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TO UNDERSTANDING THE LEPIDOPTERA FAUNA OF THE SOUTHERN REGION
OF THE UNITED STATES

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BAIT TRAPS

LEROY C. KOEHN

I have been using bait traps for over eleven years and have found them to be easy and exciting to use. They can be used twenty-four hours a day and are a very effective means of collecting lepidoptera that are attracted to bait. There are three key factors to successful bait trapping: (1) The design of the trap and its construction; (2) The bait; and (3) The placement of the trap during use. This paper will attempt to cover in detail each of these factors.

THE TRAP

The design of the collapsible bait traps has been reported by others; Rydon (1963), Platt (1969), Owen (1971), Neilsen (1976), Baggett (1980), and Winter (1980). The design figured by Rydon (1963) and Owen (1971), (fig.1 & 2) is a cylinder with a closed top and a open bottom with a suspended platform to hold the bait. Although the design was simple, many individuals entrapped in the cylinder could easily escape by simply flying or walking down the side walls onto the platform and escape out the bottom. Platt's design (Fig.3) added the inverted cone, hence once an individual became entrapped, escape is almost impossible. Neilsen's, Baggett's, and Winter's designs are basically the same as Platt's; all of these traps were made of inexpensive materials and were easy to produce. My first trap was built to Platt's plans. It survived one season; the following spring a storm destroyed the trap. Like the mouse trap, I had to have a better bait trap.

The design of my trap is basically that of Platt's. The major differences are in the materials and constuction. A trap made of durable materials with solid construction that is symmetrical will produce a functionally superior trap.

The method of construction and the materials that were used in the development of my current trap had to be extremely durable. The end results was a trap of exceptional quality and durability. The basic design consists of a cylinder closed at the top, with an inverted cone in the bottom suspended with tethers at the top. A platform to hold the bait is suspended from the bottom. (fig.4 & fig.5)

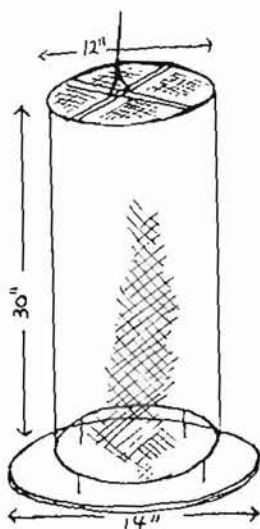


Fig. 1
from Rydon
(1963)

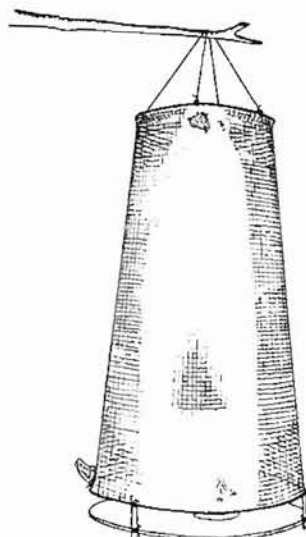


Fig. 2
from Owen
(1971)

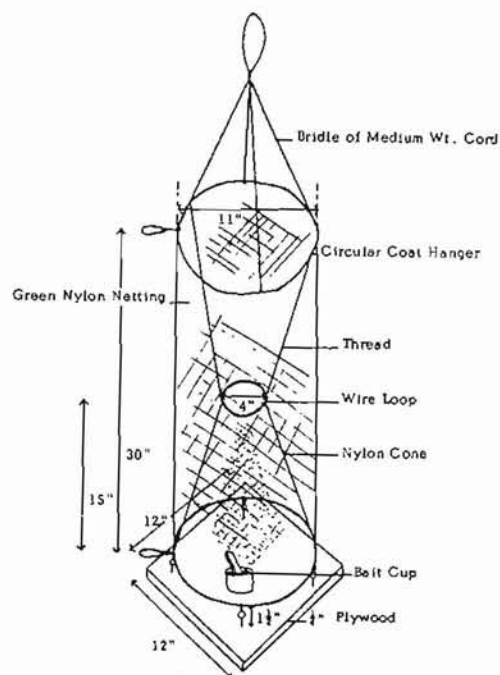


Fig. 3
from Platt
(1969)

Using fig. 4 & 5 the following materials and construction were developed. The cylinder consists of (a) two 15 inch steel macrame hoops which are used as the support rings and give the trap its shape; (b) nylon coated fiberglass screen 36 inches long to form the walls of the cylinder. The screen is sewn to the rings. (The entire trap is sewn together with black nylon thread on an industrial sewing machine). (c) waterproof raincoat cloth, light gray in color, is used for the top; (d) a four inch steel macrame hoop is the supporting ring for the small end of the inverted cone; (e) nylon coated fiberglass screen is also used to form the walls of the inverted cone; (f) short cloth tethers are sewn into the top ring; and (g) long cloth tethers are sewn to the four inch ring of the inverted cone, the tethers provide the support for the inverted cone; (h) brass eyelets are inserted into the ends of the tethers; (i) "S" hooks are used to couple the tethers; (j) "S" hooks and "eye" screws allow a (k) square platform of 1/4 inch plywood to be suspended from the bottom; (l) a 22 inch plastic zipper is sewn into the seam; (m) a rope line is sewn to the top as a hanger.

Nylon coated fiberglass screen is extremely durable and can withstand many years of continuous use in any weather condition. I have left traps hanging in my yard continuously for six years, winter and summer, all year long, only after the sixth year did the screen begin to deteriorate.

The 22 inch plastic zipper provides a tight seal and allows for easy access into the trap. Unlike metal zippers, plastic will not corrode or rust, a little light oil (sewing machine oil) used occasionally will allow the zipper to work easily. An alternative to a zipper is a Velcro seal, however I have found that after several seasons the Velcro begins to deteriorate and will easily separate with a slight wind.

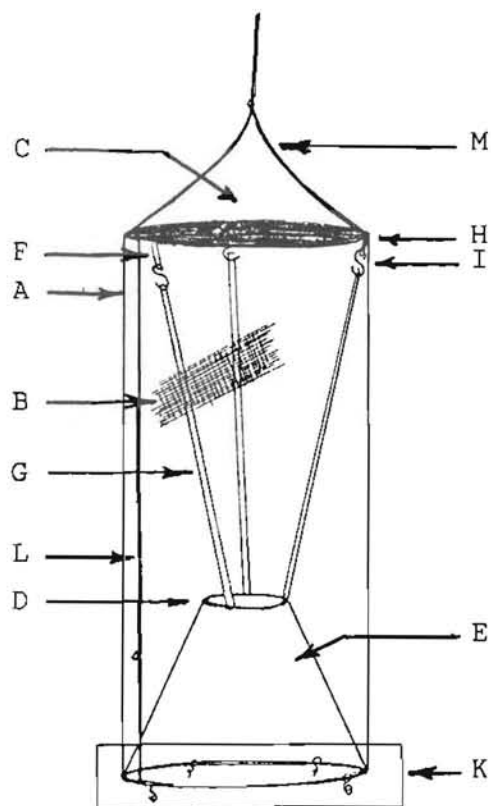


Fig. 4
Standard design
(Koehn)

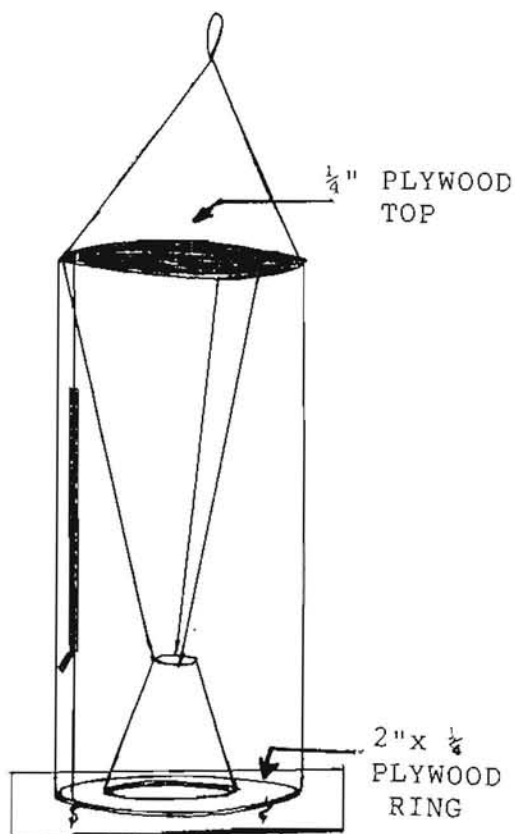


Fig. 5
Plywood bottom & top
(Baggett)

The waterproof material used for the top prevents rain from penetrating and causing damage to the specimens. I have also used both regular white terry cloth and a light navy canvas for the top. Butterflies will fly up towards light after feeding, therefore a material that allows light to pass through is essential. Collecting moths, especially Catocala, presented a different problem, moths seek a dark area to hide during the day, Neilsen (1976) placed leaves or a large piece of bark on top of the trap providing a dark area for the moths to hide under. I found that light gray colored water proof rain cloth material would create the dark area at night, and still be light enough to permit the passage of light to be effective during the day time for butterflies.

The point where the side wall meets the inverted cone forms a tight angle (Fig. 6); when butterflies and moths encounter this point in their frantic effort to escape, scalping of the thorax will occur. Dave Baggett (pers. comm.) has solved this problem by using a 1/2 inch thick plywood wooden ring in place of the metal macrame ring (Fig. 5). A two inch gap provides adequate space and eliminates the tight angle. The top is also made of 1/2 inch plywood. This is an ideal Catocala trap.

The cloth tethers are connected to the top of the trap with "S" hooks. This permits the inverted cone to be detached and pushed down and out the bottom for easy cleaning. The tethers can be used like handles to shake the trap, and dislodge unwanted insects from within. (Fig. 7)



Fig. 5
Bait container
spacing

The placement and size of the bait container are important, although bait can be placed directly on the platform, this will permit individuals to walk out from under the trap after feeding. Using a container with a height greater than the distance between the platform and the bottom of the trap has two advantages (Fig.5); (1) When an individual has finished feeding it is more apt to fly off the container than to walk down the side; (2) during windy weather

or severe storm conditions, the container is fenced in by the bottom of the trap and will not fall out. (Fig.4) Some of the best Catocala collecting that I have experienced has occurred on nights with thunderstorms or rain. Winter (1980) eliminated the platform and used a wire suspension to hold a cup of bait. (Fig.8) Rainy weather conditions will permit water to accumulate in the bait container. I have been unable to find a solution to this problem. Even bait with some rain water can still be effective. I learned early on in my bait trapping experiences that you must keep bait in the trap if you want to catch something.

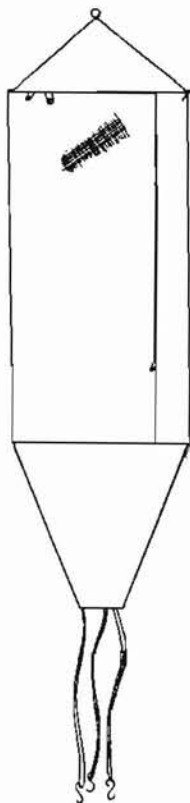


Fig. #7
Inverted cone dropped
out the bottom

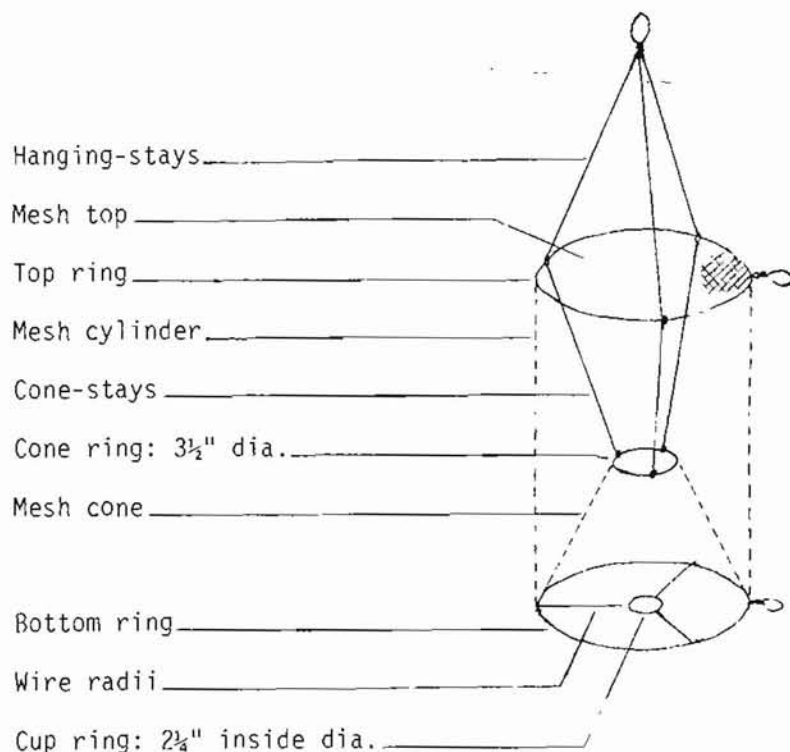


Fig. #8
from Winter
(1980)

THE BAIT

There have been many reports on the use of bait for collecting lepidoptera. As a teenager I remember reading Holland's (1903) account in the Moth Book of his experience baiting for Catocala. Every collector I know has his own bait recipe, secret formulas like witches brew concocted to place that poor alcoholic Catocala moth in a drunken stupor. The success of the bait trap depends on the bait, the better the bait, the better the catch. I have tried everything and anything, from sweet to sour, salty to rotten, artificial to DOA (road kills) and I still continue to seek out new and interesting baits.

The most frequently used baits are fermenting or rotten fruits. I first prepare a mixture of stale beer, unsulphured molasses, and sugar as my liquid base. I usually make a gallon at a time. I then slice up fresh fruits into my bait container and add the beer mixture, place it in the trap and a day later it begins to work. I use apples, peaches, plums, bananas and nectarines. These work well when used by themselves or mixed with other fruits. I have used persimmons, melons, mulberries, grapes, apricots, citrus fruits, coconuts, blackberries, strawberries, blueberries and papayas. I achieved some degree of success with each, and on occasion I would experience extremely successful results that I have never been able to reproduce. One occurrence in particular happened at Triangle Lake, Portage County, Ohio. I had been using beer and apples with rather poor results, as I was walking along the board walk in the bog checking traps, I found that the blueberries were ripe and I would pick and eat them as I went along, then I remembered a trip to Triangle Lake the previous fall with Eric Metzler. Eric had baited a trail with sponges of Brandy and Banana wine, although some moths were taken at the sponges, it was soon discovered that more moths could be found on the fermenting blueberries still clinging to the branch. I picked a container full of blueberries and crushed them, I baited one trap with just blueberries and another with blueberries and beer mixture. When I returned to check my traps the following day, I found them to contain many Catocala and other noctuids. Many nymphalid butterflies were collected with a blueberry and elderberry mixture. I tried this at several other locations and experienced terrible results. I noted that no blueberry plants were present at these locations. I had a similar incident happen on Key Largo, Florida this spring. While trapping for Eunica tatila I was using beer and apples in some traps and beer and bananas in others with rather poor results. E. tatila was very abundant in the hammocks and could be found commonly around soapberry trees, I observed E. tatila feeding on rotting soapberries on the ground. I immediately gathered several containers full, mixed some beer with and some without, put them in the traps, the next day I had 20 or more E. tatila in each trap. However, that was the only species in the traps. Observing what butterflies and moths feed on can greatly aid you in your baiting.

I have used animal droppings with very limited success. In the mountains of Virginia I used fresh deer feces in the spring and had some very good results, but during the summer deer feces only filled the traps with flies. I made a trip to a local park that had several deer in captivity, when I ask if I could collect the deer droppings, I recieved several strange looks, but the feces of wild deer held in captivity proved to be useful for flies only.

The diet of the deer must therefore be the deciding factor. I found the same to be true of bear, horse and raccoon droppings. Urine of mammals will also attract lepidoptera, including human urine. I have used a mixture of sand, rock salt, and urine as a bait and I have had some excellent results. Feniseca tarquinius will readily come to this bait, along with Basilarchia astyanax, and Lethe anthedon. I have made no attempt to collect mammal urine for use in traps. You reach a point when enough is enough!

Reptilian road kills have always produced some good collecting; well-smashed toad is a favorite of nymphalids. Snakes in the same condition are a close second. Box turtles are also good, I have used them all at one time or another and have found them to be excellent for Polygonia fanus, P. progene and Nymphalis vau-album. I have put several toads and a snake in a blender and whipped up a nasty batch of reptilian chopped meat, I only had moderate success with Polygonia and Nymphalis species. My wife also made me buy a new blender. (A word of caution: when using these baits a strong stomach is mandatory.)

When traveling with limited time, I have used yeast to make the bait ferment quickly, especially when using fruit baits. I do not recommend the use of yeast for long term baiting. Mold develops over the bait and renders it useless.

Another bait that I have had limited success with is corn meal. Fill a container full of corn meal, add water until the meal is completely saturated, then add some yeast and fermentation begins. This bait is short lived, three (3) days at the most. At times this bait can be very effective, at others times it is only good for corn meal muffins.

PLACEMENT OF THE TRAP

A good trap and excellent bait are only as good as the location where you place it. It is important to remember the what, where, and when of bait trapping. What is the larval host plant, where the moth or butterfly and their host plants occur, and when do the adults appear. I have found that habitats with known host plants will produce the best results.

Search for natural flyways, especially those that receive the late afternoon sun, as these will usually produce the best results. Along the banks of streams and creeks are also excellent flyways. Locate a tree that overhangs the water and hang a trap in it. Power line cuts, gas, and oil pipe line right-of-ways are other good flyways. The borders of woodlands and forests are also excellent trap locations. Hill top location, especially those with woodland or forest borders, or a natural ravine leading down the side of the hill are also excellent. The borders of wet lands, bogs and swamps produce some choice species. A little knowledge of the lepidoptera you want to collect and some habitat information will aid you tremendously in your trapping.

USE AND CARE

Once you have found a suitable location for your trap, hang it securely from a strong tree limb or branch. I hang my traps high enough so that I can reach all the way to the top of the inside when removing specimens.

(Cont. on Pg 17)

I have hung traps high in the trees, 20 to 30 feet, to collect nymphalids. The higher you hang the trap, the more it will be effected by the wind. If you plan to let your trap hang for extended periods of time, use a good grade of nylon rope. Be sure that your trap is out of sight. Putting traps where they can be easily seen could result in damage or the loss of it. Don't hesitate to ask private property owners for permission to hang traps, I have never been turned down and the owners turn out to be good watch dogs. They also tend to ask lots of questions and find your trap very interesting. A small price for some good security.

Once your trap is hung it must be tended. I check my traps twice a day, in the morning for moths, and the late afternoon for butterflies. Keep the bait saturated with the beer mixture. Change the bait bi-weekly, especially when using fruit.

There are other creatures beside lepidoptera that will consume your bait. Ants, mice, chipmunks, squirrels, raccoons, and opossums not only will devour the bait and the entrapped specimens, they will chew holes in the screen getting in and out of the trap. There is a certain feeling that you get when you come to your trap and find only the wings of Catocala duciola, the body having been consumed by a hungry mouse. There are several simple things that can be done to keep unwanted bait-eaters out. The rope or line which is used to suspend the trap provides access to it. Apply a thick coat of vasoline or grease to the line and spray it with an insect repellent weekly. This will keep ants, insects, and small rodents from coming down the rope. A nine inch aluminum pie pan can be inserted on the line by punching a hole big enough to allow the rope or line to pass through. Tie a large knot in the line twelve (12) inches above the trap; the knot will prevent the pie pan from sliding down the line and it will also block rodents and other small mammals from coming down the rope. The pie pan will turn and wobble freely on the rope, the unwanted visitor will be unable to find footing on the unstable pie pan and keep the unwanted visitors out of the bait. When I first began using bait traps I would often find my traps with the bait container on the ground and the bait gone; once I began using grease and pie pans I rarely lost bait.

Birds and most insects, like lepidoptera, will fly to the trap, I have found no real solution to prevent them from entering the trap. More than once have I found a fat frightened little chickadee or sparrow in my trap, unable to find its way out after eating all the specimens. Hornets and wasps will enter the trap by two different means: (1) When they are attracted to the bait and then fly up and into the trap and become disoriented, as a result they cannot find their way out; and (2) When they are hunting prey, they can find their way in and out of the trap with ease, I have never seen them take lepidoptera, only flies and other small insects.

Many other insects are attracted to the bait and will become entrapped. I made a trap with a 1/4 grid aluminum mesh top which allowed most insects to escape, including most of the smaller lepidoptera. These unwanted guests also present some problems for the lepidopterist. Yellow jackets, wasps, and hornets pose a real danger, they sting! Every year I manage to receive several stings when reaching into the trap to remove specimens, usually by small yellow jackets.

I always manage to notice and avoid the larger hornets and wasps. Large numbers of flies will occasionally become entrapped. Their constant movement will remove scales from any lepidoptera in trap. I have had the upper surface of Catocala forewings completely de-scaled as a result.

STORAGE

Proper storage of your traps when not in use can add many years of life to them. It is important to properly prepare your traps for long term storage. Thoroughly clean your trap with soap and water, hang them out with the inverted cone dropped through the bottom and thoroughly wash them down with a garden hose, allow to dry. Once dry apply a light coat of vegetable oil, this will help to prevent dry rot and a permanent creasing of the screen while the trap is collapsed. Place the trap in a plastic bag and store in a cool dry place.

In conclusion, these traps provide an efficient means of collecting lepidoptera. I have used up to thirty traps at a time, in a wide range of habitats and have enjoyed some exciting and adventurous experiences. However you decide to build your trap and the type of material you use in the construction will determine the cost. The results will depend on how patient, consistent and determined you are.

Baggett, H.D. 1980 More on Bait Traps, Newsletter of the Ohio Lepidopterists' Vol 2 No#4

Holland, W.J. 1903 The Moth Book, Doubleday, page, & Co. New York, New York, Pg.146-150

Nielsen, M.C. 1976 Use of Collapsible Bait Trap for Lepidoptera. Newsletter of the Michigan Ent. Soc. Vol 21 No# 2 & 3

Owen, D.F. 1971 Tropical Butterflies, Oxford University Press, London England

Platt, A.P. 1969 A Lightweight Collapsible Bait Trap for Lepidoptera. J. Lepid. Soc. 23(2):97-101

Rydon, A. 1964 Notes on the use of Butterfly Traps in East Africa, J. Lepid. Soc. 18(1):51-58

Winter, D. 1980 Collapsible Bait Trap, Newsletter of the Lepid. Soc. No# 3 Pg. 38-39

1988 ANNUAL MEETING: POVERTY HOLLOW VIRGINIA LEROY C. KOEHN

The Southern Lepidopterists' Annual Meeting will be held on the weekend of July 8th, 9th and 10th in the Poverty Hollow area of Montgomery County Virginia. The following accommodations are available;

Econo-Lodge
I-81 at Exit 37 & US 460
Christiansburg, Virginia
703-382-6161 or 800-446-4600
\$32.95 Single
\$36.95 Double

Econo-Lodge
US 460 & Yellow Sulphur Rd.
Blacksburg, Virginia
703-951-4242 or 800-446-6900
\$29.95 Single
\$32.95 Double

(Cont. on Pg. 19)

Sheraton Inn
By-Pass US 460 & Prices Fork Rd.
Blacksburg, Virginia
1-800-325-3535
\$48.00 Single
\$60.00 Double

Marriott Inn
By-Pass US 460 to Prices Fork Rd
1/2 Mile south of exit
Blacksburg, Virginia
1-800-228-9290
\$59.00 Double or Single
Includes Breakfast

There are numerous motels in the Blacksburg area, I have only listed a few. The nearest State Park with a camp ground is Claytor Lake State Park near Dublin, Virginia. It is 32 miles from Poverty Hollow area, and is fully equipped with electricity, water, and showers. You will need reservations; Telephone 1-703-674-0856, prices range from \$11.50 to \$16.00 per night.

For more information and directions see the Annual Meeting notice in Vol. 10 No# 1. If you are planning on attending please let us know. Contact Leroy C. Koehn at home 305-344-3873 or work 305-561-8301 or Jeff Slotten at home 904-733-9281 or work 904-328-1500. See you there.

CALENDER OF EVENTS

Lepidopterists' Society, 39th Annual Meeting.....July 14 - 17
Carnegie Museum of Natural History, Pittsburg, PA. For complete information and details contact John Rawlins, Section of Invertebrate Zoology, Carnegie Museum of Natural History, 4400 Forbes Ave, Pittsburg, PA, 15213.....Telephone 416-622-3259

THIS-N-THAT & OTHER TID BITS

John Hyatt, our zone coordinator from east Tennessee, has turned down a professorship at Georgia Tech, John and his wife decided that the big city was no place for a country boy from east Tennessee.

Jeff Slotten is considering doing a comic strip for the News, entitled "Catocala Capers".....

The Ohio Lep's are considering a field trip to Florida to view the Florida State collection at Gainesville in March of 1989. Possible joint meeting?

RESEARCH REQUESTS & MEMBER NOTICES

If you are conducting research on lepidoptera in our region, notify the editor of (1) your research project and (2) your address and telephone number. Members will be encouraged to aid with records, specimens, and appropriate information. We will prepare a list for inclusion in the newsletter or will mention your work in the Research Request section if preferred.

WANTED: Some one to identify and determine Crambids, Tortricids, and most other micros in exchange for specimens. Contact Bryant Mather, 213 Mt. Salus Dr., Clinton, MS 39056

FOR SALE: Collapsible bait traps and portable light traps, for more information contact Leroy C. Koehn, 2848 N.W. 91st Ave., Coral Springs, FL 33065-5004 Telephone (home) 305-344-3873, (work) 305-561-8301.

EXCHANGE: Ex-Pupae of Eumaeus atala, seeds of Aristolochia tagala the host plant of birdwings, Battus philenor and Battus polydamus, and ova of Battus polydamus. Will exchange for ova of Papilio, Nymphalids, and saturniids, especially Eacles. Will buy the latter if unable to exchange. Paul Pfenninger, 4085 Floral Dr., Boynton Beach, FL 33436 Telephone 305-732-4123.

WANTED: The following books and publications; The Butterflies of the West Coast by W.G. Wright; On the Sphingidae of Peru by A.M. Moss; Butterflies of Cuba by D.M. Bates; Monograph of the Genus Erebia by B.C. Warren; Vol#5 of Sietz. Please state price and condition, contact Leroy C. Koehn 2848 NW 91st Ave. Coral Springs, FL 33065-5004.

CURRENT ZONE REPORTS

ZONE I TEXAS: Coordinator, Ed Knudson, 808 Woodstock, Bellaire TX 77401 Knudson reports a very mild winter with the coldest temperatures coming in late March. Rain fall has been very scarce over most of the state.

April 8-13. : Ed Knudson and Morton (Sam) Adams visited the lower Rio Grande Valley taking Sphinx libocedrus at Falcon State Park on April 11

April 13. : Knudson and Adams visited Double Lake Camp Ground in San Jacinto County., (70 Mi. N. of Houston) and collected three new state records, Immyrla nigrovittella, Sigela eoides, and Nola clethrae. They also reported collecting Argyresthia austerella, Eupithecia peckorum, and Balsa labecula.

May 1. : Knudson returned to Double Lake and reported poor moth collecting due to the full moon, he managed to collect several interesting micros, Opostega quadristrigella, Idioglossa miraculosa (a truly exquisite moth), and Accleris maculidorsana.

May 8. : Again Knudson returned to Double Lake and reported good moth collecting, taking Catocala ilia, C. orba, and C. clintoni at bait. Meskea dyspteraria, Niasoma metallica, and a state record, Biselachista cucullata was also collected.

May 14. : Knudson visited Sixmile in Sabine County and collected 9 Catocala species at bait including, C. texarkana, C. lincolnana, C. mira, C. orba, C. clintoni, and C. andromedae. Other good noctuids were Zale aeruginosa, Zancloganatha martha, and Cosmia calami. About 30 species of Tortricids were collected, including Petrova houseri, Satrania tantilla, Ancylis muricana, Cydia toreuta, Choristoneura pinus, Archips georgiana, and Sparganothis cana. Nice Gelechiids were Anacamptis tristrigella and A. levipedella.

May 15. : Knudson visited Daingerfield State Park, in Morris County. and reported collecting Polia detracta, Pyrausta homonymalis, Basicallis tarachodes, Nephopterix vetustella, Olethreutes astrologana, and Dichrorampha broui. The Gelechiid Strobisia iridipennella was taken. Also several Tineids were collected, including Homostinea argentinotella and Fernaldia anatomella.

ZONE II ALABAMA, LOUISIANA, MISSISSIPPI, and TENNESSEE: Vernon Brou, 137 Jack Lyod Rd., Abita Springs, LA 70420; Bryant Mather, 213 Mt. Salus Dr., Clinton, MS 39056; John Hyatt, 439 Forest Hills Dr., Kingsport, TN 37663
(Cont. on Pg. 21)

John MacDonald reported the capture of Calycopis isobea near Malvern, Geneva County, Alabama on April 9th for a new state record. This is an eastern extension of its known range, the locality only 10 miles from Florida and 30 miles from Georgia. Collectors in the area should watch for C. isobea, it can be easily overlooked due to its similarity to C. cecrops. John is also working on a checklist for Alabama; if you can contribute, please contact him. C. isobea has been reported from Mississippi.

Francis Weldon reported on the situation she refers to as a "plague" - a population explosion of Hemileuca maia in New Orleans, Louisiana area which began about 1976-77. The situation has gotten so bad that the streets and yards in neighborhoods with oaks trees are not useful for outdoor activity from March through late May or June when the larvae are active. Heavy use of insecticides, even bacterial warfare, has not stopped the infestation. She further notes that these efforts may well be the cause of the drastic decline in other lepidoptera in the affected areas, she hopes that a better solution to the problem may be forthcoming.

ZONE III GEORGIA: Irving Finkelstein, 425 Springdale Dr. NE, Atlanta, GA 30305.

Bill Grooms, on a trip south from Maryland, stopped near Rincon, Effingham County on May 6th, and found Megisto cymela viola, Cyllopsis gemma, Enodia portlandia, and collected Poanes viator on an Iris blossom.

ZONE IV FLORIDA: Dave Baggett 309 SW 16th Ave. #122, Gainesville, FL 32601.

April 4 : Tom Neal reported a single capture of Mitoura gryneus swadlowi in his yard in Gainesville visiting Avocado blossom, a unique nectar source for this butterfly.

April 9-14 : Baggett, Neal, Slotten, and Stevens visited the Sampson, St. Johns County locality and found a few Amblyscirtes alternata, Atrytonopsis loami, lots of Thorybes spp., and recorded two new county records with Incisalia henrici margaretae and Nastra neamathla.

April 18 : Baggett reported 3 Achalarus lyciades in Gainesville, the present southern limit for this species.

May 3 : Baggett and Stevens visited the Withlacoochee State Forest in Citrus County and collected Satyrus l. liparops, S.c. calanus, P. M-album, A. halesus, Fixenia favonius, Dahana atripennis, and a female Paranthrene simulans palmii over flowers of Vaccinium.

May 4 : Tom Neal reported the capture of Satyrus l. liparops at a UV light in his carport, a bug that he had not previously taken in Gainesville. Maybe he should concentrate on collecting more in his back yard, especially on the 4th of the month! S.l. liparops is generally uncommon in Gainesville.

May 7 : Leroy Koehn reported collecting Anaea floridalis in bait traps in Coral Springs, Broward County. He also found Danaus eresimus rather common in Broward County.

May 14-15 : Koehn visited the Keys and found Eunica monima and E. tatilla to be very common on Key Largo. E. monima was found through out the Keys. Danaus eresimus, Appia drusilla, Chlorostymon maesites, C. simaethis, Tmolus azia, Hemiargus thomasi bethunbakerii, and Panoquina panoquinoides were also taken on Key Largo. On Big Pine Key he found Strymon acis bartrami, Strymon martialis, Anaea floridalis, Panoquina panoquinoides, and Hesperia meskil. On Stock Island he found Ephyriades brunnae floridensis, Electrostymon angelia, Epargyreus zestos, and the sphingid Aellopos tantalus.

May 22 : Koehn returned to Key Largo, Big Pine Key, Stock Island, Plantation Key and No Name Key and found excellent general collecting. Appias drusilla and Ascia monuste were very abundant. Collecting on No Name Key was extremely difficult due to mosquitoes, he managed to take Anaea floridalis, Strymon martialis, and Epargyreus zestos.

May 23 : Koehn visited the Homestead area and found collecting generally poor. Owaissa-Bauer Hammock was devoid of Butterflies. A brief visit IFAS Station found collecting not much better, taking Eunica monima and Siproeta stelenes biplagiata. At Navy Wells area south of Homestead he found Polites barocoa, Hemiargus ceraunus antibubastus and Polygonus leo.

Baggett reported that Catocala collecting in the Gainesville area was spectacular during late April and May. Neal, Baggett, Sloten, Gillmore, and Stevens collected 23 species, including C. orba, C. lincolnae, C. louisae, C. gracilis, C. pretiosa, C. connubialis, C. alabamiae, C. mira, C. clintoni and Vernon Brou's recently described C. charlottae. Two new county records for C. orba were obtained this year, with the above from Alachua County and Jeff Sloten reporting it from Rice Creek Preserve in Putnam County. John Kutis, collecting Catocala in the Bellview, Marion County area, reported new county records for C. grisatra, C. louisae, and C. insolabilis, and said that he had taken 17 species to date. John also reported taking Danaus eresimus near Bowling Green, Hardee County for a new Florida county record. We look forward to hearing more from John and other newcomers to Florida Collecting.

Other interesting moth records from Gainesville include the undescribed Morrisonia n. sp. mentioned in Kimball for a southward extension, Perigea xanthioides, Argillophora furcilla; Hyalophora cecropia (also emerging ex-cocoon found at the Ordway Preserve, Putnam County by Marc Minno); Scopula compensata (common at bait, not at light), Scopula timandrata; and Acrobasis demotella. Gillmore reported the capture of Catocala delilah from Sanford, Seminole County, and Jeff Sloten also reported the Catocala charlottae from Jacksonville, Duval County. Jeff will be describing the life history of C. charlottae, a species he has successfully able to rear this spring.

ZONE V VIRGINIA, NORTH & SOUTH CAROLINA: John Coffman Rt. 1 Box 331, Timberville, VA 22853; Bob Cavanaugh P.O. Box 734 Morehead City, NC 28557. Ron Gatrelle, 126 Wells Rd., Goose Creek, SC 29445

March 29 : Ron Gatrelle visited Barnwell State Park, Barnwell County, SC and collected Mitoura gryneus, Incisalia nippon, Falcapica midea annickae. At Aiken State Park, Aiken County, SC he collected Mitoura gryneus and Falcapica midea annickae.

March 31 : Gatrell reported visiting St. James Estates, Berkeley County, SC and found Incisalia irus arsace, the first time this species has been seen in several years. A second specimen was taken there on April 16.

April 9 : Gatrell visited Edisto Island, Colleton County, SC and found very dry conditions. He collected Falcapica midea midea and Brephidium pseudofea, the later very fresh, an early record, possible overwintering population?

April 15-19 : Gatrell collected around Goose Creek, Berkeley County, SC and found Megisto cymela viola very abundant, he also collected Amblyscirtes aesculapius, Thorybes confusus, Euptychia gemma and Euptychia sosybius.

April 21 & 28 : Gatrell returned to Aiken State Park, Aiken County, SC and collected Mitoura hesseli.

May 28 & June 2 ; Gatrell visited the Mount Pleasant area, Charleston County, SC and collected S.liparops, S.kingi, F.favonius, S. calanus, S.melinus, C.cecrops, P. m-album and A.halesus. Ron noted that this well known S.kingi locality, first discovered by Stan Nicolay in the late 1960's where the specimen figured in Howe(1976) was collected, is just about gone due to development.

May 31 : Gatrell collected in the Jacksonboro area, Colleton County, SC and found Megisto cymela fresh, a partial second brood. At Ashepoo River, Colleton County, SC, he found Oligoria maculata and Poanes viator zizaniae. Along HWY 802 in Beaufort County, SC, he found S.kingi and F.favonius, both new county records.

Charles Watson, now attending Clemson University where he is working on his PhD, reported on his field work at Clemson Experimental Forest, Pickens County, SC. To date he has collected the following: A.carolina, A.aesculapius, A.hegon, A.reversa, A.celia belli, H.metea, A.hianna, A.virginensis, F.tarquinius, A.halesus, H.titus, S.liparops, E.ontario, M.gryneus, I.nippon, P.m-album, C.gorgone, E.creola, and S.appalachia. Anyone wishing to do a little collecting in the area are invited to visit Charlie. Write or call (work) 803-656-5058 or (home) 803-653-7102.

Editors note: I would like to hear from anyone who may wish to contribute to the News. Even if you only visit our area and some general collecting, that information could be very important to some future or current worker doing research. Please report your collecting activities to the zone coordinators.

Have you developed a list of lepidoptera from your state or county, or would like to gather additional information, use the Research Request section! I encourage you to publish your work.

The Newsletter is only as good as the input I receive. Any articles of interest to the membership are encouraged and welcome. This is your society and your Newsletter. Your Editor can only work with what comes in, so let's hear from you out there.

THE MISSING NEWSLETTER - VOLUME 9 NO. 4

Volume 9 No. 4 was never published. No. 3 was the last Newsletter of Volume 9. Make a note of this and keep those bibliographers from going bald!

SOUTHERN LEPIDOPTERISTS MEMBERSHIP LIST AS OF JUNE 1, 1988

The following list is not to be used for purposes of external advertisement and has been provided to members to aid in personal correspondence and general business pertaining to group activities.

Lee Adair
810 Gascon Place
Temple Terrace FL 33817
Rhop., Macro., esp. Sphingidae, Saturniidae, Papilionidae,
coll., ex.

David H. Ahrenholz
2900-305 Douglas Dr. N.
Minneapolis MN 55422
Roph., Macro., esp. Saturniidae, ex., buy

Ken Alvarez
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Osprey FL 33559
Naturalist, endangered spp.

Christa L. Anderson
283 LaFontenay Dr.
Louisville KY 40223

R. A. Anderson
636 Amelia Ct. NE
St Petersburg FL 33702
Rhop., esp. Theclinae, Hesperioidea; coll., ex.

Richard T. Arbogset
114 Monica Blvd.
Savannah GA 31419
Nearctic Rhop., stored product moths

Thomas L. Ashby
667 Halifax Dr.
Mobile AL 36609

Dave Baggett
309-122 SW 16th Ave.
Gainesville FL 32601
Lep. of Fla., esp. Noctuidae and other moths

George Balogh
6275 Liteolier
Portage MI 49002
Lep., esp. Lycaenidae, Hesperioidea, Geometridae,
distribution in eastern N.A.; coll., ex., buy, sell

Andrew F. Beck
5181 Cassille Ave.
Jacksonville FL 32210

Bob Belmont
P. O. Box 2626
Naples FL 33939
Geometridae esp. Itame

Dike Bixler
P. O. Box 813
Jamestown NC 27282
Moths: taxonomy, ecology, behavior, education

Frank Bodnar
1201 Ridge Rd.
Apollo PA 15613
Rearing, ex. of ova-pupae

Ronald Boender
3431 NE 17th Terrace
Ft. Lauderdale FL 33334
Butterfly World

Richard Boscoe
150-A101 Ridge Pike
Lafayette Hill PA 19444
Butterflies and skippers; rearing and life histories

Donald W. Bowden
19 Nick Lane
Waynard MA 01754

Jo Brewer
257 Common St.
Dedham MA 02028
Rhop., photography, reer.

Vernon Brou
137 Jack Loyd Rd.
Abits Springs LA 70420
Lep. of LA, esp. Heterocera; designing better light and bait
traps

Richard L. Brown
Drawer EM, Miss. State Univ.
Starkville MS 39762
Systematics of Tortricidae

Robert S. Bryant
522 Old Orchard Rd.
Baltimore MD 21229
Lep., esp. MD moths; behavior, distribution, life

Charles T. Bryson
P. O. Box 350
Stoneville MS 38776
Lep., Carex (Cyperaceae), lep. feeding on Carex (Cyperaceae);
esp. Hesperidae

John V. Calhoun
368 Tradewind Ct.
Westerville OH 43081
Distribution of Ohio butterflies, Pieridae, Hesperidae

Richard L. Cassell
4003 Poplar Level Rd.
Louisville KY 40213
Moths: host plants, life history

Robert Cavanaugh
612 Carolina Ave.
Durham NC 27705
Rhop.; coll., photograph, rear. Japanese, Korean, Philippine
Rhopalocera; coll.

Dr. Ho H. Chuah
9208 Mary Haynes Dr.
Centerville OH 45459

John Coffman
Rt. 1, Box 331
Timberville VA 22853
Lep.; coll., ex., buy, sell

Colorado St. Univ. Libraries Serials Dept. Ft. Collins	CO	60523	Tom & Pat Dooley 145 Sea Park Blvd. Satellite Beach Lepidoptera	FL	32937	Hugh A. Freeman 1605 Lewis St. Garland TX 75041 Catocala; ex., buy, will determine specimens for any collector in North America free
Patrick J. Conway 4533 Stanley Downers Grove Lep. of N.A.; coll., ex., buy	IL	80515	Edward Doyle 5289 NE 1st Ave. Ft. Lauderdale	FL	33334	Mecky Furr 7925 Cross Pike Germantown TN 38138 Rhop., Macro, esp. Sphingidae, Saturnidae, Catocala, rear. exchange, buy, sell; esp. interested in distribution TN
Charles V. Covell Dept. of Biology, Univ. of Louisville Louisville KY 40292 Geometridae, esp. Nearctic & Neotropical & esp. subfamily Sterrhinae; KY lep.; Theclinae or Nearctic & Neotropical	KY	40292	Joseph F. Doyle III 13310 Bar C San Antonio TX 78253 Lep., esp. Limenitis, Lycaenidae, Hesperidae; life histories, coll, ex., buy	TX	78253	Dr. Lawrence F. Gail Div. of Ent., Peabody Museum, Yale U. New Haven CT 06511 Catacoia; evolutionary biology; numerical systematics; computer applications in biology
Ray Coyle P. O. Box 1321 Modesto CA 95353	CA	95353	Mr. Simon Ellis 1000-6951 San Jose/Trnsfld.Btrfly Co Costa Rica Central America			Ron Gatrell 128 Wells Rd. Goose Creek SC 29445 Lep., esp. Hesperidae, Lycaenidae, Satyridae, taxonomy; coll., ex., buy; correspondence welcome
Dennis Currutt 7533 Mulberry Rd. Chesterland OH 44026 Lycaenidae, Hesperidae; coll., ex.	OH	44026	Thomas C. Emmel Dept. of Zoology, Univ. of Fla. Gainesville FL 32611 Rhop., esp. Satyridae, Riodinidae; ecology, genetics, evolution; coll., ex., buy	FL	32611	Loran D. Gibson 5505 Taylor Mill Rd. Taylor Mill KY 41015
Harry N. Darrow 1470 Midland Ave. Bronxville NY 10708 Lep.; photography, life history	NY	10708	Douglas C. Ferguson Syst.Ent. Lab,USDA, US Nat'l Mus./Nat.Hstry Washington DC 20560 Taxonomy & biology of N.A. Geometridae, Arctiidae, "Deltoid" Noctuids	DC	20560	Rick Gillmore 148 Clear Lake Circle Sanford FL 32771 Sphingidae, Catocala
Terry Dickel P. O. Box 365 Homestead FL 33030 Macro., Micro. of Florida & Colorado; esp. Noctuidae, Pyralidae; life histories, rearing	FL	33030	Irving L. Finkelstein 425 Springdale Dr. NE Atlanta GA 30305 Rhop., esp. Papilionidae, Lycaenidae; coll., ex., rear.	GA	30305	Ada Ginsburg 710-1102 N. Ocean Blvd. Pompano Beach FL 33062 Photography of Hemiptera
Robert Dirig P. O. Box 891 Ithaca NY 14851 Butterflies	NY	14851	Hermann Flaschka 2318 Hunting Valley Dr. Decatur GA 30033 Macro.; coll., ex., rear	GA	30033	John D. Glaser 8800 Loch Hill Rd. Baltimore MD 21239 Noctuidae
Joseph R. Donaghue 5556 Pennybrook Trall Stone Mountain GA 30087 Life history; photography	GA	30087	Charles G. Fleming 2122 Reynolds Ave. Charleston IL 61920	IL	61920	Robert Godefroi 18 Cobalt St. Wilmington MA 01887 Rhop.; coll.

Ben Gregory 1350-19 Bob Pettit Blvd. Baton Rouge Sessions	LA	70820	Parker & Donna Henry 10960 SW 89th Terr. Miami Rhop., Macro.	FL	33176	Walter E. Jolley 2D1 W. Indiantown Rd. Jupiter	FL	33458
Dana M. Gring 6126 Harveet Lane Toledo Lep.; coll., ex.	OH	43623	John B. Heppner Box 1289, FL St. Coll. Arthropods Gainesville Micro.	FL	32802	John W. Kemner, Jr. P. O. Box 226 Dripping Springs	TX	78620
Dale H. Habeck Dept. of Entomology & Nem., UF Gainesville Lep.; immatures, biology	FL	32611	Larry A. Hill 404 Brookshire Dr. Lilburn	GA	30247	Roy O. Kendall 5598 Mt. McKinley Dr. NE San Antonio Lep.; life history, parasites, predators, distribution	TX	78251
Gordon R. Halvorsen Route 1, Box 137 Lovington Rhop., esp. Saturniidae, Papilionidae, ex., buy	VA	22942	Robert C. Hollister 9001 3rd St. N. (11/1-5/15) St. Petersburg Lep.; ex., buy, sell	FL	33702	Everard M. Kinch 4223 Jerry Lane Ft. Worth Interested in Junonia; would like to correspond	TX	76117
Steve Harley 1310 Pinecrest Rd. Spartanburg Lep., esp. Nymphalidae, Ornithoptera; coll., ex.; behavioral aspects of lepidoptera	SC	29302	Robert C. Hollister 2347 S. Baird Dr. (5/15-11/1) Highland Lep.; ex., buy, sell	MI	48031	Ed Knudson 808 Woodstock Bellaire Heterocera, Hesperidae	TX	77401
Frank R. Hedges 4413 Chantilly Way Pensacola Photography, life history	FL	32505	John Hyatt 439 Forest Hills Dr. Kingsport Rhop., Macro; coll., ex., buy	VA	37663	Leroy Koehn 2848 NW 91st Ave. Coral Springs Lep.; correspondence invited	FL	33065
Frank W. Hedges, MD 1195 Meadow Springs Ct. Kissimmee Macro.; coll., ex., buy	FL	32743	Samuel & Patricia Isaac 11205 Balmoralfield Lane Riverview Lep.; coll., ex., buy	FL	33569	Dennis M. Koopmeiners 5207-3 Cedarbend Dr. Ft. Meyers U.S. butterflies & moths	FL	33919
John C. Heinrich 22531 Tuckahoe Rd. Alva Coll. E. U.S., lists for Lee, Hendry, Collier counties in FL	FL	33920	Michael Israel 1934 Oleander St. Baton Rouge Rhop., Macro., rearing	LA	70806	Tom W. Kral P. O. Box 349 Necedah Ex. of specimens, esp. Satyridae (esp. L. postlandis, appalachia, N. areolata, Cercyonis pegala), Lycaenidae, Hesp	WI	54646
John R. Heltzman 3112 Harris Ave. Independence Nearctic butterflies, Lep. of Missouri, life histories	MO	64052	Joel M. Johnson 59 E. 400 N. Payson	UT	84851	Elaine Krueger 1850-6D9 Embassy Dr. West Palm Beach General; non-specific	FL	33401

Marc Kutash 4314 S. Anita Blvd. Tampa Heterocera dist., Geometridae; trade only	FL	33811	Howard Maier 4679 Pine Green Trail Sarasota Naturalist: education	FL	34241	Sra. Alma Garces Mendina Museo de Zoológica, Facultad de Ciencias de Mexico Apartado Postal 70-399 Mexico DF	04510
John S. Kutis 9783 SE Hwy. 441 Bellevue	FL	32820	Ernest Martin 603 Sullivan St. Ocoee Books on Lep., esp. butterflies, both current & out of print	FL	32761	Eric Metzler 1241 Kildale Sq. N. Columbus Noctuoidae; life history	OH 43229
Mary C. LaBrie 1024 S. Rhodes Ave. Sarasota	FL	33580	Leland Martin RD#2, Box 254/5628 Leroy Rd. Wakeland Rhop., esp. Ohio; Lep. on stamps, Lep. literature	OH	44889	Jacqueline Y. Miller Allyn Mus. of Ent., FSM, 3621 Bay Shore Rd. Sarasota Florida species, especially Hesperidae, Sphingidae	FL 34236
Julian J. Levasseur 200-6 Parma Dr. Daphne Rearing	AL	36526	John W. Mason 32 Maple Vale Dr. Woodbridge Lep., esp. Lycaenidae, Satyridae; coll., ex.	CT	08525	Lee D. Miller Allyn Mus. of Ent./FSM, 3621 Bay Shore Rd. Sarasota Systematics and biography of butterflies	FL 34236
Anton Littahorsky RR2 Corkery Rd. Carp, Ontario Lep.	KOA 1LO Canada		Bryant Mather 213 Mt. Salus Dr. Clinton Lep., coll., ex., buy, sell, also Neuroptera, Trichoptera, Mecoptera of MS	MS	39056	Paul F. Milner 713 Brandsford Rd. Augusta Rhop. of Caribbean, Eureka; life history, photography	GA 30909
John B. Lombardini 3507 41st St. Lubbock General collecting	TX	79413	Deborah L. Matthews Dept. of Entomology, UF Gainesville	FL	32611	Marc C. Minno 303-18 Diamond Village Gainesville	FL 32603
Vincent P. Lucas 600-301 Brick Mill Run Westlake Sphingidae; Hesperidae and lep. on stamps (philately)	OH	44145	James Maudsley 400 University Circle Athens Rearing, breeding, evolution of mimicry	GA	30605	Steve Mix 1109 Niblick Dr. Rocky Mount	NC 27804
Alvin Ludtke 8524 Stoneman Dr. North Highlands Lep., esp. of Western US; Riodinidae, coll.	CA	95660	Michael McInnis 22 Benchmark New Albany Lep., esp. Lycaenidae	IN	47150	Helen R. Mullaby 1920-116 West Lindner Mesa	AZ 85202
George MacDonald 8220 NW 21st St. Sunrise	FL	33322	Mrs. Joyce McNamara 1311 Riverside Cir. Dr. W. Bradenton Nymphalidae, Saturniidae, butterfly & moth books	FL	34209	Thomas M. & Leslie Neal 3620 NW 16th Pl. Gainesville Lep., esp. Notuidae, Geometridae; coll., rear	FL 32605

Stanley S. Nicolay
1500 Wakefield Dr.
Virginia Beach VA 23455
Rhop., esp. Lycaenidae, Hesperidae; coll., ex.

Paul A. Opler
5100 Greenville Ct.
Ft. Collins CO 80525
Distribution, ecology

Brian Pasby
1025 Main St.
Shrub Oak NY 10586
Captive colonies. Heliconiids, Papilionids, etc., behavior, conservation

Steven Passoa
219-66 67th Ave.
New York NY 11364
Taxonomy of immatures, esp. Pyralidae and Oecophoridae

Harry Pavulaan
P. O. Box 20202 Affton
St. Louis MO 63123
Lycaenidae (esp. celastrina complex), rearing, conservation, geographical distribution, mapping, ex.

John W. Peacock
185 Benzler Lust Rd.
Marion OH 43302
Macro., esp. Catocala, life histories, rear., coll.

Belinda S. Perry
4217 Iola Dr.
Sarasota FL 33561
Lep.; education, endangered spp., migration

Paul F. Pfenninger
4085 Floral Dr.
Boynton Beach FL 33436
Rearing of silk moths, esp. Automeris and exotic butterflies; buy, trade

W. Levi Phillips
2835 N. 840 East
Provo UT 84601
Macro., esp. Hemileuca; life history, taxonomy. ex., buy

Ms. Plonczynski & Mr. Hildebrandt
227 Hartfield St.
Jackson MS 39216
Butterfly and moth collecting, esp. Lycaenids & Noctuids; Carabid beetles of the area

Plonczynski/Hildebrandt
227 Hartfield St.
Jackson MS 39216

Edward Prescott
369 East Gore Rd.
Erie PA 16509
Rhop., esp. Speyeria distribution in N.A.

John M. Prescott
369 E. Gore Rd.
Erie PA 16509

Ployd & June Preston
632 Sunset Dr.
Lawrence KS 66044
Butterflies of North America north of Mexico

David A. Purdum
5232 Roselawn Rd. SW
Roanoke VA 24016
Lep., esp. Saturniidae, life history, photography; ex., buy, sell

Mrs. Patricia Purdy
303 Elm St.
Salem VA 24153

W. B. Richfield
P. O. Box 1066
Goleta CA 93116
Lep.; Heterocera, esp. Castniidae, Reptaliidae, Carocula; micro
lep., esp. leaf miners, buy, sell, ex., offers welcome

Mike Rickard
6550-201 Hillcroft
Houston TX 77061
Rhop., esp. Hesperidae; Macro.; coll., ex., buy, life history

John & Norma Riggenbach
6757 Blue Jay Ln.
Melbourne Village FL 32901
Lep.; photography, coll.

Imogene L. Rillo
P. O. Box 1666
Manila Philippines
Lep.; coll., sell

Jeff Robb
2515 Rockwood
Denton TX 76201
Macrolepidoptera of the Neotropical, Oriental and Australian faunal regions

Robert Robbins
Dept. of Ent. NHB 127, Smithsonian
Washington DC 20560
Hairstreak butterflies (Lycaenidae)

Randy Robinette
4800 State Rt. 5
Ashland KY 41101
Rearing & breeding different moth & butterfly sp., buy, sell, trade, esp. European app. Try to get food plants for other

Kilian Roever
3739 W. Townley Ave.
Phoenix AZ 85051
Rhop., esp. Hesperioidea, Theclinae; coll., ex., buy, sell

Allison Rose
1260 Getwell Rd.
Hernando MS 38632
Butterflies, esp. Monarch

Frank Rutkowski
234 Fifth St.
Jersey City NJ 07302
Lep. life history; buy early stages

Antonio Sanchez-Conde
115 Albert Dr.
Florissant MO 63031

Mack Shotts, MD
514 W. Main St.
Paragould AR 72450
Lep., esp. Catocala; buy, trade

Jeff Slotten
4083-1215 Sunbeam Rd.
Jacksonville FL 32217
Rhop., esp. Hesperidae; Saturniidae, Sphingidae, Catocala

David Smith
18A Pecan St.
Naples FL 33962

Gene Snyder
991 McLean St.
Dunedin FL 33528

John A. Snyder
Dept. of Biology, Furman Univ.
Greenville SC 29613
Pigments of butterflies

New Jersey Lep. Society
147 W. Carleton Ave.
Hazelton PA 18201
Breeding & farming; combatting viruses in raising populations

Ray E. Stanford
720 Fairfax St.
Denver CO 80220
Butterflies of western North America including Mexico, esp. Hesperidae & Lycaenidae

John Staples
Nature Discoveries, 389 Rock Beach Rd.
Rochester NY 14817

Charles Stevens
307-348 SW 18th Ave.
Gainesville FL 32601
Lep., Coleoptera

Major Jim Stevenson
3900 Commonwealth Blvd.
Tallahassee FL 32303
Rare and endangered species, park checklists

Allan M. Stodghill
2928-A Woodrich Dr.
Tallahassee FL 32301

J. Bolling Sullivan III
200 Craven St.
Beaufort NC 28518
Rhop., esp. Theclinae, Riodinidae, Euptychia; coll., ex.

Donald R. Tangren
Box 10
Aultman PA 15713

John Z. Trzaskos
RD #6, Voorhees Rd.
Amsterdam NY 12010
Lep.; coll., ex., buy, rear.

Tom W. Turner
12 Kingfisher Cove
Safety Harbor FL 33572
Rhop., esp. Pieridae; life history, coll.

James P. Tuttle
3838 Fernleigh St.
Troy MI 48083
U. S. Saturniidae & Sphingidae; biology and photography

Richard D. Ullrich
1108 Saybrook Circle
Lilburn GA 30247

John B. Vernon
1135 McClelland Dr.
Novato CA 94945
Rhop. of N.A.; coll., ex.

Charles N. Watson
252-K Rock Creek Rd.
Clemson SC 29631
Rhop., Macro., esp. Pieridae; coll., ex., buy

Reginald P. Webster
2729 Rue Vieux Moulin #26
St. Romuald, Quebec CANADA G6W 2X4
Lep.; esp. Lycaenidae, Pieridae, Nymphalidae, Saturniidae, pheromones

Howard V. Weems, Jr.
Box 1269, Div. of Plant Industry
Gainesville FL 32802
Diptera, Lep.

Frances Welden
7826 Willow St.
New Orleans LA 70118
Host foodplant studies (on-going); behavior patterns of Hemileuca (temporary)

David A. West
Dept. of Biology, VA Polytechnic Inst.
Blacksburg VA 24081
Rhop., Macro.; life history, pupal color in swallowtails, melanism in moths

Dr. Stepheo G. Williams
7502 Fondren Rd./Houston Bap. Univ.
Houston TX 77074
Butterflies, skippers and moths of SE and S Texas (and other).

William D. Winter
257 Common St.
Dedham MA 02026

Don A. Wood
620 Meridian St., FL Gm. & Frsh. Wtr. Fish Comm.
Tallahassee FL 32301

J. Benjamin Ziegler
64 Canoe Brook Parkway
Summit NJ 07901
Rhop., esp. Lycaenidae, Theclinae, Eumaeini; taxonomy, life history, systematics, food plants