

UNIQUE NATURAL ASSETS OF SCHUYLER COUNTY, NEW YORK

An annotated inventory
Compiled May 2001

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TABLE OF CONTENTS

<u>TOPIC AREA</u>	<u>PAGE</u>
Sensitive data advisory	2
Overview	2
Introduction	3
Biodiversity	3
Flora and Fauna	4
Unique, Ecologically Sensitive Areas	5
Township Natural Resources Inventory Introduction	5
Town of Hector	6 -10
Town of Montour	11-13
Town of Catharine	14-16
Town of Cayuta	17-18
Town of Dix	19-20
Town of Orange	21-22
Town of Tyrone	23-24
Town of Reading	26
Recommendations, proposed actions and guidelines	27

APPENDICES

Rare Native Plants of Schuyler County	28
Birds of Schuyler County	28-30
Reptiles and Amphibians of Schuyler County	31
Mammals of Schuyler County	32
Trees of Schuyler County by George Bulin	33-34
Butterflies of Schuyler County	35-36
Precipitation Records 1986-2000	37
Dragonflies of Schuyler County by Fred C. Sibley	38-40
Fish and Mollusks of Schuyler County	41-42
Geology of Schuyler County by George Bulin	43

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John and Sue Gregoire

Submitted to the Schuyler County Planning Commission in Spring 2001 as part of the report of the Environment, Natural Resources and Recreation Task Group for the County Comprehensive Plan. The following contains sensitive data and, as such, specific locations have not been given. GPS and map-derived data for each site are available and will be placed in a GIS overlay when that system is available. Please contact the principal authors for further dissemination or information.

OVERVIEW

A documented inventory of truly unique natural assets in a county blessed by an abundance of such treasures is a Herculean task. In creating the town-by-town annotated lists that follow, an environmental inventory created by the Environmental Management Council in the early 1990's was used as a point of departure. That list was field checked for accuracy and completeness and several sites were either deleted or added. Several organisms thought to be unique and rare were found to be relatively common within the correct habitats; some sites were found to be of marginal significance but the overall biodiversity was found to be truly impressive.

Criteria for inclusion followed Natural Heritage Program global and state ranking for identifying species and habitat types. These are scored from demonstrably secure to critically imperiled, or from very common to extremely rare. **The challenge was to reduce a long list of interesting places to a short list of sites unique for either habitat or specific species depending on that habitat. Finally, we identified those extremely significant sites that demand our protection.**

Perhaps the greatest outcome of the study was the discovery of areas so pristine that entire biological communities, let alone remnants of individual rare species, were discovered in Schuyler. Some species exist here which have been extirpated in all other areas of the Finger Lakes and the Northeast.

To fence off the county as a biological diversity preserve is a lofty thought that flies in the face of practicality. Rather, we have listed the cream of our natural treasures so that we all will appreciate our natural wealth and become aware of the need to protect it. **Some sites are so unique that they must be protected at all costs. These are very few and comprise the Queen Catharine Marsh, the Texas Hollow bog, the incredibly biodiverse habitat discovered in Montour Falls, the rare sponges in the Cayuta Inlet, the uniqueness of our gorge environments and Seneca Lake. Overall, Schuyler County has the richest biodiversity in the Finger Lakes region and we must orient our planning to both protect and take advantage of our natural resources.**

The key to all this bounty is water. We are the stewards of the headwaters of two major and three supporting watersheds. The Chesapeake Bay and the St. Lawrence systems are fed by our streams, which feed the former via the Susquehanna River and the latter by Cayuga and Seneca Lakes. The major recommendations for preservation must be centered on protection of our waterways and their riparian areas.

INTRODUCTION

A few thousand years ago, Schuyler emerged from under the Laurentian glaciers. In the last few centuries, we have enjoyed a fertile time in our county's ecological history. Its richness and diversity – and our almost singular ability to exploit it – allows us the luxury to think about a more philosophical purpose to what it all means, what it all is for and, why we should preserve it. Nature is constantly changing things and us; A Hector sheep farmer 150 years ago could not have imagined the industrial, let alone the computer age. During the twentieth century, development, mining, logging and other resource-consuming interests destroyed half of the world's wetlands and forests, and degraded two-thirds of the world's agricultural lands.

As for our generation, no one can predict how our grandchildren will make their living. We do know that future generations will always need clean water and want open spaces where they can go to get away. We need to respect the places where we can come to appreciate and learn. The land sustains us and teaches us. Sometimes kindly, sometimes violently, but it does teach us in subtle and effective ways that we are only beginning to understand. Nature gives us an education in wordless ways that lends purpose and connection and sinks deep into our memories. We learn so much by doing and seeing, rather than hearing words poured upon us by lecturers.

Nature is telling us that for our species to continue to survive and prosper, we must balance our ability to exploit with our ability to preserve. We must also use our intelligence to restore and to achieve balance. If we don't, we'll be just another species that will go away before its time. We must use our intelligence to do the right thing for those who will come after us.

BIODIVERSITY

To understand the true wealth of Schuyler County, we should understand the word that succinctly describes our natural treasures. All life is part of one great, interdependent system. It interacts with, and depends upon, the non-living components of the planet: atmosphere, oceans, freshwaters, rocks and soils. Humanity depends totally upon this community of life, the biosphere, of which we are an integral part. Biological diversity, or biodiversity, is the variety of an area's organisms, including their genetic diversity and the assemblages they form. It is the blanket term for the natural wealth that underpins human life and well being. The breadth of the concept reflects the inter-relatedness of genes, species and ecosystems.

We are coming to realize that biological assets have limits and that we are exceeding those limits and thereby globally reducing our biodiversity. This is a time of extraordinary change in the relationships between people and the resources upon which their welfare depends. Be it overpopulation, global destruction of habitat or the erosion of the planet's life-support systems, the problems of conserving biodiversity are linked to the larger issues of social and economic development. Human aspirations must be brought more into line with the realities of the earth's resource capacities and processes. Maintaining maximum biodiversity assumes far greater urgency as rates of environmental change increase.

FLORA AND FAUNA

Schuyler County is home to a very large diversity of plants and animals. Over 250 species of birds either nest here or utilize our natural assets during their migrations. The New York Breeding Bird Atlas has identified over 140 avian species breeding in the county. The New York Reptile and Amphibian Atlas has identified 32 species in the county. Plants exist here that have been extirpated elsewhere. The Botanical Atlas project of the New York State Museum lists 11 species of rare native plants in Schuyler, although more are being discovered. Thirty-nine species of mammals, including us, inhabit our county. Fifty of the 64 tree species found here are native to Schuyler County and our Butternut trees (*Juglans cinera*) are listed as a regional sensitive species. Fifty-seven butterfly species have been found and a few are quite uncommon. A new study is underway to identify Dragonflies and of the more than fifty thus far confirmed, one very large and unusual species is dependent on the specific environment found in our gorges. Underpinning all of this life is the unique geology that contributes the habitat upon which all life depends. Listings of the above and a description of the geology is included in the appendices.

Our pristine waters support many forms of life. Overall, Schuyler County is very much understudied by biologists. We should sponsor a major effort by area colleges and universities to fully document our natural resources. Avian studies have confirmed our richness and limited botanical studies have uncovered rare species and whole communities that are unique. How much more is there? Where? We must utilize our synergistic relationship with Corning Community College as well as other area universities to achieve a full documentation. The biodiversity of Schuyler County can form the basis of a strong future and economic development in the ecotourism industry.

Problems affecting all forms of life include urban sprawl and water pollution. Development proceeds uncontrolled into our countryside, destroying both essential habitat and viewsheds. While the total acreage of active farmland has decreased over the last 20 years, agricultural practices have changed in ways that have decimated our grassland, meadow, and hedgerow habitats. The increasing practice of spreading liquid manure slurry on open fields is over-nutrienting the soil and our water. Ponds and streams that are overloaded with nitrogen and phosphorous and are prematurely dying currently exemplify the result. This has not only caused small inland wetlands to no longer support native animal and plant communities, but is also slowly poisoning our ponds and will eventually reach Seneca Lake.

Other species, such as owls and hawks and herons, are being adversely affected by uncontrolled logging, which removes the mature trees essential to their survival. Where native species of plant life has been trampled or removed, alien species take hold readily and further degrade our biodiversity.

UNIQUE, ECOLOGICALLY SENSITIVE SITES

There are six sites in Schuyler County that must be fully protected. [The Texas Hollow Natural Area](#) in Hector is the only sphagnum bog in our county; it is partially protected through state ownership and DEC stewardship. [Queen Catharine Marsh](#) (Catharine Creek Wildlife Management Area) has been designated as an Important Bird Area and nominated as a Bird Conservation Area. It supports several rare avian species as well as rare vegetative communities. Part of the marsh is protected by state ownership and should be enhanced by further acquisition of riparian lands or conservation easements, as these parcels are integral to the survival of the marsh; they also host rare species. The marsh and bog should be designated as Critical Environmental Areas under the state SEQRA law. The [Cayuta Inlet](#) hosts rare species and is protected in part by Cornell Plantations ownership and stewardship. We must further protect the inlet by limiting pollution sources from the stream and the lake. An incredibly [biodiverse area](#) was recently discovered in Montour Falls. This must be preserved in its current state by conservation easement or acquisition. While not a specific site, our [many gorges](#) host a variety of animals and plants that need our protection. Statewide, some of these organisms are rare and endangered. Within our gorges, many are quite common. While it may not be possible to protect every gorge, development, buffer and setback regulations can preserve this very unique resource. Finally, the pure waters of [Seneca Lake](#) is shared by many municipalities and we can best perform our stewardship by supporting the initiatives of Seneca Lake Pure Waters Association and establishing vegetative buffers along all streams in its watershed.

TOWNSHIP NATURAL ASSETS INVENTORY

The following annotated listing reflects the more unique areas in each of our towns. Certainly, many special places exist and this is but a skimming of the cream. Each of these locations is supported by a data packet and supporting documentation which will be on file with the Schuyler County Environmental Management Council and is a continuing project of the principal authors.

We wish to thank Jim and Sue Hazlitt, John Q. and Joani Smith, George Bulin and Fred Sibley for their contributions.

TOWN OF HECTOR

(Ecologically sensitive areas are underlined)

FEDERAL AND STATE:

- **Finger Lakes National Forest**

Located between Seneca and Cayuga Lakes, the forest occupies 10,951 acres in Schuyler County and is managed by the US Forest Service as a multiple use land area. The forest provides 25 miles of trails, three developed campgrounds and many wildlife ponds suitable for fishing. A segment of the Finger Lakes Trail passes through the forest and connects to the 12 mile Interloken trail. Additionally, field areas are maintained for the summer grazing of cattle.

Some fields are managed for grassland bird species including the threatened Henslow's Sparrow, while other acreage is cooperatively managed by local sportsman as Ring-necked Pheasant habitat. The forest is listed as an Audubon Important Bird Area. Threats to the area include clear-cut logging, destruction of trails by high impact users such as horses and ATVs, mining and vandalism. In 2001, the forest is engaged in an Environmental Impact Study to determine the feasibility of allowing natural gas exploration in the forest.

Portions of the forest host several species of uncommon plants and threatened avian species. The forest is engaged in selecting natural areas for further research and protection. New trails are under consideration to lessen the impact of overuse. Federal law enforcement officers are now on site to combat vandalism and the forest continues toward a goal consolidating private tracts within the forest into a coherent, manageable national forest.

- **Texas Hollow State Forest**

Located south of the hamlet of Bennetsburg between Texas Hollow, Newtown and Steam Mill Roads, the forest covers 850 acres in Hector. This unfragmented lowland corridor between high glacial ridges is dammed by both man-made and beaver structures. The habitat is important to many species of breeding birds, stopover migrant species and waterfowl. A small portion of the forest is in the town of Catharine.

Some mature forest provides habitat for many upland species including Wild Turkey. The man-made shallow water pond and wetlands are home to nesting ducks, geese, amphibians and fish. Remote ravines harbor salamanders. A segment of the Finger Lakes trail runs through the forest.

Primary threats revolve around human use. Although the trail system is banned to off-road vehicles, ATVs and snowmobiles continue to use the area harassing wildlife and damaging the ecosystem. Noted for both bass and catfish, the impoundment suffers from trash. A clear pack-in/pack-out policy or trash receptacles would help immensely. Neighbors complain of noise and bonfires.

- **Texas Hollow Natural Area –(Only Sphagnum bog in County)**

Adjoins the pond area of Texas Hollow State Forest and encompasses 88 acres of mature woods which shelter a ten acre sphagnum bog, the only one in Schuyler County. Only light impact activities are allowed within the natural area.

The floating mat of sphagnum moss provides habitat for well developed colonies of bog plants including Cranberry, Rattlesnake Plantain, carnivorous Sundew and Pitcher Plants. The upland areas boast unusually dense stands of Pink Lady's Slipper and other unusual wildflowers. All are protected plants and vulnerable to exploitation.

This true bog is the only site capable of supporting these uncommon species of flora. Illegal plant collection, human trampling of the delicate mat ecosystem and illegal off-road vehicles are the primary threats. Fishermen often attempt to dam the outlet in misguided attempts to convert the bog into a fishpond (thus extirpating the sensitive bog environment).

NATURAL FEATURES:

- **Seneca Lake**

The largest of the Finger Lakes, the county line between Schuyler and Yates counties runs down the centerline. Approximately 10 miles of the lake lies within Schuyler and averages 1-½ miles in width. Approximately 40% of the surface area of the lake is in Schuyler County. The great depth (605 feet) and physics of the lake provides a research site for U.S. Navy acoustic research. Seneca provides clean drinking water for the Village of Watkins Glen via a municipal system and to many lakefront properties via private wells and water intakes (untreated). Seneca is the recipient body of most of the Schuyler County watershed. The lake provides wintering habitat for many species of waterfowl and is prime tourist attraction and fishing destination.

The Howard gravel and natural microclimate on the surrounding hillsides makes the area particularly suitable for viticulture. Extensive studies of the lake and its watershed have been completed under the aegis of Seneca Lake Pure Waters Association and the five county protection group termed SLAP-5.

Major threats include pollution and siltation from agricultural and roadside run-off, siltation from the DOT barge canal and the introduction of non-native species.

- **Gorges**

These biologic and geologic wonders of Schuyler County funnel the majority of our upland watershed to Seneca Lake and exhibit unique geology that provides precise habitat for unusual flora and fauna. Most of the actual gorges and riparian lands are in private ownership. Most gorges support Ebony Spleenwort and many support Walking Fern, both globally uncommon, yet locally common, plants. Native Americans hold these gorges in special reverence. From south to north, the major gorges in Hector are:

Excelsior Glen
Hector Falls/ Hector Falls Creek
Glen Eldridge/Tug Hollow Creek
Bullhorn Creek
Sawmill Creek
Breakneck Creek

Excelsior has a rich history including a Native American trail where artifacts have been found and a documented visit by Alexander Wilson, the father of American Ornithology who visited and wrote poems of the Seneca Lake area in 1802 (published in Philadelphia in 1804). Excelsior boasts a classic “hanging gorge”. Hector Falls displays a 165-foot waterfall visible from Rte 414 and a “hanging gorge”. Bullhorn plays an important role in current Native American rites and Sawmill drains an immense area of the township while supporting several waterfalls, steep cliffs and grottos. Breakneck forms the divide with Seneca County boasting many of the attributes found in these magnificent gorges.

Flora which is uncommon elsewhere is abundant within the specific gorge habitat. Some limestone has surfaced here which nurtures the very specific requirements of some of these plants such as Walking Fern. The east/west orientation promotes growth of these organisms on north facing slopes. Many species listed as “exploitably vulnerable” on DEC’s list of protected plants exist in these gorges. Most ferns, orchids and clubmosses are protected in New York. The unique habitat creates a very biodiverse community of many forms of life including reptiles, amphibians, native trout, avian species and mammals.

Threats include the collection of protected plants, damage by floodwaters caused by the lack of remediation of roadside ditches and uncontrolled human development.

Agriculture, viticulture and development should be encouraged to maintain a minimum 200 foot vegetated and treed buffer from these very delicate ecosystems. The Town and State must be encouraged to both construct proper drainage ditches and to remediate all bare earth with vegetative cover. The Town should adopt land use planning guidelines to protect these and other natural resources. Agricultural activities in the town need to implement nutrient management plans and riparian buffer zones.

- **Wetland off State Rte 228 at Hector/Catharine line**

Located on Rte 228 at the Hector / Catharine line, this wetland floods 30 acres of bottomland. Privately owned, it is very sparsely utilized by avian species and turtles. This may be due to the reported prevalence of pickerel in the waters. Many snags provide sites for cavity nesting species; Osprey often stopover during migration.

Threats to the site include the lack of land use planning in the town, the overabundance of pickerel (anecdotal) causing the decline of waterfowl and amphibian species, and potential residential/ recreational development.

This site should be fully investigated by field biologists to determine the reasons for its sparse utilization by wildlife.

- **Beaver Swamp on State Route 227**

A beaver colony provides habitat for nesting and migrant waterfowl, songbirds, reptiles and amphibians. The privately owned land comprises approximately 92 acres on the East Side of the road. A wetland and pond of approximately 62 acres adjoins on the West Side of the road and continues to the gravel pit at the junction of State Route 79. This portion is home to several species of waterfowl, a Bank Swallow colony and the endangered Spotted Turtle. These waters ultimately flow to Hector Falls. The Spotted Turtle may also exist in the eastern portion of this wetland but remains illusive to researchers.

The site is totally dependent on the beavers and their water control structures. Therefore, the major threat is the destruction of beaver dams by town and state highway crews.

Specific, DEC approved, beaver exclusion culverts should be installed to protect the road from flooding and the beaver habitat from extirpation. Herpetologists should gain access to the private lands to determine the extent of the Spotted Turtle colony. The gravel mine is scheduled for closing and remediation in 2001. Remediation must insure the continuance of the Bank Swallow colony. Future land use must protect that colony and the stream and wetland habitat. A vegetated and treed buffer zone of 200 feet will provide the needed protection.

TOWN LANDS:

- **Smith Park**

Located on the Seneca Lake shore, the 92-acre site is off State route 414, approximately 8 miles north of Watkins Glen and boasts 2,000 feet of lake frontage. Owned and managed by the Town, the area has a guarded swimming beach and spaces for both tent and RV camping. A boat launch area is also available. The wooded hillsides and microclimate create a classic lakeside ecosystem and one of the few open to the public. Access is free to Town residents. Camping and boat launch incur a fee.

The major threat to this site is overuse and potential pollution. This area has not been surveyed by field biologists.

UNIQUE GEOLOGY:

The gorges within the township provide excellent examples of many geologic features such as hanging gorges. The road cuts from Watkins Glen northward provide the student of geology with easily accessible examples of stratification of Devonian beds and glacial activity. Further east near Perry City on State Route 228, two long earthen mounds on the south side of the road are examples of Drumlins or Kame Moraines (geologists are in disagreement as to which they are). Texas Hollow is an excellent example of a “through valley”. A detailed discussion of county geology is included as an appendix.

VIEWSHEDS OF SIGNIFICANCE:

Many wonderful views exist along the roads and trails of Hector. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations are virtually non-existent and a beautiful natural vista today can become a multi-story manufactured home tomorrow. ☹

- **Satterly Hill Road summit.** North of Burdett this road gives an extensive view of Seneca lake and the western part of the county.
- **Skyline Drive** (County Rte 8). Runs N/S above the Catharine Valley from Watkins Glen to Montour Falls providing a vista of the valley, marsh, villages and lake stretching to the hills of the western townships.
- **“Inner vistas”** such as Ravine Trail in FLNF or any gorge. This is natural beauty on a smaller scale and visible only on foot. Geologic beauty and unique flora and fauna are important to our ecotourist industry.

RESEARCH SITES:

- **Kestrel Haven Avian Migration Observatory & NOAA Cooperative Weather Station for Schuyler County** (Biological and climatological data for Schuyler County).

Privately owned perpetual wildlife sanctuary and the only full time, non-profit avian research (banding) station in New York State. Bird banding is under the aegis of the US Dept of the Interior and data are published in scientific journals as well as being publicly available through the Department. From October 1986 to December 2000, 50,000 birds of 123 species have been banded here. A total of 210 species had been reported as a part of daily point counts. The overall data is invaluable in assessing the biologic health of the county. The property is protected through perpetual conservation easement with the Wildlife Land Trust and is on the Finger Lakes Land Trust Land Stewardship Registry.

Daily weather data is transmitted to the national weather service and then made available worldwide. These data form the “official” weather database for Schuyler County. A precipitation chart is presented in the appendices.

- **Finger Lakes National Forest**

Volunteers may assist in three ongoing projects: Inventory of Management Indicator Species (American Woodcock, Ruffed Grouse and Chestnut-sided Warbler); Wood Duck and Eastern Bluebird Nest Box Maintenance and Grassland Bird Nest Monitoring.

Further flora and fauna studies have been completed or are active under the cooperative leadership of local universities and federal biologists. All data are publicly available to researchers. A cooperative nesting/banding study of American Kestrels is also active.

Future research opportunities in both flora and fauna abound as natural areas are designated within the forest.

Archaeological research is an ongoing forest program.

TOWN OF MONTOUR

FEDERAL AND STATE:

- **Queen Catharine Marsh (Catharine Creek Wildlife Management Area)**

This 890-acre marsh, of which 415 acres are in Montour, is one of the largest cattail marshes remaining on the East Coast and is a home to rare vegetative communities, rare plants and the nesting ground for threatened bird species. The marsh has been designated as an Important Bird Area and has been nominated as a State of New York Bird Conservation Area. The marsh currently filters water flowing from John's Creek and several seasonal tributaries from the eastern hillside. The current barge canal, which bisects the marsh, is dredged over the remnants of the historical Chemung Canal.

The marsh is a Class I wetland, approximately 80% emergent, 7% shrub swamp, 5% wet meadow, 4% wooded swamp and 4% open water submergent by recent survey. The DEC has enhanced wildlife use for breeding and stopover migrants through the construction of level ditching and potholes.

The site hosts breeding populations of Least Bittern, American Bittern, Pied-billed Grebe and American Coot as well as Virginia and Sora Rails, Swamp Sparrow and Marsh Wren and the occasional nesting of Sedge Wren. In migration, a gamut of waterfowl and other species utilize the marsh.

- **Montour Falls Biodiversity Area**

Incredibly biodiverse communities / rare plants have been discovered in 2000. The area is particularly rich and currently under study by field botanists. Several species of plants have been identified which do not exist in other parts of the Finger Lakes as well as some ancient prairie species. The rare plants are listed in the appendices. The current evaluation by Cornell Plantations botanists is that this site may be the most biodiverse and biologically important site in the region.

- **Catharine Valley Trail**

The trail is under development as a 12-mile hiker/biker trail following the old Conrail railway bed from Horseheads to Watkins Glen. Remnants of the Chemung canal and locks, now home to many reptiles and amphibians, often run parallel. The entire length of the trail is an excellent venue for birdwatching and will be an ecotourism destination.

- **Catharine Creek Trout Stream**

This active, healthy stream is world famous for rainbow trout. It conveys the watershed from much of southern Schuyler and parts of Chemung County. It is a major tributary to Seneca Lake via a diversion channel built by the US Corps of Engineers.

Much tampered with by both entrepreneurs of the 1800s and the Corps of Engineers, Catharine Creek is no longer filtered by Queen Catharine Marsh. Waters flow via diversion channels to the barge canal. During times of heavy precipitation, much siltation occurs and is visible as a brown plume into Seneca Lake. The entire watershed requires a stabilization plan to include vegetative seeding of roadside ditches, vegetated buffers on agricultural lands and manure management.

The stream is being rebuilt and revegetated after flooding and a disastrous local attempt to bulldoze the streambed. Many species and habitats were destroyed. These and the trout species are slowly returning.

NATURAL FEATURES:

- **Creeks and Gorges**

These biologic and geologic wonders of Schuyler County funnel the majority of our upland watershed to Seneca Lake and exhibit unique geology that provides precise habitat for unusual flora and fauna. Most of the actual gorges and riparian lands are in private ownership. Most gorges support Ebony Spleenwort and many support Walking Fern, both globally uncommon, yet locally common, plants. Native Americans hold these gorges in special reverence. In Montour, the most significant are:

Catharine Creek. Described above.

McClure Creek. See Havana Glen below.

John's Creek. Off Skyline Drive, it is a major tributary to Queen Catharine Marsh and drains a large section of Hector. A scenic trail skirts interesting geologic formations. A dam and impoundment once served as the Village of Montour Falls water supply.

Catlin Mill Creek/Deckertown Falls. Another major tributary, this creek boasts a constant water supply even in drought and has excellent trout fishing. Some public access is available via a short trail that passes the remnants of historic woolen and flour mills to a vista of the falls.

TOWN LANDS:

- **Havana Glen**

A town park with pavilion and picnic facilities, the site abuts McClure Creek, which is a healthy trout stream. A Black Walnut tree in the park is over 150 years old. The entire area is very important in Native American History and remnants of a turtle mound are still visible. A short trail enters the gorge providing excellent views of unique plant life and terminates at the base of Eagle Cliff Falls. The falls provide a close study of glacial action and are but the base of a long system of waterfalls and amphitheaters no longer accessible to the public.

- **Rock Cabin Road**

Rare Nodding Wild Onion and three uncommon butterfly species can be seen on properties along its eastern border. The road is an excellent nature trail with large stands of wildflowers visible in the proper seasons. Roadside stands of Hackberry trees attract the three unusual butterfly species – Tawny Emperor, Hackberry and Snout. The proximity to Queen Catharine Marsh makes this road an outstanding bird watching area.

- **Aunt Sarah's Falls**

A large waterfall on the west slope of Route 14 just north of Montour falls is easily visible from the roadway. A DEC parking area is located across the road. In times of high water, the spray from the tumbling waters often crosses the road.

- **Che-Qua-Ga Falls**

A spectacular view from the villages main street, the 160 foot falls is a major tourist stop. The heavily engineered basin and diversion channel eliminated a constant source of flooding to the village. A small park at Main and Genesee Streets provides visitors with access.

UNIQUE GEOLOGY:

The appendix on county geology covers several areas where various geologic formations have been exposed and may be closely studied. Along Rock Cabin Road there is a small “flexure”. But a few feet tall, this fault remnant looks like a little rock cabin and is on the East Side of the roadway. Several exposed cliffs can be studied in the many road cuts in the area.

SIGNIFICANT VIEWSHEDS:

Many wonderful views exist along the roads and trails of Montour. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations are virtually non-existent and a beautiful natural vista today can become a multi-story manufactured home tomorrow. ☹

- **Hospital Hill**

A picturesque view from south of Montour Falls through Queen Catharine Marsh and up Seneca Lake can be enjoyed from the parking lots of Schuyler Hospital and the Primary Care Center on Steuben Street.

- **Skyline Drive**

County Rte 8 runs N/S above the Catharine Valley from Watkins Glen to Montour Falls providing a vista of the valley, marsh, villages and lake stretching to the hills of the western townships.

RESEARCH SITES:

- **Queen Catharine Marsh**

The Wildlife Management Area provides many opportunities for flora and fauna research. Projects have been completed, are underway or are continuous in several disciplines including botany, ornithology, herpetology, aquatic biology and wildlife management. Reports are available through the DEC, the Breeding Bird and Reptile and Amphibian Atlas Projects and the U.S. Department of the Interior. The NYS Heritage Program has issued a botanical study of the WMA.

TOWN OF CATHARINE

FEDERAL AND STATE:

- **Connecticut Hill Wildlife Management Area**

A 4,716.05-acre wildlife management area controlled by the DEC. The area extends an additional 569.34 acres into the Town of Cayuta. Additional acreage is in Tompkins County. Diversity of ecosystems supports many species of flora and fauna unique to upland forest, shale cliffsides, field and meadow, pond and stream and lowland habitat areas. An extensive system of roads, trails and tracks cover the forest. The Finger Lakes Trail is routed through this area. The WMA is a popular hunting area as well as the home to a wide variety of game and non-game research.

- **Texas Hollow State Forest**

Described under Hector, a small portion of the forest is within the town of Catharine.

NATURAL FEATURES:

- **Cayuta Lake**

Located between State route 228 and County Route 6, this lake covers 360 surface acres and has 4 miles of shoreline. It is a very shallow (< 24 ft), eutrophic lake. A DEC public access area at the north end bolsters two campgrounds and three private boat launch sites. Several DEC classified wetlands surround the lake. Also known as “Little Lake”, it has a nutrient load related to bottom sediments, failing septic systems and agricultural runoff. Swimming, boating and aesthetics are impaired by the high nutrient levels and resultant waterweeds. Cayuta hosts a nice concentration of Bass.

- **Cayuta Lake Inlet and associated wetlands (Cornell Plantations Site)**

The Cornell Plantations James W. and Helene D. Allen Wetland Preserve covers 95 acres of meadow, upland forest, swamp forest and wetland shrub thicket surrounding Cayuta Inlet. This is a diverse wetland habitat that hosts uncommon flora. Globally rare fresh water sponges of the genus *Spongilla* occur along the inlet creek. (Sponges are extremely sensitive to pollutants and disturbance, but thrive in clear, clean, calcareous streams). These sponges are only found here and in Siberia!

The rare sponges host spongilla flies whose existence is entirely dependent on the sponges as a food source. The site could become imperiled in times of low water flow, which would allow pollutants from the lake to migrate upstream. Overuse by students is another potential problem in this very sensitive wetland.

- **Cayuta Lake Outlet and gorges**

The Finger Lakes Trail passes through this area. Cayuta Lake drains through a series of deep gorges with some vertical faces in excess of 150 feet. All three areas are threatened by off road ATV's. Unique geology, flora and fauna can be viewed here and the scenery is fantastic.

- **“The Gulf”** is the first of these and can be viewed from the FLT that runs along the water's edge through the wooded gorge. The gorge and trail are accessible from County Route 6 at Gulf Road. When the FLT turns uphill into Connecticut Hill, one can follow the outlet a short distance to the second site.
- **“Lost Gorge”** was the original post-glacial outlet for Cayuta Lake. Before the flood of 1935, Lost Gorge carried Cayuta Creek to the area of Hendershott Gulf. The flood caused a change in the watercourse to today's routing of the creek south to Alpine and Cayuta (anecdotal information). Lost Gorge is currently a seasonal wetland and large portions are privately owned with no public access.
- **“Hendershott Gorge”** can be reached by going a short distance overland from a hunting camp on Swan Hill Road (Connecticut Hill WMA). This deep gorge drains Swan Hill and feeds Cayuta Creek. Primordial bottomland hosts flora and fauna typical of wooded gorges with many species of fern present.

- **Hinman Swamp**

On County Route 11 this wetland is partially the result of human creation and stewardship. A bridge on CR 11 provides excellent viewing on both sides of the road. The habitat is excellent for a wide variety of aquatic and avian species. Several species of waterfowl, reptiles, amphibians and insects have been documented as breeding here. A large concentration of Green Heron breed here and the site hosts several other species during dispersal and migration.

- **Martin Nature Preserve**

Protected by the Finger Lakes Land Trust under a conservation easement, this 110-acre site is mostly wooded and highlighted by a White Oak estimated to be in excess of 300 years old. Open to the public for non-motorized activities. The FLLT currently has no conservation easements on private property in the County and only five landowners have joined the Stewardship Registry, all of these in Hector.

UNIQUE GEOLOGY:

- There are several areas within the town where cliffs are exposed for study. The gorges described above are particularly interesting and the roadways offer fantastic views of glacial work. The township is particularly rich in geologic vistas. Please see the geology appendix for more information.

SIGNIFICANT VIEWSHEDS:

Many wonderful views exist along the roads and trails of Catharine. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations are virtually non-existent and a beautiful natural vista today can become a multi-story manufactured home tomorrow. ☹

- **Stewart Road**

Off County Route 15 southwest of the village of Catharine, this roadway offers a vantage point from which a large portion of Schuyler County may be seen.

- **Beardsley Hollow Road**

Off County Route 14 southeast of the village of Catharine, this roadway offers a fantastic scenic vista off typical post-glacial terrain.

RESEARCH SITES:

- **Connecticut Hill WMA**

Temporary field biology research sites are scattered throughout the forest in both Schuyler and Tompkins Counties. These sites are related primarily to student research supported by area universities. A permanent Ruffed Grouse research area is within the WMA. Pure northern hardwoods, Hemlock and White Pine make up a highland ecology that allows research into altitude loving species.

TOWN OF CAYUTA

FEDERAL AND STATE:

- **Connecticut Hill WMA**

Described under Catharine, 569.34 acres of the WMA are within Cayuta.

- **Cliffside State Forest**

Covering most of western Cayuta, this 676.9-acre forest is managed by DEC region 7. The forest abuts the Arnot teaching forest managed by Cornell University.

NATURAL FEATURES:

- **Cayuta Creek and Wetlands/wet meadows along Route 224**

The wet meadow on either side of State Route 224 provides both a scenic vista and critical habitat for nesting and resting waterfowl. Other forms of aquatic life and fauna utilize this asset. Cayuta Creek that runs almost parallel to the roadway, is a recognized DEC trout stream that ultimately flows into the Susquehanna River to the Chesapeake Bay.

UNIQUE GEOLOGY:

There are several areas within the town where cliffs are exposed for study. Roadways offer fantastic views of glacial work. The township is rich in geologic vistas. Please see the geology appendix for more information.

SIGNIFICANT VIEWSHEDS:

Many wonderful views exist along the roads and trails of Cayuta. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations are virtually non-existent and a beautiful natural vista today can become a multi-story manufactured home tomorrow. ☹

- **Atop Irish Hill in Arnot Forest**

A gravel road climbs to the top of Irish Hill from the main entrance to Arnot Forest. The interior forest views are as spectacular as the traditional long-range views available from the top. A second road departs the summit, passes through teaching forest tracts and offers long views in yet other directions. One can see well into Horseheads and the Pennsylvania hills beyond.

RESEARCH SITES:

- **Arnot Teaching Forest and NOAA Cooperative Weather Station**

Managed by Cornell University, the forest has been the site of numerous research projects including demonstration stands, wildlife habitat, forestry practices and a functioning Maple Syrup production area. Many classes are held for both university students and the public. Remnants of old projects, CCC camps and projects and wildlife ponds are within the forest. A developed area provides housing for the classes held here. The many habitat areas and vertical elevation provides for excellent avian and botanical diversity.

The NOAA site is a remote automated precipitation gauge that seldom works.

TOWN OF DIX**FEDERAL AND STATE:**

- **Watkins Glen State Park**

A very popular tourist attraction, this 12,000-year-old gorge boasts 19 waterfalls one of which visitors can walk behind. Public access is available within the gorge. Hiking trails, camping and picnic areas are located throughout. The gorge trail follows Glen Creek from the main entrance off Franklin Street in Watkins Glen to the upper entrance, a distance of 1-½ miles easily walked on a well-maintained trail and stone steps. The Finger Lakes Trail/ North Country Scenic Trail passes through the park. The entire gorge is a wonderful study in geology. Two particularly interesting areas are the Punchbowl “Lake” and the Hidden Valley 4-H camp.

One single plant of the rare Leedy’s Roseroot (*Sedum integrifolium*, ssp. *Leedyi*) still existed in the summer of 2000. This Pleistocene relic is on the federally threatened list and a larger preserve protected by the Finger Lakes Land Trust is on Seneca Lake in Yates County.

Many botanical specimens may be viewed from the trails both within the gorge and on its rims. The greatest threat to the gorge and its biota lies in overuse by pedestrian traffic, illegal “souvenir” taking of plants and other artifacts.

- **Coon Hollow State Forest**

Also called Chambers Road SF, this 285.53-acre area is off Baker Hill Road in western Dix. The forest is managed by DEC region 8 under the Six Nations Unit Management Area plan. The entire unit is managed to enhance wildlife habitat for creatures ranging from salamanders to beavers and Wild Turkey.

- **Sugar Hill State Forest**

A very small portion (365.85 acres) of this forest lies within Dix. See Town of Orange for description.

- **Queen Catharine Marsh**

DEC manages 204 acres within Dix. See complete descriptions of this unique area under the Town of Montour.

- **Catharine Valley Trail**

This hiker/biker trail is under construction along the abandoned Conrail RR bed. Managed by the NYS Office of Parks, Recreation and Historic Preservation, the trail links the Seneca Lake waterfront to Horseheads. Within Dix, the trail bisects Queen Catharine Marsh and will have downtown and lakefront access points. The trail may introduce new threats to the sensitive marsh environment through overuse, use by motorized vehicles and human incursion into protected areas.

NATURAL FEATURES:

- **Seneca Lake**

See description under Hector. The village of Watkins Glen maintains a large recreation site (Clute Park) along the waterfront. The village also taps the lake for drinking water and feeds the effluent of its lakefront sewage treatment plant into the lake. Two salt extraction plants mine the deep salt beds under the lake and its littoral. These plants also use lake water for all phases of their operation. Large marinas on the waterfront and within the canal contribute to the lake's water quality.

- **Ga-ha-da-gane-yad Preserve**

A portion of the greenway between Watkins Glen and Montour Falls, the preserve provides open space between the western cliffside and the Queen Catharine Marsh. In 1994 the Finger Lakes Land Trust and Friends of the Queen Catharine Marsh acquired the 10.5-acre site that is not open to the public. Five seasonal watercourses tumble down the cliffside and feed a portion of the marsh. The acquisition was made to preclude development along this portion of State Route 14 and to protect the fragile nature of the wetland. The site is also called Cliffside Preserve.

UNIQUE GEOLOGY:

There are several areas within the town where cliffs are exposed for study. Roadways offer fantastic views of glacial work. The Watkins Glen State Park and the Cliffs along State Route 14 provide excellent views of many aspects of geology. Please see the geology appendix for more information.

SIGNIFICANT VIEWSHEDS:

Many wonderful views exist along the roads and trails of Dix. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations are virtually non-existent and a beautiful natural vista today can become a multi-story manufactured home tomorrow. ☹

- **Gano Road**

Approximately ¾ mile south of Cronk Road, this vantage point offers an excellent view of Seneca Lake to the north.

RESEARCH SITES:

- **Queen Catharine Marsh**

Please see details under Montour.

TOWN OF ORANGE

FEDERAL AND STATE:

- **Six Nations Unit**

This aggregate of state forests totals 21,724 acres of which 13,141 are in Orange, 97 in Reading, 449 in Tyrone and the remainder in Steuben County. The unit consists of sloping land that is 75% natural forest and 25% conifer plantation. In Schuyler, the unit is divided into seven named forests: Goundry Hill SF has 2,111.60 acres; Sugar Hill SF has 7,288.96 acres; Coon Hollow has 2,153.26 acres; Cinnamon Lake SF has 1,207.26 acres; South Bradford SF has 242.12 acres; Beaver Dams SF has 61.20 acres and Dry Run SF has 77.05 acres in Schuyler. (See Six Nations Unit Management Plan of December 1998 by NYSDEC).

The forests are managed under the multiple use concept that allows for diverse activities as well as wildlife management. Hiking, horse and snowmobile trails are accessible as are three classified CT trout streams (four miles of these support trout).

Timber and watershed management, flora and fauna protection and enhancement, extensive forms of recreational uses and simple aesthetics are goals of the management plan.

Osprey (*Pandion haliaetus*) and Northern Harrier (*Circus cyaneus*) both threatened species breed within the unit. The Pink Lady's Slipper orchid (*Cypripedium acaule*), which has specific habitat requirements is also known to occur.

A section of the Finger Lakes Trail traverses Sugar Hill, Goundry Hill and South Bradford SFs. This 15.8-mile segment was dedicated in 1992 as a segment of the North Country National Scenic trail, a 3200-mile hiking trail, which extends from New York to North Dakota.

Trespass and habitat destruction by off-road motorized vehicles, including ATVs and motorcycles, and illegal trash dumping are the major threats.

Cinnamon Lake SF has a one-mile long stone mound ATV trail that is open only to people with disabilities. Individuals qualifying may apply for a permit to ride this trail which starts on Monterey Road and straddles the county line for ¼ mile before turning south into Steuben County. Goundry Hill SF also has a similar ATV trail for people with disabilities.

NATURAL FEATURES:

- **Cinnamon Lake (Hornby Lake)**

Located in the southwest border area, this site is partly in Steuben County. Native American artifacts have reportedly been found here. A class I DEC wetland of 38.5 acres. Parking is available for 6 vehicles and a small boat launch is planned. A classified CT trout stream drains the lake.

- **Mill Pond**

Located in the northwest corner of Orange off State Route 226, the pond is relatively shallow and eutrophic. It is usually associated with Lamoka Lake for study purposes.

SIGNIFICANT VIEWSHEDS:

Many wonderful views exist along the roads and trails of Orange. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations are virtually non-existent and a beautiful natural vista today can become a multi-story manufactured home tomorrow. ☹

- **Sugar Hill Fire Tower**

A 68-foot tower built by the CCC in 1941 is located on Tower Road, off County Route 21. On a clear day one can see seven counties and four lakes from this structure which is one of the few remaining fire towers in the state. The radius of view is at least fifteen miles in all directions. In 1991 it was dedicated as an historic landmark by the American forestry Association. It is open to the public.

- **Kelly Hill Road and CR 21**

One can see Lamoka and Waneta Lakes, surrounding hills and valleys. It is listed as a viewshed by the FLLT/NCT brochures.

TOWN OF TYRONE

FEDERAL AND STATE

- **Sugar Hill State Forest and Recreation Area**

Tyrone hosts 449.24 acres of Sugar Hill State Forest, part of the Six Nations Unit managed by DEC and addressed under Orange. Trash dumping and illegal off-road vehicles remain the largest threats.

- **Waneta-Lamoka Wildlife Management Area**

DEC manages 165 acres.

- **Waneta-Lamoka Canal and associated wetlands**

At County Route 23, the canal runs under the road and joins the two lakes. DEC maintains the WMA and boat ramps on either side of the bridge. NYSEG owns the wetlands along the canal which are under permanent easement to DEC. NYSEG also owns an island and much of the littoral. The canal is approximately ½ mile long and shallow. Spatterdock (*Nuphar advena*), Arrowhead (*Sagittaria latifolia*), Arrow arum (*Peltandra virginica*) and Pickerel Weed (*Pontederia cordata*), rushes and sedges are all present. Diverse aquatic animals thrive among these plants. Possible nesting area for the threatened Prothonotary warbler (*Prothonotaria citrea*) was identified in 2000. The single greatest threat is the possibility of dredging which would destroy this habitat.

NATURAL FEATURES:

- **Tobehanna Creek, Lake and Wetlands**

A dam built at the intersection of County route 23 and State route 226 impounds the waters of Tobehanna Creek creating an extensive wetland. The area is privately owned. The impoundment is 1 ½ miles long and provides nesting area for waterfowl, amphibians, fish and aquatic reptiles. At present the owner does not allow motorized boats, which is a boon to the ecology.

- **Little Tobehanna Creek**

South of DeCamp lane between Hallock and DeCamp Roads, this privately owned wetland was dammed in the 1950s. The 60-acre wetland thus created provides excellent waterfowl and aquatic species habitat.

- **Waneta and Lamoka Lakes**

Waneta is the northernmost of the two and comprises 781 acres of relatively shallow water of less than 30 feet. About 450 residences and a Boy Scout camp dot the shoreline. Lamoka covers 835 acres and is slightly deeper at 50 feet. Only about 325 residences are on Lamoka and NYSEG owns an island and some littoral property. Both lakes are eutrophic.

Because of its recreation association, the residents have banded together to address the perceived problem of water weeds. At present the method of control remains in doubt.

Pollution from failing on-site septic systems and agriculture affects both lakes. Most residents do not use the lakes as a potable water source. Eurasian Millfoil (*Myriophyllum spicatum*) and Curly-leafed pondweed (*Potamogeton crispus*) are invasive plant species that deplete oxygen and thus endanger other aquatic species. Some illegal use of herbicides by residents has occurred since the county ceased weed harvesting operations. The county has instead concentrated on monitoring and treatment of upland sources of pollution. The nutrient loading of both lakes is severe and fish kills resulting from the anoxic conditions has been documented.

Hydrologically, this system flows south to the Susquehanna. However, a water control structure and canal exist at the northern end of Waneta, which allowed NYSEG to drain water through the canal and produce hydroelectric power. The waters then proceed to join Keuka Lake thus changing the watershed to the northern flowing St. Lawrence. At this time, the power plant and canal are proposed for abandonment. Acquisition by the DEC and sealing of the dam would be beneficial to the lake ecology and long term protection. The situation is in negotiations with major proposals including the abandonment of the power plant, modification of the water control structures to prevent flooding while maintaining flow, and transferring lands to DEC. A major stumbling block is water level management, a function currently performed by the system. The Bradford Dam at the south end of the system at Lamoka is included in the abandonment plan although NYSEG would continue to operate gates when needed and maintain the dam. Some water would always continue to flow north through the power canal also known as "Mud Creek". A complete study including environmental impact studies is available in the Watkins Glen library.

UNIQUE GEOLOGY:

Please see the geology section of the appendix for a description of the geological significance of Tyrone and Waneta and Lamoka Lake.

SIGNIFICANT VIEWSHEDS:

Many wonderful views exist along the roads and trails of Tyrone. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations are virtually non-existent and a beautiful natural vista today can become a multi-story manufactured home tomorrow. ☹

- **Top of Mud Lake Road (County Route 23)**

This road crests Huey Hill in eastern Tyrone and presents a long but gentle descent into the village. The view encompasses both lakes and the western hills. Other spots along this road provide slightly different views. At Sebring Hill, one can see southwest down the valley in which Lamoka Lake and Mill Pond are located. These drain into the Cohocton River at Savona. The view provided is one of the best in which to study an example of a geological "through valley".

RESEARCH SITES:

- **Bradford Pond / Waneta-Lamoka Canal and Lakes**

The great diversity of aquatic life as well as the science of monitoring water quality has been conducted by students of the Bradford Central School from 1994 through 2000. There is a threat of this program being discontinued by the school administration. If so, it would be harmful to this long- term study. As of April 2001, the study has not been approved to continue.

This excellent educational opportunity provided long-term monitoring of various components of water chemistry and aquatic biology and provided students with real-world, hands-on experience in field biology.

TOWN OF READING

FEDERAL AND STATE:

- **Sugar Hill State forest and Recreation Area**

A 971.76 acre portion of the forest resides in Reading. Please see Orange for details. A portion of the Finger Lakes Trail/ North Country Scenic Trail traverses this portion of the forest.

- **Seneca Lake**

Please see discussion under Hector. A special note is required for Reading as it has enacted an insightful Land Use Regulation. Basically, the legislation provides for a three-tiered review of proposed projects. Within the most stringent category, all projects along the Seneca Lake littoral, east of State Route 14, are subject to special review and environmental impact study. This protection is also afforded to proposed development within fifty feet of all major waterways within the township.

NATURAL FEATURES:

- **Big Hollow Gorge**

Also called “Big Gully”, the gorge has several waterfalls cascading from Irelandville to Seneca Lake. It is privately owned and possesses the many ecological qualities noted for other lake gorges.

UNIQUE GEOLOGY:

Please see the geology section of the appendix for a description of the geological significance of features in Reading and Seneca Lake.

SIGNIFICANT VIEWSHEDS:

Many wonderful views exist along the roads and trails of Reading. While only a few of the most spectacular are listed herein, all of the views that attract visitors to Schuyler County are subject to immediate and irreversible damage caused by development. Land use regulations in Reading do not protect viewsheds at the present time.

- **Altay Road between Cross Road and County Route 27**

From a hilltop this road provides a panoramic vista of forested hills and Seneca Lake.

MAJOR RECOMMENDATIONS

1. The Texas Hollow Natural Area and Queen Catharine Marsh are owned by DEC. The County should designate both as Critical Environmental Areas under SEQRA (6 NYCRR Part 617.14) and support further marsh and riparian land acquisition or conservation easements. Rock Cabin Road should be designated a handicapped accessible scenic foot trail and Natural Area.
2. The Cayuta Inlet, owned in part by Cornell Plantations, can be enhanced and protected by encouraging ecologically sound agricultural, road maintenance and septic system standards such as buffer zones on all streams and field edges (a USDA cost sharing program) and vegetative remediation of road ditches (training available to Towns and County through Cornell). A rigorous septic inspection system and standards must be maintained. Recreational sources of water pollution, such as gas and oil from two-stroke engines, should be curtailed by countywide legislation and educational programs.
3. The Montour Falls Biodiversity Area should be protected through conservation easements or state acquisition. This area should be declared a Natural Area and scientific investigation encouraged.
4. The County must encourage the USDA and Soil and Water Conservation District to place the highest priority on programs that protect our watersheds through vegetated buffer zones. Our gorges should be further protected by creation of a 200 foot vegetated buffer zone, free of all development, along every gorge.
5. The County should encourage the Chamber of Commerce to initiate actions favorable to ecotourism. The lack of land use planning, buffer and setback regulations in our townships encourages the destruction of the very viewsheds and ecology we need to preserve. A device as simple as a self-guided tour pamphlet and appropriate unobtrusive signage at stopping points would create a countywide Eco-tour as well as instilling local pride in our fabulous views; it may also inhibit development that blocks such views.
6. While the above actions would significantly enhance the County's ecology at minimum cost, we must further support regional efforts as embodied in the Seneca Lake Pure Waters, SLAP-5 and Chesapeake Bay plans.
7. The biological diversity of Schuyler County is immense and understudied. We must take advantage of our synergistic relationship with Corning Community College and forge research partnerships with other area universities to completely map the biota of our County.
8. Many other site-specific threats were identified herein and should be dealt with on a case basis.

Rare Native Plants Of Schuyler County
(Updated December 2003)

Voucher specimens in the state museum

Eaton's quillwort	<i>Isoetes echinospora x engelmannii</i>
Marsh horsetail	<i>Equisetum palustre</i> (not found in 2000)
Goldenseal	<i>Hydrastis canadensis</i> (commercially exploited)
Spreading globeflower	<i>Trollius laxus</i> (historic QCM, not found 1998)
Northern tansy mustard	<i>Descurainia pinnata ssp brachycarpa</i>
Blueberry	<i>Vaccinium angustifolium x corymbosum</i>
Birds' eye (Canadian) primrose	<i>Primula mistassinica</i>
Leedy's roseroot	<i>Sedum integrifolium ssp Leedyi</i> (one plant in 2000)
Panic grass	<i>Panicum leibergii</i> (historic QCM, not found 1998)
Nodding wild onion	<i>Allium cernuum</i>

Recent discoveries

Little bluestem	<i>Andropogon scoparius</i> (prairie sp.)
Yellow mountain saxifrage	<i>Saxifraga aizoides</i>
Butterwort	<i>Pinguicula vulgaris</i> (insectivorous)

FIELD CHECKLIST OF SCHUYLER COUNTY BIRDS

*Breeds Schuyler County
 **Breeds Queen Catharine Marsh
 E=endangered; T=threatened;
 SC=special concern; H=historical; R=rare
 Year: _____ Date: _____ Obs: _____

Locations: _____

LOONS & GREBES

- ___ Red Throated Loon
- ___ Common Loon (SC)
- ___ Pied-billed Grebe** (T)
- ___ Horned Grebe
- ___ Red-necked Grebe
- ___ Eared Grebe (R)

CORMORANTS & HERONS

- ___ Double-crested Cormorant
- ___ American Bittern** (SC)
- ___ Least Bittern** (T)
- ___ Great Blue Heron*
- ___ Great Egret
- ___ Cattle Egret (R)
- ___ Green Heron**
- ___ Black-crowned Night Heron**
- ___ Glossy Ibis (H)

SWANS, GEESE & DUCKS

- ___ Tundra Swan
- ___ Mute Swan
- ___ Snow Goose
- ___ Brant
- ___ Canada Goose**
- ___ Wood Duck**
- ___ Green-winged Teal
- ___ American Black Duck**
- ___ Mallard**
- ___ Northern Pintail
- ___ Blue-winged Teal**
- ___ Northern Shoveler
- ___ Gadwall
- ___ American Wigeon**
- ___ Eurasian Wigeon (R)
- ___ Canvasback
- ___ Redhead
- ___ Ring-necked Duck
- ___ Greater Scaup
- ___ Lesser Scaup
- ___ Common Eider (R)
- ___ Harlequin Duck (R)
- ___ Long-tailed Duck (Oldsquaw)
- ___ Black Scoter
- ___ Surf Scoter
- ___ White-winged Scoter
- ___ Common Goldeneye
- ___ Bufflehead
- ___ Hooded Merganser**
- ___ Common Merganser**
- ___ Red-breasted Merganser
- ___ Ruddy Duck

VULTURES

- ___ Black Vulture (R)
- ___ Turkey Vulture

EAGLES & HAWKS

- ___ Osprey (SC)
- ___ Mississippi Kite (R)
- ___ Bald Eagle (T)
- ___ Golden Eagle (E)
- ___ Northern Harrier* (T)
- ___ Sharp-shinned Hawk* (SC)
- ___ Cooper's Hawk* (SC)
- ___ Northern Goshawk* (SC)

- ___ Red-shouldered Hawk* (SC)
- ___ Broad-winged Hawk*
- ___ Swainson's Hawk (R)
- ___ Red-tailed Hawk**
- ___ Rough-legged Hawk

FALCONS

- ___ American Kestrel**
- ___ Merlin
- ___ Peregrine Falcon (E)
- ___ Gyrfalcon (R)

GROUSE, TURKEY & QUAIL

- ___ Ring-necked Pheasant**
- ___ Ruffed Grouse**
- ___ Wild Turkey**
- ___ Northern Bobwhite (R)

RAILS, MOORHEN & COOT

- ___ King Rail (R) (T)
- ___ Virginia Rail**
- ___ Sora**
- ___ Common Moorhen** (R)
- ___ American Coot**
- ___ Sandhill Crane (R)

PLOVERS

- ___ Black-bellied Plover
- ___ American Golden - Plover
- ___ Semiplumated Plover
- ___ Killdeer**

SANDPIPERS

- ___ American Avocet (H)
- ___ Greater Yellowlegs
- ___ Lesser Yellowlegs
- ___ Solitary Sandpiper
- ___ Willet (H)
- ___ Spotted Sandpiper**
- ___ Upland Sandpiper (R) (T)
- ___ Ruddy Turnstone
- ___ Red Knot
- ___ Sanderling
- ___ Semipalmated Sandpiper
- ___ Least Sandpiper
- ___ White-rumped sandpiper (R)
- ___ Baird's Sandpiper (R)
- ___ Pectoral Sandpiper
- ___ Dunlin
- ___ Short-billed Dowitcher
- ___ Long-billed Dowitcher
- ___ Common Snipe**
- ___ American Woodcock**
- ___ Red-necked Phalarope (R)
- ___ Red Phalarope (R)

GULLS & TERNS

- ___ Laughing Gull (R)
- ___ Franklin's Gull (R)
- ___ Bonaparte's Gull
- ___ Ring-billed Gull*
- ___ California Gull (R)
- ___ Herring Gull*
- ___ Iceland Gull (R)
- ___ Lesser Black-backed Gull
- ___ Glaucous Gull (R)
- ___ Great Black-backed Gull
- ___ Caspian Tern
- ___ Common Tern (T)
- ___ Black Tern (H) (E)

DOVES & CUCKOOS

- ___ Rock Dove*
- ___ Mourning Dove**
- ___ Monk Parakeet (H)
- ___ Black-billed Cuckoo**
- ___ Yellow-billed Cuckoo**

OWLS

- ___ Barn Owl*
- ___ Eastern Screech Owl*

- ___ Great Horned Owl**
- ___ Snowy Owl
- ___ Barred Owl*
- ___ Long-eared Owl* (R)
- ___ Short-eared Owl (E) (R)
- ___ Northern Saw-whet Owl

GOATSUCKERS

- ___ Common Nighthawk (SC)
- ___ Whip-poor-will (SC) (R)

SWIFT & HUMMINGBIRD

- ___ Chimney Swift*
- ___ Ruby-throated Hummingbird**

KINGFISHER

- ___ Belted Kingfisher**

WOODPECKERS

- ___ Red-headed Woodpecker (SC) (R)
- ___ Red-bellied Woodpecker**
- ___ Yellow-bellied Sapsucker*
- ___ Downy Woodpecker**
- ___ Hairy Woodpecker**
- ___ Black-backed Woodpecker (H)
- ___ Northern Flicker**
- ___ Red X Yellow Shafted Flicker (R)
- ___ Pileated Woodpecker*

FLYCATCHERS

- ___ Olive-sided Flycatcher
- ___ Eastern Wood Pewee**
- ___ Yellow-bellied Flycatcher
- ___ Acadian Flycatcher*
- ___ Alder Flycatcher*
- ___ Willow Flycatcher**
- ___ Least Flycatcher**
- ___ Eastern Phoebe**
- ___ Great Crested Flycatcher**
- ___ Western Kingbird (H)
- ___ Eastern Kingbird**

LARKS & SWALLOWS

- ___ Horned Lark* (SC)
- ___ Purple Martin*
- ___ Tree Swallow*
- ___ Northern Rough-winged Swallow**
- ___ Bank Swallow*
- ___ Cliff Swallow*
- ___ Barn Swallow**

JAYS & CROWS

- ___ Blue Jay**
- ___ American Crow**
- ___ Fish Crow
- ___ Common Raven*

CHICKADEES & TITMOUSE

- ___ Black-capped Chickadee**
- ___ Boreal Chickadee (H)
- ___ Eastern Tufted Titmouse

NUTHATCHES & CREEPER

- ___ Red-breasted Nuthatch*
- ___ White-breasted Nuthatch**
- ___ Brown Creeper*

WRENS

- ___ Carolina Wren**
- ___ House Wren**
- ___ Winter Wren*
- ___ Sedge Wren** (T)
- ___ Marsh Wren**

KINGLETS & GNATCATCHER

- ___ Golden-crowned Kinglet*
- ___ Ruby-crowned Kinglet
- ___ Blue-gray Gnatcatcher**

THRUSHES & MIMIDS

- ___ Eastern Bluebird**
- ___ Veery*
- ___ Gray-cheeked Thrush
- ___ Bicknell's Thrush (R) (SC)
- ___ Swainson's Thrush
- ___ Hermit Thrush*

- Wood Thrush**
- American Robin**
- Gray Catbird**
- Northern Mockingbird**
- Brown Thrasher*
- WAXWING & PIPIT**
- American Pipit
- Cedar Waxwing**
- SHRIKES & STARLING**
- Northern Shrike
- Loggerhead Shrike (R) (E)
- European Starling**
- VIREOS**
- White-eyed vireo (R)
- Blue-headed Vireo*
- Yellow-throated Vireo**
- Warbling Vireo**
- Philadelphia Vireo
- Red-eyed Vireo**
- WARBLERS**
- Blue-winged Warbler**
- Golden-winged Warbler* (SC)
- Lawrence's Warbler Hybrid
- Brewster's Warbler Hybrid
- Tennessee Warbler
- Orange-crowned Warbler
- Nashville Warbler*
- Northern Parula**
- Yellow Warbler**
- Chestnut-sided Warbler**
- Magnolia Warbler**
- Cape May Warbler
- Black-throated Blue Warbler**
- Yellow-rumped Warbler*
- Black-throated Green Warbler*
- Blackburnian Warbler
- Yellow-throated Warbler (R)
- Pine warbler*
- Prairie Warbler*
- Western Palm Warbler
- Yellow Palm Warbler
- Bay-breasted Warbler
- Blackpoll Warbler
- Cerulean Warbler (SC)
- Black-and-White Warbler*
- American Redstart**
- Prothonotary Warbler*
- Worm-eating Warbler (R)
- Ovenbird**
- Northern Waterthrush*
- Louisiana Waterthrush*
- Kentucky Warbler (R)

- Connecticut Warbler
- Mourning Warbler*
- Common Yellowthroat**
- Hooded Warbler*
- Wilson's Warbler
- Canada Warbler*
- Yellow-breasted Chat (SC) (R)
- TANAGER**
- Scarlet Tanager**
- GROSBEAKS & BUNTINGS**
- Northern Cardinal**
- Rose-breasted Grosbeak**
- Indigo Bunting**
- Dickcissel (R)
- TOWHEE AND SPARROWS**
- Eastern Towhee**
- American Tree Sparrow
- Chipping Sparrow**
- Clay-colored Sparrow (R)
- Field sparrow*
- Vesper Sparrow* (SC)
- Savannah Sparrow*
- Grasshopper Sparrow* (SC)
- Henslow's Sparrow* (T)
- Fox Sparrow
- Song Sparrow**
- Lincoln's Sparrow*
- Swamp Sparrow**
- White-throated Sparrow**
- White-crowned Sparrow
- Gambel's White-crowned Sparrow
- (R)
- Eastern X Gambel's W.C.Sparrow
- (R)
- Dark-eyed Junco**
- Lapland Longspur
- Snow Bunting
- BLACKBIRDS & ORIOLES**
- Bobolink*
- Red-winged Blackbird**
- Eastern Meadowlark*
- Yellow-headed Blackbird (R)
- Rusty Blackbird
- Brewer's Blackbird
- Common Grackle**
- Brown-headed Cowbird**
- Orchard Oriole*
- Baltimore Oriole**
- FINCHES**
- Pine Grosbeak
- Purple Finch**
- House Finch**

- Red Crossbill (R)
- White-winged Crossbill (R)
- Common Redpoll
- Hoary Redpoll (R)
- Pine Siskin*
- American Goldfinch**
- Evening Grosbeak
- OLD WORLD SPARROW**
- House Sparrow**
- _____ TOTAL SPECIES (of 279)
- _____ INDIVIDUALS
- NOTES / ADDITIONS**

As of January 2001, Schuyler County has documented 272 species, 6 forms and 7 historical species. 141 species breed in the county. Data is from Jack Brubaker, John Gregoire and the Kestrel Haven Avian Migration Observatory, which publishes this checklist. **Please send documented reports of any additions in species or breeding status to: Kestrel Haven AMO, 5373 Fitzgerald Road, Burdett, NY 14818-9626**

Amphibians and Reptiles Of Schuyler County

(Updated December 2003)

32 species 3 are (T) Threatened

Salamanders (12)

Jefferson Salamander complex
Jefferson Salamander (T)
Spotted Salamander
Red-spotted Newt
Northern Dusky Salamander
Mountain Dusky Salamander
Redback Salamander
Northern Slimy Salamander
Northern Spring Salamander
Northern Red Salamander
Northern Two-lined Salamander
Longtail Salamander

Ambystoma jeffersonianum x laterale
Ambystoma jeffersonianum
Ambystoma maculatum
Notophthalmus v. viridescens
Desmognathus fuscus
Desmognathus ochrophaeus
Plethodon cinereus
Plethodon glutinosus
Gyrinophilus p. porphyriticus
Pseudotriton r. ruber
Eurycea bislineata
Eurycea l. longicauda

Frogs (8)

Eastern American Toad
Northern Gray Treefrog
Northern Spring Peeper
Bullfrog
Green Frog
Wood Frog
Northern Leopard Frog
Pickerel Frog

Bufo a. americanus
Hyla versicolor
Pseudacris c. crucifer
Rana catesbeiana
Rana clamitans melanota
Rana sylvatica
Rana pipiens
Rana palustris

Turtles (4)

Common Snapping Turtle
Spotted Turtle (T)
Wood Turtle (T)
Midland Painted Turtle

Chelydra s. serpentina
Clemmys guttata
Clemmys insculpta
Chrysemys picta marginata

Lizards (1)

Northern Coal Skink

Eumeces a. anthracinus

Snakes (7)

Northern Water Snake
Northern Brown Snake
Northern Redbelly Snake
Common Garter Snake
Eastern Ribbon Snake
Northern Ringneck Snake
Smooth Green Snake
Eastern Milk Snake

Nerodia s. sipedon
Storeria d. dekayi
Storeria o. occipitomaculata
Thamnophis sirtalis
Thamnophis sauritus
Diadophis punctatus edwardsii
Liochlorophis vernalis
Lampropeltis t. triangulum

Mammals of Schuyler County

Virginia Opossum	<i>Didelphis virginians</i>
Masked Shrew	<i>Sorex cinerus</i>
Smoky Shrew	<i>Sorex fumeus</i>
Northern Short-tailed Shrew	<i>Blarina brevicauda</i>
Hairy-tailed Mole	<i>Parascalops breweri</i>
Star-nosed Mole	<i>Condylura cristata</i>
Little Brown Bat	<i>Myotis lucigugus</i>
Keen's Bat	<i>Myotis keenii</i>
Big Brown Bat	<i>Eptesicus fuscus</i>
Coyote	<i>Canis latrans</i>
Red Fox	<i>Vulpes vulpes</i>
Gray Fox	<i>Urocyon cinereoargenteus</i>
Black Bear	<i>Ursus americanus</i>
Human	<i>Homo sapiens</i>
Raccoon	<i>Procyon lotor</i>
Short-tailed Weasel (Ermine)	<i>Mustela ermina</i>
Long-tailed Weasel	<i>Mustella frenata</i>
Mink	<i>Mustela vison</i>
Striped Skunk	<i>Mephitis mephitis</i>
Bobcat	<i>Lynx rufus</i>
White-tailed Deer	<i>Odocoileus virginianus</i>
Eastern Chipmunk	<i>Tamias striatus</i>
Woodchuck	<i>Marmota morax</i>
Fox Squirrel	<i>Sciurus niger</i>
Gray Squirrel	<i>Sciurus carolinensis</i>
Red Squirrel	<i>Tamiasciurus hudsonicus</i>
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>
Beaver	<i>Castor canadensis</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
White-footed Mouse	<i>Peromyscus leucopus</i>
Southern Red-backed Vole	<i>Clethrionokys gapperi</i>
Meadow Vole	<i>Microtus pennsylvanicus</i>
Muskrat	<i>Ondatra Zibethicus</i>
Meadow Jumping Mouse	<i>Zapus hudsonius</i>
Woodland Jumping Mouse	<i>Napaeozapus ingignis</i>
Norway Rat	<i>Rattus norvegicus</i>
Allegheny Wood Rat (E)	<i>Neotoma magister</i>
Porcupine	<i>Erethizon dorsatum</i>
Eastern Cottontail	<i>Sylvilagus floridanus</i>

Tree List For Schuyler County

Tree species observed in Schuyler by GB as of date shown below. List is continually under revision. Completeness not guaranteed. Some more common woody shrubs found in the understory are included. Source for natural range is "Trees of the Central Hardwood Forest of NA, Leopold, McComb and Muller, 1998. Updated:8/10/00

Observed	Common Name	Latin Name	Native To SC	Comment
Y	Apple	Malus sp.		
Y	Arborvitae	Thuja occidentalis		
Y	Ash, Black	Fraxinus nigra	Y	
	Ash, Green	Fraxinus pennsylvanica	Y	
Y	Ash, White	Fraxinus americana	Y	
Y	Aspen, Big Toothed	Populus. grandidentata	Y	
Y	Aspen, Quaking	Populus tremuloides	Y	
Y	Basswood	Tilia americana	Y	
Y	Beech	Fagus grandifolia	Y	
Y	Birch, black	Betula lenta	Y	
Y	Birch, gray	Betula populifolia	Y	
Y	Birch, white	Betula papyrifera	Y	
Y	Birch, yellow	Betula lutea	Y	
Y	Box Elder	Acer negundo	Y	
Y	Buckthorn	Rhamnus cathartica		
Y	Butternut	Juglans cinerea	Y	
Y	Catalpa	Catalpa speciosa		
Y	Cherry, Black	Prunus serotina	Y	
Y	Cherry, Pin	P. pennsylvanica	Y	
Y	Cherry, Sweet	P. sp.		
Y	Chestnut, American	Castanea dentata	Y	
Y	Chokecherry	Prunus virginiana	Y	
Y	Cottonwood	Populus deltoides	Y	
Y	Cucumber	Magnolia acuminata	Y	
Y	Dogwood	Cornus florida	Y	
Y	Elm, American	Ulmus americana	Y	
Y	Hawthorn	Crataegus sp.	Y	
Y	Hackberry	Celtis occidentalis	Y	
Y	Hemlock, Eastern	Tsuga canadensis	Y	
Y	Hickory, Bitternut	Carya. Cordiformis	Y	
Y	Hickory, Pignut	C. glabra		
Y	Hickory, Red	C. Ovalis	Y	
Y	Hickory, Shagbark	Carya ovata	Y	
Y	Hophornbeam (Ironwood)	Ostrya virginiana	Y	
Y	Hornbeam (Musclewood)	Carpinus caroliniana	Y	
Y	Larch, American (Tamarack)	Larix laricina	Y	
Y	Larch, European	Larix decidua		
Y	Locust, Black	Robinia pseudoacacia		
Y	Maple, Red	Acer rubrum	Y	
Y	Maple, Silver	Acer sacharinum	Y	
Y	Maple, Striped	Acer pennsylvanicum	Y	
Y	Maple,Sugar	Acer saccharum	Y	
Y	Mountain Ash	Sorbus americana	Y	
Y	Oak, Black	Q. velutina	Y	
Y	Oak, Burr	Q. macrocarpa	Y	

Observed	Common Name	Latin Name	Native To SC	Comment
Y	Oak, chestnut	Quercus prinus	Y	
Y	Oak, Pin	Q. palustris		along SR14 by WG golf course.
Y	Oak, Red	Quercus rubra	Y	
Y	Oak, Scarlet	Q coccinea	Y	
Y	Oak, swamp white	Q. bicolor	Y	
Y	Oak, White	Q. Alba	Y	
Y	Pine, Pitch	P. rigida	Y	SE side Mud Lake Rd near CR 28 inter.
Y	Pine, Red	P. Resinosa	Y	
Y	Pine, Scotch	P. Sylvestris		
Y	Pine, White	Pinus strobus	Y	
Y	Plum,	Prunus sp.		in hedgerows, esp. in FLNF ; may be domestic escape.
Y	Poplar, Lombardy	Populus sp.		
Y	Sassafras	Sassafras albidum	Y	
Y	Shadbush	Amelanchier arborea	Y	
Y	Spruce, Norway	Pices abies		
Y	Spruce, White	Picea glauca		
Y	Sycamore	Platanus occidentalis	Y	
Y	Tuliptree (Yellow Poplar)	Liriodendron tulipifera	Y	
Y	Walnut, Black	Juglans nigra		
Y	Witchhazel	Hammamelis virginiana	Y	

Butterfly List for Schuyler County

The following is the Schuyler County Butterfly list as published by the USGS Northern Prairie Wildlife Research Center with additions from the records of Robert Dirig, Sue Gregoire , and Charles Smith as of January 2003. Documented additions should be directed to Harry Pavulaan (USGS) at butterflyreports@hotmail.com .

Skippers (Hesperiidae)

Silver-spotted Skipper	<i>Epargyreus clarus</i>
Hoary Edge	<i>Achalarus lyciades</i>
Northern Cloudywing	<i>Thorybes pylades</i>
Dreamy Duskywing	<i>Erynnis icelus</i>
Juvenal's Duskywing	<i>Erynnis juvenalis</i>
Mottled Duskywing	<i>Erynnis martialis</i>
Columbine Duskywing	<i>Erynnis lucilius</i>
Wild Indigo Duskywing	<i>Erynnis baptisiae</i>
Common Sootywing	<i>Pholisora catullus</i>
Least Skipper	<i>Ancyloxypha numitor</i>
European Skipper	<i>Thymelicus lineola</i>
Leonard's Skipper	<i>Hesperia leonardus</i>
Checkered Skipper	<i>Pyrgus communis</i>
Peck's Skipper	<i>Polites peckius</i>
Tawny-edged Skipper	<i>Polites themistocles</i>
Crossline Skipper	<i>Polites origenes</i>
Long Dash	<i>Polites mystic</i>
Dion Skipper	<i>Euphyes dion</i>
Dun Skipper	<i>Euphyes vestris metacomet</i>
Two-spotted Skipper	<i>Euphyes bimacula</i>
Little Glassywing	<i>Pompeius verna</i>
Northern Broken Dash	<i>Wallengrenia egeremet</i>
Hobomok Skipper	<i>Poanes hobomok</i>
Broad-winged Skipper	<i>Poanes viator</i>
Delaware Skipper	<i>Anatryton logan</i>
Pepper and Salt Skipper	<i>Amblyscirtes hegon (=samoset)</i>
Common Roadside Skipper	<i>Amblyscirtes vialis</i>

Swallowtails (Papilionidae)

Black Swallowtail	<i>Papilio polyxenes asterius</i>
Eastern Tiger Swallowtail	<i>Papilio glaucus</i>
Spicebush Swallowtail	<i>Papilio troilus</i>

Whites & Sulphurs (Pieridae)

West Virginia White	<i>Pieris virginiensis</i>
Cabbage White	<i>Pieris rapae</i>
Clouded Sulphur	<i>Colias philodice</i>
Alfalfa Butterfly (Orange sulphur)	<i>Colias eurytheme</i>
Little Yellow	<i>Eurema lisa</i>

Gossamer-winged Butterflies (Lycaenidae)

Coppers (Subfamily Lycaeninae)

American Copper	<i>Lycaena phlaeus americana</i>
Bronze Copper	<i>Lycaena hyllus</i>
Bog Copper	<i>Lycaena epixanthe</i>
Harvester	<i>Feniseca tarquinius</i>

Hairstreaks (Subfamily Theclinae)

Coral Hairstreak	<i>Satyrium [Harkenclenus] titus</i>
Banded Hairstreak	<i>Satyrium calanus falacer</i>
Hickory Hairstreak	<i>Satyrium caryaevorum</i>
Acadian Hairstreak	<i>Satyrium acadica</i>
Striped Hairstreak	<i>Satyrium liparops</i>
Oak Hairstreak	<i>Fixsenia favonius</i>
Brown Elfin	<i>Callophrys augustinus</i>
Eastern Pine Elfin	<i>Callophrys niphon</i>
Juniper (Olive) Hairstreak	<i>Callophrys gryneus</i>
Gray Hairstreak	<i>Strymon melinus</i>
Early Hairstreak	<i>Eroria laeta</i>

Blues (Subfamily Polyommatae)

Eastern Tailed Blue	<i>Everes comyntas</i>
Spring Azure	<i>Celastrina ladon</i>
Summer Azure	<i>Celastrina ladon neglecta</i>

Brush-footed Butterflies (Nymphalidae)

Pearl Crescent	<i>Phyciodes tharos</i>
Northern Pearl Crescent	<i>Phyciodes selenis</i>
Great Spangled Fritillary	<i>Speyeria cybele</i>
Aphrodite Fritillary	<i>Speyeria aphrodite</i>
Silver-bordered Fritillary	<i>Boloria selene</i>
Meadow Fritillary	<i>Boloria bellona</i>
Silvery Checkerspot	<i>Chlosyne nycteis</i>
Harris' Checkerspot	<i>Chlosyne harrisii</i>
Baltimore Checkerspot	<i>Euphydryas phaeton</i>
Mourning Cloak	<i>Nymphalis antiopa</i>
Compton Tortoiseshell	<i>Nymphalis vau-album</i>
Milbert's Tortoiseshell	<i>Nymphalis milberti</i>
Question Mark	<i>Polygonia interrogationis</i>
Eastern Comma	<i>Polygonia comma</i>
Green Comma	<i>Polygonia faunus</i>
Gray Comma	<i>Polygonia progne</i>
American Painted Lady	<i>Vanessa virginiensis</i>
Painted Lady	<i>Vanessa cardui</i>
Common Buckeye	<i>Junonia coenia</i>
Red Admiral	<i>Vanessa atalanta</i>
Red-spotted Purple	<i>Limenitis arthemis astyanax</i>
Banded Purple or White Admiral	<i>Limenitis arthemis arthemis</i>
Viceroy	<i>Limenitis archippus</i>

Snouts (Libytheidae)

American Snout	<i>Libytheana bachmanii</i>
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Emperors (Apaturidae)

Hackberry Butterfly	<i>Asterocampa celtis</i>
Tawny Emperor	<i>Asterocampa clyton</i>

Wood Nymphs and Satyrs (Satyridae)

Northern Pearly Eye	<i>Enodia anthedon</i>
Common Wood Nymph	<i>Cercyonis pegala</i>
Eyed Brown	<i>Satyrodes eurydice</i>
Appalachian Brown	<i>Satyrodes appalachia</i>
Little Wood Satyr	<i>Megisto cymela</i>
Common Ringlet	<i>Coenonympha tullia</i>

Milkweed Butterflies (Danaiidae)

Monarch	<i>Danaus plexippus</i>
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Kestrel Haven Precipitation Data
NOAA Station 30-5233-10, Mecklenburg 4 SW, MECN6

Last updated 1/13/2004

Year	J	F	M	A	M	J	J	A	S	O	N	D	Total
1987	3.15	0.66	2.21	4.38	1.25	4.00	3.35	2.38	4.70	1.90	1.68	1.84	31.50
1988	1.86	2.00	3.09	2.60	2.33	1.24	4.40	2.78	1.58	2.78	3.02	1.95	29.63
1989	0.95	2.67	3.90	1.54	8.50	5.23	3.05	2.78	5.05	3.83	2.25	2.65	42.40
1990	2.30	4.55	2.00	3.63	5.53	2.10	3.58	2.95	4.75	6.73	3.70	5.35	47.17
1991	3.60	2.10	3.15	3.36	1.71	1.43	4.78	2.99	2.99	2.54	3.65	3.51	35.81
1992	2.55	2.75	5.10	2.34	3.58	1.88	7.65	4.68	4.34	2.49	3.18	3.86	44.40
1993	2.57	2.38	6.01	7.78	1.57	3.24	2.74	2.96	4.29	3.03	3.59	2.42	42.58
1994	3.38	2.55	6.00	3.35	3.07	5.37	3.35	8.70	3.94	1.25	4.70	2.33	47.99
1995	2.36	2.17	1.44	2.01	1.92	2.38	4.13	1.91	2.02	6.52	3.73	1.76	32.35
1996	3.87	1.40	2.70	6.04	4.98	5.12	3.56	2.47	5.91	4.17	6.90	3.46	50.58
1997	0.69	2.09	3.52	1.48	2.94	4.44	3.01	2.38	5.36	1.03	6.17	3.72	36.83
1998	3.69	4.18	3.19	4.63	4.57	4.94	2.59	2.50	3.32	2.17	1.28	1.15	38.21
1999	4.18	1.52	4.54	2.43	1.24	1.82	2.66	2.94	6.79	2.01	2.85	1.71	34.69
2000	3.71	2.89	2.33	5.37	5.37	4.99	1.79	2.72	2.54	3.39	1.84	1.21	38.15
2001	1.08	0.94	6.47	0.86	2.42	3.79	2.81	4.26	3.98	2.17	2.75	1.79	33.32
2002	2.16	1.24	2.20	3.46	4.66	4.74	2.01	1.48	4.25	3.30	3.11	3.45	36.06
2003	2.14	2.08	2.10	1.98	4.70	3.01	7.32	2.38	5.71	3.91	3.72	3.54	42.59
2004													
STATS													
Year	J	F	M	A	M	J	J	A	S	O	N	D	Total
AVG	2.60	2.25	3.53	3.37	3.55	3.51	3.69	3.13	4.21	3.13	3.42	2.69	39.07
SD	1.07	1.02	1.57	1.82	1.96	1.47	1.63	1.62	1.40	1.58	1.46	1.14	6.18
HIGH	4.18	4.55	6.47	7.78	8.50	5.37	7.65	8.70	6.79	6.73	6.90	5.35	50.58
LOW	0.69	0.66	1.44	0.86	1.24	1.24	1.79	1.48	1.58	1.03	1.28	1.15	29.63

Year	SNOW												Total	SEASON
	J	F	M	A	M	J	J	A	S	O	N	D		
1991	31.00	11.00									14.00	15.00	71.00	115.00
1992	32.50	20.50	33.00								7.75	24.00	117.75	139.75
1993	14.75	23.25	54.50	15.50						12.00	4.75	22.00	146.75	171.00
1994	43.00	35.00	50.75	3.50							8.00	7.50	147.75	64.00
1995	17.75	19.25	8.00	3.50							32.50	26.25	107.25	132.00
1996	24.25	7.00	26.00	11.00	5.00						17.50	12.50	103.25	72.00
1997	11.50	10.00	16.75	3.75						0.50	18.00	40.50	101.00	105.00
1998	10.00	12.25	23.75									5.00	51.00	90.00
1999	29.50	24.00	30.50	1.00							6.50	9.50	101.00	91.25
2000	49.00	17.00	7.00	2.25						3.00	7.75	19.50	105.50	112.75
2001	14.00	10.50	57.50	0.50								7.30	89.80	50.30
2002	15.50	10.50	13.50	2.50	1.00					T	17.00	34.00	94.00	
2003	29.50	23.00	15.50	9.50						0.30	5.70	36.00	119.50	
2004														
STATS														
Year	J	F	M	A	M	J	J	A	S	O	N	D	Total	SEASON
AVG	24.79	17.17	28.06	5.30	3.00					3.95	12.68	19.93	104.27	105.96
HIGH	49.00	35.00	57.50	15.50	5.00	0.00	0.00	0.00	0.00	12.00	32.50	40.50	147.75	171.00
LOW	10.00	7.00	7.00	0.50	1.00	0.00	0.00	0.00	0.00	0.30	4.75	5.00	51.00	50.30

DAMSELFLIES AND DRAGONFLIES OF SCHUYLER COUNTY

(Revised January 2004 – 97 species)

From personal observations of Fred C. Sibley, Sue and John Gregoire and from Thomas Donnelly's The Dragonflies and Damselflies of New York, 1999 (privately published). See notes at end for symbology and other source information.

Broad-winged Damselflies – Calopterygidae (2)

			<u>Flight Period</u>
River Jewelwing	(+)	<i>Calopteryx aequabilis</i>	5/21 – 8/14
Ebony Jewelwing	(x)	<i>Calopteryx maculata</i>	5/17 – 9/12

Spreadwings – Lestidae (9)

Spotted Spreadwing	(x)	<i>Lestes congener</i>	6/14 – 11/14
Common Spreadwing	(x)	<i>Lestes disjunctus</i>	6/10 – 9/23
Emerald Spreadwing	(x)	<i>Lestes dryas</i>	6/10 – 8/19
Amber-winged Spreadwing	(x)	<i>Lestes eurinus</i>	5/28 – 8/14
Sweetflag Spreadwing	(x)	<i>Lestes forcipatus</i>	6/9 – 10/13
Elegant Spreadwing	(x)	<i>Lestes inaequalis</i>	5/24 – 8/22
Slender Spreadwing	(x)	<i>Lestes rectangularis</i>	6/14 – 10/13
Lyre-tipped Spreadwing	(x)	<i>Lestes unguiculatus</i>	6/19 – 10/9
Swamp Spreadwing	(x)	<i>Lestes vigilax</i>	5/29 – 9/6

Pond Damsels – Coenagrionidae (23)

Eastern Red Damsel	(x)	<i>Amphiagrion saucium</i>	5/19 – 8/14
Variable Dancer	(x)	<i>Argia fumipennis violacea</i>	5/28 – 9/18
Powdered Dancer	(x)	<i>Argia moesta</i>	6/6 – 9/20
Aurora Damsel	(x)	<i>Chromagrion conditum</i>	5/15 – 8/16
Taiga Bluet	(x)	<i>Coenagrion resolutum</i>	5/26 – 7/9
Rainbow Bluet	(x)	<i>Enallagma antennatum</i>	6/11 – 7/25
Azure Bluet	(x)	<i>Enallagma aspersum</i>	6/10 – 9/21
Double-striped Bluet	(x)	<i>Enallagma basidens</i>	6/8 – 9/29
Boreal Bluet	(x)	<i>Enallagma boreale</i>	5/25 – 7/10
Tule Bluet	(x)	<i>Enallagma carunculatum</i>	6/20 – 9/28
Familiar Bluet	(x)	<i>Enallagma civile</i>	6/17 – 12/1
Northern Bluet	(x)	<i>Enallagma c. cyathigerum</i>	5/12 – 8/12
Marsh Bluet	(x)	<i>Enallagma ebrium</i>	5/26 – 9/11
Stream Bluet	(x)	<i>Enallagma exulans</i>	6/3 – 9/14
Skimming Bluet	(x)	<i>Enallagma geminatum</i>	5/24 – 10/5
Hagen's Bluet	(x)	<i>Enallagma hageni</i>	6/4 – 9/5
Orange Bluet	(x)	<i>Enallagma signatum</i>	5/24 – 9/20
Slender Bluet	(x)	<i>Enallagma t. westfalli</i>	6/23 – 8/21
Vesper Bluet	(x)	<i>Enallagma vesperum</i>	5/29 – Sep.
Citrine Forktail	(x)	<i>Ischnura hastata</i>	8/13 – Nov.
Fragile Forktail	(x)	<i>Ischnura posita</i>	4/25 – 9/20
Eastern Forktail	(x)	<i>Ischnura verticalis</i>	5/1 – 10/8
Sedge Sprite	(x)	<i>Nehalennia irene</i>	5/29 – 8/18

Petaletails – Petaluridae (1)

Gray Petaltail	(x)	<i>Tachopteryx thoreyi</i>	6/7 – 7/15
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Darners – Aeshnidae (15)

Canada Darner	(x)	<i>Aeshna canadensis</i>	6/14 – 10/10
Mottled Darner	(+)	<i>Aeshna clepsydra</i>	June – 9/22
Lance-tipped Darner	(x)	<i>Aeshna constricta</i>	June – 10/5
Variable Darner	(x)	<i>Aeshna interrupta</i>	8/16 – 9/18
Spatterdock Darner	(x)	<i>Aeshna mutata</i>	6/4 – 7/9
Black-tipped Darner	(x)	<i>Aeshna tuberculifera</i>	7/19 – 10/10
Shadow Darner	(x)	<i>Aeshna u. umbrosa</i>	6/22 – 11/6

			<u>Flight Period</u>
Green-striped Darner	(x)	<i>Aeshna verticalis</i>	6/19 – 10/22
Common Green Darner	(x)	<i>Anax junius</i>	3/16 – Dec.
Springtime Darner	(x)	<i>Basiaeschna janata</i>	5/5 – 7/9
Ocellated Darner	(x)	<i>Boyeria grafiana</i>	8/9 – 10/8
Fawn Darner	(+)	<i>Boyeria vinosa</i>	June – 10/23
Swamp Darner	(+)	<i>Epiaeschna heros</i>	5/21 – 8/19
Harlequin Darner	(x)	<i>Gomphaeschna furcillata</i>	5/17 – 7/2
Cyano Darner	(x)	<i>Nasiaeschna pentacantha</i>	5/22 – 7/25
Clubtails – Gomphidae (12)			
Lilypad Clubtail	(x)	<i>Arigomphus furcifer</i>	5/19 – 7/30
Unicorn Clubtail	(x)	<i>Arigomphus villosipes</i>	5/11 – 8/9
Beaverpond Clubtail	(x)	<i>Gomphus borealis</i>	6/2 – 8/3
Harpoon Clubtail	(+)	<i>Gomphus desertus</i>	5/6 – 6/29
Lancet Clubtail	(x)	<i>Gomphus exilis</i>	5/11 – Sep.
Ashy Clubtail	(x)	<i>Gomphus lividus</i>	5/4 – 6/26
Dusky Clubtail	(x)	<i>Gomphus spicatus</i>	5/12 – 7/14
Dragonhunter	(s)	<i>Hagenius brevistylus</i>	6/1 – 9/16
Northern Pygmy Clubtail	(s)	<i>Lanthus parvulus</i>	5/21 – Aug.
Riffle Snaketail	(x)	<i>Ophiogomphus carolus</i>	5/1 – 7/2
Rusty Snaketail	(s)	<i>Ophiogomphus rupinsulensis</i>	5/16 - 8/7
Least Clubtail	(x)	<i>Stylogomphus albistylus</i>	5/29 – 8/18
Spiketails – Cordulegastridae (4)			
Delta-spotted Spiketail	(x)	<i>Cordulegaster diastatops</i>	5/16 – 7/24
Tiger Spiketail	(x)	<i>Cordulegaster erronea</i>	June – 8/1
Twin-spotted Spiketail	(+)	<i>Cordulegaster maculata</i>	5/18 - July
Arrowhead Spiketail	(x)	<i>Cordulegaster obliqua</i>	May – 7/1
Cruisers – Macromiidae (1)			
Stream Cruiser	(x)	<i>Didymops transversa</i>	5/4 – 7/24
Emeralds – Corduliidae (9)			
American Emerald	(x)	<i>Cordulia shurtleffii</i>	5/17 – 8/8
Racket-tailed Emerald	(x)	<i>Dorocordulia libera</i>	May – 8/8
Prince Baskettail	(x)	<i>Epicordulia princeps</i>	5/28 – 8/30
Uhler's Sundragon	(x)	<i>Helocordulia uhleri</i>	4/26 – 7/6
Brush-tipped Emerald	(x)	<i>Somatochlora walshii</i>	7/17 – Sep.
Williamson's Emerald	(x)	<i>Somatochlora williamsoni</i>	7/16 – Sep.
Beaverpond Baskettail	(x)	<i>Tetragoneuria canis</i>	4/29 – 7/1
Common Baskettail	(x)	<i>Tetragoneuria cynosura</i>	4/23 – 8/11
Spiny Baskettail	(x)	<i>Tetragoneuria spinigera</i>	5/2 – Sep.
Skimmers – Libellulidae (21)			
Calico Pennant	(x)	<i>Celithemis elisa</i>	5/31 – 9/6
Halloween Pennant	(x)	<i>Celithemis eponina</i>	May – 9/20
Eastern Pondhawk	(x)	<i>Erythemis simplicicollis</i>	5/18 – 9/19
Chalk-fronted Corporal	(x)	<i>Ladona julia</i>	5/16 – 8/3
Frosted Whiteface	(x)	<i>Leucorrhinia frigida</i>	May – 9/2
Crimson-ringed Whiteface	(x)	<i>Leucorrhinia glacialis</i>	5/17 – Aug.
Dot-tailed Whiteface	(x)	<i>Leucorrhinia intacta</i>	4/26 – 8/1
Red-waisted Whiteface	(x)	<i>Leucorrhinia proxima</i>	6/7 – 8/8
Slaty Skimmer	(x)	<i>Libellula incesta</i>	5/24 – 9/19
Widow Skimmer	(x)	<i>Libellula luctuosa</i>	5/25 – 9/28
Twelve-spotted Skimmer	(x)	<i>Libellula pulchella</i>	5/24 – 9/18
Four-spotted Skimmer	(x)	<i>Libellula quadrimaculata</i>	5/16 – Aug.
Blue Dasher	(x)	<i>Pachydiplax longipennis</i>	5/22 – 9/22

			<u>Flight Period</u>
Wandering Glider	(s)	<i>Pantala flavescens</i>	6/18 – 10/4
Eastern Amberwing	(x)	<i>Perithemis tenera</i>	6/1 – 9/11
Common Whitetail	(x)	<i>Plathemis lydia</i>	4/27 – 9/22
Cherry-faced Meadowhawk	(x)	<i>Sympetrum internum</i>	6/10 – 10/21
White-faced Meadowhawk	(+)	<i>Sympetrum obtrusum</i>	June – 9/28
Band-winged Meadowhawk	(s)	<i>Sympetrum semicinctum</i>	8/20 – Oct.
Yellow-legged Meadowhawk	(x)	<i>Sympetrum vicinum</i>	6/29 – 12/6
Black Saddlebags	(x)	<i>Tramea lacerata</i>	5/22 – 10/4

NOTES:

1. **Scientific Names** from: Dragonflies of North America. James Needham, Minter Westfall and Michael May. Gainesville, FL.: Scientific Press, 2000. Damselflies of North America. Minter Westfall, and Michael May. Gainesville, FL.: Scientific Publishers, 1996.
2. **Common Names** from: A Checklist of North American Odonata. Dennis Paulson and Sidney Dunkle, 1999.
3. **Flight period** dates from Donnelly as modified by Gregoire/Sibley field records.
4. **Specimens** indicated as follows: (x) = F.C. Sibley recent collection; (+) older specimen cited in Donnelly; (s) = Sibley/Gregoire sight record.

FISH AND MOLLUSKS OF SCHUYLER COUNTY

(Documented species through 1998)

Found In Seneca Lake:

Lake Sturgeon (Threatened)	<i>Acipenser sturiooxyrhynchus</i>
Lake Trout	<i>Salvelinus namayoush</i>
Rainbow Trout	<i>Salmo salar</i>
Brown Trout	<i>Salmo trutta</i>
Atlantic Salmon	<i>Salmo salar</i>
Northern Pike	<i>Esox lucius</i>
Chain Pickerel	<i>Esox niger</i>
Carp	<i>Cyprinus carpio</i>
Bowfin	<i>Amia calva</i>
White Sucker	<i>Catostomus commersoni</i>
Brown Bullhead	<i>Ictalurus nebulosus</i>
Channel Catfish	<i>Ictalurus punctatus</i>
Rock Bass	<i>Ambloplites rupestris</i>
Bluegill	<i>Lepomis macrochirus</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Largemouth Bass	<i>Micropterus salmoides</i>
Smallmouth Bass	<i>Micropterus dolomieu</i>
Yellow Perch	<i>Perca flavescens</i>
Alewife (sawbelly)	<i>Alosa pseudoharengus</i>
Rainbow Smelt	<i>Osmerus mordax</i>

Additions from Upland Streams/Ponds:

Brook Trout	<i>Salvelinus fontinalis</i>
Northern Hogsucker	<i>Hypentelium nigricans</i>
Mottled Sculpin	<i>Cottus bairdi</i>
Stoneroller	<i>Campostoma anomalum</i>
Cutlips Minnow	<i>Exoglossum maxillingna</i>
Margined Madtom	<i>Nostrus insignis</i>
Bluntnose (fathead) Minnow	<i>Pimephales notatus</i>
Trout Perch	<i>Percopsis omnisomaycus</i>
Johnny Darter	<i>Etheostoma nigrum</i>
Fantail Darter	<i>Etheostoma falabellare</i>
Spotfin Shiner	<i>Notropis spliopterus</i>
Satinfin Shiner	<i>Notropis analostanus</i>
Spottail Shiner	<i>Notropis hudsonius</i>
Common Shiner	<i>Notropis cornutus</i>
River Chub	<i>Nocomis micropogon</i>
Blacknose Dace	<i>Rhinichthys aratulus</i>
Long-nose Dace	<i>Rhinichthys cataractae</i>
Creek Chub	<i>Semotilus atromaculatus</i>
Fallfish	<i>Semotilus corporalis</i>

Mollusks Identified in Seneca Lake

Clams	<i>Elliptio complanatus</i>
	<i>Lampsilla radiata</i>
	<i>Ligumia nasuta</i>
	<i>Adonta grandis</i>
Snails	<i>Goniobasis livescens</i>
	<i>Bithynia tentaculata</i>
	<i>Lymnaea stagnalis</i>

Zebra Mussel (Introduced 1992) *Dreissena polymorpha*

(causing a decline in benthic organisms in waters greater than three feet, thereby disrupting the food source and decimating Alewife and Smelt populations).

Geology of SC George Bulin