NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO

Founding Chapter Of

THE OHIO NATIVE PLANT SOCIETY

6 Louise Drive
Chagrin Falls, Ohio 44022
(216) 338-6622

On the Fringe

Volume 4 **May/June 1986** **Number 3**

ANNUAL DINNER - DECEMBER 5th

MAY PROGRAMS AND EVENTS:

May 3rd (Saturday) **TWC Botanizers** are planning a **field trip** to **Eagle Creek in Portage County.**

May 4th (Sunday) **1:00 p.m. - Wilderness Center.** A guided wildflower tour by **TWC Chapter.**

May 10th (Saturday) **9:30 a.m. - Kent Scott** will lead a **field trip** at the **Girdled Road Reservation in Lake County.** There is a fair amount of walking, but what we will be seeing is the flood plains of Big Creek along with an abundance of spring wildflowers. From I-90, take Rt. 44 south 1½ miles, turn left on Girdled Road. Go to the second stop sign and turn right onto Route 608. Go 1½ miles to Lake/Geauga line--turn left on Radcliffe. Meet at the picnic area - brown bag.

May 15th (Thursday) **7:30 p.m. - The Holden Arboretum.** Dr. Nathan Easterly of Bowling Green State University will give us a **slide talk** on the **Oak Openings near Toledo.** A relic of the Ice Age, this unusual and diverse environment harbors many unique species of plants and insects.

May 17th & 18th (Saturday & Sunday) **TWC** plans an **overnight trip to the Hocking Hills area.** The time should be just about right to see shooting stars. Contact Bobbie Lucas, if you are interested.

MAY PROGRAMS & EVENTS:

May 17 & 18th (Saturday & Sunday) **The Cincinnati Chapter** will host a **weekend trip to Cumberland Falls, Kentucky.** Call Vic Soukup.

May 19th (Monday) **7:30 p.m. Columbus Chapter at Sharon Hollow Center.** The lecture will be **"Wildflowers of the 7 caves region in Ross County and Rocky Fork Creek".**

JUNE PROGRAMS & EVENTS:

June 1st (Sunday) **The Columbus Chapter** will take a **field trip** to **Shawnee State Park.** Call.

June 7th (Saturday) **TWC** is planning an all **day trip** to **Cedar Bog** and some prairies between **Urbana and Columbus.**

June 12th (Thursday) **7:30 p.m. The Holden Arboretum.** Jack Selby, one of the area's finest nature photographers, will present his newest lecture, **"Orchids I Have Seen".** Many of you know Jack's work and what he and Florence have traveled and endured to gain access to their lovely "subjects".

June 14th (Saturday) **Cincinnati** plans a **field trip** to **Adams County.** Call.

June 21st (Saturday) **TWC will come to Holden** for a guided tour of **Stebbins Gulch.** This would be a good chance to meet some of our Wilmot members.

June 28th (Saturday) **9:30 a.m. Lake Kelso.** Jim Bissell will take a **field trip** to the **Nature Conservancy's new preserve.** This is an area of rare plants and birds so the **limit is 10.** Canoes will be used and there will be a small rental fee.

If additional details are needed, please call the local chapters listed below:

TWC	- Bobbie Lucas	(216)	645-0302
Cinci	- Dr. Vic Soukup	(513)	761-2568
Columbus	- Dr. Jean Willis	(614)	882-4644

CONSERVATION EDITORIAL

Shortly after the first part of Jim Bissell's Wetlands article appeared in the March issue, an event occurred that dramatically illustrated how easy it is for man to destroy a wetland. An enormous tanker truck carrying dictyl alcohol overturned on Route 44 in Newbury and spilled out 7,000 gallons into the Burton Wetlands. The fish population has been virtually wiped out. In addition, geese, ducks, muskrats, and beaver have died. Ohio EPA investigator, Jim Irwin said, "The marsh is pretty much devoid of any wildlife now. There are no frogs and fish, muskrats or geese you would expect there. It probably won't begin to recover until next year." No one knows what the long term effects on wildlife and plant life will be. Most certainly the food chain will be adversely affected since the vegetation has absorbed the pollutant, as has all surviving aquatic life.

At the same time we discovered that a small wetland near home had been sold for an oil and gas well. For years this site had been a source of enjoyment and discovery. It is filled with numerous varieties of flowers, sedges, grasses and other plants. It is home to wetlands species of nesting birds. Insects, butterflies and spiders find food and protection. It was a wonderful place to sit on a hot, sunny, summer day and just listen to the sounds of another world busily going about affairs. The road for the gas well is marked out right through the middle of the swamp. The drilling pit will obliterate any remaining vestige of this once beautiful area.

Within one mile of each other, in the space of one week, here were two flagrant examples of man's inhumanity, not to man himself, but to the rest of the natural world. It is a demonstration of our total lack of concern and care for every other species of living things.

In the dictionary, the letters "co-" are defined as "jointly, together, mutually (for the mutual good)". The letters combine with other words that should become engraved on the minds of all of us and influence our total relationship with the world around us. Try "co-operation": partnership, trust, share, make common cause with. Try "co-exist": to exist together. Or "co-equal": having the same privileges, status, or rights. And finally, try "co-extend": to reach or attain the same limit in space and time.

To preserve the wetlands we must stop swamp drainage, toxic spills, development, dumping, dredging, and pesticide run-off. We must preserve and conserve as diligently as we can. We must learn to regard the wetlands as co-equal with man, and we must learn to co-exist and co-operate with our total environment so that all the varied eco-systems on earth will co-extend, will reach and attain the same limit in time and space as mankind. The alternative is the destruction and loss of species, and finally disaster. I quote William Beebe, ". . .when the last individual of a race of living things breathes no more, another Heaven and another Earth must pass before such a one can be again."

AKM

WETLANDS - PART TWO: by Jim Bissell

The New U.S. Fish and Wildlife Service Classification System

The FWS 1979 classification recognizes five major systems: (1) marine, (2) estuarine, (3) riverine, (4) lacustrine and (5) palustrine. Only the latter three occur in Ohio. The riverine system has four subsystems: tidal, lower perennial, upper perennial and intermittent. The lacustrine system has two subsystems: limnetic and littoral, and the palustrine system has no subsystems.

The five major systems of the 1979 FWS Wetland Classification are subdivided into classes based upon substrate, flooding regime and vegetative life form. Classes of substrate include rock bottom, unconsolidated bottom, rocky shore and consolidated shore. Substrate classes are used when vegetative cover is less than 30 percent. Major classes of vegetative life form include aquatic bed, moss lichen wetland, emergent wetland, scrub-shrub wetland and forested wetland. Emergent wetland plants are divided into two important subclasses, persistent emergents and non-persistent emergents. Persistent emergents such as cattails (**Typha sp.**) or phragmites (**Phragmites australis**) normally remain standing until the beginning of the next growing season. Non-persistent emergents such as pickerel-weed and arrowhead break down at the end of the growing season. The percentage cover of persistent emergents vs. non-persistent emergents is very important in classifying the five major systems. The aquatic bed class refers to plant species that grow on or beneath the surface Potamogeton of the water such as pondweeds (**Potamogeton sp.**), white water lily (**Nymphaea odorata**), coontail (**Ceratophyllum demersum**) and water milfoils (**Myriophyllum sp.**). The aquatic bed class normally occupies deep water habitats and deeper sections of emergent wetlands.

Within the 1979 FWS Classification System modifiers are placed after the subclass categories in the following order: water regime modifiers, water chemistry modifiers (pH and salinity), soil modifiers and specific modifiers. Dominant plants are listed following the modifiers. Below are descriptions of the three major wetland systems in Ohio with a classification example for each of the three major systems.

Riverine

The riverine system includes all wetlands and deepwater habitats within a channel. Wetlands within a rivertine system which have greater than 30% cover of trees, shrubs, emergent mosses or persistent emergent aquatic plants would be classified within the FWS palustrine system (see below).

Most of the lake shore wetlands on creek channel mouths east of Cleveland including Arcola Creek, Chagrin River marshes and the Geneva State

Park marshes would be classified within the riverine system because persistent emergents cover less than 30% of the riverine marsh. Although the Coastal Zone Management Act of 1972 recognizes places such as Old Woman Creek mouth and Arcola Creek mouth as estuaries, the 1979 FWS does not include such areas in their estuarine system. Rooted aquatic bed plants such as floating pondweed (**Potamogeton nodosus**) and eelgrass (**Vallisneria americana**) are often distinctive features within clean water riffles on the Grand River and upper Cuyahoga River.

These clean water riffles on the Grand and Cuyahoga Rivers would be treated under the 1979 FWS Classification System:

System: **Riverine**
Class: Aquatic bed
Subclass: rooted vascular
Water regime: permanently flooded
Water chemistry: circumneutral and fresh
Soil: mineral
Dominant plants: floating pondweed (**Potamogeton nodosus**) and eelgrass (**Vallisneria americana**)

Lacustrine

The lacustrine system includes wetlands and deepwater habitats situated within a basin or a damned river channel which is 8 hectares (=20 acres) or larger and has less than 30% cover of persistent emergent trees, shrubs or emergent mosses. A lacustrine system can be less that 8 hectares if a wave formed beach or bedrock shoreline is present or if low water depth in the deepest part of the basin exceeds 2 meters (6.6 feet). The Lake Abrams which formerly covered much of the land surrounding the Hopkins Airport would probably have been placed in the FWS lacustrine system

because the original lake was more than 8 hectares (=20 acres) and the dominant plants were non-persistant emergents such as spatter-dock (**Nuphar advena**), arrow-arrum (**Peltandra virginica**), and pickerel-weed (**Pontederia cordata**).

System: **Lacustrine**
Subsystem: lower perennial
Class: emergent
Subclass: nonpersistent
Water regime: permanently flooded
Water chemistry: circumneutral and fresh
Soil: organic
Dominant plants: spatterdock (**Nuphar advena**) and arrow-arrum (**Peltandra virginica**).

Palustrine

The palustrine system includes all wetlands with 30% or more cover of persistent emergents, trees, shrubs, or emergent mosses. A palustrine system can have less than 30% persistent vegetation cover providing it fits the following three criteria: (1) must be less than 8 hectares (=20 acres), (2) lacks a wave formed beach or bedrock shoreline, and (3) is less than 2 meters (=6.6 ft.) deep. Bogs, fens, shrub swamps and forested wetlands would be placed in the FWS palustrine system. One plant group, the native orchids have a strong association with palustrine wetlands. One plant group, the native orchids have a strong

association with palustrine wetlands. Most beaver marshes would fall within the palustrine system.

The once extensive, glacial lake plain wetlands in northern Ohio were predominantly palustrine wetlands covered by forests of elm, ash, and maple. The Black Swamp formerly covered 1,500 miles on the lake plains in northwestern Ohio. (Kaatz, 1955). Drainage of the Black Swamp took place during the latter half of the nineteenth century, and the Black Swamp was almost completely converted to agriculture by the early 1900's. Many forested wetlands were still intact twenty-five years ago on the lake plains east of Cleveland at the same time preservation efforts were underway at Mentor Marsh. The conversion of so much of the Lake Plain wetlands across northern Ohio demonstrates the need to preserve good examples of a commonplace habitat before the habitat becomes rare. The best remaining forested wetlands on the lake plains in northeasten Ohio are along the northern fringe of Ashtabula County and glacial lake basins along the Grand River in Ashtabula and Trumbull Counties. Morgan Swamp is perhaps the best lake plain wetland remaining in Ohio, and acquisition of Morgan Swamp is one of the current projects of The Nature Conservancy. The strongly acid hummocks adjacent to woodland pools within the hummock-hollow topography of forested wetlands at Morgan Swamp support numerous rare Ohio plants which are not often considered hydrophytes; however, these rare hummock plants such as painted trillium (**Trillium undulatum**) dewdrop (**Dalibarda repens**), goldthread (**Coptis groenlandic**) or star flower (**Trientalis borealis**) appear to have a strong association with the shaded hummock habitat in Ohio.

Mentor Marsh is situated on an old river channel. The dominance of persistent emergents such as cattails and reeds would place Mentor Marsh in the palustrine system.

System: **Palustrine**
Class: emergent wetland
Subclass: persistent
Water regime: semi-permanently flooded
Water chemistry: circumneutral and oligosaline
Soil: organic
Dominant Plants: reed (**Phragmites austrais**) and cattail (**Typha sp.**)

Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe, 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service. FWS/OBS-79/31. Washington, D.C.

PRESIDENT'S COLUMN

We have already had four outstanding programs, and I am wondering where all of you were?? The membership slide program in January was a great success with only a few of us there, but we were treated to some fine pictures of plants from all over the United States. We will do this again next year. The Fern class in February, given by Tom Yates, was **outstanding**. If one didn't learn something about ferns, it was from lack of trying. Tom did an incredible job, as did Bob Bartolotta in March in a class on Mosses and Liverworts. This was a more complicated subject, but Bob captivated his audience. Both of these classes were very well attended. However, we had a disappointing turnout for Dr. Macior's lecture, April 4th. This man is full of strange and wonderful facts about flowers, and we are going to have him back another year.

I guess what I am trying to say is, that if you don't attend the meetings you are missing out on a lot. The larger the attendance the better we appear to the lecturers, but in the long run it is your, the member's, loss when you miss these meetings. I hope more of you will try to get out to meetings in the future.

We have just had a display at the Garden Center's Spring Show and garnered some new members. We will be exhibiting at the Breezewood Garden Center Spring Weekend and at the Holdern Arboretum Symposium, as well. We had an excellent article in the March Garden Center News written by Susan McClure. All of this has helped us gain 20 new members for 1986. If you know of any other place for us to put our display, please let me know.

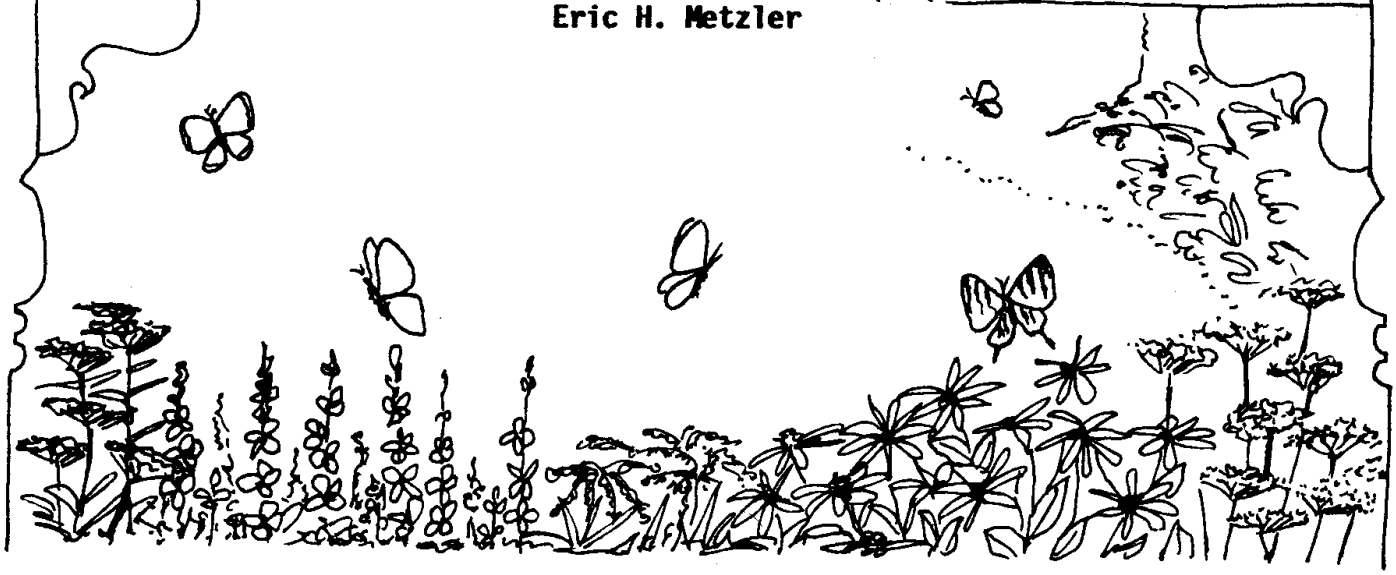
Our Bill to make the White Trillium the State wildflower passed the House in March 89-4. We tried to get it into the Senate the week they adjourned, but there just was not time. However, we have been promised that they will take it up the week they come back into session after the primaries. We still hope to have the Governor sign the Bill in a woods full of Trilliums.

The time is coming near to begin planning the 1987 programs and field trips, and begin rounding up authors for the newsletter. If you have ideas that interest you, we would very much appreciate your suggestions. In addition, if you have someone to nominate for the Annual Dinner $500.00 Award and the lecture honoree, please contact us.

When you read this I hope that you will all be up to your ears in Spring wildflowers, for this is the best time of the whole year. We will be in the Blue Ridges for the Virginia Wildflower Society's Symposium May 7-9. I'll tell you about it in the July issue.

GARDENING FOR BUTTERFLIES

Eric H. Metzler



Gardening for butterflies can be beneficial for both butterflies and the people that do the gardening. It is aesthetically pleasing to have butterflies to look at, but the available habitat for butterflies is decreasing annually. When I was a young boy, one of the joys of my grandmother's rock garden was the butterflies and moths it attracted. I know people still like to see butterflies, for I am often asked "Where have all the butterflies gone?" With a butterfly garden, you will know with satisfaction that many of them are in your backyard.

As soon as people learn I study butterflies and moths, they tell me they just don't see as many butterflies as they used to. Possible explanations for this disappearance are also offered, such as pollution, the growth of cities, and other practices of man that have made butterflies much less common than they were. All of these thoughts tell me the opportunity to see butterflies makes our lives fuller and more enjoyable. I couldn't agree more, and I want to suggest that gardening for butterflies can be a good way to attract butterflies, to observe butterflies and to learn more about butterflies.

My grandmother didn't keep her rock garden for butterflies, but she did plan to have plants in bloom during all times of the year, and she worked hard to have a variety of plants in the garden. These actions made her garden an attraction for butterflies. Had she been trying specifically for butterflies, even more could have been attracted, and her garden would not have suffered at all. For gardeners with a special interest in native plants, the opportunities for butterflies could not

be better. Even for someone like myself who does little gardening, there are still opportunities for attracting butterflies and moths, as I shall explain.

For the most part, the observed decrease in butterflies makes sense. There are still plenty of butterflies in Ohio; there are simply fewer places for them to live. The changing scene of the cities and country side provides most of the answers. Modern agricultural practices with decreased fence rows offer fewer places for butterflies to live. Most of us live in town, perhaps cities. As the land is changed for people, native habitats are displaced by concrete and manicured lawns. We apply all kinds of chemicals to yards and gardens to control weeds (native plants) and insect pests. Butterflies are insects. By these and other actions, we destroy the habitat for our Ohio butterflies, and we do everything we can to make certain they don't come back.

Actually, it is still possible to see many butterflies in Ohio. To do so, you must either go to the butterflies, or attract them to you. Over 140 species of butterflies have been recorded from Ohio, and many of these are quite common. Although, fewer butterflies are seen in the cities, they still abound in the country side. The Ohio Lepidopterists regularly conduct field trips for members and guests, and it is not uncommon to record nearly 30 species of butterflies on a weekend field trip. The key to all this is knowing where and how to look. The right conditions - habitat, time of year, nectar sources, and host plants are all important considerations. Gardening for butterflies, done at home, is an effort to duplicate the right conditions in a garden. I also encourage managing habitat for butterflies, which can be likened to gardening for butterflies on a large scale. Habitat management is possible nearly everywhere in Ohio.

To garden for butterflies, it is important to know more about butterflies. Learning the nectar sources for the butterflies and host plants for the caterpillars are both very important. There are several books about butterflies, but generally they are written for people wanting to know only about butterflies rather than for people wanting to know about butterfly gardening. A recently published book (**The Butterfly Garden**, by Mathew Tekulsky, 1985, Harvard Common Press, Boston, 144 p.) fills this void, and is a must for the butterfly gardener. I personally recommend it for any gardener in hope that all gardeners will want to know more about this subject. My grandmother was encouraged by butterflies in her garden and I am certain all gardeners like to see these lovely creatures. Tekulsky's book shows how to enhance this benefit of a garden with little extra work. This book offers the chance to learn more about the attraction of butterflies to gardens.

When we see butterflies visiting flowers, we assume the butterflies have come to seek nectar. When we see caterpillars eating plants, we are revulsed and take action to kill them. The butterflies we love to see are the adult stage of the caterpillars we are reluctant to see. Spraying to eliminate caterpillars also eliminates adults. Butterflies need food for both adults and caterpillars. Butterflies also need diversity. One reason butterflies are seen regularly away from the city and intensively tilled areas is because of the diversity of plants to use for food for caterpillars and nectar for adults. The complete butterfly garden offers not only other sources of nectar, but it also offers places for the butterflies to live. For this reason it is important to learn the food plants of caterpillars. Some caterpillars are easy to rear, and they can become a fascinating project for the gardener as well.

Many plants work very well. Dill is quickly found by black swallowtail butterflies for their eggs. The caterpillars are fun to watch grow. When the black swallowtail adults emerge, they love to nectar at milkweed. Many other butterflies, including the fabled monarch, and moths also visit milkweed. Milkweed is also the caterpillar foodplant for the monarch as well as a handsome tiger moth. The fuzzy and brightly colored tiger moth caterpillar is found on milkweed in September. The butterfly weed, **Asclepias tuberosa**, is a handsome milkweed that suits these purposes nicely. These are just three examples. Tekulsky's book lists fifty common garden butterflies, time of year on the wing, nectar sources and host plants.

Do not be surprised that milkweed is an excellent nectar source. Many of the best butterfly attractors are common wild plants that some gardeners would try to keep out of their spaces. Other such plants are: Joe-Pye-weed, ironweed, thistle, mints, clovers, goldenrod and dandelion. Some of the excellent nectar sources are less objectionable: bergamot, coltsfoot, coneflowers, phlox, loosestrifes, mustards, autumn olive, fleabane, goatsbeard, boneset, New England aster and liatris. The Ohio Department of Natural Resources division of Natural Areas and Preserves has planted a small prairie patch on the Ohio State Fairgrounds. During the time of the State Fair in August, this prairie patch is full of butterflies visiting the flowers, even in downtown Columbus! Some good nectar sources are cultivated for other purposes: fruit trees (cherry, apple, pear, etc.), blackberry brambles and lilac. **The Butterfly Garden** has seven pages of flower lists describing the time of year of bloom and the color.

A butterfly garden should also provide other environmental requirements of butterflies. The edge effect is very important. Butterflies

are usually found along roadsides, along paths and other "edges". In addition, butterflies need sun and shade. They need water and places to seek protection at night, in storms, and in the winter. Some butterflies, such as the Mourning Cloak overwinter as adults, and a place to hibernate is important. Water is very important. Most of us have seen pictures of "puddle clubs" - gatherings of butterflies at mud puddles in the road. These butterflies get moisture and needed minerals at the mud puddles.

Once a butterfly garden is going, it is hard to resist learning more about butterflies. I say this since many people who ask me about my hobby first become interested in butterflies to learn more about the ones attracted to their gardens. Butterfly gardens are an excellent place to closely observe butterflies, to photograph butterflies and to learn about their habits. Many gardeners spend many hours photographing plants. It is hard to imagine a better photograph than one showing a butterfly enjoying the benefits of a lovely flower. Two recently published books feature photographs of butterflies in natural poses on flowers. **The Audubon Society Field Guide to North American Butterflies** by R.M. Pyle, 1981, Knopf, New York 916 p. and **Butterflies East of the Great Plains** by P.A. Opler and G.O. Krizek, 1984, John Hopkins Univ. Press, Baltimore, 294 p. are excellent references.

Many enthusiastic butterfly watchers have developed from butterfly gardeners. They continue to enjoy both hobbies simultaneously. These persons record the butterflies that visit their gardens, note the nectar sources and record fluctuating populations. Some collect representative specimens or photographs. These observations are very important in efforts to learn more about butterflies, and to measure the effects of decreasing habitats. The Ohio Lepidopterists is an organization with memebers ready to assist anyone desiring to learn more about butterflies and moths.

Butterfly gardening has a long tradition in England and Europe. This may be partially explained by the limited land area, but it is also part of an affection for natural gardens. The Europeans also tend to do more observing of butterflies than we in the U.S. This discrepancy is easy to see when looking for references to the subject. While there are several books on the subject specific to Europe, only recently have any books been published in the United States on butterfly gardening. Tekulsky's book, already mentioned, is an excellent source for us in North America. Tekulsky fills a great void. Hopefully it will get many of us started.

I feel very fortunate to study butterflies and moths. I feel best when I am in a field of wild flowers surrounded by butterflies. I do

not have a formal garden but even I have attracted butterflies to the few meager weeds (native plants) in my door yard. I also manipulate the habitat of a meadow in Vinton County, Ohio specifically for butterflies and moths. I know the butterflies are there and it give me great satisfaction. You can share this satisfaction by gardening for butterflies.

Eric H. Metzler, Chief, Division of Watercraft, Ohio Dept. of Natural Resources.

* * * * * * * * * *

BOOK REVIEW

The book, **Plant Classification**, is one of the easier texts to use in order to grasp how plants are grouped. It seems to be written for the beginning student because the characteristics of each group are so carefully described and illustrated. The drawings are easily interpreted. The use of keys in the process of identifying and naming the orders of dicots and monocots has a more than usual number of illustrations.

If a trip is planned, it would be well worth reading chapters 24 and 25. They describe how natural flora areas are classified and the geological and climatic characteristics in all areas of the United States, Canada, Alaska and Hawaii. Most interesting was that the blooming seasons for these areas were given. The glossary was easily understood because it does not use many professional taxonomic terms as do most texts. This is the second edition of **Plant Classification** by Lyman Benson, published in 1979 by Heath & Company for approximately $30.00.

M.R. Larson

* * * * * * * * * *

CHIMPS APPEAR TO USE HERBAL MEDICINE

Chimpanzees in the wild appear to practice herbal medicine.

Moreover, according to scientists who have discovered this behavior, the plant leaves on which the chimps rely have been found to contain a powerful antibiotic that shows promise as a drug for humans.

The leaves that chimps methodically seek out and swallow, apparently when ill, contain a substance that laboratory studies show to be a potent killer of bacteria, fungi and nematodes. All can cause serious diseases in apes and humans.

The discoveries, which have emerged only gradually, began some 20 years ago when Jane Goodall, a pioneer chimpanzee researcher, found that chimp dung often contained one species of leaf that invariably had not been chewed.

Later his colleagues at Gombe National Park in Tanzania discovered the source of the leaves--a bushy shrub called Aspilia that grows 6 to 10 feet tall--and observed the animals' behavior when seeking the leaves.

"Perhaps chimpanzees will show us a drug that can one day be used in the Western world," Richard Wrangham, an anthropologist at the University of Michigan, wrote in AnthroQuest, the newsletter of the L.S.B. Leakey Foundation, named for a pioneering anthropologist.

At Gombe, chimps seek out the leaves as soon as they wake up in the morning. Instead of breakfasting at the nearest source of wild fruit, which is their usual practice, some chimps will walk for 20 minutes or more to open, grassy areas where Aspilia bushes grow.

Instead of promptly tearing off the leaves and eating them, the animal will gingerly close its lips over the unplucked leaf and hold it for a few seconds. Several leaves are tried in this way before the chimp selects one and places it in the mouth.

Instead of chewing, the ape rolls the leaf around in the mouth for perhaps 15 seconds and then swallows it whole. Over perhaps 10 minutes the chimp may select and swallow up to 30 small leaves.

The Gombe researchers found that while chimps of all ages and sexes will use Aspilia, females do so more often, averaging about one day in 10. Males take the leaves about one-third as often. Another oddity is that while Gombe chimps swallow the leaves mainly in the morning, those at another national park do so at any time of day.

Chimp researchers have long speculated on the special role of the leaves, wondering if it was an intoxicant or hallucinogen. Part of the answer emerged last year.

Eloy Rodriguez, a biochemist at the University of California-Irvine, began searching for unusual chemicals present in Aspilia leaves and quickly isolated a previously unknown substance. It was a red oil that was later named thiarubrine-A.

Coincidentally another scientist Neil Towers at the University of British Columbia at Vancouver, had discovered the same substance in Canadian plants a few weeks earlier. In a search for medicinal properties, Towers found that thiarubrine-A was a powerful antibiotic that could kill common disease-causing bacteria in concentrations of less than one part per million.

Rodriguez and Towers, who were friends, shared their findings and touched off a renewed investigation of Aspilia's possible use as a medicinal plant. They did one study that showed the chemical contents of the leaves probably being released in the chimp's digestive tract. Electron microscope views of the leaves, removed from chimp dung, showed that surface cells had been ruptured, apparently during passage through the gut.

This article is a reprint from The Plain Dealer, Wednesday, January 1, 1986.

* * * * * * * * * * *

NOTICE ON NEWSLETTER SUBSCRIPTION FOR STATE MEMBERS

With members around the state transferring their membership from the Northeast Chapter to their local chapters, it should be noted that they will cease to receive the newsletter. Therefore, in order to continue to receive the newsletter, subscriptions are available at the rate of $7.50 per year. Send check made payable to: Native Plant Soceity, 6 Louise Drive, Chagrin Falls, Ohio 44022.

* * * * * * * * * *

SIGNIFICANCE OF WETLANDS

Natural wetlands provide the following services:

water supply act as a sponge, holding vast quantities of water;
flood control retain sudden surges of incoming water and release it slowly;
pollution control filter pollutants, produce oxygen, and recycle basic nutrients;
groundwater protection purify and recharge groundwater reserves;
wildlife production nurseries for fish, habitat for waterfowl, and refuges for rare and endangered species;
human needs, aesthetic, educational, recreational, scientific and ecological values.

* * * * * * * * * *

NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO

Founding Chapter Of

THE OHIO NATIVE PLANT SOCIETY

6 Louise Drive Chagrin Falls, Ohio 44022

Tom Sampliner
3390 Clayton #7A
Shaker Hts., Ohio 44120

GARDEN CENTER RAVINE PROJECT

If you own a rake, a shovel, or a trowel you qualify to work on the Ravine Project. No great horticultural skill is necessary to recognize a non-native weed and eliminate it. It just takes time and work.

I'm calling on more members in the Society to consider giving some time in the coming season. As little as a few hours, or a full day, or several days a season can make an appreciable difference. Any days can be worked out. I will see that I or one of the horticulturists from the Garden Center, or John Michalko are there to instruct as to what needs to be done. I would especially like to hear from members who can give time later in the season, mid-summer to fall.

Betty Koelliker will donate a book to be given to the volunteer who logs the most hours on the project. The book will be presented at the Annual Dinner. Working at the Ravine has been truly rewarding and I hope you will become involved and contribute to an area that was once a littered, overgrown woods and is now a lovely wildflower garden right in the middle of downtown Cleveland.

Larry Giblock
1/272-5852