*, *Alliaria petiolata*, and *Polygonum cuspidatum*.

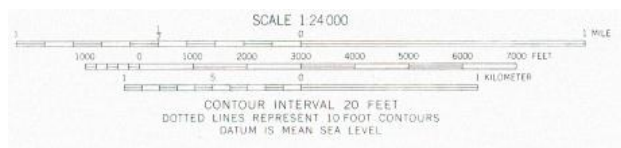
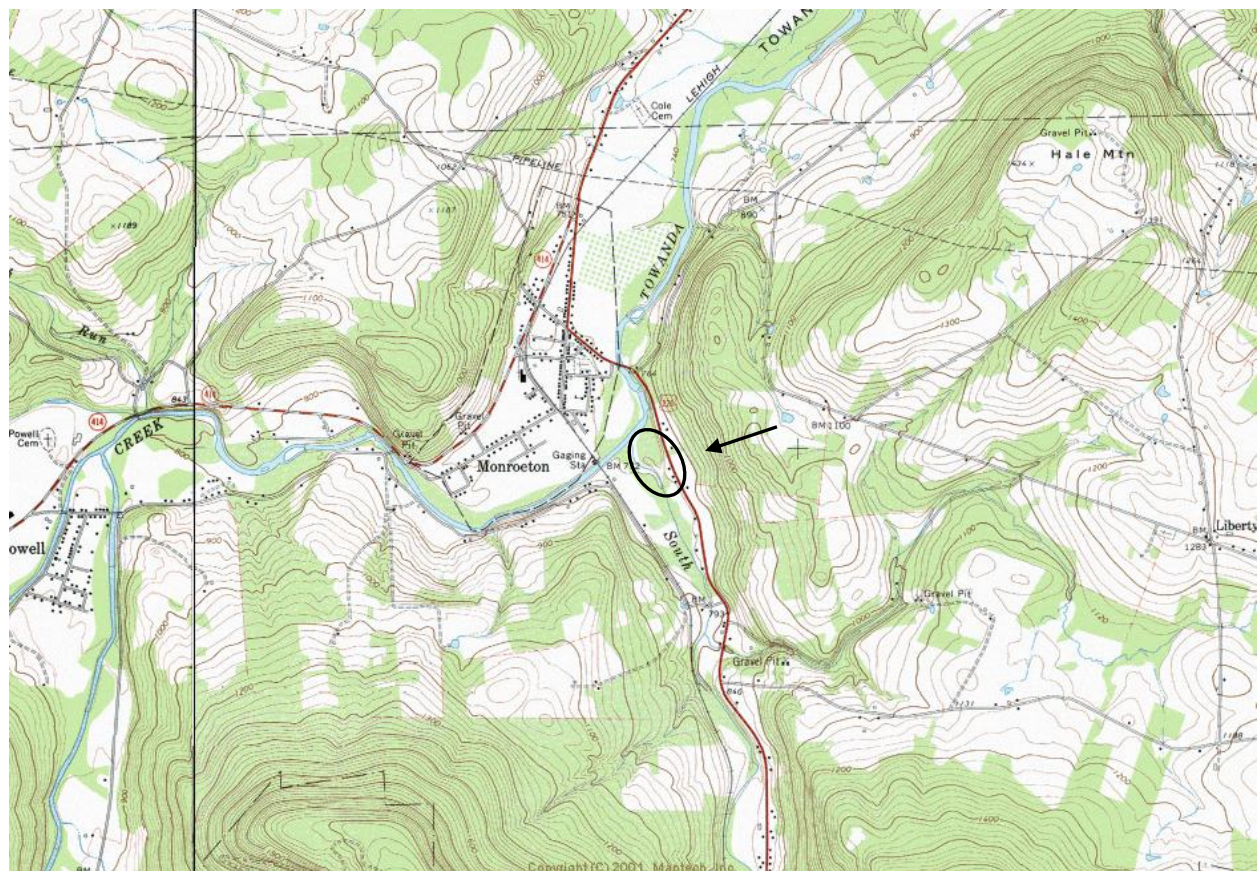


Site: EPA 1.27

USGS 7.5' Quadrangle: Monroeton, PA
Bradford County, Monroe Twp.
Location: Liberty Corners, 3.3 km WNW

UTM Zone: 18
Easting: 0377823 m
Northing: 9618485 m
Elevation: 770 ft.

EPA 1.27 lies within TNC's High Allegheny Plateau Ecoregion on a low terrace near the confluence of the South Fork Towanda Creek with the main stem of Towanda Creek. This site is located within a small patch of floodplain forest along a generally rural residential section of the valley near the town of Monroeton. Adjacent land uses include a major secondary road and abandoned agricultural areas. The plot represents a partial to full canopy, *Platanus occidentalis* dominated community containing significant amounts of *Populus deltoides* and *Catalpa speciosa*. The understory is relatively open with some *Acer negundo* and a dense herbaceous layer. Other prominent associates include *Matteucia struthiopteris*, *Urtica procera*, *Solidago gigantea*, and *Microstegium vimineus*.

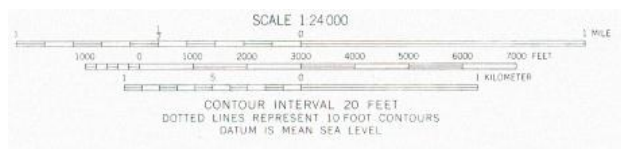
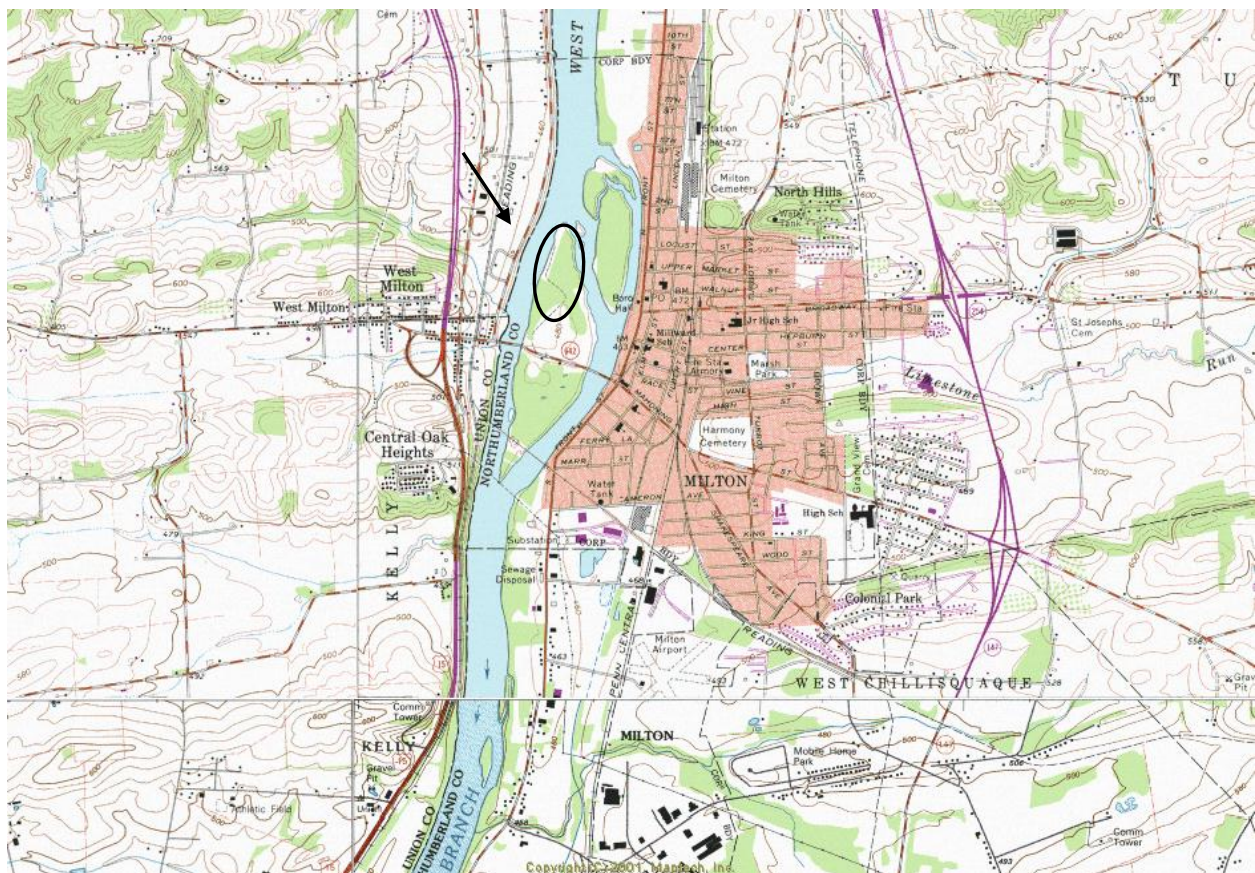


Site: EPA 1.28

USGS 7.5' Quadrangle: Milton, PA
Northumberland County, Milton Twp.
Location: West Milton, 1.1 km ENE

UTM Zone: 18
Easting: 0343539 m
Northing: 4542973 m
Elevation: 445 ft.

EPA 1.28 lies within TNC's Central Appalachian Forest Ecoregion on a large island in the Susquehanna River that is part of Milton State Park. This site sits on a low terrace that abutts maintained sections of the park, including mowed trails. The plot represents a full canopy, *Acer saccharinum* dominated community containing some *Platanus occidentalis*. An understory is absent and *Polygonum cuspidatum* accounts for nearly all herbaceous cover. The only species of note are *Celtis occidentalis* and *Catalpa speciosa* that were present in the upper subcanopy.

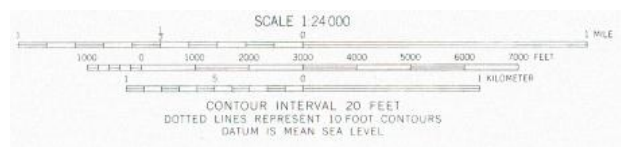
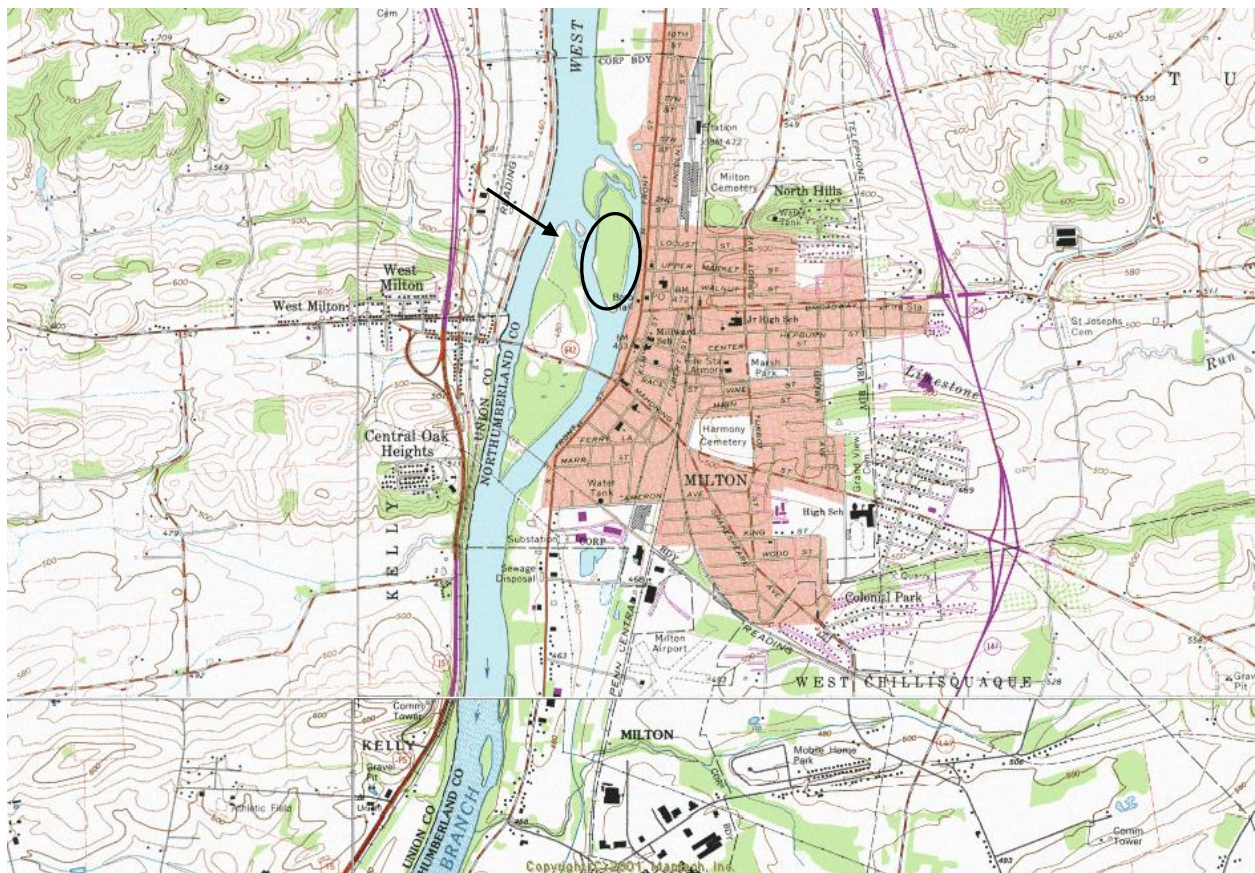


Site: EPA 1.29

USGS 7.5' Quadrangle: Milton, PA
Northumberland County, Milton Twp.
Location: West Milton, 1.4 km NE

UTM Zone: 18
Easting: 0343811 m
Northing: 4543390 m
Elevation: 437 ft.

EPA 1.29 lies within TNC's Central Appalachian Forest Ecoregion on an island in the Susquehanna River that is part of Milton State Park. This site sits on a low terrace and levee on a undeveloped, heavily channelized island. Shoreline land use across the river from this island includes Milton State Park and the town of Milton. The plot represents a full canopy, *Acer saccharinum* dominated community containing some *Platanus occidentalis*. An understory is absent and *Polygonum cuspidatum* accounts for nearly all herbaceous cover. *Toxicodendron radicans* and *Impatiens sp.* are the only notable other species present.

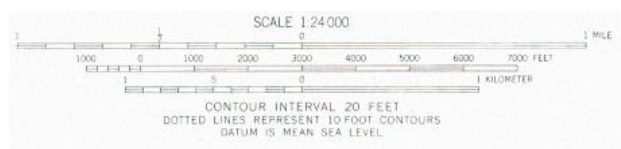
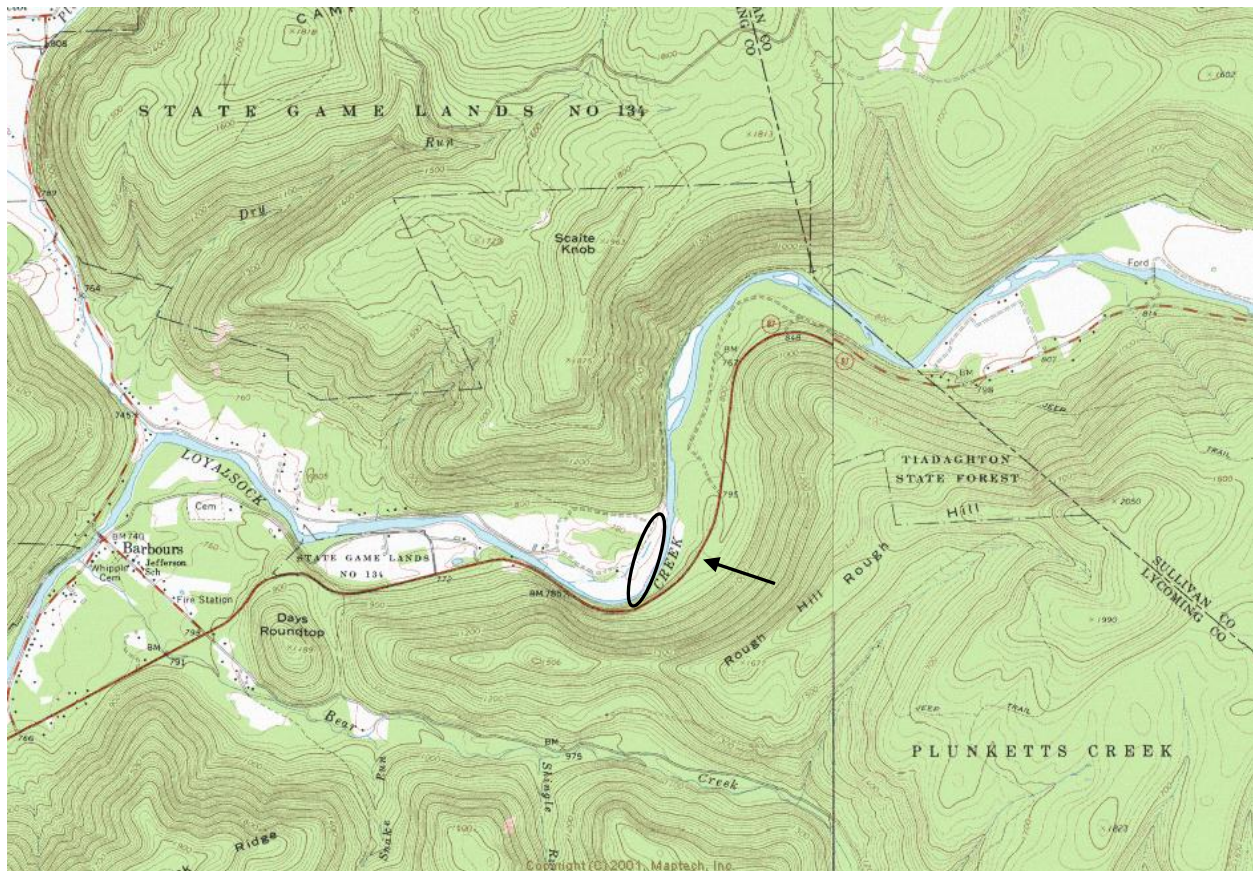


Site: EPA 1.30

USGS 7.5' Quadrangle: Barbours, PA
Lycoming County, Plunketts Creek Twp.
Location: Barbours, 3.4 km ENE

UTM Zone: 18
Easting: 0352831 m
Northing: 4584524 m
Elevation: 745 ft.

EPA 1.30 lies within TNC's High Allegheny Plateau Ecoregion on a small island in Loyalsock Creek in Lycoming County. This site sits on a low terrace of the island within a large patch of forested floodplain. The adjacent land use is primarily commercial forest managed by the Bureau of Forestry. The plot represents a full canopy, *Platanus occidentalis* dominated community with little understory and a moderately dense herbaceous layer. Prominent associates include *Polygonum cuspidatum*, *Teucrium canadense*, *Microstegium vimineous*, and *Alliaria petiolata*.

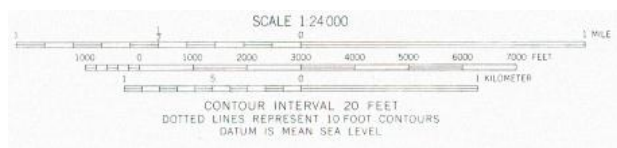
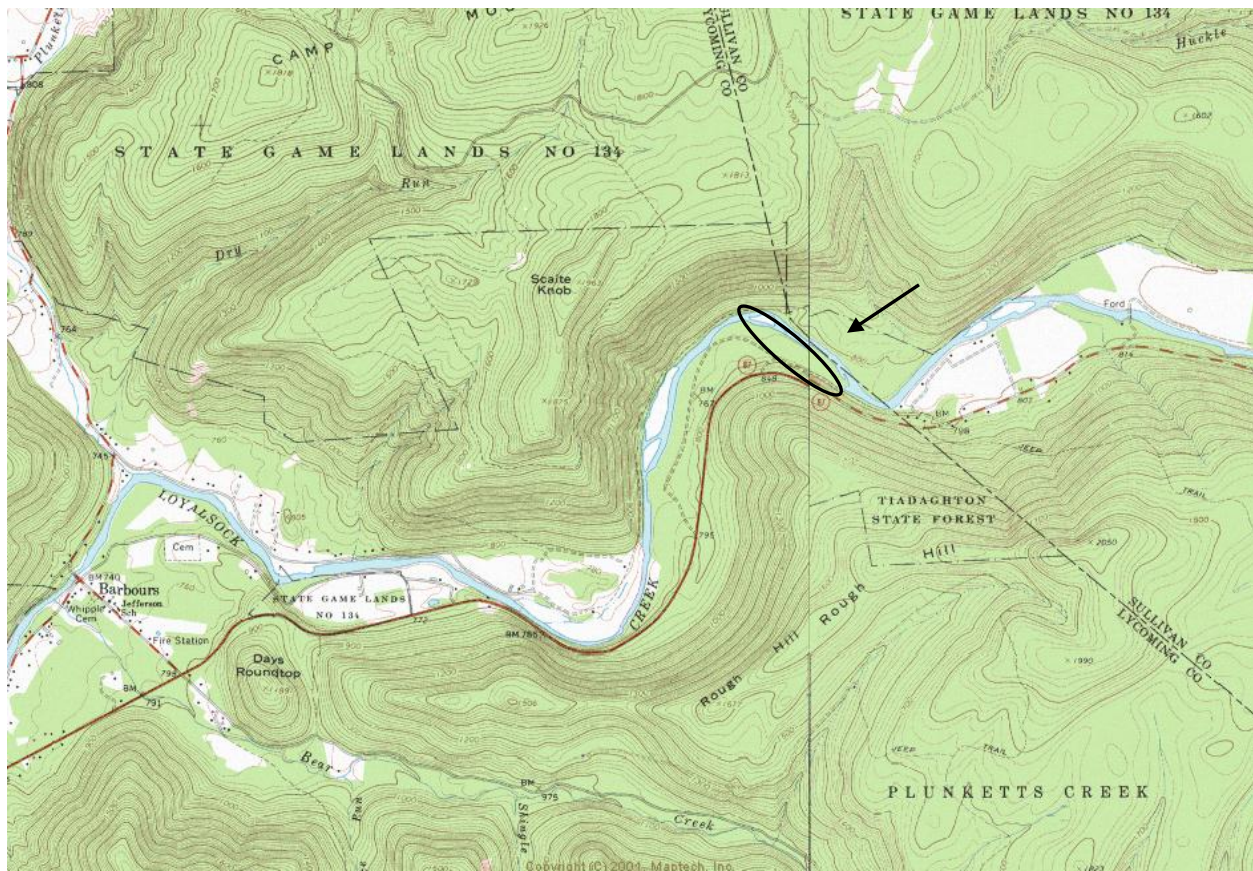


Site: EPA 1.31

USGS 7.5' Quadrangle: Barbours, PA
Lycoming County, Plunketts Creek Twp.
Location: Barbours, 4.3 km ENE

UTM Zone: 18
Easting: 0353801 m
Northing: 4585150 m
Elevation: 766 ft.

EPA 1.31 lies within TNC's High Allegheny Plateau Ecoregion along Loyalsock Creek in Lycoming County. This site is located on a low, channelized terrace within a large patch of upland forest and forested floodplain in a sparsely developed section of the valley. The adjacent land use is primarily commercial forest managed by the Bureau of Forestry. The plot represents a full canopy, *Platanus occidentalis* – *Acer saccharum* – *Acer rubrum* dominated community with little understory and a moderately dense herbaceous layer. Prominent associates include *Panicum clandestinum*, *Microstegium vimineus*, *Berberis thunbergii*, *Aster divaricatus*, *Aster prenanthioides*, *Eupatorium rugosum*, and *Solidago rugosa*.

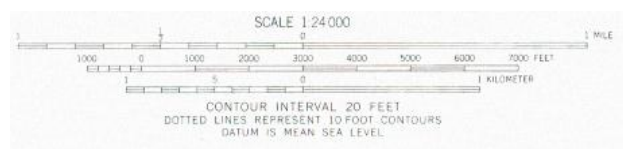


Site: EPA 1.32

USGS 7.5' Quadrangle: Trout Run, PA
Lycoming County, Lewis Twp.
Location: Bodines, 0.9 km NNW

UTM Zone: 18
Easting: 0334585 m
Northing: 4591238 m
Elevation: 758 ft.

EPA 1.32 lies within TNC's High Allegheny Plateau Ecoregion along Lycoming Creek in Lycoming County. This site sits on a low terrace within a small patch of floodplain forest embedded in a mostly forested, rural landscape. Immediately surrounding land uses include a non-agricultural field and a young forest. The plot represents a full canopy, *Platanus occidentalis* dominated community containing some *Robinia pseudoacacia* and a sparse subcanopy. The shrub and herbaceous layers include *Acer negundo*, *Salix nigra*, *Rosa multiflora*, *Solidago rugosa*, *Solidago gigantea*, *Hesperis matronalis*, and *Euthamia graminifolia*.

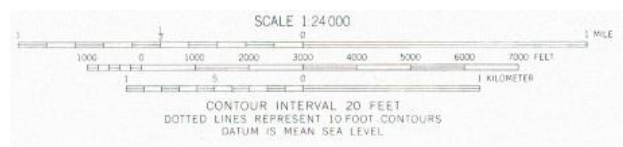
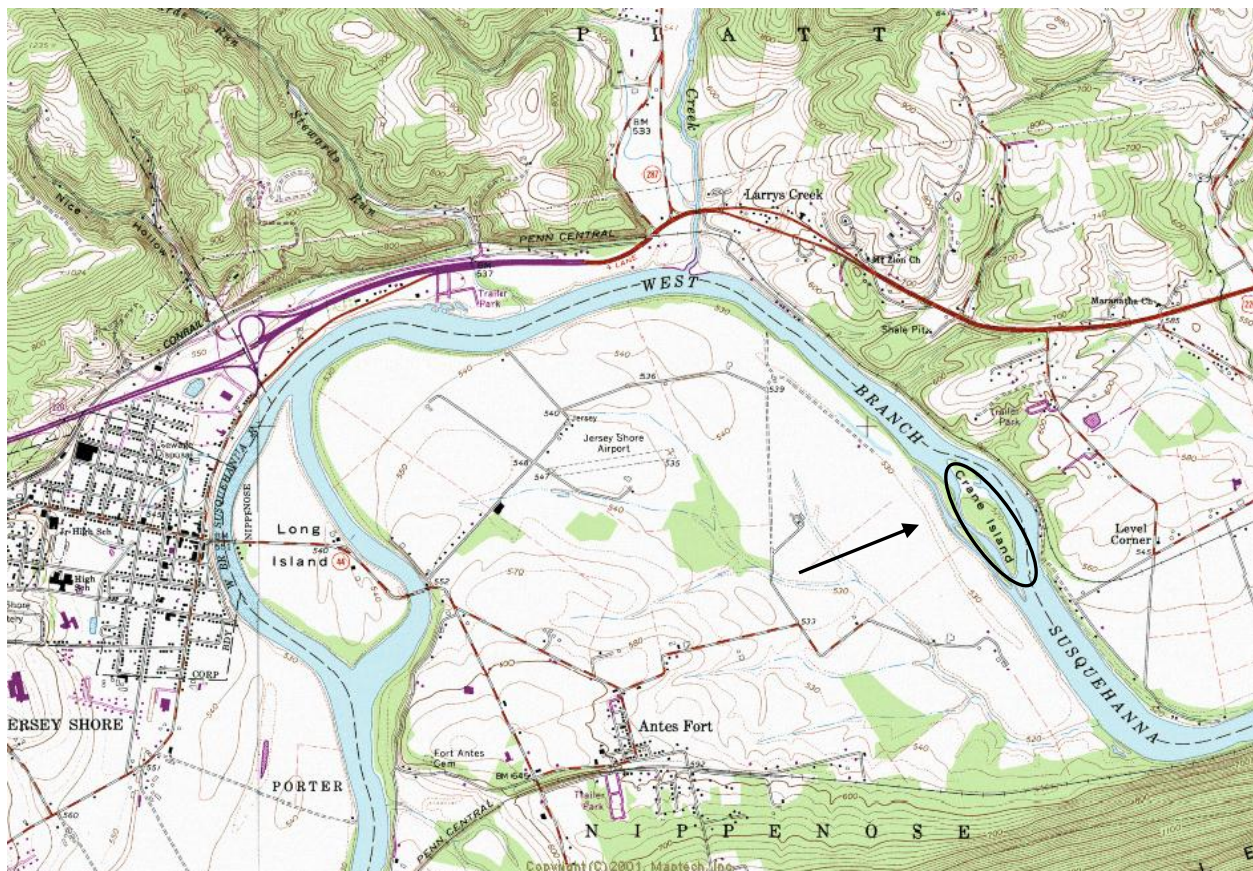


Site: EPA 1.33

USGS 7.5' Quadrangle: Linden, PA
Lycoming County, Nippenose Twp.
Location: Antes Fort, 2.5 km NE

UTM Zone: 18
Easting: 0315549 m
Northing: 4563849 m
Elevation: 518 ft.

EPA 1.33 lies within TNC's High Allegheny Plateau Ecoregion on a moderately large island in the West Branch of the Susquehanna River in Lycoming County. This site is located on a low terrace on the outer edge of the island. Land use on the shoreline of the river is predominately agricultural fields and sparse, rural development. The plot represents a partial to full canopy, *Betula nigra* dominated community containing some *Acer saccharinum*. Understory and shrub layers are very sparse. A dense herbaceous layer is predominantly composed of the exotic species *Polygonum cuspidatum* and *Microstegium vimineus*, along with *Onoclea sensibilis*, *Teucrium canadense* and *Panicum clandestinum*.

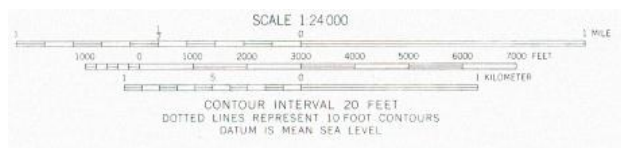
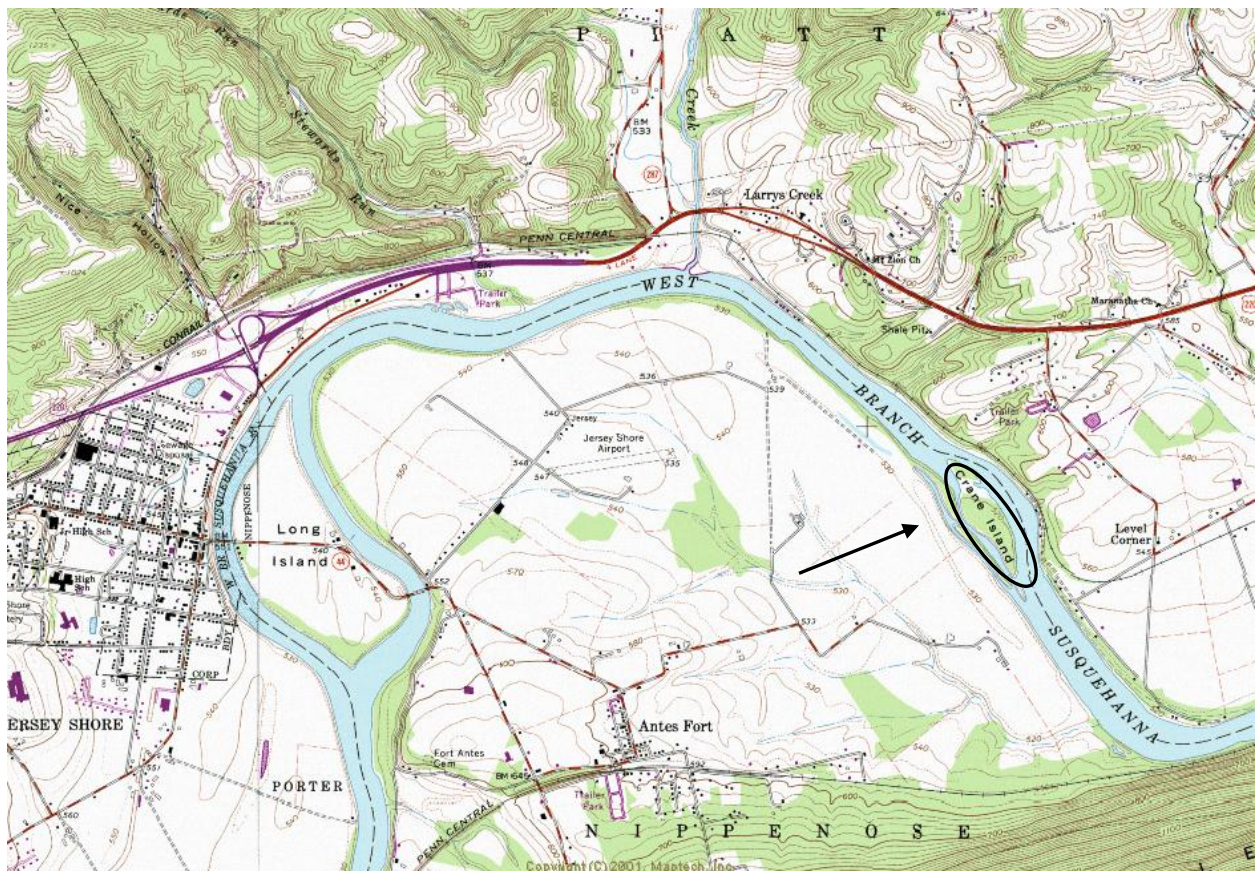


Site: EPA 1.34

USGS 7.5' Quadrangle: Linden, PA
Lycoming County, Nippenose Twp.
Location: Antes Fort, 2.5 km NE

UTM Zone: 18
Easting: 0315549 m
Northing: 4563849 m
Elevation: 518 ft.

EPA 1.34 lies within TNC's High Allegheny Plateau Ecoregion on a moderately large island in the West Branch of the Susquehanna River in Lycoming County. This site sits on a low terrace on the interior of the island. Land use on the shoreline of the river is predominately agricultural fields and sparse, rural development. The plot represents a partial to full canopy, *Acer saccharinum* dominated community containing some *Betula nigra*. The understory is wholly *Acer saccharinum* and a dense herbaceous layer is dominated by the exotic species *Polygonum cuspidatum* and *Microstegium vimineus*, along with *Onoclea sensibilis*, *Arisaema draconitum*, and *Laportea canadensis*.

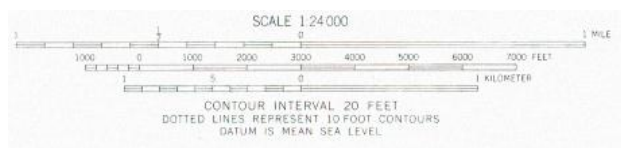
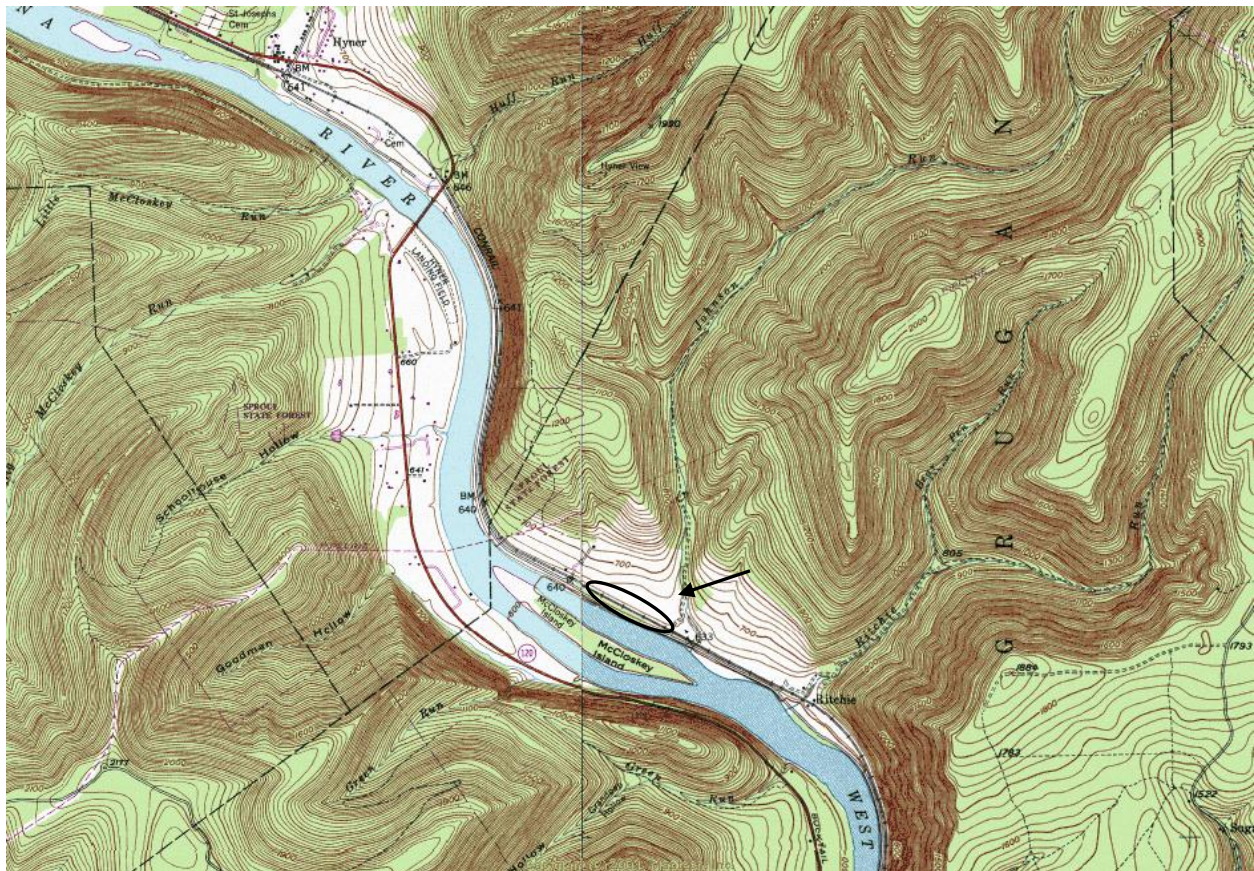


Site: EPA 1.35

USGS 7.5' Quadrangle: Glen Union, PA
Clinton County, Grugan Twp.
Location: Ritche 0.7 km WNW

UTM Zone: 18
Easting: 0280920 m
Northing: 4575474 m
Elevation: 593 ft.

EPA 1.35 lies within TNC's High Allegheny Plateau Ecoregion along the West Branch of the Susquehanna River in Clinton County. This site sits on an active floodplain within a narrow linear section of floodplain forest. Adjacent land uses include a dirt road and a railroad right-of-way. The plot represents a partial canopy, *Betula nigra* – *Salix nigra* dominated community supporting sparse shrub and understory layers. A dense herbaceous layer contains numerous species, including *Carex* spp., *Boehmeria cylindrica*, *Onoclea sensibilis*, *Teucrium canadense*, and *Microstegium vimineus*.

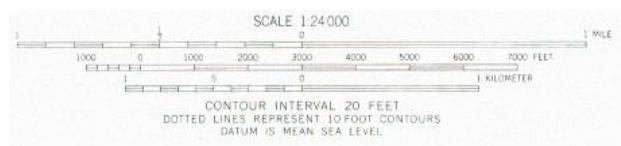
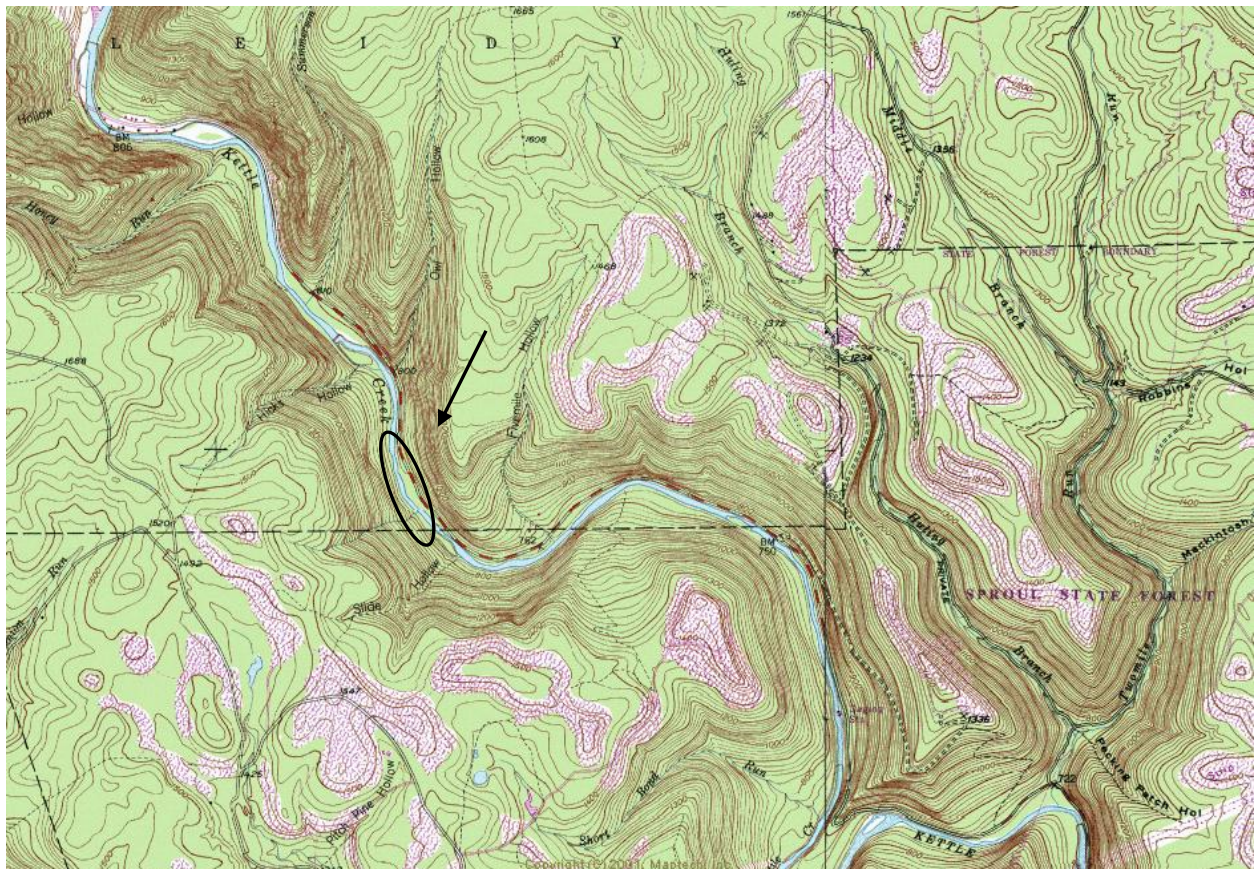


Site: EPA 1.36

USGS 7.5' Quadrangle: Keating, PA
Clinton County, Leidy Twp.
Location: Westport, 6.1 km NW

UTM Zone: 18
Easting: 0257191 m
Northing: 4579415 m
Elevation: 766 ft.

EPA 1.36 lies within TNC's High Allegheny Plateau Ecoregion on a narrow section of floodplain along Kettle Creek in Clinton County. This site sits within a forested landscape, most of which is part of Sproul State Forest. Immediately surrounding land uses include a road above the creek running the length of the valley and commercial forest. The plot represents a partial canopy, *Platanus occidentalis* – *Betula nigra* dominated community with a moderately dense shrub layer and dense herbaceous layer. Prominent associates include *Alnus serrulata*, *Rosa multiflora*, *Berberis thunbergii*, *Thelypteris palustris*, *Hydrocotyle americana*, *Senecio aurea*, and numerous *Carex* spp..

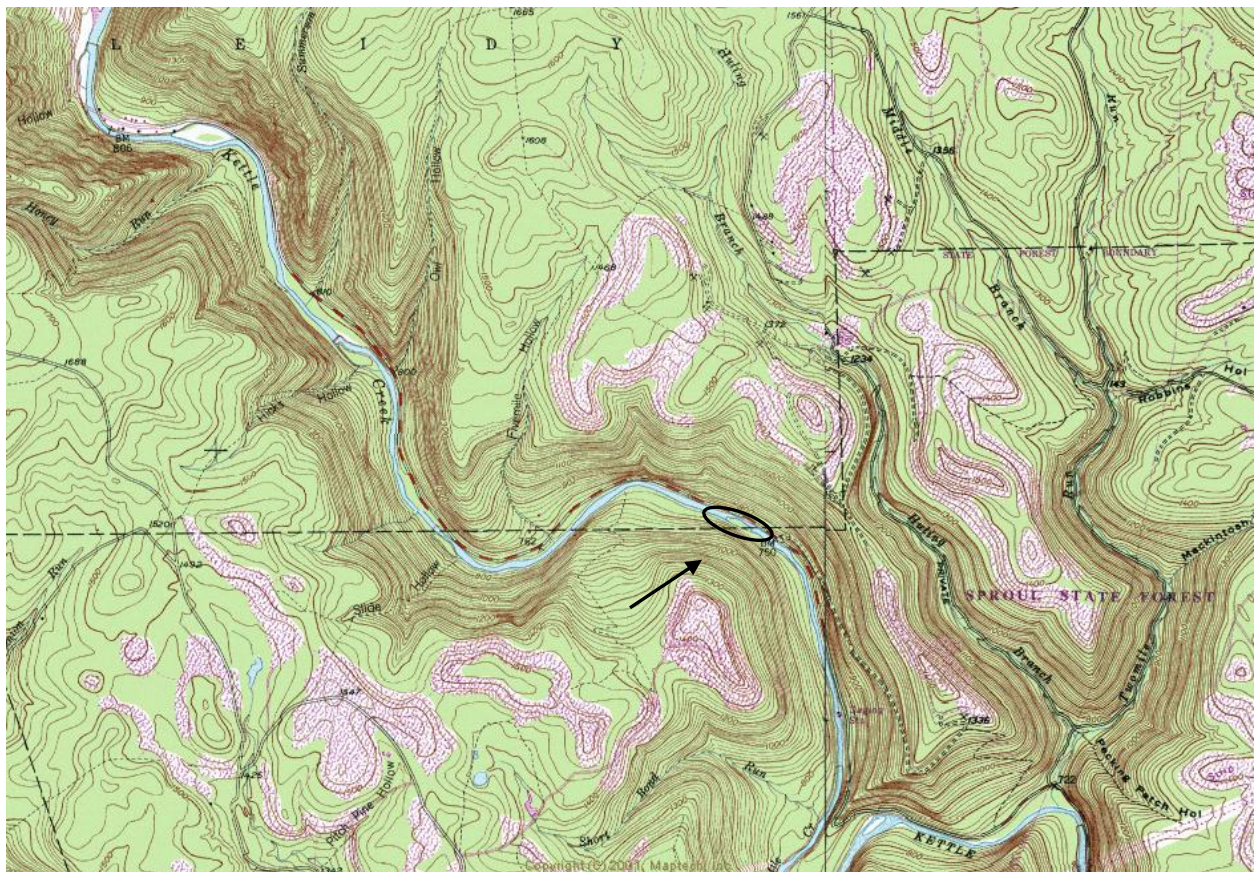


Site: EPA 1.37

USGS 7.5' Quadrangle: Keating, PA
Clinton County, Leidy Twp.
Location: Westport, 4.6 km NW

UTM Zone: 18
Easting: 0258914 m
Northing: 4579347 m
Elevation: 744 ft.

EPA 1.37 lies within TNC's High Allegheny Plateau Ecoregion on a small island within Kettle Creek in Clinton County. This site sits within a forested landscape, most of which is part of Sproul State Forest. Adjacent land uses include a road above the creek running the length of the valley and commercial forest. The plot represents a partial canopy, *Platanus occidentalis* – *Betula nigra* dominated community with a moderately dense shrub layer and dense herbaceous layer. Prominent associates include *Carpinus caroliniana*, *Alnus serrulata*, *Anthoxanthum odorata*, *Asclepias syrica*, *Thelypteris palustris*, and *Rubus hispidis*.

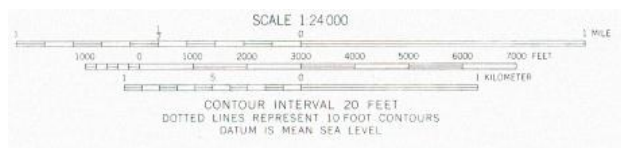
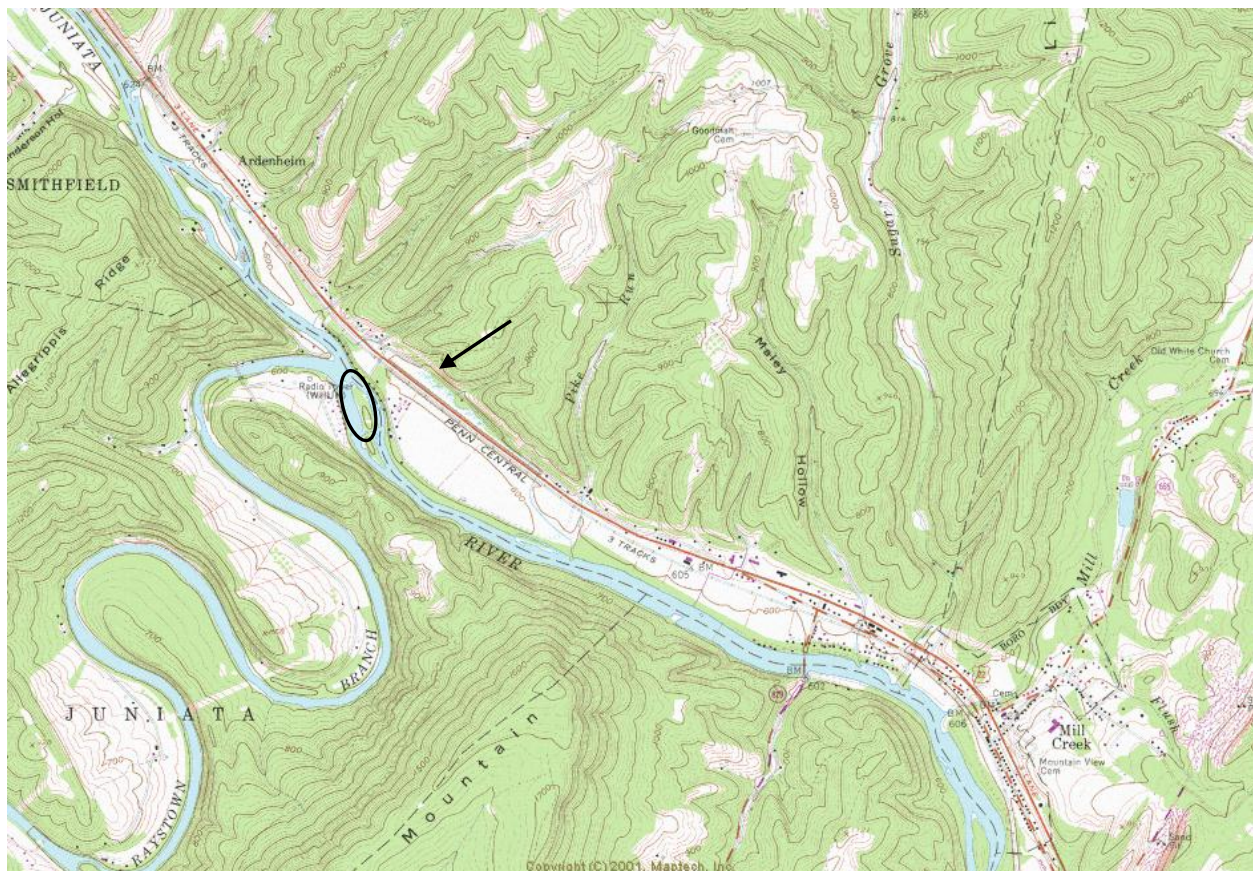


Site: EPA 1.38

USGS 7.5' Quadrangle: Frankstown, PA
Huntingdon County, Juniata Twp.
Location: Mill Creek, 2.5 km NW

UTM Zone: 17
Easting: 0247777 m
Northing: 4482104 m
Elevation: 595 ft.

EPA 1.38 lies within TNC's Central Appalachian Ecoregion on a large island in the West Branch of the Susquehanna River at its confluence with the Raystown Branch in Huntingdon County. The island contains a summer residence and a large area of cleared land associated with the dwelling. The surrounding shoreline includes similar seasonal homes and cabins with adjacent clearings within a largely forested landscape. The plot represents a full canopy, *Platanus occidentalis* – *Fraxinus pennsylvanica* dominated community containing some *Celtis occidentalis* and *Ulmus americana*. Other prominent associates include *Acer negundo*, *Lindera benzoin*, *Parthenocissus quinquefolia*, *Rosa multiflora*, *Toxicodendron radicans*, *Eupatorium rugosum* and *Rudbeckia laciniata*.

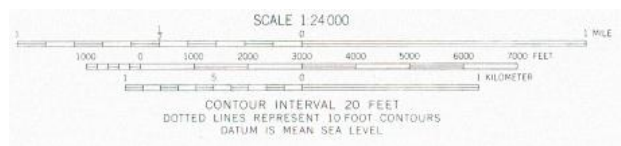
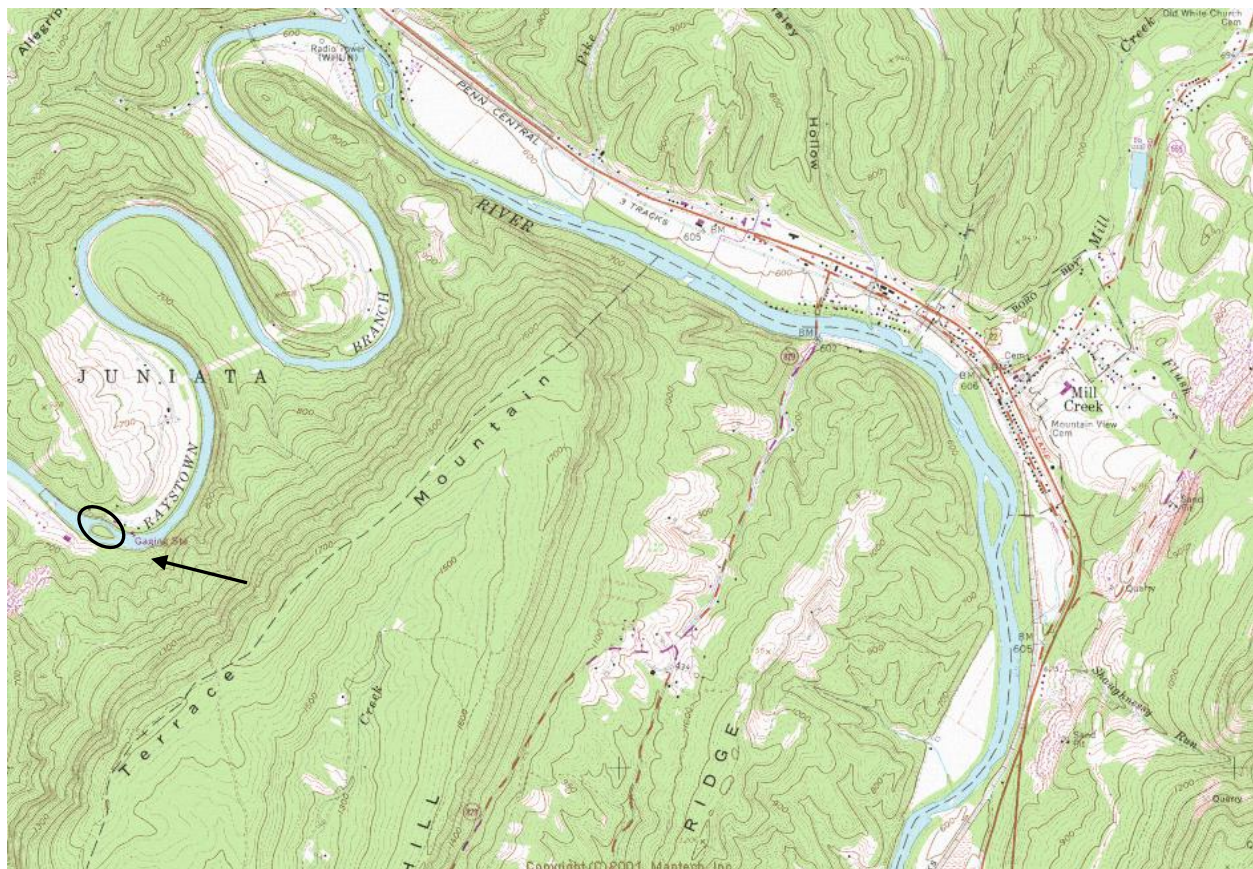


Site: EPA 1.39

USGS 7.5' Quadrangle: Mt. Union, PA
Huntingdon County, Juniata Twp.
Location: Mill Creek, 5.3 km W

UTM Zone: 18
Easting: 0246223 m
Northing: 4479608 m
Elevation: 621 ft.

EPA 1.39 lies within TNC's Central Appalachian Ecoregion on an island in the Raystown Branch of the Juniata River in Huntingdon County on U.S. Army Corps of Engineers land. The island is frequently flooded and scoured although it sits just downstream of the Raystown Lake Dam facility. The surrounding land is predominately forested with immediately adjacent land and shoreline containing fishing access, maintained park facilities, a dirt and gravel access road and trails. The plot represents a full canopy, *Platanus occidentalis* dominated community containing some *Ulmus americana* and *Morus alba*. Other prominent associates include *Gleditsia tricanthos*, *Robinia pseudoacacia*, *Rosa multiflora*, *Toxicodendron radicans*, *Lindera benzoin*, *Solanum carolinensis*, and numerous grass species.

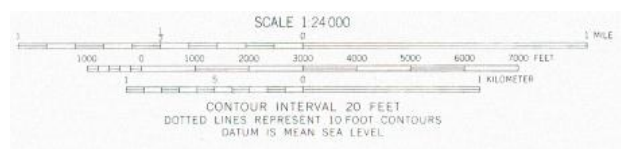
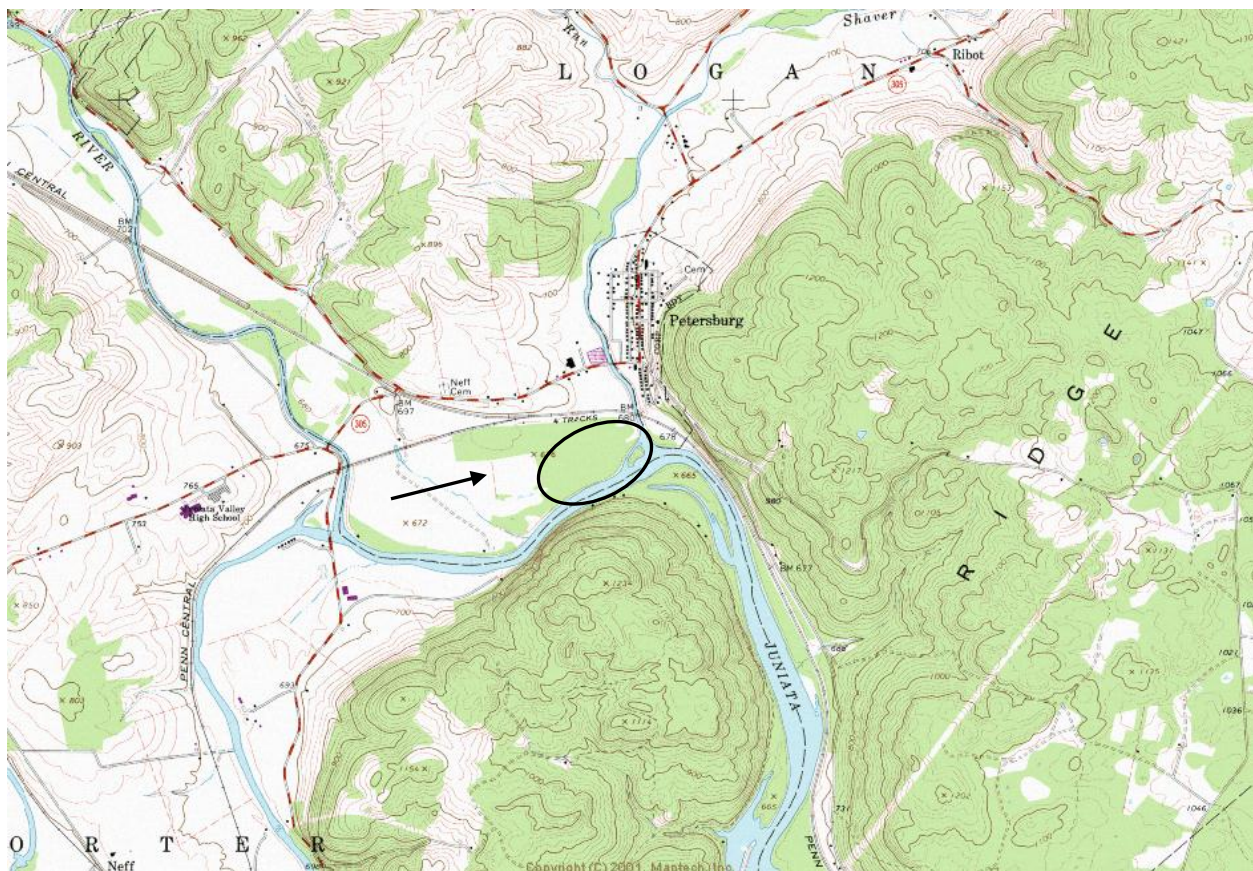


Site: EPA 1.40

USGS 7.5' Quadrangle: Alexandria, PA
Huntingdon County, Logan Twp.
Location: Petersburg, 0.8 km SSW

UTM Zone: 17
Easting: 0750070 m
Northing: 4494797 m
Elevation: 643 ft.

EPA 1.40 lies within TNC's Central Appalachian Ecoregion along the Juniata River at the confluence with Spruce Creek in Huntingdon County. This site sits on a low terrace within a moderately large patch of forested floodplain. The area includes a back channel area bordered by a railroad right-of-way which creates a low levee along the river. The town of Petersburg, composed of dense residential and commercial development, lies just to the north. The plot represents a partial canopy, *Fraxinus pennsylvanica* dominated community containing significant amounts of *Acer rubrum* and *Acer saccharinum*. Other prominent associates include *Acer negundo*, *Ligustrum vulgare*, *Polygonum pensylvanicum*, *Lysimachia nummularia*, *Veronica americana*, *Boehmeria cylindrica*, *Leersia virginica*, and numerous *Carex* spp..

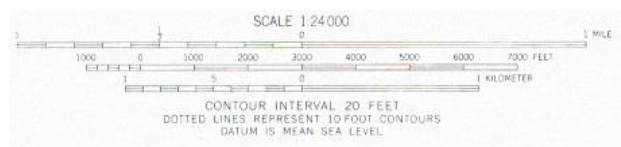
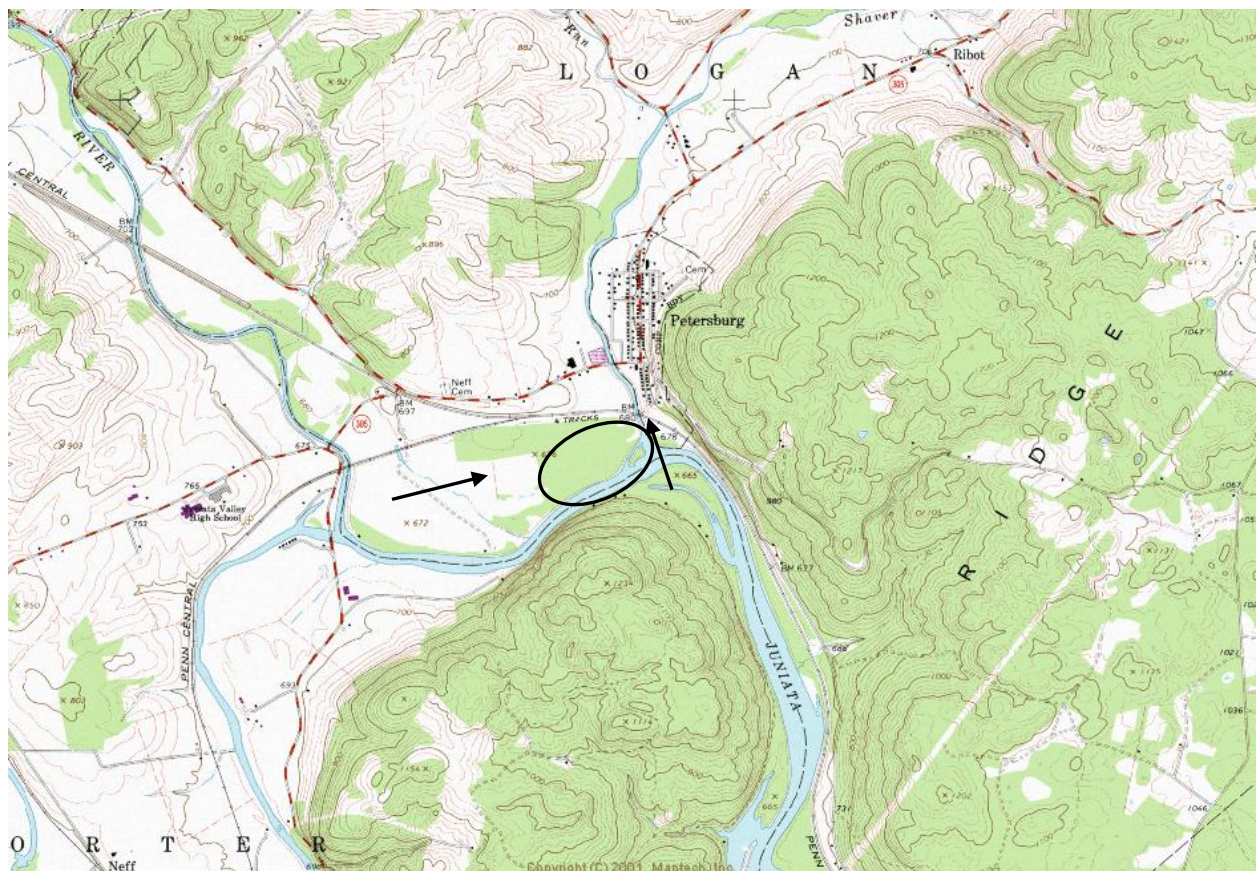


Site: EPA 1.41

USGS 7.5' Quadrangle: Alexandria, PA
Huntingdon County, Logan Twp.
Location: Petersburg, 0.5 km SW

UTM Zone: 17
Easting: 0750039 m
Northing: 4494723 m
Elevation: 668 ft.

EPA 1.41 lies within TNC's Central Appalachian Ecoregion along the Juniata River at the confluence with Spruce Creek in Huntingdon County. This site sits within a moderately large patch of forested floodplain on a low terrace near the river. The town of Petersburg with associated residential and commercial development lies just to the north. Foot trails run through the site and several unofficial fishing access points sit along the shoreline. The plot represents a partial to full canopy, *Acer saccharinum* – *Acer negundo* – *Salix nigra* dominated community. Other prominent associates include *Juglans nigra*, *Ligustrum vulgare*, *Verbesina alternifolia*, *Impatiens capensis*, *Ranunculus hispidus*, *Lysimachia nummularia*, *Pilea pumila*, *Leersia virginica*, and numerous *Carex* spp..

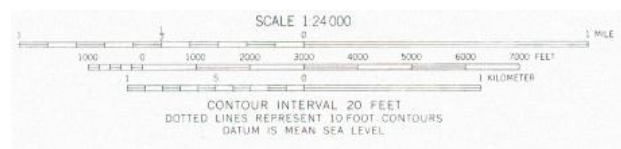
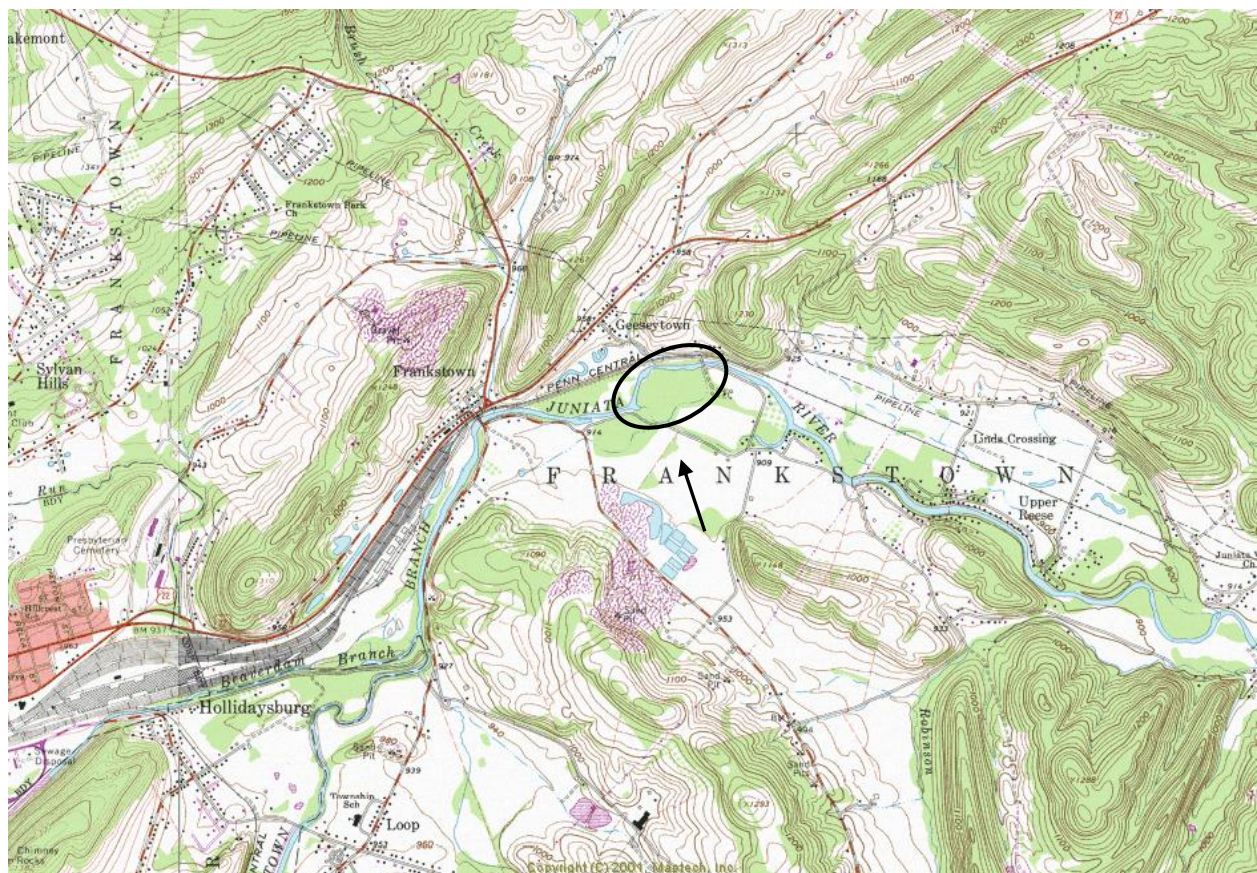


Site: EPA 1.42

USGS 7.5' Quadrangle: Frankstown, PA
Blair County, Frankstown Twp.
Location: Frankstown, XX km W

UTM Zone: 17
Easting: 0725562 m
Northing: 4480672 m
Elevation: 925 ft.

EPA 1.42 lies within TNC's Central Appalachian Ecoregion along the Frankstown Branch of the Juniata River in Blair County. This site sits on a low terrace of the river within a small patch of floodplain forest along a generally rural residential section of the valley. Adjacent land uses include sparse residential development and agriculture. The plot represents a full canopy, *Acer saccharinum* dominated community containing some *Robinia pseudoacacia*. Other prominent associates include *Acer negundo*, *Toxicodendron radicans*, *Lysimachia nummularia*, *Verbisina alternifolia*, and *Alliaria petiolata*.



Appendix II: Species and Cover Values for Forested Floodplain Wetlands in the Susquehanna River Basin

EPA1.1		EPA1.2		EPA1.3		EPA1.4	
Microstegium vimineum	7	Acer saccharinum	7	Boehmeria cylindrica	8	Acer saccharinum	8
Acer negundo	6	Toxicodendron radicans	7	Impatiens capensis	8	Toxicodendron radicans	4
Quercus palustris	6	Fraxinus pennsylvanica.	6	Betula nigra	7	Acalypha rhomboidea	3
Acer rubrum	5	Impatiens pallida	6	Laportea canadensis	6	Eupatorium album	3
Fraxinus pennsylvanica.	5	Polygonum hydropiper	6	Lysimachia nummularia	6	Impatiens capensis	3
Lindera benzoin	5	Parthenocissus quinquefolia	6	Onoclea sensibilis	6	Lindera benzoin	3
Polygonum cespitosum	5	Lindera benzoin	5	Toxicodendron radicans	5	Lysimachia ciliata	3
Laportea canadensis	4	Laportea canadensis	5	Robinia pseudoacacia	5	Betula nigra	3
Cinna latifolia	3	Leersia virginica	4	Ulmus americana	5	Aster sp.	2
Impatiens sp.	3	Morus rubra	4	Acer saccharinum	5	Boehmeria cylindrica	2
Leersia virginica	3	Phytolacca americana	4	Lindera benzoin	4	Cassia hebecarpa	2
Polygonum hydropiper	3	Sambucus sp.	4	Celtis occidentalis	3	Celastrus orbiculatus	2
Polygonum persicaria	3	Verbena urticifolia	4	Fraxinus pennsylvanica.	3	Fraxinus pennsylvanica.	2
Rosa multiflora	3	Viola sp.	4	Pilea pumila	3	Gleditsia triacanthos	2
Symplocarpus foetidus	3	Alliaria petiolata	3	Geum canadense	2	Lythrum salicaria	2
Urtica procera	3	Celtis occidentalis	3	Catalpa speciosa	1	Morus rubra	2
Vitis aestivalis	3	Microstegium vimineum	3	Polygonum amphibium	1	Oxalis stricta	2
Alliaria petiolata	2	Polygonum virginianum	3			Solanum carolinense	2
Boehmeria cylindrica	2	Acer negundo	3	Campylium stellatum	1	Solanum dulcamara	2
Circaea lutetiana	2	Catalpa speciosa	2	Helodium blandowii	1	Bidens frondosa	1
Polygonum perfoliatum	2	Geum canadense	2			Catalpa speciosa	1
Polygonum virginianum	2	Polygonum perfoliatum	2			Convolvulus sepium	1
Smilax rotundifolia	2	Polygonum amphibium	1			Echinocystis lobata	1
Toxicodendron radicans	1	Ulmus americana	1			Erechtites hieracifolia	1
Arisaema triphyllum	1					Helenium autumnale	1
Carex spp.	1	Mnium affine	2			Parthenocissus quinquefolia	1
Carpinus caroliniana	1	Rhyncostegium serrulatum	1			Polygonum cuspidatum	1
Cephalanthus occidentalis	1					Polygonum pensylvanicum	1
Glyceria striata	1					Salix nigra	1
Onoclea sensibilis	1					Solidago sp.	1
Oxalis stricta	1					Vitis sp.	1
Parthenocissus quinquefolia	1					Vitus spp.	1
Pilea pumila	1						
Poa pratensis	1					Campylium stellatum	1
Rumex obtusifolius	1					Leskea gracilens	1
Anomodon minor	1						
Brachythecium sp.	1						
Platygyrium repens	1						

Note: Cover values for all strata combined

Cover Value Key:

- 1 = single stem or few
- 2 = occasional
- 3 = less than 5%
- 4 = 5 - 12%
- 5 = 13 - 25%
- 6 = 26 - 50%
- 7 = 51 - 75%
- 8 = 76% or more

Appendix II (cont.)

EPA1.5

Acer saccharinum	8
Toxicodendron radicans	7
Celastrus orbiculatus	6
Impatiens pallida	6
Asimina triloba	5
Alliaria petiolata	4
Lindera benzoin	4
Verbena urticifolia	4
Vitis aestivalis	4
Matteuccia struthiopteris	3
Platanus occidentalis	3
Rubus allegheniensis	3
Sambucus sp.	3
Carya cordiformis	2
Parthenocissus quinquefolia	2
Phytolacca americana	2
Polygonum scandens	2
Polygonum virginianum	2
Celtis occidentalis	1
Sicyos angulatus	1
Solidago gigantea	1
Thalictrum pubescens	1

EPA1.6

Polygonum cuspidatum	8
Acer saccharinum	7
Platanus occidentalis	7
Fraxinus pennsylvanica.	5
Toxicodendron radicans	4
Betula nigra	3
Lindera benzoin	3
Alliaria petiolata	1
Carya cordiformis	1
Parthenocissus quinquefolia	1

EPA1.7

Platanus occidentalis	8
Acer saccharinum	6
Betula nigra	4
Vitis aestivalis	4
Toxicodendron radicans	4
Polygonum cuspidatum	3
Asclepias incarnata	3
Convolvulus sepium	2
Leersia virginica	2
Lycopus uniflorus.	2
Lysimachia ciliata	2
Microstegium vimineum	2
Polygonum sp.	2
Polygonum coccineum.	2
Polygonum hydropiper	2
Polygonum pensylvanicum	2
Solanum carolinense	2
Acalypha rhomboidea	1
Bidens sp.	1
Boehmeria cylindrica	1
Echinochloa crus-galli	1
Gleditsia triacanthos	1
Hypericum sp.	1
Lythrum salicaria	1
Polygonum cespitosum	1
Setaria sp.	1
Viola sp.	1
Anomodon minor	1

EPA1.8

Acer saccharinum	8
Polygonum cuspidatum	7
Toxicodendron radicans	7
Betula nigra	4
Catalpa speciosa	4
Cornus amomum	4
Laportea canadensis	4
Lysimachia ciliata	4
Onoclea sensibilis	4
Convolvulus sepium	3
Fraxinus americana	3
Fraxinus pennsylvanica.	3
Juglans nigra	3
Lindera benzoin	3
Mint sp. #4	3
Mint spp.	3
Sambucus sp.	3
Sicyos angulatus	3
Boehmeria cylindrica	2
Eupatorium fistulosum	2
Lycopus uniflorus.	2
Lythrum salicaria	2
Polygonum cilinode	2
Arisaema dracontium	1
Leersia virginica	1
Platanus occidentalis	1
Sambucus canadensis	1
Vitis aestivalis	1
Mnium punctatum	1

Appendix II (cont.)

EPA1.9		EPA1.10		EPA1.11		EPA1.12	
Impatiens pallida	7	Glechoma hederacea	8	Acer negundo	7	Acer saccharinum	8
Fraxinus pennsylvanica.	7	Impatiens pallida	6	Alliaria petiolata	7	Toxicodendron radicans	7
Platanus occidentalis	5	Juglans nigra	6	Lysimachia nummularia	7	Lysimachia nummularia	7
Rosa multiflora	5	Verbesina alternifolia	5	Verbesina alternifolia	7	Acer negundo	4
Acer negundo	4	Fraxinus pennsylvanica.	5	Glechoma hederacea	6	Carex folliculata	4
Carex grisea	4	Alliaria petiolata	4	Celtis occidentalis	5	Fraxinus pennsylvanica.	4
Circaea lutetiana	4	Conium maculatum	4	Acer saccharinum	5	Boehmeria cylindrica	3
Poa trivialis	4	Lonicera maackii	4	Juglans nigra	4	Carex lupulina	3
Alliaria petiolata	3	Rosa multiflora	4	Ranunculus septentrionalis	4	Rosa multiflora	3
Geum canadense	3	Rudbeckia laciniata	4	Boehmeria cylindrica	3	Ulmus americana	3
Glechoma hederacea	3	Robinia pseudoacacia	4	Geum rivale	3	Amphicarpaea bracteata	2
Laportea canadensis	3	Acer negundo	4	Impatiens pallida	3	Carex laevivaginata	2
Lysimachia nummularia	3	Phalaris arundinacea	3	Lindera benzoin	3	Elymus hystrix	2
Microstegium vimineum	3	Polygonum scandens	3	Rudbeckia laciniata	3	Geum canadense	2
Oxalis stricta	3	Boehmeria cylindrica	2	Scutellaria incana	3	Gleditsia triacanthos	2
Pilea pumila	3	Elaeagnus umbellata	2	Toxicodendron radicans	3	Leersia virginica	2
Polygonum hydropiper	3	Geum canadense	2	Circaea lutetiana	2	Poa pratensis	2
Sicyos angulatus	3	Laportea canadensis	2	Fragaria virginiana	2	Polygonum hydropiper	2
Ulmus americana	3	Maclura pomifera	2	Fraxinus sp.	2	Polygonum virginianum	2
Arisaema triphyllum	2	Poa sp.	2	Lonicera tatarica	2	Robinia pseudoacacia	2
Carex spp.	2	Polygonum virginianum	2	Pilea pumila	2	Rumex obtusifolius	2
Celtis occidentalis	2	Solidago gigantea	2	Polygonum hydropiper	2	unknown herb #3	2
Parthenocissus quinquefolia	2	Teucrium canadense	2	Polygonum virginianum	2	Urtica dioica L.	2
Phalaris arundinacea	2	Ulmus americana	2	Sicyos angulatus	2	Verbesina alternifolia	2
Polygonum persicaria	2	Carex grisea	1	Teucrium canadense	2	Carex annectens	1
Polygonum scandens	2	Eupatorium rugosum	1	Geum canadense	1	Carex squarrosa	1
Polygonum virginianum	2	Galium aparine	1	Grass #2	1	Cinna arundinacea	1
Toxicodendron radicans	2	Grass #1	1	Grass spp.	1	Glyceria striata	1
Verbena urticifolia	2	Grass spp.	1	Parthenocissus quinquefolia	1	Oxalis stricta	1
Waldsteinia fragarioides	2	Humulus lupulus	1	Solidago gigantea	1	Quercus sp.	1
Agrostis perennans	1	Phytolacca americana	1	Vitis sp.	1		
Arisaema dracontium	1	Polygonum sp.	1	Vitis spp.	1	Campylium hispidulum	2
Carya cordiformis	1	Viola sp.	1			Mnium cuspidatum	2
Impatiens capensis	1	Vitis sp.	1	Anomodon minor	2	Amblystegium varium	1
Juglans nigra	1	Vitis spp.	1	Campylium stellatum	2	Entodon seductrix	1
Lonicera maackii	1			Entodon seductrix	1	Fissidens taxifolius	1
Rumex sp.	1	Leskea gracilens	1	Leskea gracilens	1		
Amblystegium varium	2						
Brachythecium sp.	1						
Leskea gracilens	1						
Platydicta confervoides	1						
Platygyrium repens	1						

Appendix II (cont.)

EPA1.13		EPA1.14		EPA1.15		EPA1.16	
Laportea canadensis	7	Polygonum pensylvanicum	6	Acer saccharum	7	Acer saccharinum	7
Alliaria petiolata	6	Acer saccharinum	6	Lindera benzoin	6	Fraxinus pennsylvanica.	5
Juglans nigra	6	Carex lupulina	5	Platanus occidentalis	6	Lysimachia ciliata	5
Platanus occidentalis	5	Lysimachia nummularia	4	Dennstaedtia punctilobula	4	Toxicodendron radicans	5
Verbesina alternifolia	5	Rosa multiflora	4	Fraxinus pennsylvanica.	4	Betula nigra	4
Acer saccharinum	5	Toxicodendron radicans	4	Liriodendron tulipifera	4	Lindera benzoin	4
Impatiens capensis	4	Quercus palustris	4	Carpinus caroliniana	4	Pilea pumila	4
Impatiens pallida	4	Fraxinus pennsylvanica.	4	Alnus serrulata	3	Polygonum cuspidatum	4
Lindera benzoin	4	Carex spp.	3	Hamamelis virginiana	3	Teucrium canadense	4
Acer negundo	4	Cinna arundinacea	3	Juglans cinerea	3	Viola repens	4
Carya cordiformis	4	Geum canadense	3	Polygonatum biflorum	3	Boehmeria cylindrica	3
Catalpa speciosa	3	Impatiens sp.	3	Symplocarpus foetidus	3	Eupatorium maculatum	3
Celtis occidentalis	3	Leersia virginica	3	Acer saccharinum	2	Leersia virginica	3
Pilea pumila	3	Phalaris arundinacea	3	Aralia nudicaulis	2	Mentha arvensis	3
Carex grayi	2	Ulmus americana	3	Aster acuminatus	2	Onoclea sensibilis	3
Fraxinus pennsylvanica.	2	Salix nigra	3	Aster divaricatus	2	Parthenocissus quinquefolia	3
Parthenocissus quinquefolia	2	Alisma subcordatum	2	Aster prenanthoides	2	Polygonum virginianum	3
Polygonum cespitosum	2	Boehmeria cylindrica	2	Brachyelytrum erectum	2	Rosa multiflora	3
Polygonum scandens	2	Carex gynandra	2	Carex grisea	2	Vitis aestivalis	3
Polygonum virginianum	2	Glyceria striata	2	Glyceria melicaria	2	Vitis sp.	3
Sambucus sp.	2	Pilea pumila	2	Leersia virginica	2	Vitus spp.	3
Carex spp.	1	Polygonum arifolium	2	Panicum sp.	2	Circaea lutetiana	2
Geum canadense	1	Polygonum hydropiper	2	Polystichum acrostichoides	2	Cornus amomum	2
Leersia virginica	1	Ranunculus septentrionalis	2	Prenanthes alba	2	Erysimum cheiranthoides	2
Staphylea trifolia	1	Bidens frondosa	1	Quercus rubra	1	Eupatorium rugosum	2
Toxicodendron radicans	1	Bromus ciliatus	1	Smilacina racemosa	1	Geum canadense	2
Viola sp.	1	Carex squarrosa	1	Thalictrum pubescens	1	Glechoma hederacea	2
		Chelone glabra	1	Thelypteris noveboracensis	2	Impatiens pallida	2
Fissidens taxifolius	2	Elymus hystrix	1	Viola sp.	2	Lycopus uniflorus.	2
		Elymus virginicus	1	Vitis sp.	2	Microstegium vimineum	2
		Epilobium cilatum	1	Vitus spp.	2	Oxalis stricta	2
		Parthenocissus quinquefolia	1	Arisaema triphyllum	1	Rumex obtusifolius	2
		Penthorum sedoides	1	Asclepias incarnata	1	Solanum dulcamara	2
		Polygonum cespitosum	1	Aster lateriflorus	1	Urtica procera	2
		Xanthium strumarium	1	Athyrium filix-femina	1	Acalypha rhomboidea	1
				Berberis thunbergii	1	Aster sp.	1
		Brachythecium rivulare	2	Carex laevivaginata	1	Bidens cernua	1
		Campylium chrysophyllum	2	Collinsonia canadensis	1	Bidens frondosa	1
		Anomodon rugellii	1	Diervilla lonicera	1	Chelone glabra	1
		Leptodictyum riparoides	1	Eupatorium fistulosum	1	Cinna arundinacea	1
		Mnium cuspidatum	1	Onoclea sensibilis	1	Echinochloa sp.	1
		Platygyrium repens	1	Panicum clandestinum	1	Echinocystis lobata	1
				Podophyllum peltatum	1	Humulus lupulus	1
				Rudbeckia laciniata	1	Poa nemoralis	1
				Senecio aureus	1	Polygonum cespitosum	1
				Smilax rotundifolia	1	Polygonum hydropiperoides	1
				Solidago rugosa	1	Polygonum pensylvanicum	1
				Toxicodendron radicans	1	Scutellaria sp.	1
				Tsuga canadensis	1	Verbena urticifolia	1
				Viburnum dentatum	1		
						Hypnum lindbergii	2
				Mnium affine	2	Mnium cuspidatum	1
				Atrichum undulatum	1		
				Brachythecium sp.	1		
				Leucobryum glaucum	1		

Appendix II (cont.)

EPA1.17

Acer saccharinum	8
Salix nigra	7
Alliaria petiolata	5
Leersia virginica	4
Phalaris arundinacea	4
Polygonum cuspidatum	4
Fraxinus pennsylvanica.	4
Humulus lupulus	3
Impatiens pallida	3
Laportea canadensis	3
Lysimachia ciliata	3
Viola renifolia	3
Acer negundo	2
Bidens sp.	2
Boehmeria cylindrica	2
Cinna arundinacea	2
Echinocystis lobata	2
Eupatorium rugosum	2
Fraxinus sp.	2
Impatiens capensis	2
Prenanthes	2
Teucrium canadense	2
Arisaema dracontium	1
Elymus sp.	1
Fragaria virginiana	1
Grass #3	1
Grass spp.	1
Lonicera japonica	1
Onoclea sensibilis	1
Oxalis stricta	1
Polygonum hydropiperoides	1
Solidago gigantea	1
Symplocarpus foetidus	1
Leskea gracilens	1

EPA1.18

Acer saccharinum	8
Laportea canadensis	4
Leersia virginica	4
Onoclea sensibilis	4
Cinna arundinacea	3
Impatiens sp.	3
Polygonum cuspidatum	3
Alliaria petiolata	2
Boehmeria cylindrica	2
Echinocystis lobata	2
Fraxinus pennsylvanica.	2
Oxalis stricta	2
Pilea pumila	2
Polygonum hydropiper	2
Arisaema dracontium	1
Arisaema triphyllum	1
Bidens frondosa	1
Lycopus uniflorus.	1
Polygonum amphibium	1
Scutellaria sp.	1
Symplocarpus foetidus	1
Rhynchosyrium serrulatum	3
Anomodon minor	1
Mnium thompsonii	1

EPA1.19

Impatiens pallida	8
Fraxinus pennsylvanica.	8
Alliaria petiolata	7
Hydrophyllum canadense	7
Carya cordiformis	4
Leersia virginica	4
Lilium superbum	4
Symplocarpus foetidus	4
Agostis tenuis	3
Elymus sp.	3
Geum canadense	3
Lysimachia nummularia	3
Veratrum viride	3
Allium canadense	2
Carex intumescens	2
Laportea canadensis	2
Podophyllum peltatum	2
Polygonum virginianum	2
Solidago rigida	2
Viola renifolia	2
Matteuccia struthiopteris	1
Mnium cuspidatum	2
Brachythecium sp.	1
Hypnum sp.	1
Leskea gracilens	1

EPA1.20

Polygonum cuspidatum	6
Acer saccharinum	6
Matteuccia struthiopteris	4
Onoclea sensibilis	4
Polygonum amphibium	4
Aster ericoides	3
Bidens cernua	3
Fraxinus pennsylvanica.	3
Impatiens sp.	3
Lycopus virginicus	3
Polygonum sp.	3
Polygonum virginianum	3
Solanum carolinense	3
Boehmeria cylindrica	2
Carex normalis	2
Carex projecta	2
Lycopus americanus	2
Mentha arvensis	2
Myosotis scorpioides	2
Phytolacca americana	2
Pilea pumila	2
Polygonum hydropiperoides	2
Ranunculus repens	2
Raphanus raphanistrum	2
Rorippa sylvestris	2
Xanthium strumarium	2
Arisaema triphyllum	1
Aster lanceolatus	1
Bidens coartata	1
Blephilia ciliata	1
Chelone glabra	1
Echinochloa muricata	1
Eupatorium fistulosum	1
Eupatorium perfoliatum	1
Euthamia graminifolia	1
Geum sp.	1
Lythrum salicaria	1
Oxalis stricta	1
Panicum dichotomiflorum	1
Polygonum cespitosum	1
Rumex obtusifolius	1
Scutellaria ovata	1
Solidago gigantea	1
Stellaria pubera	1
Teucrium canadense	1
Verbena urticifolia	1
Brachythecium sp.	1
Campylium stellatum	1
Hypnum sp.	1
Leskea gracilens	1
Mnium cuspidatum	1
Rhynchosyrium serrulatum	1

Appendix II (cont.)

EPA1.21

Leersia virginica	7
Acer saccharinum	7
Populus deltoides	6
Salix nigra	5
Laportea canadensis	5
Bidens vulgata	4
Platanus occidentalis	4
Alliaria petiolata	3
Ambrosia trifida	3
Boehmeria cylindrica	3
Echinocystis lobata	3
Impatiens sp.	3
Lycopus virginicus	3
Oxalis stricta	3
Pilea pumila	3
Polygonum sp.	3
Polygonum hydropiperoides	3
Ranunculus repens	3
Raphanus raphanistrum	3
Vitis aestivalis	3
Vitis sp.	3
Vitus spp.	3
Acalypha rhomboidea	2
Arisaema dracontium	2
Cardamine pensylvanica	2
Chelone glabra	2
Chenopodium album	2
Eupatorium perfoliatum	2
Humulus lupulus	2
Plantago major	2
Polygonum cuspidatum	2
Rumex obtusifolius	2
Solanum nigrum	2
Stellaria media	2
Acer negundo	1
Ambrosia artemisiifolia	1
Aster sp.	1
Echinochloa sp.	1
Elymus virginicus	1
Erysimum cheiranthoides	1
Hypericum sp.	1
Mint sp. #1	1
Mint spp.	1
Parthenocissus quinquefolia	1
Poa sp.	1
Polygonum coccineum.	1
Scutellaria sp.	1
Sicyos angulatus	1
Solanum carolinense	1
Xanthium strumarium	1
Amblystegium varium	1
Bryum pseudotriquetrum	1
Mnium punctatum	1

EPA1.22

Acer saccharinum	7
Onoclea sensibilis	6
Leersia virginica	5
Acer negundo	3
Alliaria petiolata	3
Boehmeria cylindrica	3
Grass #8	3
Grass spp.	3
Impatiens sp.	3
Mint sp. #2	3
Mint spp.	3
Bidens sp.	2
Oxalis stricta	2
Pilea pumila	2
Polygonum cespitosum	2
Rorippa sylvestris	2
Rumex sp.	2
Xanthium strumarium	2
Ambrosia artemisiifolia	1
Arisaema dracontium	1
Arisaema triphyllum	1
Chenopodium album	1
Cinna arundinacea	1
Galium sp.	1
Lycopus americanus	1
Lythrum salicaria	1
Mentha arvensis	1
Parthenocissus quinquefolia	1
Polygonum sp.	1
Polygonum hydropiperoides	1
Polygonum virginianum	1
Raphanus raphanistrum	1
Solanum carolinense	1
Teucrium canadense	1
Hypnum sp.	3
Brachythecium velutinum	2
Brachythecium sp.	1
Entodon seductrix	1
Leskea gracilens	1
Mnium cuspidatum	1
Platygyrium repens	1

EPA1.23

Fraxinus pennsylvanica.	8
Impatiens sp.	7
Alliaria petiolata	6
Glechoma hederacea	5
Solidago gigantea	3
Eupatorium rugosum	3
Juglans nigra	3
Acer negundo	3
Geum canadense	3
Grass #4	3
Grass spp.	3
Hesperis matronalis	2
Onoclea sensibilis	2
Pilea pumila	2
Polygonum scandens	2
Rosa multiflora	2
Rudbeckia laciniata	2
Agrimonia gryposepala	2
Arisaema dracontium	1
Arisaema triphyllum	1
Carex intumescens	1
Cinna arundinacea	1
Circaea lutetiana	1
Laportea canadensis	1
Lonicera sp.	1
Parthenocissus quinquefolia	1
Polygonum sagittatum	1
Ranunculus hispidus	1
Teucrium canadense	1
Thalictrum sp.	1
Carex grisea	1
Elymus sp.	1
Polygonum virginianum	1
Symplocarpus foetidus	1
Thalictrum pubescens	1
Verbena urticifolia	1
Viola sp.	1
bryophyte 2	1
bryophyte 3	1
bryophyte 4	1
Campylium stellatum	1

EPA1.24

Acer saccharinum	7
Alliaria petiolata	7
Laportea canadensis	7
Phalaris arundinacea	6
Impatiens sp.	5
Cinna arundinacea	4
Elymus sp.	4
Leersia virginica	4
Polygonum cuspidatum	4
Arisaema dracontium	3
Toxicodendron radicans	3
Urtica procera	3
Amphicarpaea bracteata	2
Eupatorium rugosum	2
Fraxinus sp.	2
Humulus lupulus	2
Lindera benzoin	2
Matteuccia struthiopteris	2
Parthenocissus vitacea	2
Pilea pumila	2
Polygonum hydropiper	2
Polygonum pensylvanicum	2
Polygonum scandens	2
Polygonum virginianum	2
Teucrium canadense	2
Bidens frondosa	1
Carex intumescens	1
Onoclea sensibilis	1
Solidago gigantea	1
Leskea gracilens	1
Rhyncostegium serrulatum	1

Appendix II (cont.)

EPA1.25		EPA1.26		EPA1.27		EPA1.28	
Platanus occidentalis	8	Platanus occidentalis	7	Platanus occidentalis	7	Polygonum cuspidatum	8
Alliaria petiolata	6	Rosa multiflora	6	Populus deltoides	5	Acer saccharinum	7
Polygonum cuspidatum	6	Ulmus americana	5	Rosa multiflora	5	Erythronium americanum	6
Solidago gigantea	6	Matteuccia struthiopteris	5	Catalpa speciosa	4	Platanus occidentalis	5
Acer negundo	5	Polygonum cuspidatum	5	Hemerocallis fulva var. fulva	4	Celtis occidentalis	4
Celtis occidentalis	5	Alliaria petiolata	4	Matteuccia struthiopteris	4	Catalpa speciosa	3
Rosa multiflora	5	Onoclea sensibilis	4	Microstegium vimineum	4	Alliaria petiolata	2
Impatiens sp.	4	Solidago gigantea	4	Solidago gigantea	4	Impatiens sp.	2
Laportea canadensis	4	Solidago rugosa	4	Urtica procera	4	Fraxinus pennsylvanica.	2
Teucrium canadense	4	Celtis occidentalis	3	Acer negundo	4	Carya sp.	1
Ulmus americana	4	Circaea lutetiana	3	Alliaria petiolata	3	Echinocystis lobata	1
Betula nigra	3	Euthamia graminifolia	3	Fraxinus pennsylvanica.	3	Prunus serotina	1
Cornus amomum	3	Glechoma hederacea	3	Glechoma hederacea	3	Smilacina racemosa	1
Crataegus	3	Impatiens capensis	3	Impatiens capensis	3	Tiarella cordifolia	1
Parthenocissus quinquefolia	3	Panicum clandestinum	3	Parthenocissus quinquefolia	3		
Polygonum pensylvanicum	3	Parthenocissus quinquefolia	3	Sambucus canadensis	3		
Rumex obtusifolius	3	Phalaris arundinacea	3	Amphicarpaea bracteata	2		
Urtica procera	3	Polygonum scandens	3	Arctium minus	2		
Vitis aestivalis	3	Polygonum virginianum	3	Boehmeria cylindrica	2		
Allium canadense	2	Urtica procera	3	Cardamine pensylvanica	2		
Circaea lutetiana	2	Aster prenanthoides	2	Chenopodium album	2		
Convolvulus sepium	2	Carex grisea	2	Echinocystis lobata	2		
Galium aparine	2	Echinocystis lobata	2	Eupatorium maculatum	2		
Hemerocallis fulva var. fulva	2	Eupatorium rugosum	2	Eupatorium rugosum	2		
Lysimachia nummularia	2	Hesperis matronalis	2	Eupatorium sp.	2		
Oxalis stricta	2	Lysimachia ciliata	2	Euthamia graminifolia	2		
Panicum clandestinum	2	Lysimachia nummularia	2	Galium aparine	2		
Phalaris arundinacea	2	Rubus idaeus	2	Hesperis matronalis	2		
Pilea pumila	2	Rumex obtusifolius	2	Onoclea sensibilis	2		
Polygonum hydropiper	2	Teucrium canadense	2	Panicum dichotomiflorum	2		
Polygonum scandens	2	Vitis sp.	2	Pilea pumila	2		
Rubus idaeus	2	Vitus spp.	2	Polygonum persicaria	2		
Solidago rugosa	2	Acer rubrum	1	Polygonum sagittatum	2		
Urtica dioica L.	2	Acer saccharinum	1	Polygonum scandens	2		
Ambrosia artemisiifolia	1	Artemisia vulgaris	1	Stellaria sp.	2		
Arisaema triphyllum	1	Carex bromoides	1	Stylophorum diphylum	2		
Bromus sp.	1	Carex spp.	1	Hydrocotyle americana	1		
Carex torta	1	Convolvulus sepium	1	Impatiens pallida	1		
Chelone glabra	1	Cuscuta gronovii	1	Leonurus cardiaca	1		
Elymus sp.	1	Elymus sp.	1	Phytolacca americana	1		
Erysimum cheiranthoides	1	Geum canadense	1	Polygonum sachalinense	1		
Eupatorium maculatum	1	Grass #9	1	Rudbeckia laciniata	1		
Geum canadense	1	Grass spp.	1	Rumex obtusifolius	1		
Hypericum sp.	1	Hypericum sp.	1	Scrophularia marilandica	1		
Myosotis laxa Lehm.	1	Laportea canadensis	1	Teucrium canadense	1		
Polygonum cespitosum	1	Polygonum sagittatum	1	Thalictrum sp.	1		
Polygonum cilinode	1	Scrophularia marilandica	1				
Sphenopholis obtusata	1	Spiraea latifolia	1	Campylium stellatum	1		
unknown herb #2	1	Stellaria pubera	1	Mnium cuspidatum	1		
				Physcomitrium pyriforme	1		
Campylium stellatum	1	Brachythecium sp.	2	Thuidium delicatulum	1		
Leskea gracilens	1	Mnium thompsonii	2				
		Brachythecium velutinum	1				
		Callicladium haldanianum	1				
		Campylium stellatum	1				
		Hypnum pratense	1				
		Mnium cuspidatum	1				
		Platygyrium repens	1				

Appendix II (cont.)

EPA1.29		EPA1.30		EPA1.31		EPA 1.31 (cont.)	
Polygonum cuspidatum	8	Platanus occidentalis	8	Panicum clandestinum	8	Chrysanthemum leucanthemum	1
Acer saccharinum	7	Polygonum cuspidatum	7	Acer saccharinum	6	Circaea lutetiana	1
Platanus occidentalis	4	Microstegium vimineum	6	Microstegium vimineum	5	Conioselinum chinense	1
Impatiens sp.	3	Alliaria petiolata	5	Platanus occidentalis	5	Dactylis glomerata	1
Toxicodendron radicans	3	Teucrium canadense	5	Acer rubrum	4	Daucus carota	1
Leersia virginica	2	Carex crinita	3	Aster divaricatus	3	Erechtites hieracifolia	1
Hesperis matronalis	1	Eupatorium rugosum	3	Aster prenanthoides	3	Eupatorium fistulosum	1
Oxalis stricta	1	Impatiens capensis	3	Berberis thunbergii	3	Eupatorium perfoliatum	1
		Oxalis stricta	3	Bromus sp.	3	Fraxinus sp.	1
bryophyte 1	1	Panicum clandestinum	3	Elymus sp.	3	Galium aparine	1
		Solidago gigantea	3	Eupatorium rugosum	3	Galium mollugo	1
		Urtica procera	3	Phalaris arundinacea	3	Hesperis matronalis	1
		Boehmeria cylindrica	2	Solidago rugosa	3	Hieracium caespitosum	1
		Carex torta	2	Ulmus americana	3	Holcus lanatus	1
		Circaea lutetiana	2	Alliaria petiolata	2	Juncus tenuis	1
		Pilea pumila	2	Aster acuminatus	2	Lobelia inflata	1
		Raphanus raphanistrum	2	Carex grisea	2	Luzula multiflora	1
		Rumex obtusifolius	2	Equisetum arvense	2	Lysimachia ciliata	1
		Arisaema dracontium	1	Euthamia graminifolia	2	Lysimachia quadrifolia	1
		Arisaema triphyllum	1	Geum canadense	2	Myosotis	1
		Bidens sp.	1	Hypericum pyramidatum	2	Pastinaca sativa	1
		Polygonum hydropiper	1	Impatiens pallida	2	Pilea pumila	1
		Polygonum hydropiperoides	1	Lycopus uniflorus.	2	Plantago lanceolata	1
		Polygonum sagittatum	1	Mentha arvensis	2	Plantago major	1
		Thalictrum sp.	1	Oxalis stricta	2	Poa palustris	1
		Thelypteris noveboracensis	1	Poa alsodes	2	Polygonum cespitosum	1
				Polygonum cuspidatum	2	Ranunculus abortivus	1
		Atrichum undulatum	1	Polygonum hydropiperoides	2	Rorippa sylvestris	1
		Callicladium haldanianum	1	Polygonum sagittatum	2	Rumex obtusifolius	1
		Campylium stellatum	1	Polygonum virginianum	2	Scutellaria sp.	1
				Prunella vulgaris	2	Senecio aureus	1
				Raphanus raphanistrum	2	Sisyrinchium sp.	1
				Solidago canadensis	2	Thalictrum pubescens	1
				Tanacetum vulgare	2	Tridens flavus	1
				Thelypteris noveboracensis	2	Verbena urticifolia	1
				Viola sp.	2	Veronica officinalis	1
				Waldsteinia fragarioides	2		
				Zizia aurea	2	Atrichum undulatum	3
				Achillea millefolium	1	Mnium cuspidatum	3
				Ambrosia artemisiifolia	1	Anomodon minor	1
				Amphicarpaea bracteata	1	Brachythecium sp.	1
				Anthoxanthum odoratum	1	Rhynchosostegium serrulatum	1
				Apios americana	1		
				Arisaema triphyllum	1		
				Aster sp.	1		
				Betula alleghaniensis	1		
				Bidens connata	1		
				Boehmeria cylindrica	1		
				Carex bromoides	1		
				Carex cephaloidea	1		
				Carex heleonastes	1		
				Carex projecta	1		
				Chelone glabra	1		

Appendix II (cont.)

EPA1.32		EPA 1.32 (cont.)		EPA1.33		EPA1.34	
Platanus occidentalis	7	Arisaema triphyllum	1	Betula nigra	7	Microstegium vimineum	
Rosa multiflora	6	Carex heleonastes	1	Microstegium vimineum	7	Polygonum cuspidatum	
Hesperis matronalis	5	Carya sp.	1	Polygonum cuspidatum	7	Acer saccharinum	
Solidago rugosa	5	Chelone glabra	1	Onoclea sensibilis	5	Onoclea sensibilis	
Robinia pseudoacacia	5	Eupatorium sp.	1	Acer saccharinum	4	Arisaema dracontium	
Euthamia graminifolia	4	Geum sp.	1	Panicum clandestinum	4	Arisaema triphyllum	
Phalaris arundinacea	4	Glyceria striata	1	Scutellaria sp.	4	Asclepias incarnata	
Polygonum scandens	4	Matteuccia struthiopteris	1	Arisaema dracontium	3	Betula nigra	
Scutellaria sp.	4	Rumex obtusifolius	1	Leersia virginica	3	Laportea canadensis	
Solidago gigantea	4	Stellaria pubera	1	Phalaris arundinacea	3	Phalaris arundinacea	
Acer negundo	3	Thalictrum pubescens	1	Verbesina alternifolia	3	Scutellaria sp.	
Alliaria petiolata	3	Viola sp.	1	Vitis aestivalis	3	Teucrium canadense	
Aster prenanthoides	3			Arisaema triphyllum	2	Verbesina alternifolia	
Cardamine pensylvanica	3	Atrichum undulatum	1	Convolvulus sepium	2	Vitis aestivalis	
Carex projecta	3	Brachythecium sp.	1	Fraxinus pennsylvanica.	2	Boehmeria cylindrica	
Clematis virginiana	3	Bryum pseudotriquetrum	1	Solidago gigantea	2	Leersia virginica	
Glyceria sp.	3	Mnium thompsonii	1	Solanum carolinense	1	Cassia hebecarpa	
Impatiens sp.	3	Rhyncostegium serrulatum	1			Echinocystis lobata	
Salix nigra	3			Leskea gracilens	1	Eupatorium rugosum	
Spiraea latifolia	3					Impatiens sp.	
Vitis aestivalis	3						
Betula nigra	3						
Ambrosia artemisiifolia	2						
Carex crinita	2						
Carex grisea	2						
Carex normalis	2						
Carex radiata	2						
Circaea lutetiana	2						
Cuscuta gronovii	2						
Elymus virginicus	2						
Equisetum arvense	2						
Eupatorium rugosum	2						
Galeopsis tetrahit	2						
Galium boreale	2						
Galium mollugo	2						
Hypericum sp.	2						
Hypericum pyramidatum	2						
Juncus tenuis	2						
Lindera benzoin	2						
Lycopus americanus	2						
Lysimachia ciliata	2						
Microstegium vimineum	2						
Onoclea sensibilis	2						
Oxalis stricta	2						
Panicum clandestinum	2						
Parthenocissus quinquefolia	2						
Podophyllum peltatum	2						
Polygonum cespitosum	2						
Polygonum sagittatum	2						
Sicyos angulatus	2						
Teucrium canadense	2						
Achillea millefolium	1						
Agrostis sp.	1						

Appendix II (cont.)

EPA1.35		EPA1.36		EPA 1.36 (cont.)		EPA1.37	
Carex scabrata	7	Lindera benzoin	6	Laportea canadensis	1	Anthoxanthum odoratum	6
Microstegium vimineum	6	Betula nigra	6	Myosotis laxa Lehm.	1	Platanus occidentalis	6
Salix nigra	6	Platanus occidentalis	6	Prunus sp.	1	Alnus serrulata	5
Betula nigra	6	Carex spp.	4	Rudbeckia laciniata	1	Betula nigra	5
Boehmeria cylindrica	4	Alnus serrulata	4	Solidago canadensis	1	Asclepias syriaca	4
Onoclea sensibilis	4	Berberis thunbergii	4	Solidago rugosa	1	Carpinus caroliniana	4
Phalaris arundinacea	4	Glechoma hederacea	4	Stellaria graminea	1	Muhlenberia frondosa	4
Scutellaria sp.	4	Hydrocotyle americana	4			Panicum clandestinum	4
Cardamine pensylvanica	3	Rosa multiflora	4	Bryhnia nova-angliae	4	Rubus hispidus	4
Cinna arundinacea	3	Senecio aureus	4	Calliergon cordifolium	4	Thelypteris palustris	4
Galium aparine	3	Thelypteris palustris	4	Campylium stellatum	4	Carex spp.	3
Leersia virginica	3	Apocynum cannabinum	3	Climacium dendroides	3	Achillea millefolium	3
Panicum clandestinum	3	Aster prenanthoides	3	Atrichum undulatum	2	Andropogon gerardii	3
Polygonum sagittatum	3	Carex oligocarpa	3	Entodon seductrix	1	Bromus sp.	3
Rosa multiflora	3	Galium aparine	3	Eurhynchium hians	1	Galium sp.	3
Spiraea sp.	3	Galium asprellum	3	Liverwort	1	Galium asprellum	3
Urtica procera	3	Glyceria sp.	3	Mnium cuspidatum	1	Glechoma hederacea	3
Alliaria petiolata	2	Lycopus uniflorus.	3	Thuidium delicatulum	1	Hydrocotyle americana	3
Arisaema triphyllum	2	Onoclea sensibilis	3			Oxalis stricta	3
Circaea lutetiana	2	Panicum clandestinum	3			Panicum microcarpum	3
Glyceria striata	2	Phalaris arundinacea	3			Potentilla	3
Impatiens sp.	2	Teucrium canadense	3			Viola renifolia	3
Juncus effusus	2	Viola sp.	3			Agrostis perennans	2
Oxalis stricta	2	Achillea millefolium	2			Apocynum cannabinum	2
Polygonum virginianum	2	Anthoxanthum odoratum	2			Eupatorium rugosum	2
Rumex obtusifolius	2	Apios americana	2			Grass #5	2
Solidago graminifolia	2	Aster lateriflorus	2			Grass spp.	2
Teucrium canadense	2	Boehmeria cylindrica	2			Heliopsis helianthoides	2
Arisaema dracontium	1	Bromus ciliatus	2			Linum sp.	2
Carex hystericina	1	Carex radiata	2			Lycopus uniflorus.	2
Carya cordiformis	1	Eupatorium fistulosum	2			Oenothera perennis	2
Hesperis matronalis	1	Eupatorium rugosum	2			Parthenocissus quinquefolia	2
Hypericum sp.	1	Hypericum sp.	2			Phalaris arundinacea	2
Parthenocissus quinquefolia	1	Impatiens capensis	2			Polygonum arifolium	2
Solidago gigantea	1	Lysimachia ciliata	2			Ranunculus sp.	2
		Lysimachia nummularia	2			Rosa multiflora	2
		Microstegium vimineum	2			Rumex acetosella	2
		Oxalis stricta	2			Setaria sp.	2
		Panicum sp.	2			Stellaria graminea	2
		Polygonum arifolium	2			Tsuga canadensis	2
		Polygonum cespitosum	2			Veronica officinalis	2
		Prunella vulgaris	2			Acer rubrum	1
		Triodia flava	2			Aster sp.	1
		Agrimonia gryposepala	1			Cassia hebecarpa	1
		Agrostis perennans	1			Chrysanthemum leucanthemum	1
		Andropogon gerardii	1			Circaea lutetiana	1
		Carex intumescens	1			Clematis virginiana	1
		Clematis virginiana	1			Daucus carota	1
		Equisetum arvense	1			Hypericum sp.	1
		Eupatorium perfoliatum	1			Microstegium vimineum	1
		Fragaria virginiana	1			Onoclea sensibilis	1
		Galium tinctorium	1			Pilea pumila	1
		Galium triflorum	1			Pinus strobus	1

Appendix II (cont.)

EPA 1.37 (cont.)	EPA 1.38	EPA1.39	EPA1.40
Rubus allegheniensis 1	Eupatorium rugosum 8	Platanus occidentalis 8	Lysimachia nummularia 7
Satureja vulgaris 1	Lindera benzoin 8	Ulmus americana 6	Fraxinus pennsylvanica. 7
Veratrum viride 1	Rosa multiflora 8	Toxicodendron radicans 6	Parthenocissus quinquefolia 5
	Rudbeckia laciniata 8	Rosa multiflora 5	Ligustrum vulgare 5
Climacium dendroides 4	Solidago gigantea 8	Viola sp. 5	Acer negundo 5
Brachythecium sp. 2	Celtis occidentalis 6	Morus alba 4	Carex squarrosa 5
Pleurozium schreberi 2	Fraxinus pennsylvanica. 6	Robinia pseudoacacia 4	Polygonum pensylvanicum 5
Thuidium delicatulum 2	Parthenocissus quinquefolia 6	Agrostis perennans 3	Veronica americana 5
Atrichum undulatum 1	Platanus occidentalis 6	Celtis occidentalis 3	Acer rubrum 4
Cephalozia sp. 1	Toxicodendron radicans 6	Coronilla sp. 3	Boehmeria cylindrica 4
Hypnum curvifolium 1	Ulmus americana 6	Elymus hystrix 3	Carex annectens 4
Mnium punctatum 1	Lysimachia ciliata 5	Elymus virginicus 3	Leersia virginica 4
	Verbesina alternifolia 5	Eupatorium rugosum 3	Loniceria japonica 4
	Acer platanoides 3	Hypericum spathulatum 3	Loniceria tatarica 4
	Alliaria petiolata 3	Lindera benzoin 3	Polygonum hydropiper 4
	Impatiens capensis 3	Panicum clandestinum 3	Solidago gigantea 4
	Ligustrum vulgare 3	Parthenocissus quinquefolia 3	Verbesina alternifolia 4
	Viola sp. 3	Scutellaria sp. 3	Acer saccharinum 4
	Acer negundo 3	Solanum carolinense 3	Carex frankii 3
	Carya cordiformis 2	Verbena urticifolia 3	Carex lupulina 3
	Coronilla sp. 2	Vitis sp. 3	Carex stipata 3
	Geum canadense 2	Vitus spp. 3	Cuscuta gronovii 3
	Hesperis matronalis 2	Gleditsia triacanthos 3	Impatiens sp. 3
	Oxalis stricta 2	Ambrosia artemisiifolia 2	Myosotis laxa Lehm. 3
	Rubus idaeus 2	Carya cordiformis 2	Ranunculus septentrionalis 3
	Solanum carolinense 2	Cornus amomum 2	Rosa multiflora 3
	Teucrium canadense 2	Festuca elatior 2	Salix nigra 3
	Vitis aestivalis 2	Grass #7 2	Allium canadense 2
	Carex folliculata 1	Grass spp. 2	Bidens frondosa 2
	Carex grisea 1	Leersia virginica 2	Carex granularis 2
	Elymus hystrix 1	Mentha sp. 2	Cornus amomum 2
	Gleditsia triacanthos 1	Oxalis stricta 2	Geum canadense 2
	Juglans nigra 1	Potentilla 2	Grass #6 2
	Phytolacca americana 1	Rubus 2	Grass spp. 2
	Polygonum virginianum 1	Verbesina alternifolia 2	Lycopus uniflorus. 2
	Rubus allegheniensis 1	Allium canadense 1	Oxalis stricta 2
	Scrophularia marilandica 1	Aster lateriflorus 1	Penthorum sedoides 2
		Barbarea vulgaris 1	Phalaris arundinacea 2
	Amblystegium varium 1	Bidens frondosa 1	Pilea pumila 2
	Campylium polygamum 1	Chrysanthemum leucanthemum 1	Arisaema dracontium 1
	Entodon seductrix 1	Dactylis glomerata 1	Catalpa speciosa 1
	Platygyrium repens 1	Fraxinus sp. 1	Epilobium cilatum 1
	Pylaisia sp. 1	Galium aparine 1	Lycopus americanus 1
		Lysimachia ciliata 1	Polygonum sagittatum 1
		Muhlenberia frondosa 1	Rumex obtusifolius 1
		Panicum sp. 1	Solidago sp. 1
		Plantago major 1	Toxicodendron radicans 1
		Ranunculus abortivus 1	
		Sisyrinchium angustifolium 1	Leskea gracilens 3
		unknown herb #1 1	Brachythecium sp. 1
			Mnium cuspidatum 1
		Drepanocladus aduncus 3	Ulota crispa 1
		Leskea gracilens 3	
		Eurhynchium hians 2	
		Mnium cuspidatum 2	

Appendix II (cont.)

EPA1.41

Acer negundo	7	Impatiens pallida	1
Lysimachia nummularia	7	Lysimachia ciliata	1
Impatiens capensis	6	Parthenocissus quinquefolia	1
Ranunculus septentrionalis	6	Rumex obtusifolius	1
Acer saccharinum	5	Solidago canadensis	1
Festuca sp.	5		
Leersia virginica	5	Fissidens taxifolius	3
Salix nigra	5	Campylium stellatum	2
Verbesina alternifolia	5	Brachythecium sp.	1
Boehmeria cylindrica	4	Bryum pseudotriquetrum	1
Geum canadense	4	Entodon seductrix	1
Ligustrum vulgare	4	Leptobryum pyriforme	1
Pilea pumila	4	Mnium cuspidatum	1
Rudbeckia laciniata	4	Pseudoleskeella nervosa	1
Scutellaria sp.	4		
Viola renifolia	4		
Agrostis stolonifera	3		
Carex lupulina	3		
Glechoma hederacea	3		
Juglans nigra	3		
Laportea canadensis	3		
Polygonum punctatum	3		
Polygonum virginianum	3		
Symplocarpus foetidus	3		
Bidens frondosa	2		
Carex frankii Kunth	2		
Carex projecta	2		
Cinna arundinacea	2		
Fraxinus sp.	2		
Fraxinus pennsylvanica.	2		
Hesperis matronalis	2		
Oxalis stricta	2		
Phalaris arundinacea	2		
Poa trivialis	2		
Polygonum sagittatum	2		
Ranunculus repens	2		
Robinia pseudoacacia	2		
Scutellaria serrata	2		
Sicyos angulatus	2		
Solidago altissima	2		
Carex spp.	2		
Amphicarpaea bracteata	1		
Aster lateriflorus	1		
Carex laevivaginata	1		
Convolvulus sepium	1		
Epilobium cilatum	1		
Eupatorium perfoliatum	1		
Glyceria melicaria	1		

EPA 1.41 (cont.)

EPA1.42

Acer saccharinum	8
Lysimachia nummularia	6
Alliaria petiolata	5
Toxicodendron radicans	5
Urtica procera	5
Verbesina alternifolia	5
Acer negundo	5
Geum canadense	4
Glechoma hederacea	4
Hesperis matronalis	4
Robinia pseudoacacia	4
Ligustrum vulgare	4
Impatiens sp.	3
Leersia virginica	3
Parthenocissus quinquefolia	3
Phalaris arundinacea	3
Platanus occidentalis	3
Solidago gigantea	3
Viola sp.	3
Fraxinus pennsylvanica.	3
Carex projecta	2
Cinna arundinacea	2
Elymus virginicus	2
Oxalis stricta	2
Panicum clandestinum	2
Polygonum hydropiper	2
Ribes americanum	2
Sicyos angulatus	2
Solidago rugosa	2
Carex folliculata	1
Carex spp.	1
Carex stipata	1
Cornus racemosa	1
Lythrum salicaria	1
Onoclea sensibilis	1
Pilea pumila	1
Ranunculus repens	1
Rhamnus cathartica	1
Verbena urticifolia	1
Brachythecium sp.	1
Entodon seductrix	1
Platygyrium repens	1

Appendix III: Detailed Insect Collection Data for Forested Floodplain Wetland Disturbed and Undisturbed Sites in the Susquehanna River Basin

Complete data compilation for all insect species vouchered by prepared specimens at Carnegie Museum of Natural History during an assessment of habitats along or near the Susquehanna River, Pennsylvania. Pin labels on each voucher specimen bear unique numbers (not duplicated in the CMNH collection); these are preceded by '#' in the compilation below. The list is arranged in taxonomic order, with subordinate categories arranged alphabetically throughout.

Order Coleoptera

Suborder Adephaga

Carabidae

Carabinae: Carabini

Carabus (Archicarabus) nemoralis O. F. Müller

[Det. by R.L. Davidson] **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#258187); 20 Jun-31 Jul 2001, pitfall trap (#242047, #242381, #242561, #242562, #244009, #244014). [Total specimens =7]

Carabus (Carabus) vinctus (Weber)

[Det. by R.L. Davidson] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#165262, #253559, #256666, #256836, #256959, #258983); 27 Jul-20 Aug 2001, pitfall trap (#176302, #260057, #260752). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 1-24 Aug 2001, pitfall trap (#261827). [Total specimens =10]

Carabinae: Cicindelini

Cicindela (Cicindela) sexguttata Fabricius

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun 2001, hand-collected (#243834). [Total specimens =1]

Carabinae: Cychrini

Sphaeroderus stenostomus lecontei Dejean

[Det. by R.L. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jul-23 Aug 2001, pitfall trap (#257852). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#167781, #243740, #258155); 27 Jul-23 Aug 2001, pitfall trap (#243860); 24 Aug-11 Sep 2001, pitfall trap (#242279, #242798, #242805, #243673, #243983). **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 1-24 Aug 2001, pitfall trap (#243442, #243979). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#258464, #259299, #259601, #259750, #260560); 28 Jun-10 Jul 2001, pitfall trap (#256371, #256858). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#173845, #259797, #260316, #260732, #260868, #260978); 11 Jul-16 Aug 2001, pitfall trap (#259473); 17 Aug-21 Sep 2001, pitfall trap (#258420). [Total specimens =27]

Carabinae: Loricerini

Loricera pilicornis (Fabricius)

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N,

76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#261145). [Total specimens =1]

Carabinae: Nebrini

Nebria pallipes Say

[Det. by R.L. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#262167). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242666, #244128); 20 Jul-23 Aug 2001, pitfall trap (#257124); 24 Aug-11 Sep 2001, pitfall trap (#242174, #242461, #247028). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 27 Jul-23 Aug 2001, pitfall trap (#239404, #243398); 24 Aug-11 Sep 2001, pitfall trap (#239208, #243775). [Total specimens =11]

Nebria (Boreonebria) lacustris lacustris Casey

[Det. by R.L. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 24 Aug-11 Sep 2001, pitfall trap (#241738, #244347). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 24 Aug-11 Sep 2001, pitfall trap (#241979, #242108, #242301, #243781, #244085). [Total specimens =7]

Carabinae: Notiophilini

Notiophilus aeneus (Herbst)

[Det. by R. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jul-23 Aug 2001, pitfall trap (#258130). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#259032). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#171580, #259926). [Total specimens =4]

Carabinae: Omophronini

Omophron americanum Dejean

[Det. by R.L. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#263430). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#256507, #256581, #257256, #257416, #258064, #258601, #260553, #260588). [Total specimens =9]

Harpalinae: Chlaeniini

Chlaenius (Anomoglossus) emarginatus Say

[Det. by R.L. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#259911). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242157). **NORTHUMBERLAND CO. Site 3**, island in

Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#256659, #257495, #260820); 20 Jun-26 Jul 2001, pitfall trap (#258016, #258250, #260866, #261175); 27 Jul-20 Aug 2001, pitfall trap (#257863, #259176, #260822). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May 2001, hand-collected (#177596, #259143); 18 May-19 Jun 2001, pitfall trap (#257090, #259262); 20 Jun-31 Jul 2001, pitfall trap (#242170, #243414); 1-24 Aug 2001, pitfall trap (#241984, #242756, #244429). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#257954, #259954); 28 Jun-10 Jul 2001, pitfall trap (#258485). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#162623, #256141, #256300, #256653, #256762, #257560, #257656, #258214, #258219, #258358, #258648, #258714, #258933, #258954, #259030, #259430, #259437, #259521, #259606, #259812, #260008, #260289, #260454, #260628, #261254); 11 Jul-16 Aug 2001, pitfall trap (#259070, #260744, #260780, #260972). [Total specimens =53]

***Chlaenius (Chlaeniellus) impunctifrons* Say**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#243275); 20 Jul-14 Aug 2001, pitfall trap (#167442, #202421, #254729, #257294, #258801, #258926, #261089); 15 Aug-13 Sep 2001, pitfall trap (#256852). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#243186); 20 Jul-14 Aug 2001, pitfall trap (#262664, #262877). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#260705); 27 Jul-20 Aug 2001, pitfall trap (#257995, #260365, #268923). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 1-24 Aug 2001, pitfall trap (#247700). [Total specimens =17]

***Chlaenius (Chlaeniellus) pennsylvanicus pennsylvanicus* Say**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257632, #263763). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#261218, #265067). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#259229). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#258323, #263127). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#264085); 26 Jun 2001, UV light trap (#260816, #263003, #263799). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#265347); 26 Jun 2001, UV light trap (#265260, #265512). [Total specimens =14]

***Chlaenius (Chlaeniellus) tricolor tricolor* Dejean**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#257874, #261042); UV light trap (#172076, #262961). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#256798); 20 Jul-14 Aug 2001, pitfall trap (#258553, #260467, #260848, #261190, #262616, #262624, #262742,

#262812, #262818, #262927, #263756). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#256965, #259929, #260105); 17 Aug-21 Sep 2001, pitfall trap (#257483). [Total specimens =20]

***Chlaenius (Chlaenius) aestivus* Say**

[Det. by R.L. Davidson] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#258277). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#258055). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#172624, #179619, #256424, #257541). [Total specimens =6]

***Chlaenius (Chlaenius) sericeus sericeus* (Forster)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#171900, #256609). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259267). [Total specimens =3]

Harpalinae: Ctenodactylini

***Leptotrachelus dorsalis* (Fabricius)**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263454). [Total specimens =1]

Harpalinae: Galeritini

***Galerita (Progaleritina) bicolor* (Drury)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#260236). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#255878); 15 Aug-13 Sep 2001, pitfall trap (#242714). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May 2001, hand-collected (#260242). [Total specimens =4]

Harpalinae: Harpalini

***Acupalpus (Acupalpus) canadensis* Casey**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257730, #258686, #264589, #264792, #265362). [Total specimens =5]

***Acupalpus (Acupalpus) carus* (LeConte)**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264418, #265095, #265167, #265304). [Total specimens =4]

***Acupalpus (Acupalpus) hydropicus* (LeConte)**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256498). [Total specimens =1]

***Acupalpus (Philodes) rectangulus* Chaudoir**

[Det. by R. Davidson] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#264831). [Total specimens =1]

***Acupalpus (Tachistodes) indistinctus* Dejean**

[Det. by R. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260977). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#261028, #263287, #264868, #265282). [Total specimens =5]

***Acupalpus (Tachistodes) pauperculus* Dejean**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#174386, #260483, #262334, #262758, #263125, #263254, #263373, #263777, #264106, #265274, #265301, #265320, #265370). [Total specimens =13]

***Amphasia (Amphasia) interstitialis* (Say)**

[Det. by R.L. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242488, #242751, #243293, #243870, #243892, #243929, #244183). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#242338, #259331). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#258009, #258376). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#258175, #259179). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#256230, #257303, #258031). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#261036). [Total specimens =17]

***Amphasia (Pseudamphasia) sericea* (T.W. Harris)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#255271, #255703, #256420, #259362, #259781, #259915, #261204, #262332, #262568, #262752, #262910, #263034, #263066, #263267, #263344, #263456, #263654). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#263192, #263291, #264362, #264488). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259160, #262544, #263188, #263227). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#165532, #203854, #262193, #262225, #262357, #262581, #262676, #264735, #264811, #265030, #265108, #265217, #265412). **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#263064). [Total specimens =39]

***Anisodactylus (Anadaptus) discoideus* Dejean**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#163212, #170101, #170108, #172012, #174837, #177741, #178001, #178766, #255190, #256209, #256275, #256351, #256390, #256523, #256567, #256578, #256589, #256663, #256675, #256720, #256777, #256979, #257141, #257442, #257466, #257488, #257771, #257882, #257970, #258213, #258446, #258452, #258696, #258819, #258852, #258858, #259205, #259378, #259664, #259666, #259716, #259803,

#260349, #260380, #260510, #260559, #260599, #260770, #260782, #260884, #260911, #260981, #262151, #262172, #262207, #262238, #262260, #262279, #262361, #262366, #262404, #262432, #262491, #262504, #262526, #262538, #262619, #262621, #262633, #262634, #262639, #262640, #262670, #262674, #262683, #262700, #262724, #262731, #262750, #262767, #262783, #262866, #262903, #262913, #263005, #263089, #263221, #263274, #263319, #263336, #263380, #263411, #263420, #263421, #263450, #263461, #263474, #263485, #263503, #263510, #263511, #263529, #263531, #263539, #263570, #263572, #263575, #263583, #263584, #263606, #263607, #263642, #263646, #263650, #263651, #263742, #263757, #263816, #263894, #263913, #263914, #263936, #263988, #264015, #264025, #264036, #264039, #264054, #264070, #264104, #264121, #264128, #264159, #264161, #264194); 18 Jul 2001, UV light trap (#163877, #259386, #259623, #260251, #262689, #262885, #262915, #262944, #263033, #263065, #263098, #263156, #263256, #263271, #263276, #263330, #263340, #263345, #263353, #263369, #263403); 20 Jul-14 Aug 2001, pitfall trap (#163312, #169776); UV light trap (#264098). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#258083, #258226, #260520, #263132, #263186, #264290, #264341, #264407, #264482, #264515, #264525, #264560, #264566, #264596, #264681); 15 Jun-19 Jul 2001, pitfall trap (#163488, #258944, #259038, #259953, #260009, #261177); 20 Jul-14 Aug 2001, pitfall trap (#257736). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#165688, #254306, #263030, #263324). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#164508, #174331, #205604, #254113, #256946, #259967, #260998, #261058, #261192, #262567, #262701, #262703, #262781, #262994, #263013, #263150, #263885, #263907). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265019, #265575, #265593, #265847, #266748). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#260460). [Total specimens =209]

***Anisodactylus (Anadaptus) sanctaecrucis* (Fabricius)**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#260469); 20 Jul-14 Aug 2001, pitfall trap (#263835). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#242278). [Total specimens =3]

***Anisodactylus (Anisodactylus) agricola* (Say)**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242249, #242313, #243552, #244385, #246227, #257727, #258726, #258980, #260720, #261180); 20 Jul-14 Aug 2001, pitfall trap (#168571, #170940, #171446, #256185, #256353, #257424, #260342, #263653, #264022, #264082, #264192, #264252). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#255081); 28 Jun-10 Jul 2001, pitfall trap (#174493). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#257401, #259997). [Total specimens =26]

***Anisodactylus (Anisodactylus) harrisii* LeConte**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#257320). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#257464). [Total specimens =2]

***Anisodactylus (Anisodactylus) kirbyi* Lindroth**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Aug-13 Sep 2001, pitfall trap (#168727). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#165939, #172059, #176341, #179313, #242649, #242676, #242752, #242800, #243330, #243572, #243993, #244042, #244190, #244367, #245243, #254908, #255469, #255574, #256224, #256765, #257043, #257509, #257608, #257646, #257772, #258451, #258788, #258794, #258802, #259017, #259145, #259629, #259676, #259920, #259949, #260413, #260470); 20 Jul-14 Aug 2001, pitfall trap (#163227, #163457, #164620, #166358, #169486, #171223, #173662, #254670, #256129, #256142, #256468, #256792, #256878, #257190, #257225, #257261, #257337, #257546, #257571, #257631, #257866, #257888, #258442, #258453, #258465, #258845, #258854, #258880, #258963, #259044, #259154, #259239, #259276, #259513, #259763, #260075, #260156, #260214, #260276, #260713, #261101, #261132, #261169, #262131, #262574, #262590, #262749, #262929, #263070, #263306, #263417, #263418, #263463, #263464, #263469, #263491, #263538, #263547, #263563, #263698, #263760, #263772, #263776, #263810, #263870, #263884, #263910, #264003, #264034, #264169, #264173, #264197, #264220, #264251); 15 Aug-13 Sep 2001, pitfall trap (#242330, #243460, #244290, #244465, #254491, #257035, #259528, #260005). [Total specimens =120]

***Anisodactylus (Anisodactylus) nigerrimus* (Dejean)**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243713). [Total specimens =1]

***Anisodactylus (Anisodactylus) nigrita* Dejean**

[Det. by R. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242745, #243292, #243297, #243618, #243828, #244350). [Total specimens =6]

***Bradycellus (Stenocellus) nigriceps* LeConte**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262991). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256944, #261252, #262287, #262559, #262958, #263648, #263933, #264305, #264440, #264631, #264658, #264695, #264810, #264870, #265103, #265127, #265222, #265235, #265401, #265402, #265487, #265515). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#263334). [Total specimens =24]

***Bradycellus (Stenocellus) rupestris* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda,

41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#255562); UV light trap (#263346); 13 Aug 2001, UV light trap (#262726, #263898). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#244020); 20 Jul-14 Aug 2001, pitfall trap (#207093, #258770, #262565). [Total specimens =8]

***Bradycellus (Stenocellus) tantillus* (Dejean)**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263039). [Total specimens =1]

***Bradycellus (Triliarthrus) atrimeus* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#240065, #241765, #241998, #242456, #242474, #242678, #243754, #243823); UV light trap (#262244); 20 Jul-14 Aug 2001, pitfall trap (#166030, #261139, #263550, #263699, #263700, #263779, #263820, #263834, #263920, #264075, #264149). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#238712, #242311); 20 Jul-14 Aug 2001, pitfall trap (#259446, #262588, #263268); 15 Aug-13 Sep 2001, pitfall trap (#257593). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#257554); 20 Jun-26 Jul 2001, pitfall trap (#257982). [Total specimens =28]

***Bradycellus (Triliarthrus) badipennis* (Haldeman)**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243767). [Total specimens =1]

***Bradycellus (Triliarthrus) kirbyi* (Horn)**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#241974). [Total specimens =1]

***Bradycellus (Triliarthrus) lugubris* (LeConte)**

[Det. by R. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 24 Aug-11 Sep 2001, pitfall trap (#242016). [Total specimens =1]

***Harpalus somnulentus* Dejean**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#262887, #262898, #263599). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#242357, #256374, #260679). [Total specimens =6]

***Harpalus (Pseudoophonus) compar* LeConte**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Aug-13 Sep 2001, pitfall trap (#258128). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263365). [Total specimens =2]

***Harpalus (Pseudoophonus) longicollis* LeConte**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap

(#244416); 20 Jul-14 Aug 2001, pitfall trap (#257740, #265489); 15 Aug-13 Sep 2001, pitfall trap (#186277, #258370, #258555). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#257548, #259783); 20 Jul-14 Aug 2001, pitfall trap (#178987, #255932, #257262, #259052, #259891, #260097, #262947, #263603, #263605, #264254); 15 Aug-13 Sep 2001, pitfall trap (#242234, #243769, #244318, #257601). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 20 Jun-26 Jul 2001, pitfall trap (#256303); 27 Jul-20 Aug 2001, pitfall trap (#258809). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#256319, #259225); 17 Aug-21 Sep 2001, pitfall trap (#256422). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#259535). [Total specimens =28]

Harpalus (Pseudoophonus) pensylvanicus (DeGeer)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#262730, #263117, #263879); 15 Aug-13 Sep 2001, pitfall trap (#257274, #258104, #258211). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242477, #243320, #259083); 20 Jul-14 Aug 2001, pitfall trap (#162271, #170878, #256100, #256239, #256293, #256537, #256925, #256929, #257399, #257448, #257688, #258473, #258909, #259329, #259457, #259651, #259719, #260412, #260571, #260747, #260901, #264230); 15 Aug-13 Sep 2001, pitfall trap (#241648, #242023, #242276, #242773, #244098, #255128). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 24 Aug-11 Sep 2001, pitfall trap (#244201). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259168, #263447). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#262312, #264396, #265037). [Total specimens =43]

Notiobia (Anisotarsus) terminata (Say)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#263074); 13 Aug 2001, UV light trap (#262638). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#168821, #260240, #265228); 13 Aug 2001, UV light trap (#259939). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#264434, #264476). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262519, #263243); 31 Jul 2001, UV light trap (#259705, #262732, #263216, #263471, #263719). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265769). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#262229); 23 Aug 2001, UV light trap (#260489). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#263229). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#264549). [Total specimens =20]

Selenophorus (Selenophorus) opalinus (LeConte)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257394, #262959). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#243304, #244152). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264400, #264818). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265726). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#264592). [Total specimens =8]

Stenolophus (Agonoderus) comma (Fabricius)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#259079, #265122, #265510, #265555, #266470, #266794); 18 Jul 2001, UV light trap (#256726, #262602); 13 Aug 2001, UV light trap (#260463). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#258857, #262721, #264081); 20 Jul-14 Aug 2001, pitfall trap (#264163). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262545, #263618, #263669). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257062, #258212, #258915, #262563, #262837, #263165, #263741, #264579, #265048). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#262717). [Total specimens =26]

Stenolophus (Agonoderus) lecontei (Chaudoir)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256164, #262632, #264473, #264496, #265373, #265655, #265783, #266210, #266611); 18 Jul 2001, UV light trap (#164048, #168277, #260980, #263032, #263111, #263193); 13 Aug 2001, UV light trap (#256648). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#259568). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#263158). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258524, #259772, #259972, #260561, #262341, #263458, #263663, #263845, #264719). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#264984). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#262826). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#261133). [Total specimens =30]

Stenolophus (Agonoleptus) conjunctus (Say)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#263246). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#254028). [Total specimens =2]

***Stenolophus (Agonoleptus) rotundatus* LeConte**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#258002). [Total specimens =1]

***Stenolophus (Agonoleptus) rotundicollis* (Haldeman)**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#171088, #255501, #256481, #257081, #257432, #257578, #257633, #257920, #257993, #258828, #259584, #259989, #260677); 28 Jun-10 Jul 2001, pitfall trap (#165416, #169053, #169982, #174561, #257327, #257482, #257917, #259434, #260361, #260733, #260758, #261071, #261249); 11 Jul-16 Aug 2001, pitfall trap (#257268). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#162935, #166249, #175538, #177503, #181397, #181416, #254011, #255522, #256337, #256854, #257358, #257363, #257463, #257547, #257675, #257765, #257812, #258027, #258745, #259102, #259634, #259639, #259793, #259904, #260312, #260350, #260953, #261004, #261073, #261246); 11 Jul-16 Aug 2001, pitfall trap (#259322, #259764, #260582). [Total specimens =60]

***Stenolophus (Stenolophus) ochropezus* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257810, #262170, #262195, #262899, #263171, #264298, #264702, #264706, #265730, #265764, #265811, #266386); 18 Jul 2001, UV light trap (#262205, #263347); 13 Aug 2001, UV light trap (#263213). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#258594, #262395); 15 Jun-19 Jul 2001, pitfall trap (#240409); UV light trap (#264340, #264443); 13 Aug 2001, UV light trap (#259318, #263428). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#256999, #260962, #263300); 20 Jun-19 Jul 2001, pitfall trap (#243843); 31 Jul 2001, UV light trap (#264437, #264553); 22 Aug 2001, UV light trap (#265069). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259062, #262200, #262550, #262595, #262644, #263976, #264624, #264949, #265446); 31 Jul 2001, UV light trap (#262850, #263145, #263624, #263678). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#260656, #261235, #264711, #264757, #265622). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262960, #265530); 25 Jul 2001, UV light trap (#259293, #264530); 23 Aug 2001, UV light trap (#263128, #263855). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#263927, #263962, #265450); 26 Jun 2001, UV light trap (#171922, #259516, #260474, #263081); 20 Sep 2001, UV light trap (#261051, #262952). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#261106, #263443); 26 Jun 2001, UV light trap (#256211, #262711, #262825); 25 May-10 Jul 2001, pitfall trap (#260323). [Total specimens =68]

***Trichotichnus autumnalis* (Say)**

[Det. by R. Davidson] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#258934). [Total specimens =1]

***Trichotichnus fulgens* (Csiki)**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#256982); 28 Jun-10 Jul 2001, pitfall trap (#259747, #260305). [Total specimens =3]

***Trichotichnus vulpeculus* (Say)**

[Det. by R.L. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Aug-13 Sep 2001, pitfall trap (#256127). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264336); 23 Aug 2001, UV light trap (#263096, #263176). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 17 Aug-21 Sep 2001, pitfall trap (#179201, #253970, #256744, #257051, #257762, #259159, #259284). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#260142, #260821, #261255); 17 Aug-21 Sep 2001, pitfall trap (#166801, #178535, #254776, #255732, #255733, #256190, #256966, #257032, #257212, #257465, #258084, #259289, #259383, #259654, #260476, #261025). [Total specimens =30]

***Xestonotus lugubris* (Dejean)**

[Det. by R. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#241969). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#242535, #243907); 24 Aug-11 Sep 2001, pitfall trap (#253470). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#257155). [Total specimens =5]

Harpalinae: Lebiini

***Apenes (Apenes) lucidulus* (Dejean)**

[Det. by R. Davidson] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#260167). [Total specimens =1]

***Cymindis (Cymindis) americanus* Dejean**

[Det. by R. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242036, #242586); 20 Jul-23 Aug 2001, pitfall trap (#259825); 24 Aug-11 Sep 2001, pitfall trap (#238228). [Total specimens =4]

***Dromius (Dromius) piceus* Dejean**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264853). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264531); 23 Aug 2001, UV light trap (#260499). [Total specimens =3]

***Lebia (Lebia) analis* Dejean**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#263289). [Total specimens =1]

***Lebia (Lebia) fuscata* Dejean**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#264068). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW

Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264657). [Total specimens =2]

***Lebia (Lebia) solea* Hentz**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#266702). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263054, #264605, #264639). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#261049). [Total specimens =5]

***Lebia (Lebia) viridipennis* Dejean**

[Det. by R.L. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jul-23 Aug 2001, pitfall trap (#258405). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264614). [Total specimens =2]

***Lebia (Lebia) viridis* Say**

[Det. by R.L. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#257059). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262962). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263057, #264217). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265921, #266704). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#265159). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#262278). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#264651). [Total specimens =9]

***Lebia (Loxopeza) atriventris* Say**

[Det. by R. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262861). [Total specimens =1]

***Lebia (Loxopeza) grandis* Hentz**

[Det. by R.L. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#259558, #261223). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#258390, #261182). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#172424, #256667, #262625, #263106, #263399). [Total specimens =9]

***Lebia (Loxopeza) tricolor* Say**

[Det. by R.L. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#263811). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#264168). [Total specimens =2]

Harpalinae: Licinini

***Badister (Badister) flavipes* LeConte**

[Det. by R. Davidson] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#257367, #258765); 27 Jul-20 Aug 2001, pitfall trap (#256349). [Total specimens =3]

***Badister (Badister) neopulchellus* Lindroth**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262968). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262951). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257417). [Total specimens =3]

***Badister (Badister) notatus* Haldeman**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#242325, #243911). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#258603); 1-24 Aug 2001, pitfall trap (#257377). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#256430, #259722). [Total specimens =6]

***Badister (Baudia) grandiceps* Casey**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#265024). [Total specimens =1]

***Badister (Baudia) ocularis* Casey**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#264182, #265925). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260671). [Total specimens =3]

***Badister (Baudia) reflexus* LeConte**

[Det. by R. Davidson] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265646). [Total specimens =1]

***Badister (Trimorphus) transversus* Casey**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262685). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#256140). [Total specimens =2]

***Dicaelus (Paradicaelus) elongatus* Bonelli**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#166059, #256346, #256403, #258911, #259373, #260048); 28 Jun-10 Jul 2001, pitfall trap (#256327, #257149, #260728). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#257314, #257994, #259525, #260112). [Total specimens =13]

Harpalinae: Loxandrinini

***Loxandrus ?vitosus* Allen**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263457). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#259247). [Total specimens =2]

Harpalinae: Platynini

Agonum (Agonum) harrisii LeConte

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263970). [Total specimens =1]

Agonum (Agonum) melanarium Dejean

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#239623, #242004, #242100, #242111, #242353, #242520, #243742, #243930, #244004, #244018, #244081, #244327, #244361); 20 Jul-14 Aug 2001, pitfall trap (#152168, #161923, #162509, #163762, #165724, #166149, #166184, #166323, #166400, #166881, #167122, #167601, #168286, #168391, #168677, #169226, #169417, #169778, #170421, #170809, #171360, #171725, #171943, #173267, #174212, #175407, #175734, #176383, #176486, #177199, #178695, #178880, #179441, #179461, #179720, #181271, #198239, #201768, #202466, #254318, #254793, #254858, #255057, #255287, #255364, #255464, #255475, #256136, #256146, #256171, #256203, #256253, #256265, #256268, #256309, #256323, #256331, #256347, #256389, #256393, #256423, #256434, #256454, #256522, #256540, #256596, #256614, #256640, #256657, #256707, #256725, #256760, #256816, #256847, #256856, #256913, #256941, #257015, #257017, #257027, #257036, #257063, #257072, #257091, #257127, #257140, #257188, #257191, #257197, #257259, #257280, #257281, #257335, #257347, #257397, #257443, #257493, #257512, #257535, #257575, #257576, #257580, #257599, #257600, #257689, #257693, #257696, #257699, #257711, #257744, #257751, #257802, #257808, #257833, #257837, #257856, #257889, #257892, #257923, #257926, #257973, #257981, #258029, #258073, #258079, #258107, #258113, #258147, #258150, #258158, #258204, #258230, #258394, #258399, #258418, #258438, #258517, #258605, #258664, #258677, #258721, #258787, #258914, #258924, #258943, #258956, #258958, #258967, #258985, #259053, #259057, #259139, #259169, #259195, #259198, #259202, #259218, #259352, #259374, #259433, #259453, #259566, #259646, #259709, #259731, #259746, #259759, #259769, #259784, #259823, #259918, #259935, #259993, #260023, #260084, #260099, #260113, #260189, #260211, #260217, #260227, #260270, #260322, #260359, #260389, #260435, #260532, #260536, #260552, #260573, #260629, #260640, #260715, #260722, #260769, #260803, #260806, #260807, #260824, #260830, #260838, #260930, #260941, #260956, #260979, #260982, #261001, #261009, #261053, #261060, #261062, #261128, #261141, #261217); 15 Aug-13 Sep 2001, pitfall trap (#163990, #167314, #176836, #177669, #255899, #256060, #256193, #256894, #257010, #257030, #257260, #257369, #257680, #258434, #258532, #258716, #258800, #258976, #259489, #259553, #259575, #259805, #260348, #260417, #260771, #261124). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#167882, #173071, #178046, #242155, #243355, #257355, #260604, #261207); 20 Jul-14 Aug 2001, pitfall trap (#151252, #165608, #171594, #171788, #254467,

#254701, #254750, #256208, #256906, #257153, #257232, #257820, #259072, #259295, #260300, #260788, #260811, #262174, #262558, #262577, #262596, #262656, #262704, #262736, #262757, #262772, #262808, #262810, #262814, #262815, #262819, #262839, #262846, #262857, #262894, #262934, #262974, #263075, #263384, #263527, #263801, #263850, #263868, #263994, #263999, #264045, #264046, #264084, #264158, #264208, #264261); 15 Aug-13 Sep 2001, pitfall trap (#165065, #256317, #256350, #256972, #257005, #257618, #258004, #258126, #258419, #258616, #258793, #259175, #260186, #260194, #260785). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#243962, #244383); 20 Jul-23 Aug 2001, pitfall trap (#255831). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243336). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#167777, #168025, #248663, #254055, #256219, #256344, #256386, #257234, #257977, #258269, #258583, #258798, #258842, #260539, #260633, #260740); 20 Jun-26 Jul 2001, pitfall trap (#257570, #258694, #260025); 27 Jul-20 Aug 2001, pitfall trap (#165545, #170114, #170790, #256221, #258282, #258432, #259503, #259688, #259888, #260279, #260548, #260723). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 20 Jun-31 Jul 2001, pitfall trap (#214800); 1-24 Aug 2001, pitfall trap (#242154). [Total specimens =364]

Agonum (Agonum) muelleri (Herbst)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242292, #242537, #243439); 20 Jul-14 Aug 2001, pitfall trap (#256458, #256864, #258293, #258574, #258672, #260001). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#256216, #258232, #259422, #260657); 20 Jul-14 Aug 2001, pitfall trap (#173092, #256702, #258917, #260775, #262628, #262729, #262803, #263281, #263791, #263872, #264144, #264180, #264181, #264234, #264235, #264249); 15 Aug-13 Sep 2001, pitfall trap (#164382, #256406, #259913, #260203, #260700, #260954). [Total specimens =35]

Agonum (Agonum) placidum (Say)

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257041). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262369, #262688, #262965). [Total specimens =4]

Agonum (Agonum) tenue (LeConte)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#263694). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#265114). [Total specimens =2]

Agonum (Circinalidia) aeruginosum Dejean

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262661, #262708, #264846). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#262939). [Total specimens =4]

***Agonum (Europhilus) anchomenoides* Randall**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256824, #262613, #262935, #264269, #264617, #264941, #265173, #265674, #265846, #265886, #265942, #265943, #266641, #266755); 19 Jul 2001, hand-collected (#239130, #243295); UV light trap (#169796, #259177, #262349, #262397, #262900, #263141, #263168, #263286, #263372); 20 Jul-14 Aug 2001, pitfall trap (#177233, #257712, #260201, #260248, #263473, #263518, #263528, #263549, #263554, #263604, #263662, #263674, #263715, #263748, #263754, #263755, #263793, #263815, #263918, #263919, #263925, #263949, #263958, #263959, #263961, #263985, #264012, #264017, #264021, #264033, #264035, #264038, #264077, #264078, #264079, #264156, #264213, #264232, #264248); UV light trap (#264048); 15 Aug-13 Sep 2001, pitfall trap (#260036). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#243616, #258903); 20 Jul-14 Aug 2001, pitfall trap (#257356, #258111, #258734, #260975, #262926, #263478, #263679); 15 Aug-13 Sep 2001, pitfall trap (#255376, #259071). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264896). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#258768). [Total specimens =79]

***Agonum (Europhilus) canadense* Goulet**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#244065). [Total specimens =1]

***Agonum (Europhilus) gratiosum* (Mannerheim)**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#206976). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#243265); 20 Jul-23 Aug 2001, pitfall trap (#165253, #259429). [Total specimens =4]

***Agonum (Europhilus) lutulentum* (LeConte)**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262469). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#261261). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256313, #257716, #263068, #263517, #264237, #265289, #265451). [Total specimens =9]

***Agonum (Europhilus) palustre* Goulet**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#263881). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#262844, #263000). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242731); 20 Jul-23 Aug 2001, pitfall trap (#257258); 24 Aug-11 Sep 2001, pitfall trap (#244148). **Site 6**, Lycoming Creek, 0.9 km NW

Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#242362, #242901, #243941, #243947, #248420); 27 Jul-23 Aug 2001, pitfall trap (#242035). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#164068, #168949, #176976, #177613, #256483, #256876, #257420, #258037, #258061, #258263, #258501, #258641, #259669, #259968, #260330, #260362, #261239); 20 Jun-26 Jul 2001, pitfall trap (#174017); 27 Jul-20 Aug 2001, pitfall trap (#258748). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#258338). [Total specimens =32]

***Agonum (Europhilus) thoreyi* Dejean**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#263284, #263573, #266566). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#172851, #262307, #262805, #262811, #263722, #263915, #264696, #265409). [Total specimens =11]

***Agonum (Olisares) punctiforme* (Say)**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#256121). [Total specimens =1]

***Agonum (Stictanchnus) decorum* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#257084). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#260776, #263838); 15 Aug-13 Sep 2001, pitfall trap (#256786). [Total specimens =4]

***Agonum (Stictanchnus) extensicollae* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#255264, #259449, #259959, #261170). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#257759, #259472, #259572, #259902); 20 Jul-14 Aug 2001, pitfall trap (#257302, #262851, #262911, #263909, #263921, #264231); 15 Aug-13 Sep 2001, pitfall trap (#166317, #171063, #257841, #260437). [Total specimens =18]

***Atranus pubescens* (Dejean)**

[Det. by R.L. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#237922, #242538, #243558, #244469, #255318). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#172315, #178089, #178916, #201650, #256290, #257019, #257972, #258704, #258965, #259399, #260068, #260329, #260602). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#259526). [Total specimens =19]

***Calathus (Neocalathus) gregarius* (Say)**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 17 Aug-21 Sep 2001, pitfall trap (#257862). [Total specimens =1]

***Olisthopus parmatus* (Say)**

[Det. by R. Davidson] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#168432, #168485, #171992, #173817, #257277, #259172, #259360); 27 Jul-20 Aug 2001, pitfall trap (#256851, #256964, #259187, #259619, #260208). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#168252, #256261); 20 Jun-31 Jul 2001, pitfall trap (#241966). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#256341, #256616, #259455). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#256165, #258751, #260585, #260626). [Total specimens =22]

***Oxytelaphus pusillus* (LeConte)**

[Det. by R.L. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#244422); 20 Jul-14 Aug 2001, pitfall trap (#263661, #263684, #263940, #264072, #264115, #264152). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#262270). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#241985, #242352, #242749, #243631, #244077, #244259, #244265, #247532, #248107, #251406); 27 Jul-23 Aug 2001, pitfall trap (#242321, #242495, #243173, #244078, #244273, #250356). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#168984, #256651, #257239, #259241, #259838, #259871, #260296); 27 Jul-20 Aug 2001, pitfall trap (#175612). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#256535). [Total specimens =33]

***Platynus (Batenus) cincticollis* (Say)**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#264309). [Total specimens =1]

***Platynus (Batenus) hypolithus* (Say)**

[Det. by R.L. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#261183). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#162229, #164116, #166297, #169890, #173853, #177588, #256207, #256435, #257087, #257110, #257235, #257340, #257826, #257976, #258177, #258200, #258359, #258582, #258873, #259077, #259180, #259616, #259863, #260170, #260287, #260333, #260366, #260590, #260593, #260622, #260711, #260827, #260862, #261000, #262328, #262930, #263525, #263625, #263696, #263720, #263740, #263938, #264010, #264228); 15 Aug-13 Sep 2001, pitfall trap (#238643, #242236, #242241, #242320, #242377, #242481, #242505, #242704, #243408, #243412, #243640, #243731, #243768, #244247, #244462, #246683, #247103, #257809, #258094, #259511, #260221, #261165). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N,

76-58-50W, 220 m: 27 Jul-23 Aug 2001, pitfall trap (#243365, #243832); 24 Aug-11 Sep 2001, pitfall trap (#242565, #242703, #243361, #243587, #244040). [Total specimens =74]

***Platynus (Platynus) decentis* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#262715); 15 Aug-13 Sep 2001, pitfall trap (#256267). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#258755). [Total specimens =3]

***Platynus (Platynus) parmarginatus* Hamilton**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#178362). [Total specimens =1]

***Platynus (Platynus) tenuicollis* (LeConte)**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262156). [Total specimens =1]

***Synuchus (Pristodactyla) impunctatus* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#263164). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 24 Aug-11 Sep 2001, pitfall trap (#255536). [Total specimens =2]

***Tetraleucus picticornis* (Newman)**

[Det. by R. Davidson] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#256809). [Total specimens =1]

Harpalinae: Pterostichini

***Cyclotrachelus (Evarthrus) furtivus* (LeConte)**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#173731); 28 Jun-10 Jul 2001, pitfall trap (#162595, #165193, #173828, #177589, #254621, #255030, #255122, #255876, #256197, #256252, #256311, #256365, #256487, #256742, #256943, #257022, #257133, #257142, #257210, #257285, #257388, #257440, #257636, #257749, #257999, #258567, #258922, #259296, #259573, #259577, #259580, #259890, #260223, #260495, #260736, #260892, #261149, #261220, #261244); 11 Jul-16 Aug 2001, pitfall trap (#256735). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#163361, #256188, #256232, #259315); 11 Jul-16 Aug 2001, pitfall trap (#246964, #259394); 17 Aug-21 Sep 2001, pitfall trap (#170347). [Total specimens =48]

***Gastrellarius honestus* (Say)**

[Det. by R. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 24 Aug-11 Sep 2001, pitfall trap (#243519). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#259365). [Total specimens =2]

***Myas cyanescens* Dejean**

[Det. by R. Davidson] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242192). [Total specimens =1]

***Poecilus lucublandus* (Say)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Aug-13 Sep 2001, pitfall trap (#177940, #256204). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#253979, #257276, #261085); 20 Jul-14 Aug 2001, pitfall trap (#257073, #263954); 15 Aug-13 Sep 2001, pitfall trap (#257462, #258456). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#237393, #238898, #242107, #242286, #242691, #242759, #243663, #244230, #244398); 20 Jul-23 Aug 2001, pitfall trap (#258838, #260603); 24 Aug-11 Sep 2001, pitfall trap (#246381). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#173347, #242319, #244161, #259732); 27 Jul-23 Aug 2001, pitfall trap (#244300); 24 Aug-11 Sep 2001, pitfall trap (#237947, #242763, #243998). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#254010, #256629, #258569, #260955, #260957); 20 Jun-26 Jul 2001, pitfall trap (#260145, #261032); 27 Jul-20 Aug 2001, pitfall trap (#258081, #260000, #260913). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#256555, #256857, #256875, #257423); 20 Jun-31 Jul 2001, pitfall trap (#242257, #242449, #243835, #244075, #244312, #255642); 1-24 Aug 2001, pitfall trap (#242413, #242554, #243763). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#255013, #256160); 28 Jun-10 Jul 2001, pitfall trap (#258067). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#166679, #260834). [Total specimens =57]

***Pterostichus (Argutor) commutabilis* (Motschulsky)**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#242743). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#257346); 20 Jun-26 Jul 2001, pitfall trap (#171141); 27 Jul-20 Aug 2001, pitfall trap (#260404). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#256872, #257449); 20 Jun-31 Jul 2001, pitfall trap (#242058, #243623). [Total specimens =8]

***Pterostichus (Bothriopterus) mutus* (Say)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#258196). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#239099, #242134, #242202, #242310, #242341, #242575, #243276, #243824, #244086, #244298, #261473, #261597); 20 Jul-23 Aug 2001, pitfall trap (#257474, #257838). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#172124); 24 Aug-11 Sep 2001, pitfall trap (#243925). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#174887, #177110, #180603, #256304, #256650, #257471, #258209, #259144, #259544, #259893, #260062, #260958); 20 Jun-26 Jul 2001, pitfall trap (#172591, #258157, #259041, #259933, #260934); 27 Jul-20 Aug 2001, pitfall trap (#173450,

#258722, #259937). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#178187, #255391, #256785, #257887, #258519, #258931, #258994, #259910, #260193); 20 Jun-31 Jul 2001, pitfall trap (#237303, #241958, #242422, #243191, #243704, #243920, #243954, #243981, #244048, #247216); 1-24 Aug 2001, pitfall trap (#239487, #242191, #242455, #242689, #242734, #243418, #244002, #244116, #244305, #244363, #247910). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#164909, #256574, #257194, #259811, #260058). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#152055, #255689, #256284, #256357, #256428, #256608, #256814, #256970, #257004, #257361, #257402, #258422, #261079); 11 Jul-16 Aug 2001, pitfall trap (#260029); 17 Aug-21 Sep 2001, pitfall trap (#170346). [Total specimens =87]

***Pterostichus (Euferonia) coracinus* (Newman)**

[Det. by R. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#243281, #244013, #244438); 20 Jul-23 Aug 2001, pitfall trap (#163501, #257492, #258730, #259958); 24 Aug-11 Sep 2001, pitfall trap (#242476, #243045, #243829). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#258536). [Total specimens =11]

***Pterostichus (Euferonia) novus* Straneo**

[Det. by R. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#241248); 20 Jul-23 Aug 2001, pitfall trap (#258443). [Total specimens =2]

***Pterostichus (Euferonia) stygicus* (Say)**

[Det. by R.L. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#238206, #240103, #240490, #241067, #242671, #242807, #244164, #244352, #244506); 20 Jul-23 Aug 2001, pitfall trap (#167625, #167821, #167886, #172228, #177091, #177618, #178525, #179158, #206898, #254634, #254895, #256431, #256462, #256660, #257056, #257319, #257450, #257622, #257774, #257795, #257855, #258065, #258321, #258324, #258354, #258364, #258499, #258548, #258578, #258631, #258649, #258689, #258761, #259093, #259286, #259878, #260074, #260393, #260395, #260477, #260564, #260591, #260618, #260696, #260779, #260920, #261130); 24 Aug-11 Sep 2001, pitfall trap (#242083, #242373, #242532, #242567, #242677, #242823, #243534, #243590, #243594, #243688, #243827, #244088, #244399, #244409, #244493, #261453). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#176036, #242506, #242601, #243299, #243949, #243960, #244028, #244146, #244232, #244237, #244241, #245277, #247084, #247193, #254641, #258167, #258703, #259403, #259604, #259662, #260220, #260481, #260818, #260870, #261054, #261202); 27 Jul-23 Aug 2001, pitfall trap (#239091, #240237, #242069, #242181, #242212, #242289, #242780, #244039, #244468, #244481, #244545); 24 Aug-11 Sep 2001, pitfall trap (#239641, #241867, #242014, #242141, #242227, #242342, #242439, #242664, #242766, #242779, #243260, #243384, #243679, #243938, #244158, #244203, #244250, #244322, #244486, #244661). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May-27 Jun 2001, pitfall trap (#169642, #257222, #258776, #260986); 28 Jun-10 Jul 2001, pitfall trap (#257343, #259574); 11 Jul-16 Aug

2001, pitfall trap (#256138); 17 Aug-21 Sep 2001, pitfall trap (#257371, #257942, #259756, #259879). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#258149); 17 Aug-21 Sep 2001, pitfall trap (#172337, #255942). [Total specimens =143]

***Pterostichus (Lamenius) caudalis* (Say)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#219705, #237541, #242131, #242163, #242179, #242511, #242697, #242707, #243245, #243350, #243437, #243544, #243647, #243683, #243887, #244027, #244173, #248030, #262063); 20 Jul-14 Aug 2001, pitfall trap (#149422, #162468, #165322, #165780, #166004, #166158, #166930, #168193, #168301, #169427, #169551, #169710, #170010, #170201, #170948, #171489, #171896, #172027, #172990, #173004, #175360, #175863, #176370, #177160, #177240, #177546, #177625, #177720, #178364, #178576, #178877, #180277, #180506, #180526, #180613, #181253, #249419, #254255, #254298, #254388, #254638, #254791, #255496, #255498, #255770, #256114, #256194, #256210, #256228, #256283, #256335, #256385, #256461, #256473, #256491, #256509, #256526, #256544, #256564, #256588, #256620, #256658, #256662, #256687, #256764, #256773, #256803, #256828, #256842, #256902, #256923, #256995, #257007, #257024, #257047, #257058, #257066, #257116, #257126, #257179, #257219, #257224, #257282, #257328, #257345, #257414, #257447, #257561, #257607, #257627, #257665, #257666, #257678, #257697, #257706, #257735, #257760, #257811, #257845, #257983, #258120, #258124, #258132, #258156, #258165, #258168, #258178, #258182, #258270, #258288, #258291, #258292, #258357, #258411, #258412, #258445, #258475, #258530, #258544, #258558, #258607, #258623, #258659, #258675, #258685, #258688, #258728, #258738, #258760, #258806, #258820, #258859, #258860, #258938, #258959, #258981, #258984, #259007, #259019, #259054, #259089, #259191, #259197, #259204, #259212, #259244, #259282, #259283, #259354, #259364, #259435, #259442, #259557, #259600, #259653, #259665, #259702, #259712, #259720, #259721, #259738, #259742, #259782, #259847, #259916, #259952, #259984, #259985, #259992, #260030, #260041, #260056, #260080, #260157, #260192, #260202, #260209, #260254, #260303, #260363, #260383, #260432, #260453, #260462, #260466, #260482, #260538, #260556, #260586, #260667, #260669, #260685, #260699, #260708, #260738, #260846, #260879, #260906, #260948, #260973, #261003, #261017, #261035, #261045, #261061, #261080, #261081, #261108, #261148, #261158, #261195, #261214); 15 Aug-13 Sep 2001, pitfall trap (#256427, #256520, #257040, #257931, #258452, #258978, #260328, #260861, #261161). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#171598, #235574, #241863, #242489, #244096, #244184, #255925, #256149, #256754, #257676, #258199, #258225, #258779, #259104, #259658, #261075); 20 Jul-14 Aug 2001, pitfall trap (#165934, #169719, #171780, #255848, #256380, #256737, #257134, #257455, #257651, #257998, #259043, #259051, #260159, #262692, #262842, #262859, #262891, #263041, #263131, #263356, #263416, #263585, #263812, #263857, #263887, #263908, #263926, #263928, #263948, #264016, #264047, #264095, #264123, #264191); 15 Aug-13 Sep 2001, pitfall trap (#177530, #260596). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242143, #243866); 20

Jul-23 Aug 2001, pitfall trap (#256696, #257247, #258010); 24 Aug-11 Sep 2001, pitfall trap (#243921). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243944). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#259519, #260046). [Total specimens =301]

***Pterostichus (Morphnosoma) melanarius* (Illiger)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242038, #242379, #242380, #243575, #243637, #243877, #244131, #244311); 20 Jul-14 Aug 2001, pitfall trap (#169151, #256222, #257900, #258635, #259113, #260078); 15 Aug-13 Sep 2001, pitfall trap (#256820, #259870, #261114). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242114, #244200, #244228); 20 Jul-14 Aug 2001, pitfall trap (#168212, #171541, #258170, #258383, #258413, #258625, #258825, #259061, #259211, #260844, #260881, #263831); 15 Aug-13 Sep 2001, pitfall trap (#242730, #242784, #246253). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jul-23 Aug 2001, pitfall trap (#257938). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#257046); 24 Aug-11 Sep 2001, pitfall trap (#242355). [Total specimens =38]

***Pterostichus (Pseudomaseus) luctuosus* (Dejean)**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#263565). [Total specimens =1]

Harpalinae: Zabrinini

***Amara (Amara) aenea* (DeGeer)**

[Det. by R. Davidson] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#169149, #177818, #180458, #261037). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 17 Aug-21 Sep 2001, pitfall trap (#259099). [Total specimens =5]

***Amara (Amara) crassispina* LeConte**

[Det. by R. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#243888); 20 Jul-23 Aug 2001, pitfall trap (#181432, #256364). [Total specimens =3]

***Amara (Amara) cupreolata* Putzeys**

[Det. by R. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242516). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#257354). [Total specimens =2]

***Amara (Amara) familiaris* (Duftschmid)**

[Det. by R. Davidson] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#241983). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243543). [Total specimens =2]

***Amara (Amara) littoralis* Mannerheim**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#174091, #260318, #260853). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#256279). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#258630). [Total specimens =5]

***Amara (Amara) lunicollis* Schiodte**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243338, #243562, #261212). [Total specimens =3]

***Amara (Amara) ovata* (Fabricius)**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#163717, #164119, #168179, #240460, #240699, #242099, #242176, #242204, #242222, #242521, #245421, #245776, #254620, #256330, #256570, #257610, #257769, #257819, #258662, #259214, #259508, #260415); 27 Jul-23 Aug 2001, pitfall trap (#239063, #242659, #243968, #244507); 24 Aug-11 Sep 2001, pitfall trap (#242502). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#256206, #257125, #258871, #260579); 11 Jul-16 Aug 2001, pitfall trap (#259866, #260889). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#179600, #180491, #256306, #258407, #258783, #259087, #259419, #259648, #259947); 17 Aug-21 Sep 2001, pitfall trap (#256147). [Total specimens =43]

***Amara (Bradytus) avida* (Say)**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242302); 20 Jul-14 Aug 2001, pitfall trap (#264233); 15 Aug-13 Sep 2001, pitfall trap (#176224). [Total specimens =3]

***Amara (Bradytus) exarata* Dejean**

[Det. by R. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Aug-13 Sep 2001, pitfall trap (#257266, #259324). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#263911, #264143); 15 Aug-13 Sep 2001, pitfall trap (#163043, #164663, #167975, #257147, #257574, #258100, #258849, #258872, #258975, #259096, #259188). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#243368); 20 Jul-23 Aug 2001, pitfall trap (#257758, #259641); 24 Aug-11 Sep 2001, pitfall trap (#242127, #242282, #243283, #243895, #244080). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#177277, #244555, #256622); 27 Jul-23 Aug 2001, pitfall trap (#242295, #243366); 24 Aug-11 Sep 2001, pitfall trap (#236409, #237770, #238584, #239906, #240966, #241136, #241978, #242034, #242172, #242437, #242633, #242709, #242721, #242733, #242809, #243288, #243298, #243313, #243369, #243399, #243434, #244069, #244079, #244136, #244163, #244307, #244339, #244521, #248690). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#257952, #259809); 17 Aug-21 Sep 2001, pitfall trap (#256512, #256515, #257563, #257922). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130

m: 25 May-10 Jul 2001, pitfall trap (#254578, #260642); 17 Aug-21 Sep 2001, pitfall trap (#167679, #170348, #174122, #254556, #257785, #257906, #259710, #259852, #259874). [Total specimens =74]

***Amara (Zezea) angustata* (Say)**

[Det. by R. Davidson] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#258698). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#165783). [Total specimens =2]

Paussinae: Brachinini

***Brachinus (Neobrachinus) cordicollis* Dejean**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#164791, #243608, #260490, #261646); 20 Jul-14 Aug 2001, pitfall trap (#256647, #258011, #260695). [Total specimens =7]

***Brachinus (Neobrachinus) cyanipennis* Say**

[Det. by R.L. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#241973, #242550, #242599, #242741, #243906, #244056, #244193, #244349, #244380); 20 Jul-14 Aug 2001, pitfall trap (#263641, #264062). [Total specimens =11]

***Brachinus (Neobrachinus) cyanochroaticus* Erwin**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#263724). [Total specimens =1]

***Brachinus (Neobrachinus) fumans* (Fabricius)**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#245763); 20 Jul-14 Aug 2001, pitfall trap (#257373, #260668, #262667, #263391). [Total specimens =5]

***Brachinus (Neobrachinus) janthinipennis* (Dejean)**

[Det. by R.L. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#257326). [Total specimens =1]

Psydrinae: Bembidiini

***Bembidion (Bembidion) quadrimaculatum oppositum* Say**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242397, #248760); 20 Jul-14 Aug 2001, pitfall trap (#264108); 15 Aug-13 Sep 2001, pitfall trap (#260719). [Total specimens =4]

***Bembidion (Chrysobraceon) inaequale* Say**

[Det. by R. Davidson] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#257378, #259101, #259668, #260017, #261002). [Total specimens =5]

***Bembidion (Eupetodromus) graciliforme* Hayward**

[Det. by R. Davidson] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda,

41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#263656). [Total specimens =1]

***Bembidion (Furcacampa) affine* Say**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#262512, #263873); 18 Jul 2001, UV light trap (#256732, #257844, #260172, #262871, #262981, #263017, #263040, #263067, #263120, #263341, #263358, #263405, #264109); 13 Aug 2001, UV light trap (#260188, #263465). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257467). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#206051, #262159, #262691, #264132, #264318, #264487, #264494, #264843, #264921). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#264680, #264873, #265264, #265283, #265720, #265795, #265929, #266720, #266754). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#264265, #264276, #264280, #265003, #265169); 25 Jul 2001, UV light trap (#263557, #264628); 23 Aug 2001, UV light trap (#258564). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#258116, #259445, #262569, #263118, #263490); 15 Aug 2001, UV light trap (#260484, #262564, #263061). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#259909, #262618, #263413, #263468, #263841); 15 Aug 2001, UV light trap (#174333, #257508). [Total specimens =59]

***Bembidion (Furcacampa) impotens* Casey**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263093). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257174). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257386, #263393); 15 Aug 2001, UV light trap (#262713). [Total specimens =5]

***Bembidion (Furcacampa) mimus* Hayward**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#263228, #265059, #265686); 18 Jul 2001, UV light trap (#263105, #263249); 13 Aug 2001, UV light trap (#179156, #257743). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242203); 20 Jul-14 Aug 2001, pitfall trap (#262668); UV light trap (#263121, #263174, #263207). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262928, #264908, #265221). [Total specimens =15]

***Bembidion (Notaphus) castor* Lindroth**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#163582, #165553, #169231, #175921, #255606, #256308, #257382, #257494, #257793, #257963, #258121, #258377,

#258463, #258637, #259316, #259358, #259404, #259724, #259774, #259906, #260012, #262138, #262141, #262181, #262190, #262191, #262237, #262329, #262487, #262534, #262653, #262655, #262671, #262761, #262831, #262847, #262869, #262922, #262938, #263035, #263149, #263154, #263159, #263191, #263251, #263252, #263285, #263348, #263379, #263388, #263431, #263610, #263827, #263830, #263917, #264029, #264092, #264137, #264148, #264172, #264199, #264295, #264306, #264327, #264335, #264350, #264355, #264357, #264358, #264404, #264432, #264455, #264464, #264475, #264511, #264523, #264543, #264610, #264611, #264673, #264750, #264767, #264775, #264778, #264807, #264814, #264834, #264845, #264856, #264857, #264920, #264938, #264944, #264976, #264990, #265045, #265061, #265066, #265079, #265087, #265089, #265096, #265115, #265176, #265178, #265202, #265211, #265223, #265281, #265305, #265328, #265392, #265415, #265425, #265428, #265434, #265443, #265461, #265462, #265474, #265478, #265534, #265535, #265550, #265552, #265561, #265576, #265589, #265590, #265591, #265592, #265601, #265605, #265615, #265618, #265625, #265631, #265658, #265672, #265673, #265676, #265692, #265698, #265714, #265715, #265727, #265732, #265733, #265740, #265741, #265754, #265757, #265772, #265777, #265778, #265786, #265790, #265807, #265819, #265826, #265856, #265862, #265871, #265874, #265893, #265905, #265918, #265922, #265933, #265936, #265939, #265948, #265976, #265979, #266020, #266032, #266065, #266067, #266085, #266099, #266103, #266151, #266214, #266319, #266354, #266359, #266363, #266383, #266390, #266422, #266521, #266532, #266542, #266562, #266713, #266739, #266740); 19 Jul 2001, hand-collected (#243373); pitfall trap (#243485); UV light trap (#168635, #171243, #175512, #178518, #181408, #256126, #256530, #256684, #257396, #257670, #258239, #258428, #258470, #258546, #258610, #258789, #258856, #259192, #259193, #259410, #259545, #259547, #259779, #259786, #259951, #260246, #260533, #260554, #260761, #260907, #261242, #262121, #262137, #262360, #262426, #262452, #262480, #262501, #262607, #262622, #262631, #262650, #262651, #262659, #262739, #262740, #262763, #262777, #262785, #262796, #262821, #262852, #262874, #262888, #262901, #262904, #262936, #262972, #262986, #262995, #263006, #263010, #263019, #263026, #263029, #263071, #263080, #263097, #263104, #263122, #263129, #263134, #263135, #263137, #263143, #263146, #263160, #263175, #263187, #263190, #263194, #263198, #263209, #263212, #263217, #263219, #263225, #263235, #263236, #263240, #263253, #263259, #263272, #263297, #263308, #263312, #263351, #263352, #263355, #263357, #263385, #263480, #263690, #263759, #263761, #263765, #263825, #263890, #263944, #263952, #264024, #264105, #264120, #264236); 20 Jul-14 Aug 2001, pitfall trap (#263795); UV light trap (#258740, #262694, #263963). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262161, #263309); 20 Jul-14 Aug 2001, pitfall trap (#167437); 15 Aug-13 Sep 2001, pitfall trap (#257352). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#263640). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264654). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#256734). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#263082). **Site 2**, Codorus Creek, 0.5 km S Graybill,

39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#264670). [Total specimens =326]

Bembidion (Notaphus) patrule Dejean

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256363, #257871, #258190, #259826, #259973, #263350, #264119, #264367, #264738, #264815, #264926, #265136, #265685, #265966, #266149, #266314, #266327, #266500, #266594); 18 Jul 2001, UV light trap (#262984, #263222, #263275, #263689). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262342, #263044, #263262). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#168134, #248702, #259343, #260249, #262213, #262242, #262733, #262820). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263264, #264616, #265494). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#258804, #265302, #265594, #265681). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257619, #262999, #263208). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#257441, #262884, #263028). [Total specimens =47]

Bembidion (Notaphus) rapidum (LeConte)

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#262248). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265833). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264533). [Total specimens =3]

Bembidion (Notaphus) variegatum Say

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256807, #263163, #264250, #264718, #264907, #264960, #265704, #265859, #265934, #265944, #265955, #266238, #266450, #266830); 18 Jul 2001, UV light trap (#258925, #263011, #263123, #263201, #263239, #263288). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#254460, #260854). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#264424). [Total specimens =23]

Bembidion (Peryphus) postremum Say

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#243726, #244252); 20 Jul-14 Aug 2001, pitfall trap (#263479, #263502, #263576, #263628, #263644, #263672, #263682, #263692, #263716, #263723, #263737, #263782, #263786, #263826, #263900, #263998, #264043, #264083, #264117, #264134, #264178, #264193); 15 Aug-13 Sep 2001, pitfall trap (#259339). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#258183, #260093); 20 Jul-14 Aug

2001, pitfall trap (#173410, #256486, #256914, #258440, #259173, #259645, #260731, #262316, #262483, #262600, #262637, #262788, #262817, #262862, #262956, #263390, #263392, #263591, #263992, #264140, #264207); 15 Aug-13 Sep 2001, pitfall trap (#258749, #259428). [Total specimens =50]

Bembidion (Peryphus) tetracolum Say

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242024); 20 Jul-14 Aug 2001, pitfall trap (#263559, #263652, #263677, #263691, #263738, #263788, #263794, #263859, #263860, #263880, #263896, #263939, #263946, #263947, #264011, #264111, #264155, #264200, #264210, #264212). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#243430, #260605); 20 Jul-14 Aug 2001, pitfall trap (#167199, #256132, #256442, #256693, #256779, #257360, #257834, #258328, #259141, #260647, #260858, #262179, #262251, #262635, #262723, #262807, #262880, #263270, #263328, #263366, #263960, #263967, #263969, #264006, #264066, #264216); 15 Aug-13 Sep 2001, pitfall trap (#260064). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#260468). [Total specimens =51]

Bembidion (Trepanedoris) frontale (LeConte)

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#242470). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#115026, #162761, #164410, #167806, #175188, #256810, #257213, #257323, #257426, #257536, #257658, #257778, #257783, #257788, #257818, #258426, #258701, #258799, #258813, #259081, #259288, #259302, #259400, #259436, #259739, #259857, #259899, #260207, #261163). [Total specimens =30]

Bembidion (Trichoplataphus) planum (Haldeman)

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260880, #262228, #262754, #262879, #263162, #263200, #263657, #264385, #264749, #265086, #265312, #265375, #265476). [Total specimens =13]

Elaphropus tripunctatus (Say)

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#178601, #256384, #264559, #264755). [Total specimens =4]

Elaphropus vivax (LeConte)

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun 2001, hand-collected (#243936). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#263063). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259638, #263364, #263705, #263726). [Total specimens =6]

Elaphropus xanthopus (Dejean)

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257143). [Total specimens =1]

***Paratachys oblitus* (Casey)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#258599, #264661). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262765). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256813). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#262695). [Total specimens =5]

***Paratachys proximus* (Say)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257195, #258297, #258865, #260331, #260420, #262317, #262698, #262806, #262848, #262988, #263234, #263404, #263601, #263655, #263665, #264179, #264291, #264320, #264343, #264368, #264369, #264370, #264412, #264426, #264506, #264581, #264648, #264862, #265004, #265119, #265268, #265280, #265475, #265666, #265909, #266059, #266248, #266358, #266639, #266738); 18 Jul 2001, UV light trap (#259118, #262623, #263008, #263178, #263244, #263433); 13 Aug 2001, UV light trap (#257557). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#259076). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257690, #262813, #262917, #264166). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259518, #263293, #264520, #265527). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262241). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#263840). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256004, #257159, #257198, #259675, #259818, #260508, #262363, #262575, #262679, #262793, #263184, #263335, #263495, #263833). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#263419). [Total specimens =73]

***Paratachys pumilus* (Dejean)**

[Det. by R. Davidson] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 28 Jun-10 Jul 2001, pitfall trap (#257539, #258784, #259045). [Total specimens =3]

***Paratachys scitulus* (LeConte)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#262234, #264271, #264448, #266347); 13 Aug 2001, UV light trap (#262552, #263676, #263861). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#165010, #256144, #261070, #262442, #264160, #264164). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262648, #263824). **Site 6**, Lycoming Creek, 0.9 km NW Bodines,

41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258202, #262990, #263241, #264774, #265382, #265383). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#254471). [Total specimens =22]

***Porotachys bisulcatus* (Nicolai)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#265160, #265972, #266290). [Total specimens =3]

Psydrinae: Patrobini

***Patrobus* (*Neopatrobis*) *longicornis* (Say)**

[Det. by R.L. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#167913, #257001, #258341); 15 Aug-13 Sep 2001, pitfall trap (#256135, #257267). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#258395, #260107, #260237, #260367, #260504, #263444, #264138); 15 Aug-13 Sep 2001, pitfall trap (#243266, #243916, #245650, #261174). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#244289). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#259964). [Total specimens =18]

Psydrinae: Trechini

***Blemus discus* (Fabricius)**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#243650); 20 Jul-14 Aug 2001, pitfall trap (#263875). [Total specimens =2]

***Trechus* (*Trechus*) *quadristriatus* (Schränk)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256545, #265843). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#164349, #262706, #263036); 17 Aug-21 Sep 2001, pitfall trap (#260033); UV light trap (#177479). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#256368, #257960, #260835, #262358, #262774, #262841, #263108, #263126, #263136, #263266, #263320, #263543, #263797, #264139, #264247); 25 May-10 Jul 2001, pitfall trap (#257671, #257698, #258474). [Total specimens =25]

Scaritinae: Scaritini

***Clivina* (*Clivina*) *impressifrons* LeConte**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256988, #258460, #259158, #259882, #260515, #260814, #262872, #262895, #263453, #263489, #264435, #265493, #265500, #265545, #265638, #266795); 20 Jul-14 Aug 2001, pitfall trap (#263533, #263721). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262163, #262264, #262741); 15 Jun-19 Jul 2001, pitfall trap (#243651); 20 Jul-14 Aug 2001, pitfall trap (#262940, #263611). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#258099,

#259050, #259620, #262836, #263846). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256521, #257182, #258397, #259467, #260258, #260364, #262890, #263232, #263343, #263374, #264337, #264882, #265053, #265455, #266829). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265585, #265647, #265735, #265829, #265887, #265927, #266145, #266835). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262333). [Total specimens =53]

***Clivina (Paraclivina) bipustulata* (Fabricius)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#264088, #265006). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#262240). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264936). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#264349, #264477, #265729). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#264452, #264540). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#264391). [Total specimens =10]

***Clivina (Reichardtula) acuducta* Haldeman**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262551, #262823, #263325, #264393, #264662). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265869). [Total specimens =6]

***Clivina (Semiclivina) dentipes* Dejean**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#265767). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#254764, #257180, #263016). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257620). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#263361). [Total specimens =6]

***Dyschirius ?longulus* LeConte**

[Det. by R. Davidson] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#256518). [Total specimens =1]

***Dyschirius haemorrhoidalis* (Dejean)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#259114). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#263333). [Total specimens =2]

***Dyschirius pilosus* LeConte**

[Det. by R. Davidson] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#256989). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#163395, #165544, #171564, #254365, #256444, #256488, #256503, #256623, #257230, #257263, #258077, #258332, #258692, #259115, #259206, #259943, #260049, #260486, #260689, #260791); 20 Jun-26 Jul 2001, pitfall trap (#256757, #257408, #257553, #258489); 27 Jul-20 Aug 2001, pitfall trap (#257806). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May-10 Jul 2001, pitfall trap (#177340, #254173, #258208, #258314, #258462, #259335, #261019). [Total specimens =33]

***Dyschirius politus* (Dejean)**

[Det. by R. Davidson] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#264466). [Total specimens =1]

***Schizogenius (Schizogenius) lineolatus* (Say)**

[Det. by R. Davidson] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264713, #265057, #265354). [Total specimens =3]

Suborder Archostemata

Cupedidae

Cupedinae: Cupedini

***Cupes capitatus* Fabricius**

[Det. by R.A. Androw] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#257748). [Total specimens =1]

Suborder Polyphaga

Chrysomeloidea

Cerambycidae

Lamiinae: Acanthocinini

***Hyperplatys maculata* Haldeman**

[Det. by R.A. Androw] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 1 Aug 2001, hand-collected (#256664). [Total specimens =1]

***Liopinus alpha* (Say)**

[Det. by R.A. Androw] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#263092). [Total specimens =1]

***Urographis fasciatus* (DeGeer)**

[Det. by R.A. Androw] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#244839). [Total specimens =1]

Lamiinae: Phytoeciini

***Oberea perspicillata* Haldeman**

[Det. by R.A. Androw] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 19 Jun 2001, hand-collected (#243822). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257173). [Total specimens =2]

***Oberea tripunctata* (Swederus)**

[Det. by R.A. Androw] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#262554). [Total specimens =1]

Lepturinae: Lepturini

***Strangalepta abbreviata* (Germar)**

[Det. by R.A. Androw] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243263). [Total specimens =1]

Parandrinae: Parandrinini

***Parandra (Neandra) brunnea brunnea* (Fabricius)**

[Det. by R.A. Androw] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#256870). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#260513). [Total specimens =2]

Prioninae: Prionini

***Orthosoma brunneum* (Forster)**

[Det. by R.A. Androw] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#254754). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#259843, #260637, #264113). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#262461). **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#253602). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#264314). [Total specimens =7]

***Prionus (Prionus) laticollis* (Drury)**

[Det. by R.A. Androw] **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263363). [Total specimens =1]

Scarabaeoidea

Geotrupidae

Geotrupinae

***Geotrupes balyi* Jekel**

[Det. by R.A. Androw] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jul-23 Aug 2001, pitfall trap (#260908). [Total specimens =1]

***Geotrupes semipacicus* Jekel**

[Det. by R.A. Androw] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242701); 20 Jul-23 Aug 2001, pitfall trap (#114769, #177178, #257470, #258515); 24 Aug-11 Sep 2001, pitfall trap (#242117, #242604, #243466). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 27 Jul-23 Aug 2001, pitfall trap (#242037). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 20 Jun-26 Jul 2001, pitfall trap (#258256, #260149); 27 Jul-20 Aug 2001, pitfall trap (#254720, #256793, #257148, #257193, #258161, #258715, #259055, #259228, #259760, #260115, #260135, #260653, #260849). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 20 Jun-31 Jul 2001, pitfall trap (#243787, #258069); 23 Aug 2001, UV light trap (#263475). [Total specimens =27]

Lucanidae

Lucaninae: Lucanini

***Pseudolucanus capreolus* (Linne)**

[Det. by R.A. Androw] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#259881); 15 Jun-19 Jul 2001, pitfall trap (#242253, #244355); 20 Jul-14 Aug 2001, pitfall trap (#258222, #258304, #258545, #258771, #259065, #260507). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Jun-19 Jul 2001, pitfall trap (#258247). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 20 Jun-26 Jul 2001, pitfall trap (#257621); 27 Jul-20 Aug 2001, pitfall trap (#258970). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#255586). [Total specimens =13]

Nicaginae: Nicagini

***Nicagus obscurus* (LeConte)**

[Det. by R.A. Androw] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#172240, #175647, #177718, #256482, #256529, #257459, #257949, #259008, #259215, #259990, #260925); 20 Jun-26 Jul 2001, pitfall trap (#258185). [Total specimens =12]

Syndesinae: Ceruchini

***Ceruchus piceus* (Weber)**

[Det. by R.A. Androw] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#262594, #262673). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262744, #264153). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#257172); UV light trap (#266642). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#259174, #264379, #264419). [Total specimens =9]

Scarabaeidae

Aphodiinae: Aegialiini

***Aegialia blanchardi* Horn**

[Det. by R.A. Androw] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#258575). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#243974); 20 Jul-23 Aug 2001, pitfall trap (#256669). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 27 Jul-23 Aug 2001, pitfall trap (#243933). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#164266, #165256, #165617, #167387, #171210, #172248, #178146, #180208, #256137, #256200, #256277, #256922, #257021, #257082, #257092, #257531, #257643, #257650, #257677, #257798, #257829, #257885, #258001, #258127, #258450, #258455, #258612, #259014, #259161, #259370, #259398, #259414, #259490, #259607, #259768,

#259923, #260010, #260014, #260047, #260055, #260070, #260082, #260104, #260111, #260173, #260336, #260562, #260831, #260932, #261233; 20 Jun-26 Jul 2001, pitfall trap (#238180, #238359, #240181, #242231, #242335, #242508, #242597, #242791, #242813, #243354, #243356, #243431, #243695, #244336, #244356); 27 Jul-20 Aug 2001, pitfall trap (#238199, #241493, #242132, #242224, #242375, #242647, #243716, #244277, #244501, #257517). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May-19 Jun 2001, pitfall trap (#240129, #242541, #244185, #244476). [Total specimens =83]

Aphodiinae: Aphodiini

***Aphodius lentus* (Palisot de Beauvois)**

[Det. by R.A. Androw] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263133, #265287). [Total specimens =2]

***Aphodius rubeolus* Horn**

[Det. by R.A. Androw] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263329). [Total specimens =1]

***Aphodius rufipes* (Linnaeus)**

[Det. by R.A. Androw] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jun 2001, UV light trap (#262816, #263196); 13 Aug 2001, UV light trap (#263441). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#265026); 18 Jul 2001, UV light trap (#264574, #265262). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262177). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265977). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#265076); 25 Jul 2001, UV light trap (#264911); 23 Aug 2001, UV light trap (#262775, #262941). [Total specimens =12]

***Aphodius ruficola* Melsheimer**

[Det. by R.A. Androw] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256264, #264258); 18 Jul 2001, UV light trap (#263231, #263769); 13 Aug 2001, UV light trap (#260970, #264154). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#259300, #262620); 18 Jul 2001, UV light trap (#264576, #264629, #264679); 13 Aug 2001, UV light trap (#262254, #264122). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262446, #262582); 31 Jul 2001, UV light trap (#264510, #264627). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#262127, #262209, #263043, #263226, #264198, #264828); 31 Jul 2001, UV light trap (#263247, #263263). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May-19 Jun 2001, pitfall trap (#257661, #260487); UV light trap (#264830, #265689); 27 Jul-20 Aug 2001, pitfall trap (#239990); 23 Aug 2001, UV light trap (#262343, #262498). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#258206, #263587); 25 Jul 2001, UV light trap

(#264582, #264986); 23 Aug 2001, UV light trap (#254581, #255692, #263167, #263631, #263986). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#257136, #259117); 26 Jun 2001, UV light trap (#262883, #263386); 28 Jun-10 Jul 2001, pitfall trap (#177992); 15 Aug 2001, UV light trap (#263668); 20 Sep 2001, UV light trap (#258622). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256780, #259565); 26 Jun 2001, UV light trap (#264539, #264545); 15 Aug 2001, UV light trap (#263099, #264421). [Total specimens =54]

***Aphodius stercorosus* Melsheimer**

[Det. by R.A. Androw] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#157728, #259022); 18 Jul 2001, UV light trap (#264454, #264536); 13 Aug 2001, UV light trap (#257297, #263169). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#256774, #260734). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263076). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265613, #265696). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264809, #264880). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#264447); 26 Jun 2001, UV light trap (#258947, #262776); 15 Aug 2001, UV light trap (#264311, #264444). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#260337, #263398); 26 Jun 2001, UV light trap (#256287, #264431); 15 Aug 2001, UV light trap (#264032, #264692). [Total specimens =24]

***Ataenius abditus* (Haldeman)**

[Det. by R.A. Androw] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#167211, #170186, #253992, #257540, #258937, #258951, #260406, #260620, #262182, #262647, #262780, #262822, #262923, #263091, #263130). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263112, #265027). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#264451, #265135, #265231, #265946, #265956, #265959). [Total specimens =23]

Aphodiinae: Euparini

***Ataenius gracilis* (Melsheimer)**

[Det. by R.A. Androw] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#256292, #262368, #263317, #263943, #264975, #265163, #265436, #265814, #265899, #266516). [Total specimens =10]

***Ataenius spretulus* (Haldeman)**

[Det. by R.A. Androw] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#263508). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#263307); 18 Jul 2001, UV light trap (#264456). [Total specimens =3]

***Ataenius strigatus* (Say)**

[Det. by R.A. Andrew] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#170994, #262598). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#261115, #262614). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259758, #261131). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258668, #259227, #262728). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#264608, #265520, #265865). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263968, #264331). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#260660, #263848). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#264312, #264353). [Total specimens =18]

***Dialytellus dialytoides* (Fall)**

[Det. by R.A. Andrew] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#254501); 24 Aug-11 Sep 2001, pitfall trap (#243718). [Total specimens =2]

***Dialytes striatulus* (Say)**

[Det. by R.A. Andrew] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#238851, #239392); 22 Aug 2001, UV light trap (#265001); 20 Jul-23 Aug 2001, pitfall trap (#166701, #169810, #256162, #257089, #258025, #260801, #260894, #261172); 24 Aug-11 Sep 2001, pitfall trap (#242419, #242454, #243515, #243578, #243890, #244262, #244267, #244281, #244502). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#240565); 31 Jul 2001, UV light trap (#260229); 27 Jul-23 Aug 2001, pitfall trap (#241710, #246127). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#235751, #244492). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 20 Jun-31 Jul 2001, pitfall trap (#241348); 1-24 Aug 2001, pitfall trap (#261933). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#257558, #263438, #264069); 25 May-10 Jul 2001, pitfall trap (#257880, #260376, #260817); 17 Aug-21 Sep 2001, pitfall trap (#258782). [Total specimens =35]

***Dialytes truncatus* (Melsheimer)**

[Det. by R.A. Andrew] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#262804, #263045); 13 Aug 2001, UV light trap (#255261). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#264329, #264667); 22 Aug 2001, UV light trap (#264509, #264590, #264770, #264962); 20 Jul-23 Aug 2001, pitfall trap (#260786); 24 Aug-11 Sep 2001, pitfall trap (#244276). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#263792). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton,

41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#259189, #264381); 23 Aug 2001, UV light trap (#262609, #264141, #264209). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#257718, #263455). [Total specimens =19]

***Dialytes ulkei* Horn**

[Det. by R.A. Andrew] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#263072); 12 Sep 2001, UV light trap (#257886, #261096). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#260597). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#167119); 20 Jun-19 Jul 2001, pitfall trap (#244338); 22 Aug 2001, UV light trap (#262120, #264951). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#243917). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 23 Aug 2001, UV light trap (#264226). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#262722, #264578); 23 Aug 2001, UV light trap (#259444, #263368). [Total specimens =14]

Dynastinae: Cyclocephalini

***Cyclocephala borealis* Arrow**

[Det. by R.A. Andrew] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264334). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256437, #263102). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#172867, #265263). [Total specimens =5]

Melolonthinae: Hopliini

***Hoplia modesta* Haldeman**

[Det. by R.A. Andrew] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jun-19 Jul 2001, pitfall trap (#242688, #243415). [Total specimens =2]

Melolonthinae: Melolonthini

***Phyllophaga crenulata* (Frölich)**

[Det. by R.A. Andrew] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#264983). [Total specimens =1]

***Phyllophaga fusca* (Frölich)**

[Det. by R.A. Andrew] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262506). [Total specimens =1]

***Phyllophaga marginalis* (LeConte)**

[Det. by R.A. Andrew] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263261). [Total specimens =1]

Rutelinae: Anomalini

***Popillia japonica* Newman**

[Det. by R.A. Androw] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#263211). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#263858). **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 20 Jun-31 Jul 2001, pitfall trap (#240224). [Total specimens =3]

Rutelinae: Rutelini

Pelidnota punctata (Linnaeus)

[Det. by R.A. Androw] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263634). [Total specimens =1]

Scarabaeinae: Onthophagini

Onthophagus taurus (von Schreber)

[Det. by R.A. Androw] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#260298). [Total specimens =1]

Trogidae

Trox aequalis Say

[Det. by R.A. Androw] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#179064). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#262268). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#260061). [Total specimens =3]

Trox hamatus Robinson

[Det. by R.A. Androw] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#264859). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#265844). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#263050); 26 Jun 2001, UV light trap (#262875). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#263396, #264669, #265441). [Total specimens =7]

Trox variolatus Melsheimer

[Det. by R.A. Androw] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#263574). [Total specimens =1]

Staphylinoidea

Silphidae

Nicrophorinae

Nicrophorus orbicollis Say

[Det. by R.A. Androw] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#260681); 15 Aug-13 Sep 2001, pitfall trap (#258600). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light

trap (#264282, #264288); 18 Jul 2001, UV light trap (#263342, #265071); 20 Jul-14 Aug 2001, pitfall trap (#259010); UV light trap (#260179). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#262149, #264243); 20 Jul-23 Aug 2001, pitfall trap (#254267, #254677, #258268, #259281). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260475, #262918, #264618, #265154); 31 Jul 2001, UV light trap (#253854, #262992); 24 Aug-11 Sep 2001, pitfall trap (#242687). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#161611, #163062, #163954, #171773, #176520, #256480, #257240, #257865, #259505, #260154, #260544); 23 Aug 2001, UV light trap (#258233). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#263608); 25 Jul 2001, UV light trap (#178897, #262799); 23 Aug 2001, UV light trap (#263183). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 25 May 2001, hand-collected (#259243); UV light trap (#262555, #263701); 25 May-27 Jun 2001, pitfall trap (#257109); UV light trap (#262727, #264239); 15 Aug 2001, UV light trap (#264330, #264474); 20 Sep 2001, UV light trap (#263025). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#262572, #263734); 26 Jun 2001, UV light trap (#263522); 15 Aug 2001, UV light trap (#264386, #264499, #264709). [Total specimens =52]

Nicrophorus pustulatus Herschel

[Det. by R.A. Androw] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260253). [Total specimens =1]

Nicrophorus tomentosus Weber

[Det. by R.A. Androw] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 20 Jul-14 Aug 2001, pitfall trap (#257755). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jul-23 Aug 2001, pitfall trap (#260521). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 27 Jul-20 Aug 2001, pitfall trap (#178466). [Total specimens =3]

Silphinae

Necrophila americana (Linnaeus)

[Det. by R.A. Androw] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 15 Aug-13 Sep 2001, pitfall trap (#243444). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 20 Jun-26 Jul 2001, pitfall trap (#260516). [Total specimens =2]

Oiceoptoma noveboracense (Forster)

[Det. by R.A. Androw] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 20 Jul-23 Aug 2001, pitfall trap (#163670, #254060, #257187, #257298, #259708, #260755, #260873); 24 Aug-11 Sep 2001, pitfall trap (#237992). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#262183, #262611, #262641). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#265128). [Total specimens =12]

Order Diptera

Suborder Nematocera

Tipuloidea

Tipulidae

Limoniinae: Hexatomini

Epiphragma (Epiphragma) fasciapennis (Say)

[Det. by C.W. Young] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May 2001, hand-collected (#236404); 18 Jun 2001, UV light trap (#236762). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#217304, #217827, #238058). [Total specimens =5]

Epiphragma (Epiphragma) solatrix (Osten Sacken)

[Det. by C.W. Young] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 25 May 2001, hand-collected (#247128); 15 Aug 2001, UV light trap (#252704). [Total specimens =2]

Hexatoma (Eriocera) spinosa (Osten Sacken)

[Det. by C.W. Young] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#217274, #250809). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#253334). [Total specimens =3]

Limoniinae: Limoniini

Limonia (Discobola) annulata (Linnaeus)

[Det. by C.W. Young] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#248427); 12 Sep 2001, UV light trap (#255430). [Total specimens =2]

Limonia (Metalimnobia) cinctipes (Say)

[Det. by C.W. Young] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#252009). [Total specimens =1]

Limonia (Metalimnobia) immatura (Osten Sacken)

[Det. by C.W. Young] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#120954, #251844). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#197292). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#217083, #217770, #248186, #249732). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#251861). [Total specimens =8]

Limoniinae: Pediciini

Pedicia (Tricyphona) inconstans (Osten Sacken)

[Det. by C.W. Young] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#216403). [Total specimens =1]

Tipulinae: Tipulini

Nephrotoma ferruginea (Fabricius)

[Det. by C.W. Young] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 May 2001, hand-collected (#216137); 18 Jun 2001, UV light trap (#248275). **Site 4**, island in Susquehanna River, 1.7 km

NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#217140). [Total specimens =3]

Tipula (Lunatipula) bicornis Forbes

[Det. by C.W. Young] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#216019). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#255420). [Total specimens =2]

Tipula (Lunatipula) duplex Walker

[Det. by C.W. Young] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#214399); 22 Aug 2001, UV light trap (#217536). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#217890). [Total specimens =3]

Tipula (Platytipula) ultima Alexander

[Det. by C.W. Young] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#219094). [Total specimens =1]

Tipula (Yamatotipula) caloptera Löw

[Det. by C.W. Young] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#217618, #251481). [Total specimens =2]

Tipula (Yamatotipula) concava Alexander

[Det. by C.W. Young] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#218336); 22 Aug 2001, UV light trap (#120662, #212528, #217582, #251737); 10 Sep 2001, UV light trap (#197306). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#118649, #237881); 18 Jun 2001, UV light trap (#215857, #251098); 25 Jul 2001, UV light trap (#170642). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#237681). [Total specimens =12]

Tipula (Yamatotipula) furca Walker

[Det. by C.W. Young] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#214906, #237244). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#255527, #255825). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#212253, #218015); 25 Jul 2001, UV light trap (#236554, #254477); 23 Aug 2001, UV light trap (#216523, #255555, #256067). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#216180); 25 Jul 2001, UV light trap (#248990). [Total specimens =13]

Tipula (Yamatotipula) sayi Alexander

[Det. by C.W. Young] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#217366, #217704, #253917, #253993, #254076, #255608). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light

trap (#223418, #255856). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#255714); 23 Aug 2001, UV light trap (#254587, #255952, #256088). [Total specimens =12]

Order Lepidoptera

Lepidoptera undetermined

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263745). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#256396). [Total specimens =2]

Suborder Ditrysia Bombycoidea

Apatelodidae

Olceclostera angelica (Grote)

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257050). [Total specimens =1]

Lasiocampidae

Malacosoma americanum (Fabricius)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259694). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262350, #262537). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#258216, #258505, #259643, #259697, #260494). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#254488, #256248, #256783, #256990, #257513). [Total specimens =13]

Malacosoma dissitria Hübner

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#259681). [Total specimens =1]

Tolyte velleda (Stoll)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#256924). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#261138). [Total specimens =2]

Saturniidae

Citheroniinae

Dryocampa rubicunda (Fabricius)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#256615, #260709). [Total specimens =2]

Hemileucinae

Automeris io io (Fabricius)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256479). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N,

76-49-57W, 130 m: 26 Jun 2001, UV light trap (#259330). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#254616). [Total specimens =3]

Sphingidae

Macroglossinae: Macroglossini

Darapsa myron (Cramer)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257971). [Total specimens =1]

Sphinginae: Smerinthini

Paonias excaecatus (J.E. Smith)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#261047). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260088). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263423). [Total specimens =3]

Paonias myops (J.E. Smith)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258644). [Total specimens =1]

Smerinthus jamaicensis (Drury)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#254956). [Total specimens =1]

Sphinginae: Sphingini

Ceratonia amyntor (Geyer)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#261140). [Total specimens =1]

Dolba hyloeus (Drury)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#258584). [Total specimens =1]

Sphinx kalmiae J.E. Smith

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#260759). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#260526). [Total specimens =2]

Gelechioidea

Oecophoridae

Depressariinae

Machimia tentoriferella Clemens

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#177235). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#171404, #259220). [Total specimens =3]

Stenomatininae

Antaeotricha leucillana (Zeller)

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#260800); 25 Jul 2001, UV light trap (#263598, #263863, #263904, #264176, #264224). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#261229); 25 Jul 2001, UV light trap (#257660, #264056). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#250685). [Total specimens =10]

Geometroidea

Drepanidae

Drepaninae

Drepana arcuata Walker

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#258520, #260686). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257731, #258223, #260230, #261024); 31 Jul 2001, UV light trap (#263736); 22 Aug 2001, UV light trap (#168393). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257499, #260750); 31 Jul 2001, UV light trap (#173686, #257306); 22 Aug 2001, UV light trap (#260890). [Total specimens =13]

Epiplemidae

Calledapteryx dryopterata Grote

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#176771, #256862). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#109122). [Total specimens =3]

Geometridae

Ennominae: Abraxini

Protitame virginialis (Hulst)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#168425). [Total specimens =1]

Ennominae: Anagogini

Cephis armataria (Herrich-Schäffer)

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#258910). [Total specimens =1]

Metanema inatomaria Guenée

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256120). [Total specimens =1]

Metarranthis duaria duaria (Guenée)

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#254940). [Total specimens =1]

Metarranthis hypochraria (Herrich-Schäffer)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N,

76-25-21W, 250 m: 14 Jun 2001, UV light trap (#258229). [Total specimens =1]

Plagodis alcoolaria (Guenée)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#171587). [Total specimens =1]

Plagodis fervidaria (Herrich-Schäffer)

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263941). [Total specimens =1]

Plagodis serinaria Herrich-Schäffer

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257791, #258477). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256950, #257737, #258076). [Total specimens =5]

Probole alienaria Herrich-Schäffer

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257667, #260984). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257003, #260095). [Total specimens =4]

Probole nepiasaria (Walker)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#261086). [Total specimens =1]

Xanthotype sospeta (Drury)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263562). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#178452, #258115). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#257211, #258330). [Total specimens =5]

Xanthotype urticaria Swett

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#263466); 22 Aug 2001, UV light trap (#259415). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260347). [Total specimens =3]

Ennominae: Angeronini

Euchlaena amoenaria amoenaria (Guenée)

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#256656). [Total specimens =1]

Euchlaena muzaria (Walker)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#171534). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256471). [Total specimens =2]

***Euchlaena obtusaria* (Hübner)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#257353). [Total specimens =1]

***Euchlaena serrata* (Drury)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263569). [Total specimens =1]

***Euchlaena tigrinaria* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#259068). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#255896, #256940, #257961, #257986, #258034, #258240). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#178701, #258272, #258777, #259808, #260446). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#173730, #181370, #256517, #258382, #260797). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#259791). [Total specimens =18]

***Lytosis unitaria* (Herrich-Schäffer)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262401). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262467). [Total specimens =2]

Ennominae: Azelinini

***Pero honestaria* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#264051). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258836); 31 Jul 2001, UV light trap (#257288, #258355, #258495, #260147, #261225); 22 Aug 2001, UV light trap (#258192, #259632, #259690). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#174518). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#169154). [Total specimens =12]

***Pero hubneraria* (Guenée)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#257739, #260608); 25 Jul 2001, UV light trap (#263819, #264255). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#257840, #258057, #258512, #260993); 25 Jul 2001, UV light trap (#259677, #263753, #263853, #264257). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#258441). [Total specimens =13]

***Pero morrisonaria* (Henry Edwards)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#264211). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#177832). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258861); 31 Jul 2001, UV light trap (#257814). [Total specimens =4]

Ennominae: Baptini

***Lomographa vestaliata* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258322, #258835). [Total specimens =2]

Ennominae: Bistonini

***Biston betularia cognataria* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259900, #260768); 22 Aug 2001, UV light trap (#258647). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#254435, #257606). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264026). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#258619). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#255452). [Total specimens =8]

***Hypagyrtis unipunctata* (Haworth)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257939); 13 Aug 2001, UV light trap (#263577, #263613, #263697, #263902). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#207054). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257228); 22 Aug 2001, UV light trap (#258228). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#260060, #262327, #262508); 23 Aug 2001, UV light trap (#175725, #258180, #258878). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#169948, #264260). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#256451); 15 Aug 2001, UV light trap (#256997). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#257208). [Total specimens =19]

Ennominae: Boarmiini

***Anavitrinella pampinaria* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263897). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257169, #259735). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263636, #264175). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#258576). **Site 2**, Codorus

Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256948, #260840). [Total specimens =8]

***Ectropis crepuscularia* ([Denis and Schiffermüller])**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263515); 12 Sep 2001, UV light trap (#256429). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262378); 25 Jul 2001, UV light trap (#257233, #263635, #264184). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#261030, #263729, #263752, #263950, #264076). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256928). [Total specimens =12]

***Glenoides texanaria* (Hulst)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#178171, #260888). [Total specimens =2]

***Hypomecis umbrosaria* (Hübner)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#258762); 22 Aug 2001, UV light trap (#256499). [Total specimens =2]

***Iridopsis larvaria* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257538). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#258892). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#258264, #260976). [Total specimens =4]

Ennominae: Caberini

***Cabera erythemaria* Guenée**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257779, #260662). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257992). [Total specimens =3]

***Cabera variolaria* Guenée**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#258447, #260491). [Total specimens =2]

Ennominae: Campaeini

***Campaea perlata* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#248741, #258046); 12 Sep 2001, UV light trap (#258313). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257776). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#259832); 10 Sep 2001, UV light trap (#256180, #257629, #259406). **Site 6**, Lycoming Creek, 0.9 km NW Bodines,

41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259998). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#258642). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#258840, #260675). [Total specimens =12]

Ennominae: Macariini

***Digrammia gnophosaria* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#257974); 13 Aug 2001, UV light trap (#263407). [Total specimens =2]

***Digrammia ocellinata* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#256898). [Total specimens =1]

***Macaria aemulataria* Walker**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257071, #257709, #258741, #259927, #260442); 18 Jul 2001, UV light trap (#259905); 13 Aug 2001, UV light trap (#263500, #263526, #263895, #263955). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#173124, #258506). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257496). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#256718, #256795, #257203, #260409). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#257598, #257747, #259507, #259794, #259976, #261083); 25 Jul 2001, UV light trap (#264000). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#176091). [Total specimens =25]

***Macaria minorata* Packard**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257830); 31 Jul 2001, UV light trap (#264131). [Total specimens =2]

***Macaria pinistrobata* Ferguson**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#259887). [Total specimens =1]

***Macaria pustularia* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#163531, #258577); 13 Aug 2001, UV light trap (#263452, #263488). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#173013, #262153, #262509); 25 Jul 2001, UV light trap (#264177). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#257797, #262306). **YORK Co. Site 1**,

Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#260567). [Total specimens =11]

Ennominae: Melanolophiini

Melanolophia canadaria crama Rindge

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#166851). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#260837). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#260379). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#257867); 25 Jul 2001, UV light trap (#264259). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#170315); 25 Jul 2001, UV light trap (#263972). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#257120, #261041). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#257075, #258767). [Total specimens =11]

Ennominae: Nacophorini

Nacophora quernaria (J.E. Smith)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#256677, #258461). [Total specimens =2]

Ennominae: Ourapterygini

Antepione thisoaria (Guenée)

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#259542). [Total specimens =1]

Besma endropiaria (Grote and Robinson)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259554). [Total specimens =1]

Eugonobapta nivosaria (Guenée)

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#172119, #258423, #258486, #259048, #259682, #260414). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#256665, #260891). [Total specimens =8]

Eusarca confusaria Hübner

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#258503). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#256975, #263623); 10 Sep 2001, UV light trap (#259319). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#256262, #258246, #259006, #259355, #260479). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#259258). [Total specimens =10]

Eutrapela clemataria (J.E. Smith)

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W,

140 m: 17 May 2001, UV light trap (#254016, #256271); 25 Jul 2001, UV light trap (#264090). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#260327); 25 Jul 2001, UV light trap (#263997). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#258844). [Total specimens =6]

Lambdina fervidaria athasaria (Walker)

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#260702). [Total specimens =1]

Lambdina fiscellaria fiscellaria (Guenée)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#258051, #259579); 10 Sep 2001, UV light trap (#259046, #259796). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#258280). [Total specimens =5]

Nematocampa resistaria (Herrich-Schäffer)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263414, #263743, #263800). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#258773, #260355). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#257088, #258307, #262454). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#261023). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#170506). [Total specimens =10]

Prochoerodes transversata (Drury)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#260987). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#258540). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257870); 22 Aug 2001, UV light trap (#257456). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#256478, #259462, #259571). [Total specimens =7]

Tetracis cachexiata Guenée

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#254544, #259830). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259946). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256409, #257625, #259167, #260175, #260411). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#257152). [Total specimens =9]

Geometrinae: Hemitheini

Chlorochlamys chloroleucaria (Guenée)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#255683). [Total specimens =1]

Geometrinae: Nemoriini

Nemoria bistriaria bistriaria Hübner

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#181183). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#205385). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#259388, #263481, #263768, #264253). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264185). [Total specimens =7]

Geometrinae: Synchlolorini

Synchlora aerata aerata

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259450). [Total specimens =1]

Larentiinae: Asthenini

Hydrelia albifera (Walker)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263828). [Total specimens =1]

Hydrelia inornata (Hulst)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260790). [Total specimens =1]

Trichodezia albovittata (Guenée)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257275). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263633, #263775, #264060). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 May 2001, hand-collected (#173152); 23 Aug 2001, UV light trap (#112877). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#259481); 26 Jun 2001, UV light trap (#257594). [Total specimens =8]

Larentiinae: Eudulini

Eubaphe mendica (Walker)

[Det. by J. E. Rawlins] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#257988, #259471). [Total specimens =2]

Larentiinae: Eupitheciini

Eupithecia sp. Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263541, #263778). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#257322, #261159). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#260872). [Total specimens =5]

Horisme intestinata (Guenée)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#173712); 22 Aug 2001, UV light trap (#258281). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262154). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#259058). [Total specimens =4]

Larentiinae: Hydrimenini

Dysstroma hersiliata hersiliata (Guenée)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260313). [Total specimens =1]

Eulithis diversilineata (Hübner)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#258652, #260087). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#256266). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#258989); 10 Sep 2001, UV light trap (#259277). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256758); 20 Sep 2001, UV light trap (#258041). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#257857). [Total specimens =8]

Eulithis explanata (Walker)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#172720). [Total specimens =1]

Rheumaptera prunivorata (Ferguson)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257567). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264186). [Total specimens =2]

Larentiinae: Lobophorini

Dyspteris abortivaria (Herrich-Schäffer)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#259387). [Total specimens =1]

Heterophleps triguttaria Herrich-Schäffer

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#256714). [Total specimens =1]

Larentiinae: Xanthorhoini

Costaconvexa centrostrigaria (Wollaston)

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263922). [Total specimens =1]

Euphyia intermediata (Guenée)

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263590, #263749). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#260905); 13 Aug 2001, UV light trap (#258712, #259271). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#171098); 10 Sep 2001, UV light trap (#256889). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#172443, #256168, #258356, #259977, #260045); 31 Jul 2001, UV light trap (#256711, #259965); 22 Aug 2001, UV light trap (#258429, #258476); 10 Sep 2001, UV light trap (#259546). [Total specimens =17]

***Orthonama obstipata* (Fabricius)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259841). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#256177). [Total specimens =2]

***Xanthorhoe ferrugata* (Clerck)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257514). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#260670). [Total specimens =2]

***Xanthorhoe labradorensis* (Packard)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#257181, #257217). [Total specimens =2]

***Xanthorhoe lacustrata* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258843). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263989). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#257165); 26 Jun 2001, UV light trap (#258796). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#259351). [Total specimens =5]

Sterrhinae: Cosymbiini

***Cyclophora pendulinaria* (Guenée)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#263882). [Total specimens =1]

***Pleuopruca insulsaria* (Guenée)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263964); 23 Aug 2001, UV light trap (#259090). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#257130). [Total specimens =3]

Sterrhinae: Scopulini

***Scopula limboundata* (Haworth)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#257137). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#259842). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#111880). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#264019). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264018). [Total specimens =5]

***Scopula quadrilineata* (Packard)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256348). [Total specimens =1]

Sterrhinae: Timandriini

***Haematopis grataria* (Fabricius)**

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#260517). [Total specimens =1]

***Timandra amaturaria* (Walker)**

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#256821). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#111694). [Total specimens =2]

Thyatiridae

Thyatirinae: Habrosynini

***Pseudothyatira cymatophoroides* (Guenée)**

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#260125). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256621). [Total specimens =2]

Noctuoidea

Arctiidae

Arctiinae: Arctiini

***Apantesis phalerata* (Harris)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256516, #256808, #258283, #260563, #261238). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257315, #258349). [Total specimens =7]

***Grammia parthenice intermedia* (Stretch)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#177594). [Total specimens =1]

***Grammia virgo* (Linnaeus)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#258163). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#260166). [Total specimens =2]

***Grammia virguncula* (W. Kirby)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#254082, #254610, #258312). [Total specimens =3]

***Holomelina opella* (Grote)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262485). [Total specimens =1]

***Hyphantria cunea* (Drury)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262379). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#257151). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#174166, #257997, #258573). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#175103). [Total specimens =6]

***Phragmatobia fuliginosa rubricosa* (Harris)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#171887, #264053, #264171). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257615, #257989, #258360, #258511, #259835, #259907, #260311, #260766). [Total specimens =11]

***Pyrrharctia isabella* (J.E. Smith)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263675). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#255187, #256804, #259317). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#256411, #259740). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257967, #259663, #260101, #260339). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#258298). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#258337, #259969); 15 Aug 2001, UV light trap (#259251). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#260995). [Total specimens =15]

***Spilosoma congrua* Walker**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256694). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#259729). [Total specimens =2]

***Spilosoma latipennis* Stretch**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257129). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W,

140 m: 18 Jun 2001, UV light trap (#262336, #262517). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#259551). [Total specimens =4]

***Spilosoma virginica* (Fabricius)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#258992, #261155); 13 Aug 2001, UV light trap (#263523). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#256805, #257202, #257959). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257596); 22 Aug 2001, UV light trap (#259524). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257792). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#172948, #259440); 26 Jun 2001, UV light trap (#254452, #256936, #258087, #258537); 15 Aug 2001, UV light trap (#169611, #254407). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#259960). [Total specimens =18]

Arctiinae: Callimorphini

***Haploa clymene* (Brown)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257525, #258271). [Total specimens =2]

***Haploa confusa* (Lyman)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#263774). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#260649). [Total specimens =2]

***Haploa lecontei* (Guérin-Méneville)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257080, #257132, #259492, #261200). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#175024, #255306, #256628, #256886, #260306). [Total specimens =9]

Arctiinae: Ctenuchini

***Ciseps fulvicollis* (Hübner)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256235, #259635). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256446, #257014); 13 Aug 2001, UV light trap (#171441). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260346). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#254782, #257715, #258940, #259309, #259680, #260997); 31 Jul 2001, UV light trap (#256815, #257669); 10 Sep 2001, UV light trap (#257750, #258092, #258145). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256528). [Total specimens =18]

***Ctenucha virginica* (Esper)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#255622, #256859, #260421). [Total specimens =3]

Arctiinae: Phaegopterini

***Cynia inopinatus* (Henry Edwards)**

[Det. by J. E. Rawlins] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#260262). [Total specimens =1]

***Cynia oregonensis* (Stretch)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#259082). [Total specimens =1]

***Cynia tenera* Hübner**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#177147). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#256546). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257348, #257507, #259585); 22 Aug 2001, UV light trap (#261066). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#257265). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#172872, #258159, #259749, #259819, #260472); 26 Jun 2001, UV light trap (#257590); 15 Aug 2001, UV light trap (#260514). [Total specimens =14]

***Euchaetes egle* (Drury)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260473, #261068). [Total specimens =2]

***Halysidota harrisii* Walsh**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#263477); 22 Aug 2001, UV light trap (#256183). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259581, #260319, #261094); 31 Jul 2001, UV light trap (#257510, #258897). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262277). [Total specimens =8]

***Halysidota tessellaris* (J.E. Smith)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#259531). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#256270, #260550). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#260243); 25 Jul 2001, UV light trap (#263616). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262308, #262459); 25 Jul 2001, UV light trap (#255880, #263790). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#171867, #255734, #258705,

#259027, #259327, #259496). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#254669, #256465, #259501, #260422). [Total specimens =19]

***Lophocampa caryae* Harris**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257292, #257407). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#259423). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#165851, #254838, #255147, #260282). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#169677, #256513, #257623, #259636, #259699, #259725, #260535). [Total specimens =14]

Lithosiinae

***Clemensia albata* Packard**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263564, #263780). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#257919, #260989). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#259248); 15 Aug 2001, UV light trap (#256334, #261015). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#258899). [Total specimens =8]

***Crambidia pallida* Packard**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#254323). [Total specimens =1]

***Hypoprepia fucosa* (Hübner)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#257241, #258887, #260351). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#257516). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#260519, #263891); 22 Aug 2001, UV light trap (#260020, #260772). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#256123, #258550, #260742). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263484). [Total specimens =12]

Lymantriidae

***Dasychira vagans vagans* (Barnes and McDunnough)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259254). [Total specimens =1]

***Lymantria dispar* (Linnaeus)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#248780). **NORTHUMBERLAND Co. Site 4**,

island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#257293). [Total specimens =2]

***Orgyia definita* Packard**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263995); 12 Sep 2001, UV light trap (#257687). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#256768). [Total specimens =3]

***Orgyia leucostigma* (J.E. Smith)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#258221). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#176911). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#258243). [Total specimens =3]

Noctuidae

Acontiinae

***Lithacodia albidula* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#257672). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259275). [Total specimens =2]

***Lithacodia muscosa* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#257766). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#259023). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#165192, #257118, #257264). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#254792, #257583, #258335, #259012, #260883); 15 Aug 2001, UV light trap (#257708, #260378, #261209). [Total specimens =13]

***Maliattha synochitis* (Grote and Robinson)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#167427); 26 Jun 2001, UV light trap (#258172). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#260388). [Total specimens =3]

***Pseudeustrotia carneola* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#260428); 18 Jul 2001, UV light trap (#257996, #259407, #259822); 13 Aug 2001, UV light trap (#263408, #263439, #263514, #263545, #263578, #263593, #263617, #263704, #263747, #263783, #263784, #263899, #264129); 12 Sep 2001, UV light trap (#203271, #260143). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#176883); 13 Aug

2001, UV light trap (#168760, #257890, #259221, #259242, #260205); 12 Sep 2001, UV light trap (#256519). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259424). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#180837, #263638, #264059). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262419); 25 Jul 2001, UV light trap (#261103, #264263). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#260256); 26 Jun 2001, UV light trap (#259459); 15 Aug 2001, UV light trap (#177061, #256332, #257969, #259028, #260255). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#258123, #259265, #260044, #260480); 26 Jun 2001, UV light trap (#256289, #260302, #260895); 15 Aug 2001, UV light trap (#166023, #179271, #258215, #258905, #259240, #260091, #260522). [Total specimens =54]

***Tarachidia candefacta* (Hübner)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#259269). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263877). [Total specimens =2]

***Tarachidia erastrioides* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#258834, #259257). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#258448). [Total specimens =3]

***Thioptera nigrofimbria* (Guenée)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#264058). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264023). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#260799); 15 Aug 2001, UV light trap (#259325); 20 Sep 2001, UV light trap (#259637). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#260616). [Total specimens =6]

Acronictinae

***Acronicta americana* (Harris)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262371). [Total specimens =1]

***Acronicta dactylina* J.B. Smith**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258876). [Total specimens =1]

***Acronicta impressa* Walker**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#256276, #257682, #260352). [Total specimens =3]

***Acronicta increta* Morrison**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259792). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258078, #259314, #260391, #260438, #260826, #261011); 31 Jul 2001, UV light trap (#257185). [Total specimens =8]

***Acronicta innotata* Guenée**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259903). [Total specimens =1]

***Acronicta interrupta* Guenée**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#173760). [Total specimens =1]

***Acronicta modica* Walker**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#260923). [Total specimens =1]

***Acronicta obliqua* (J.E. Smith)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263806). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#258889). [Total specimens =2]

***Simyra henrici* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257061). [Total specimens =1]

Agaristinae

***Eudryas grata* (Fabricius)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#178795). [Total specimens =1]

Amphipyridae

***Amphipoea americana* (Speyer)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#258050). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259037, #260052). [Total specimens =3]

***Amphipoea velata* (Walker)**

[Det. by J. E. Rawlins] **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#256903). [Total specimens =1]

***Amphipyra pyramidoides* Guenée**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#264013). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130

m: 20 Sep 2001, UV light trap (#257532, #261052). [Total specimens =3]

***Anorthodes tarda* (Guenée)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#167432). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256418). [Total specimens =2]

***Apamea dubitans* (Walker)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#255423). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#264264). [Total specimens =2]

***Apamea remissa indocilis* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#259361). [Total specimens =1]

***Apamea vulgaris* (Grote and Robinson)**

[Det. by J. E. Rawlins] **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256173). [Total specimens =1]

***Athetis miranda* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257825, #260578). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#170681). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#176879). [Total specimens =4]

***Balsa labecula* (Grote)**

[Det. by J. E. Rawlins] **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#165854). [Total specimens =1]

***Condica vecors* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#177724, #180902, #255955, #256533, #257333, #257692, #258042, #258467, #258839, #259021, #260876, #261031). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256884). [Total specimens =13]

***Condica videns* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259426); 31 Jul 2001, UV light trap (#259452); 22 Aug 2001, UV light trap (#259447). [Total specimens =3]

***Crambodes talidiformis* Guenée**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#255157); 13 Aug 2001, UV light trap (#256187, #257505). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W,

220 m: 14 Jun 2001, UV light trap (#260155, #260680); 31 Jul 2001, UV light trap (#259368). [Total specimens =6]

***Crymodes devastator* (Brace)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#203083). [Total specimens =1]

***Elaphria festivoides* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260833). [Total specimens =1]

***Elaphria grata* Hübner**

[Det. by J. E. Rawlins] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#259701). [Total specimens =1]

***Elaphria versicolor* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258333). [Total specimens =1]

***Euplexia benesimilis* McDunnough**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259078, #260845). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#164557, #258510, #260390); 25 Jul 2001, UV light trap (#263805); 23 Aug 2001, UV light trap (#163299). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#256565). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#177971); 15 Aug 2001, UV light trap (#260627). [Total specimens =10]

***Galgula partita* Guenée**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#255863); 31 Jul 2001, UV light trap (#256904, #258325, #259146). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#257849); 26 Jun 2001, UV light trap (#257895). [Total specimens =6]

***Hydraecia micacea* (Esper)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#173102, #256485, #257076). [Total specimens =3]

***Hydraecia stramentosa* Guenée**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#168959, #256119). [Total specimens =2]

***Hyppa xylinoides* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256358). [Total specimens =1]

***Leuconycta diphteroides* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#261014). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#260914). [Total specimens =2]

***Leuconycta lepidula* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258921). [Total specimens =1]

***Luperina passer* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256769); 18 Jul 2001, UV light trap (#173950). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#177653, #254699, #254855, #256585, #257074, #257908, #259464, #259588, #260245); 18 Jul 2001, UV light trap (#173762, #180238, #181356, #254514, #256118, #256288, #256639, #256753, #256976, #257700, #258028, #258468); 13 Aug 2001, UV light trap (#258142). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257166, #259859); 10 Sep 2001, UV light trap (#166922). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259209, #261185). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#264096). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#256433, #258935, #262416, #262490, #262543); 23 Aug 2001, UV light trap (#260320, #263425, #263984, #264126). [Total specimens =39]

***Nedra ramosula* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#260215). [Total specimens =1]

***Ogdoconta cinereola* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263659). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256602). [Total specimens =2]

***Papaipema cataphracta* (Grote)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#260158). [Total specimens =1]

***Papaipema inquaesita* (Grote and Robinson)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 12 Sep 2001, UV light trap (#261226). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#257144). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#258317). [Total specimens =3]

***Papaipema nebris* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#256887). [Total specimens =1]

***Papaipema pterisii* Bird**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 12 Sep 2001, UV light trap (#255418, #257801, #258908, #260119). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#168716); 10 Sep 2001, UV light trap (#168283, #176336, #258139, #259590, #260523). [Total specimens =10]

***Papaipema rigida* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#258058, #259109). [Total specimens =2]

***Papaipema rutila* (Guenée)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#256849, #258487, #261005). [Total specimens =3]

***Papaipema unimoda* (J.B. Smith)**

[Det. by J. E. Rawlins] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#259884). [Total specimens =1]

***Stiriodes obtusa* (Herrich-Schäffer)**

[Det. by J. E. Rawlins] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#258930); 15 Aug 2001, UV light trap (#256285). [Total specimens =2]

Catocalinae

***Caenurgina crassiuscula* (Haworth)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#169132); 13 Aug 2001, UV light trap (#259245). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#257183, #263432, #263711); 22 Aug 2001, UV light trap (#259628). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#258379, #259533); 22 Aug 2001, UV light trap (#257215). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#259548). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#258052). [Total specimens =11]

***Caenurgina erechtea* (Cramer)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#261157). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#260431). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#259393). [Total specimens =3]

***Catocala crataegi* Saunders**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257757). [Total specimens =1]

***Catocala habilis* Grote**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#168201, #256672). [Total specimens =2]

***Catocala neogama* J.E. Smith**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#259618). [Total specimens =1]

***Catocala palaeogama* Guenée**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#256514). [Total specimens =1]

***Parallela bistriaris* Hübner**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#259804); 13 Aug 2001, UV light trap (#263561). [Total specimens =2]

***Plusiodonta compressipalpis* Guenée**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#260924). [Total specimens =1]

***Spargaloma sexpunctata* Grote**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#165883). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#256962); 26 Jun 2001, UV light trap (#258990, #260066). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#258702). [Total specimens =5]

***Zale galbanata* (Morrison)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263426). [Total specimens =1]

***Zale helata* (J.B. Smith)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#259683). [Total specimens =1]

***Zale undularis* (Drury)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262263). [Total specimens =1]

Cuculliinae

***Calophasia lunula* (Hufnagel)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#258493). [Total specimens =1]

Hadeninae

'Polia' detracta (Walker)

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#261194). [Total specimens =1]

Aletia oxygala oxygala (Grote)

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#257419, #258054). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257031, #257231, #260261). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#171166); 10 Sep 2001, UV light trap (#254852, #256407). [Total specimens =8]

Lacinipolia olivacea (Morrison)

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#256534). [Total specimens =1]

Lacinipolia renigera (Stephens)

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263666). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#172819, #180861, #258424, #258808, #260265, #260297, #260928); 13 Aug 2001, UV light trap (#257962); 12 Sep 2001, UV light trap (#256838, #259278). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#164163); 10 Sep 2001, UV light trap (#260452). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#255738, #260003, #260915); 31 Jul 2001, UV light trap (#259086); 10 Sep 2001, UV light trap (#258294). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#258735); 23 Aug 2001, UV light trap (#166832). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#177508, #263912, #264008). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#258045); 26 Jun 2001, UV light trap (#164012). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#260278). [Total specimens =26]

Leucania commoides Guenée

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#254495, #260947). [Total specimens =2]

Leucania linda Franclemont

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#258803). [Total specimens =1]

Leucania multilinea Walker

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N,

76-25-21W, 250 m: 14 Jun 2001, UV light trap (#260335). [Total specimens =1]

Leucania ursula (Forbes)

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 12 Sep 2001, UV light trap (#257987). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#259432). [Total specimens =2]

Melanchra adjuncta (Guenée)

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#257437, #259655). [Total specimens =2]

Morrisonia confusa (Hübner)

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#259461). [Total specimens =1]

Nephelodes minians Guenée

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#260034). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#173920, #256220, #258189). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#257614, #260829, #261221). [Total specimens =7]

Orthodes crenulata (Butler)

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#258060). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#260098). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 23 Aug 2001, UV light trap (#260625). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#166194). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#260121). [Total specimens =5]

Orthodes cynica Guenée

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256470, #257325, #257490, #258114). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#170525, #258764, #259088, #260006). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256410, #260373, #260725, #261234). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#169640, #260798). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#256366); 26 Jun 2001, UV light trap (#257009, #257595). [Total specimens =17]

Orthodes goodelli (Grote)

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257105). [Total specimens =1]

***Polia imbrifera* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#162485, #164542, #256362, #257199, #258414, #258669). [Total specimens =6]

***Polia nimbose* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#165583). [Total specimens =1]

***Pseudaletia unipuncta* (Haworth)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#180934, #257331). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257311, #257860). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259340, #259821); 10 Sep 2001, UV light trap (#256460). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263619, #264087). [Total specimens =9]

***Pseudorthodes vecors* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#254104, #258071). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#256511, #257018, #257068, #257100, #257569, #257905, #258598, #259024, #259938, #260875). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#174604); 23 Aug 2001, UV light trap (#258651). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#257635, #261055). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256597, #257520, #258102, #258134, #260757); 15 Aug 2001, UV light trap (#170931, #179818, #255480, #256550, #256625, #259294). [Total specimens =27]

***Tricholita signata* (Walker)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#257815). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#256179); 22 Aug 2001, UV light trap (#258000, #258997, #260408, #260951). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 23 Aug 2001, UV light trap (#258471). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#257478, #258303, #260022). [Total specimens =10]

Heliethinae

***Schinia arcigera* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#167373, #257458). [Total specimens =2]

***Schinia rivulosa* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#259095). [Total specimens =1]

Hermiiniinae

***Bleptina caradrinalis* Guenée**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263901). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257221). [Total specimens =2]

***Chytolita morbidalis* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#257803). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#255531). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262424). [Total specimens =3]

***Idia aemula* Hübner**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#162741). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#180207, #258007). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#259049). [Total specimens =4]

***Idia americalis* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#258074). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#166339, #260334). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#172992, #257006). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#257573); 25 Jul 2001, UV light trap (#263796, #263980); 23 Aug 2001, UV light trap (#259345). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263667, #264190). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#260877); 26 Jun 2001, UV light trap (#254957); 20 Sep 2001, UV light trap (#257873, #258273, #261137, #261216). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#265677). [Total specimens =18]

***Idia lubricalis lubricalis* (Geyer)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259883, #260682). **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263521). [Total specimens =3]

***Idia rotundalis* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263751). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#259733). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#257391). [Total specimens =3]

***Lascoria ambigualis* Walker**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#171277). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#173276); 12 Sep 2001, UV light trap (#259589). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#172683); 18 Jun 2001, UV light trap (#257701); 25 Jul 2001, UV light trap (#263865). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#105648, #254420, #256298, #259994). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#162873, #256649, #256942, #257472); 20 Sep 2001, UV light trap (#260639). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#258541); 15 Aug 2001, UV light trap (#256359). [Total specimens =17]

***Macrochilo absorptalis* (Walker)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259353). [Total specimens =1]

***Macrochilo litophora* (Grote)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#258693, #259829). [Total specimens =2]

***Macrochilo louisiana* (Forbes)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256510). [Total specimens =1]

***Macrochilo orciferalis* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256993). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#259237). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#260899). [Total specimens =3]

***Palthis angulalis* (Hübner)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258483). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#257604). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#174563, #258708, #260551). **Site**

2, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#260942). [Total specimens =6]

***Palthis asopialis* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263412, #263586, #263785). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#254090, #261119). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#259069). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#261224); 15 Aug 2001, UV light trap (#106115). [Total specimens =8]

***Phalaenophana pyramusalis* (Walker)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#256772, #257436, #258366, #258608); 15 Aug 2001, UV light trap (#165665). [Total specimens =5]

***Phalaenostola eumelusalis* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#256259, #257201, #257524); 13 Aug 2001, UV light trap (#260717). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256831, #256935, #259869, #261084); 15 Aug 2001, UV light trap (#256827). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#167672, #256716, #258384). [Total specimens =12]

***Phalaenostola larentioides* Grote**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#258559). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#257102). [Total specimens =2]

***Phalaenostola metonalis* (Walker)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#259408). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#171425, #261245). [Total specimens =3]

***Renia factiosalis* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263823). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#256441, #256576, #258893). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#258136); 22 Aug 2001, UV light trap (#261076). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264001). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#259897). [Total specimens =8]

***Renia flavipunctalis* (Geyer)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257308). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263979). [Total specimens =2]

***Renia salusalis* (Walker)**

[Det. by J. E. Rawlins] **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#164104). [Total specimens =1]

***Tetanolita floridana* (J.B. Smith)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#263929, #264225). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#257487). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#261067). [Total specimens =4]

***Zanclognatha cruralis* (Guenée)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262502). [Total specimens =1]

***Zanclognatha jacchusalis* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263445). [Total specimens =1]

***Zanclognatha laevigata* (Grote)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#258435). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#256599). [Total specimens =2]

***Zanclognatha lituralis* (Hübner)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#259232, #260344). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#259836). [Total specimens =3]

***Zanclognatha obscuripennis* (Grote)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#261186). [Total specimens =1]

***Zanclognatha ochreipennis ochreipennis* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#263864). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#259576). [Total specimens =2]

***Zanclognatha pedipilalis* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#258369); 13 Aug 2001, UV light trap (#263935). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257060). **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#257978, #261093). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#259670). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#259858). [Total specimens =7]

***Zanclognatha protumnusalis* (Walker)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263829). [Total specimens =1]

Hypeninae

***Bomolocha baltimoralis* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#255286). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258744). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#103417, #167751, #257704, #259356, #260904); 25 Jul 2001, UV light trap (#264091); 23 Aug 2001, UV light trap (#259451). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262261, #262536). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#260283). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#258119). [Total specimens =13]

***Bomolocha edictalis* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263560, #263750). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#263813). [Total specimens =3]

***Bomolocha manalis* (Walker)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260419). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#257824); 18 Jun 2001, UV light trap (#259602); 25 Jul 2001, UV light trap (#261203); 23 Aug 2001, UV light trap (#255155). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#260284). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#258020); 15 Aug 2001, UV light trap (#257053). [Total specimens =8]

***Plathypena scabra* (Fabricius)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263519). [Total specimens =1]

Hypenodinae

***Hypenodes caducus* (Dyar)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263703). [Total specimens =1]

Noctuinae

***Agnorisma badinodis* (Grote)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 12 Sep 2001, UV light trap (#256087). [Total specimens =1]

***Agrotis gladiaria* Morrison**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 12 Sep 2001, UV light trap (#255178). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#173270, #257305). [Total specimens =3]

***Agrotis ipsilon* (Hufnagel)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 12 Sep 2001, UV light trap (#259853). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#260730); 13 Aug 2001, UV light trap (#180242). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#261205). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262239). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263931). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#257912). [Total specimens =7]

***Agrotis venerabilis* Walker**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#258235, #258372). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 10 Sep 2001, UV light trap (#162963, #259285). [Total specimens =4]

***Anaplectoides prasina* ([Denis and Schiffermüller])**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#257101). [Total specimens =1]

***Euretagrotis sigmoides* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#260999). [Total specimens =1]

***Feltia herilis* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#258521, #259039, #259246, #260867); 10 Sep 2001, UV light trap (#258906). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#171647, #178398, #257273, #257404, #257930, #258318, #259582); 10 Sep 2001, UV light trap (#165140, #259487). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna

River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 23 Aug 2001, UV light trap (#259596). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#263673, #263892). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#168204). [Total specimens =18]

***Feltia jaculifera* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#258097). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#257138, #258969); 10 Sep 2001, UV light trap (#175911, #259066, #259940). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#257381). [Total specimens =7]

***Feltia subgothica* (Haworth)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#257055). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#259497). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#260110); 22 Aug 2001, UV light trap (#255612). [Total specimens =4]

***Feltia tricola* (Lintner)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#258198). [Total specimens =1]

***Loxagrotis acclivis* (Morrison)**

[Det. by J. E. Rawlins] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#260392). [Total specimens =1]

***Noctua pronuba* Linnaeus**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#256973); 12 Sep 2001, UV light trap (#257246). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#256223). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#263735). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257012); 10 Sep 2001, UV light trap (#257645). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 23 Aug 2001, UV light trap (#258329, #260966). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#263771, #264183). [Total specimens =10]

***Ochropleura implecta* Lafontaine**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263449). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#259730); 13 Aug 2001, UV light trap

(#169175, #181069, #254685, #259133, #259790); 12 Sep 2001, UV light trap (#260778). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#256969). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#166849); 31 Jul 2001, UV light trap (#261016); 22 Aug 2001, UV light trap (#257947). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262527). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264214). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#257936); 15 Aug 2001, UV light trap (#176698, #258014, #260577). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#257115). [Total specimens =19]

***Peridroma saucia* (Hübner)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#259495). [Total specimens =1]

***Protolampra brunneicollis* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#256748). [Total specimens =1]

***Pseudhermonassa bicarnea* (Guenée)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#260974). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 20 Sep 2001, UV light trap (#256759, #258299, #259439, #259706). [Total specimens =5]

***Trichosilia geniculata* (Grote and Robinson)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#257366). [Total specimens =1]

***Xestia (Megasema) c-nigrum adela* Franclemont**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#254075, #257034, #257649, #257953, #258105); 13 Aug 2001, UV light trap (#263764). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#255134, #257002). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260144). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#168855); 22 Aug 2001, UV light trap (#258109); 10 Sep 2001, UV light trap (#258494). [Total specimens =12]

***Xestia (Megasema) dolosa* Franclemont**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#257545, #259925, #260267); 12 Sep 2001, UV light trap (#259898). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256916, #258490, #258571, #260557, #261237). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE

Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#178545, #257304, #258488, #258683, #259341, #260321, #260402). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#254871, #255597, #260235, #261236). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 18 Jun 2001, UV light trap (#262144, #262275). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262365); 23 Aug 2001, UV light trap (#260863). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#258237). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#169687, #259880, #261167); 26 Jun 2001, UV light trap (#256278, #258877, #260566); 15 Aug 2001, UV light trap (#258898). [Total specimens =32]

***Xestia (Xestia) normaniana* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#181125). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#256549). [Total specimens =2]

***Xestia (Xestia) smithii* (Snellen)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#257902, #258459). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#260940); 10 Sep 2001, UV light trap (#255296, #257752, #260224). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 23 Aug 2001, UV light trap (#256302, #256397). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#255140, #258258, #258527, #263893, #264007). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 21 Sep 2001, hand-collected (#258758); UV light trap (#166715, #256787, #257216, #257722, #257827, #257956, #258088, #258153, #259379, #259515, #259944). [Total specimens =25]

Pantheinae

***Colocasia propinquilinea* (Grote)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 14 Jun 2001, UV light trap (#256573). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#254360). [Total specimens =2]

***Panthea furcilla* (Packard)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#205800). [Total specimens =1]

***Raphia frater* Grote**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#258137). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258044). [Total specimens =2]

Plusiinae

***Abrostola urentis* Guenée**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#259799). **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#257639, #260151). [Total specimens =3]

***Allagrapha aerea* (Hübner)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259313). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#261243); 20 Sep 2001, UV light trap (#256489, #259609). [Total specimens =4]

***Autographa precatationis* (Guenée)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#261097). [Total specimens =1]

***Megalographa biloba* (Stephens)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260141). [Total specimens =1]

Rivulinae

***Rivula propinquialis* Guenée**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#259491); 13 Aug 2001, UV light trap (#256895). **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 22 Aug 2001, UV light trap (#258847). **NORTHUMBERLAND CO. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264151). [Total specimens =4]

Sarrothripinae

***Baileya australis* (Grote)**

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#258242); 26 Jun 2001, UV light trap (#257955). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#178164). [Total specimens =3]

***Baileya dormitans* (Guenée)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260168). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259837). [Total specimens =2]

Stiriinae

***Basilodes pepita* Guenée**

[Det. by J. E. Rawlins] **YORK CO. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 15 Aug 2001, UV light trap (#260444, #260615, #260994). [Total specimens =3]

***Plagiomimicus pityochromus* Grote**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263937). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#257616). [Total specimens =2]

Notodontidae

Heterocampinae

***Heterocampa biundata* Walker**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#203978, #259684). **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#260945). [Total specimens =3]

***Heterocampa guttivitta* (Walker)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#254038, #256527); 31 Jul 2001, UV light trap (#173436). [Total specimens =3]

***Lochmaeus bilineata* (Packard)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257270, #257411). [Total specimens =2]

***Lochmaeus manteo* Doubleday**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256980); 31 Jul 2001, UV light trap (#259184). **NORTHUMBERLAND CO. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263718). [Total specimens =3]

***Oligocentria semirufescens* (Walker)**

[Det. by J. E. Rawlins] **BRADFORD CO. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#259456). [Total specimens =1]

***Schizura ipomoeae* Doubleday**

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#260613). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#257925). [Total specimens =2]

***Schizura unicornis* (J.E. Smith)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#162246). [Total specimens =1]

Notodontinae

***Ellida caniplaga* (Walker)**

[Det. by J. E. Rawlins] **YORK CO. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#256934). [Total specimens =1]

***Furcula cinerea* (Walker)**

[Det. by J. E. Rawlins] **LYCOMING CO. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#260893). [Total specimens =1]

***Gluphisia septentrionis septentrionis* Walker**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#260703). [Total specimens =1]

***Nadata gibbosa* (J.E. Smith)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#256845). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#257395); 31 Jul 2001, UV light trap (#263437). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260451). [Total specimens =4]

***Nerice bidentata* Walker**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#260763). [Total specimens =1]

***Odontosia elegans* (Strecker)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262374). [Total specimens =1]

***Peridea basitriens* (Walker)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#257106). [Total specimens =1]

***Peridea ferruginea* (Packard)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#260965). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#166551). [Total specimens =2]

***Pheosia rimosa* Packard**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#168137). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259673); 22 Aug 2001, UV light trap (#256450). [Total specimens =3]

Nystalaeinae

***Dasylophia anguina* (J.E. Smith)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#258650). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 18 Jun 2001, UV light trap (#262458). [Total specimens =2]

***Symmerista canicosta* Franclemont**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256907). [Total specimens =1]

***Symmerista leucitys* Franclemont**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun

2001, UV light trap (#169931, #256766, #258757). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256728). [Total specimens =4]

Phalerinae

***Datana angusii* Grote and Robinson**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#261087). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#257146, #258918, #261018). [Total specimens =4]

***Datana drexlii* Henry Edwards**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#173761). [Total specimens =1]

***Datana integerrima integerrima* Grote and Robinson**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#255148); 18 Jul 2001, UV light trap (#256467). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#260598). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257476, #258164, #259130). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#256598). [Total specimens =7]

Pygaerinae

***Clostera inclusa* (Hübner)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#264136). [Total specimens =1]

***Clostera strigosa* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#179056, #257299). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#259349). [Total specimens =3]

Pterophoroidea

Pterophoridae

***Pterophoridae* undetermined**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263710). [Total specimens =1]

Pyraloidea

Pyralidae

***Pyralidae* undetermined**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 14 Jun 2001, UV light trap (#258633); 18 Jul 2001, UV light trap (#255204, #260802); 13 Aug 2001, UV light trap (#263409, #263434, #263459, #263472, #263501, #263512, #263513, #263536, #263540, #263544, #263548, #263622, #263744, #263746, #263766, #263862, #263977, #264170); 12 Sep 2001, UV light trap (#258678). **Site 8**,

Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#259112, #259226, #260027, #260263); 13 Aug 2001, UV light trap (#256579, #257097, #257741, #258867, #259476, #260743). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#263632). **Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#256198, #256260); 22 Aug 2001, UV light trap (#168769, #257400); 10 Sep 2001, UV light trap (#165395). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 17 May 2001, UV light trap (#258585); 23 Aug 2001, UV light trap (#256781, #258244, #260612). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 17 May 2001, UV light trap (#261046); 18 Jun 2001, UV light trap (#262192); 23 Aug 2001, UV light trap (#175450, #259767, #263839, #263966). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#171089, #256543, #256738, #258850, #260459); 26 Jun 2001, UV light trap (#256947); 15 Aug 2001, UV light trap (#256370, #257431, #258697, #259025, #259031, #259033); 20 Sep 2001, UV light trap (#168141, #254532, #257564). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#248819, #259728); 15 Aug 2001, UV light trap (#106110, #173429, #256452, #258425, #260288, #261129). [Total specimens =71]

Galleriinae: Galleriini

Galleria mellonella (Linnaeus)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 13 Aug 2001, UV light trap (#260498). [Total specimens =1]

Pyraustinae: Spilomelini

Desmia funeralis (Hübner)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 14 Jun 2001, UV light trap (#257927). **NORTHUMBERLAND Co. Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 23 Aug 2001, UV light trap (#257543). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#259469). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#256320). [Total specimens =4]

Desmia maculalis Westwood

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263509). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 24 May 2001, UV light trap (#259235); 26 Jun 2001, UV light trap (#257664). [Total specimens =3]

Pantographa limata (Grote and Robinson)

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#260184). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#261230). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 31 Jul 2001, UV light trap (#260268, #264052). **Site 6**, Lycoming

Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#258129, #261259). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 23 Aug 2001, UV light trap (#255814). **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#166352). [Total specimens =8]

Tineoidea

Acrolophidae

Acrolophus arcanelus (Clemens)

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#257163, #258133, #259119, #260109, #261043). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#254945, #256682, #257227, #257403, #259164, #259372). [Total specimens =11]

Acrolophus popeanellus (Clemens)

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263588). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#258227, #263429). [Total specimens =3]

Tortricoidea

Tortricidae

Tortricidae undetermined

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 13 Aug 2001, UV light trap (#263807); 12 Sep 2001, UV light trap (#259323). **Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#256328, #256584). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 22 Aug 2001, UV light trap (#256181, #256708). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#257915). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#168553, #256226). [Total specimens =9]

Yponomeutoidea

Yponomeutidae

Atteva punctella (Cramer)

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 10 Sep 2001, UV light trap (#259642). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 15 Aug 2001, UV light trap (#257103, #257721, #258525, #258671, #260645). [Total specimens =6]

Yponomeuta multipunctella Clemens

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256595). **Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 26 Jun 2001, UV light trap (#256170, #257519). [Total specimens =3]

Zygaenoidea

Limacodidae

***Apoda y-inversum y-inversum* (Packard)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#178211). [Total specimens =1]

***Euclea delphinii* (Boisduval)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 8**, Susquehanna River west of Towanda Creek, 1.8 km ESE South Towanda, 41-44-51N, 76-25-21W, 250 m: 18 Jul 2001, UV light trap (#259509). **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#261208). [Total specimens =2]

***Lithacodes fasciola fasciola* (Herrich-Schäffer)**

[Det. by J. E. Rawlins] **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#257674, #263621, #264057, #264097). **Site 4**, island in Susquehanna River, 1.7 km NW Milton, 41-01-23N, 76-51-40W, 140 m: 25 Jul 2001, UV light trap (#263804, #263957). **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#256312). [Total specimens =7]

***Prolimacodes badia* (Hübner)**

[Det. by J. E. Rawlins] **BRADFORD Co. Site 7**, Susquehanna River at mouth of Towanda Creek, 1.4 km ESE South Towanda, 41-44-52N, 76-25-38W, 250 m: 18 Jul 2001, UV light trap (#256945, #257642). **LYCOMING Co. Site 6**, Lycoming Creek, 0.9 km NW Bodines, 41-27-21N, 76-58-50W, 220 m: 31 Jul 2001, UV light trap (#165107). **NORTHUMBERLAND Co. Site 3**, island in Susquehanna River, 1.8 km NNW Milton, 41-01-36N, 76-51-28W, 140 m: 25 Jul 2001, UV light trap (#263534). [Total specimens =4]

***Sibine stimulea* (Clemens)**

[Det. by J. E. Rawlins] **YORK Co. Site 1**, Codorus Creek, 1.2 km NE Martin, 39-53-50N, 76-49-57W, 130 m: 26 Jun 2001, UV light trap (#258257). [Total specimens =1]

***Tortricidia flexuosa* (Grote)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#178541, #260357). [Total specimens =2]

***Tortricidia pallida* (Herrich-Schäffer)**

[Det. by J. E. Rawlins] **LYCOMING Co. Site 5**, Loyalsock Creek, 4.4 km ENE Barbours, 41-24-17N, 76-44-57W, 220 m: 14 Jun 2001, UV light trap (#173119). [Total specimens =1]

***Tortricidia testacea testacea* Packard**

[Det. by J. E. Rawlins] **YORK Co. Site 2**, Codorus Creek, 0.5 km S Graybill, 39-55-08N, 76-48-00W, 130 m: 24 May 2001, UV light trap (#256834). [Total specimens =1]

Appendix IV: Plant Community Data Forms

Form 3: Quantitative Community Characterization Draft: Spring, 1997

Floodplain forest sampling

A. Identifiers (general EOR information)

Sci. name: 1.SNAME: _____		2.GNAME: _____		3.Site name: _____	
4.Survey site name: _____		5.Quad name(s): _____		6.Quad code(s): _____	
7.County name(s): _____		8.County code(s): _____		9.Town (LOCAL JURIS): _____	
10.Lat: _____ N	11.Long: _____ W	12.Directions: _____			
13.Source code: _____		14.Survey date: _____			
15.Last obs: _____		16.First obs: _____		17.State: _____	
18.Surveyors: _____				Image	
Annotation: _____					

Environmental Description

23. Topographic sketch		Height above channel: _____ Distance from channel: _____ Parent material: _____	
Topographic position: ☐ Backswamp ☐ Bank ☐ Bar ☐ Channel shelf (levee) ☐ Floodplain ☐ High terrace ☐ Low terrace ☐ Oxbow ☐ Scour zone ☐ Slough ☐ Channel bed ☐ Other (_____)	33. Soil drainage: ☐ Rapidly drained ☐ Somewhat poorly drained ☐ Well drained ☐ Poorly Drained ☐ Moderately well drained ☐ Very poorly drained		32. Stoniness: ☐ Stone free <0.1% ☐ Moderately stony 0.1-1% ☐ Stony 3-15% ☐ Very stony 15-50% ☐ Exceedingly stony 50-90% ☐ Stone piles >90% 34. Average texture: ☐ sand ☐ clay loam ☐ sandy loam ☐ clay ☐ loam ☐ peat ☐ silt loam ☐ muck ☐ other
27. Soil profile description: note depth, texture, and color of each horizon. Note significant changes such as depth to mottling, depth to water table, root penetration depth (SOIL COM) 28. Organic horizon depth: 29. Organic horizon type: 30. Average pH of mineral soil:	31. Hydrologic regime: ☐ Permanently flooded ☐ Saturated ☐ Intermittently exposed ☐ Temporarily flooded ☐ Semi-permanently ☐ Intermittently flooded ☐ Seasonally flooded ☐ Artificially flooded		35. Unvegetated surface: ☐ % Bedrock ☐ % Wood (> 1 cm) ☐ % Large rocks ☐ % Litter, duff (cobbles, boulders > 10 cm) ☐ % Small rocks (gravel, 0.2-10 cm) ☐ % Water ☐ % Sand (0.1-2 mm) ☐ % Other: ☐ % Bare soil
36. Environmental Comments: Note homogeneity of vegetation, erosion / sedimentation, inundation, etc. Nearest Gauge Sta.(s): Stream height @ date/time: 37 Plot representativeness:			

