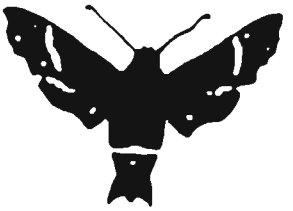
# southern lepidopterists' news



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THE OFFICIAL PUBLICATION OF THE SOUTHERN LEPIDOPTERISTS' SOCIETY ORGANIZED TO PROMOTE SCIENTIFIC INTEREST AND KNOWLEDGE RELATED TO UNDERSTANDING THE LEPIDOPTERA FAUNA OF THE SOUTHERN REGION OF THE UNITED STATES

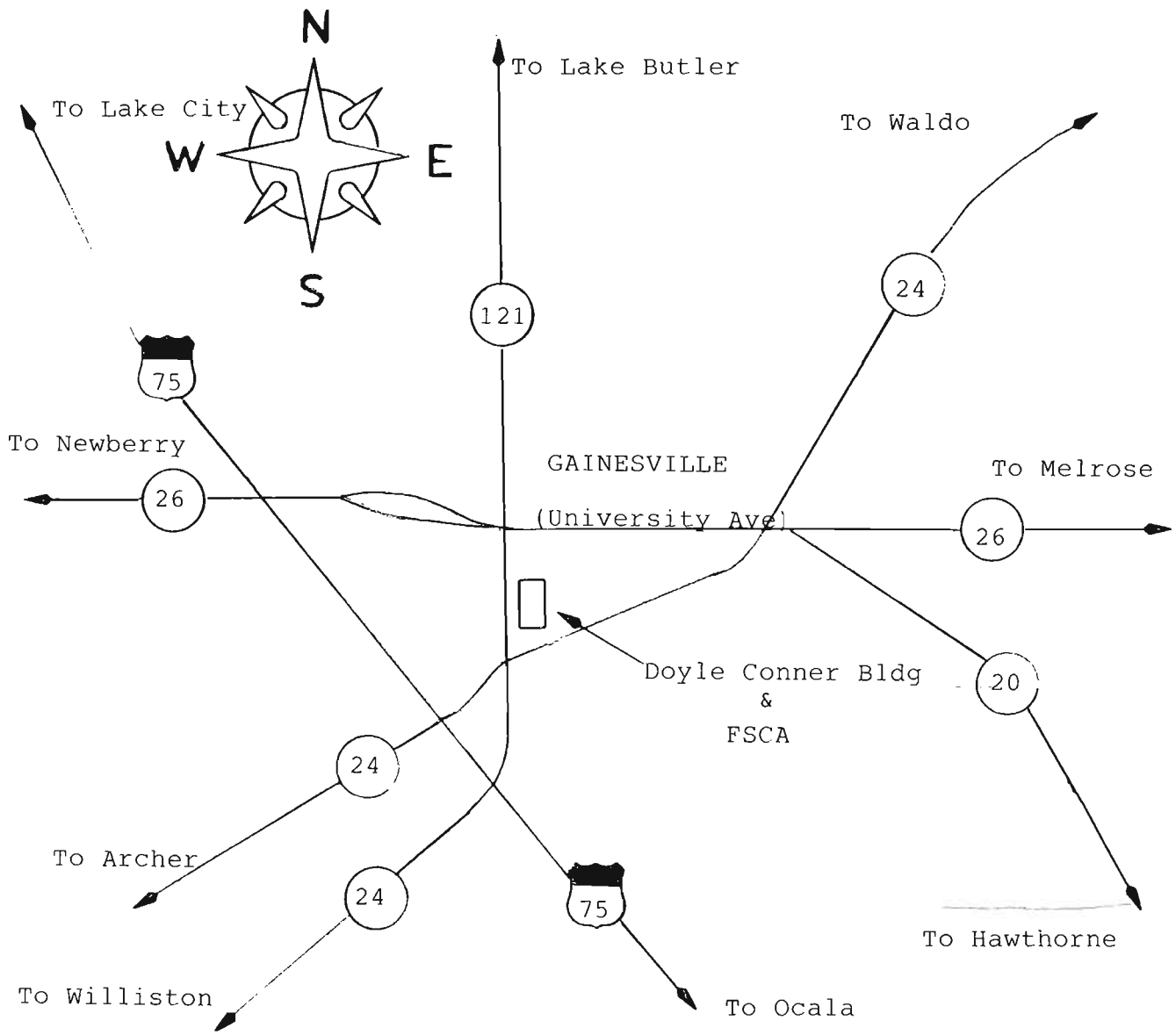


## SOUTHERN LEPIDOPTERISTS' SOCIETY ANNUAL MEETING IN GAINESVILLE, FLORIDA OCTOBER 3-4, 1992

The 1992 annual meeting of the Southern Lepidopterists' Society will be held the weekend of 3 - 4 October, 1992, at the Dolye Conner Auditorium, Florida State Collection of Arthropods in Gainesville, Florida (please refer to the map for directions). This meeting will be important as we will discuss the future course of the organization. As part of the program, we are planning an open forum to generate ideas which would help to strengthen the Southern Lepidopterists and insure that we will enjoy many more meetings in the future. In addition, we will be discussing current laws affecting the collection of lepidoptera in the state of Florida. Sunday field trips are being planned which will hopefully allow members to get a glimpse of some interesting skippers and other late-season species.

The insect collections of the Department of Plant Industry will also be made available for viewing. Arrangements have been made to have the collection open at 9 AM on Saturday. Please bring specimens which you cannot identify or other specimens of interest. The meeting will begin at 1 PM on Saturday in the main auditorium. Please feel free to bring interesting slides, observations, specimens, etc, for discussion following the main speakers. Please contact me in advance if you would like to give a presentation so that time can be arranged into the agenda for you. The business meeting and door prize drawing will conclude the program. Don't forget your donation for the door prizes! We will gather at a restaurant for an informal banquet after the meeting. A slide fest is planned for the evening. Please bring along slides of your recent trips into the field or other interesting subjects.

This promises to be an exciting and enlightening meeting, so plan **NOW** to attend. Your input at this meeting may help the Southern Lepidopterists continue to provide a valuable service to lepidopterists' of the region. If you want to participate in the meeting or need further information, contact: **John Calhoun (813) 736-3778.**




Directions to the Doyle Conner Building in Gainesville:

Gainesville is bordered on its western edge by Interstate 75, a major north-south thoroughfare. East of Gainesville, Highway 301 passes through the small towns of Waldo and Hawthorne, as well as crossing State Road 26 just west of Melrose. A quick study of the map should help you get your bearings, no matter which way you may be approaching from.

The Doyle Conner Building, which houses the Florida State Collection of Arthropods (FSCA), is located on the eastern side of State Road 121, which becomes 34th Street as you travel through the town of Gainesville. State Road 26 similarly becomes University Avenue in town, but at the edges is known as Melrose Road to the east and Newberry Road at the western edge of town. The Doyle Conner Building faces a traffic light at 20th Avenue, and a protected turn arrow is there to help if you're coming from the north. Ample parking is available at the Conner Building. The Southern Lepidopterists' signs with the group logo will also be placed conspicuously to help you.

There are numerous hotels and motels in the Gainesville area. Although this is a college town, there is no home football game that weekend. Should you need information on local accommodations or directions to the meeting, Jeffrey Slotten, a Gainesville resident, will help you: **Jeffrey Slotten, 5421 N.W. 69th Lane, Gainesville, Florida 32606. Telephone (904) 338-0721,** evenings.

## AN EARLY RECORD OF BATTUS POLYDAMAS IN EASTERN NORTH AMERICA

JOHN V. CALHOUN

Battus polydamas is primarily a Neotropical butterfly found throughout the West Indies, Mexico, Central America and most of South America. In eastern North America, B.polydamas is resident only in a portion of Peninsular Florida (Opler and Krizek, 1984).

In 1833, B.polydamas was listed from eastern North America when J.A. Boisduval and J.E. LeConte gave the range of the species as "la Floride e et Lile de Cuba". Subsequent authors continued to list the species from this region, especially Florida. However, during the late 19th century, W.H. Edwards cast doubt on the validity of B.polydamas in eastern North America. Edwards was unaware of any records of the species from the region prior to 1882 when he reported (Edwards, 1882a,b) the capture by William Wittfeld of several specimens of B.polydamas from "Indian River, Florida" (now generally considered to be in the vicinity of Georgiana, Brevard County). Edwards regarded the Floridian report of Boisduval and LeConte to be erroneous. Nonetheless, there is evidence which suggests that Boisduval and LeConte may have been aware of specimens of B.polydamas captured in eastern North America as early as the 1830's.

The eminent pioneer naturalist, John J. Audubon, included the artwork of young Maria Martin in his opus, "The Birds of America". Martin, of Charleston, South Carolina, drew flowers, branches, and various insects for use in the engravings for this work. In addition to her drawings for Audubon, Martin produced two sketchbooks containing numerous renderings of natural history subjects, including butterflies and moths (Ford, 1952). These sketchbooks are estimated to date from between 1833 and 1836. One of her sketches presents two aspects (dorsal and ventral surfaces) of a female B.polydamas. The origin of the actual specimen is unknown but it may have come to Martin from the English-born botanist and ornithologist, Thomas Nuttall, who had travelled to Florida during the early 19th century (Ford, 1952). Moreover, the illustration is accurate enough to present characteristics of the subspecies B.polydamas lucayus, which occurs in Florida.

It is possible that Boisduval and LeConte had examined or learned of Floridian specimens of B.polydamas captured by such naturalists as Nuttall. Thus, the Florida record reported in 1833 may be valid after all.

### LITERATURE CITED

Boisduval, J.A. and J.E. LeConte, "1833". Histoire generale et Iconographie des Lepidopteres et des Chenilles de l'Amerique septentrionale. Roret, Paris. 228 pp.

Edwards, W.H. 1882a. Note on Papilio polydamas. Linn. Can. Ent. 14(7):120.

Edwards, W.H. 1882b. Papilio polydamas in Florida. Papilio 2(7):122.

Ford, A. 1952. Audubon's Butterflies, Moths, and other studies. Studio Publications, Inc. 120 pp.

Opler, P.A. and G.O. Krizek. 1984. Butterflies East of the Great Plains. The Johns Hopkins Univ. Press, Baltimore, MD. 294 pp.

## INSECT STINGS

VERNON A. BROU

(Editors note: This is another of a series of several articles by Vernon Brou on health and collecting hazards.)

Insect stings are painful, but rarely dangerous. However, in the United States, insects cause more deaths than snakes.

Insect sting deaths are usually due to allergic reactions. Individuals with a potentially life threatening insect sting should be desensitized against hymenoptera. Most Hymenoptera species have common antigens in their venom.

For non-allergic individuals, cold compresses, aspirin, and diphenhydramine (Benadryl) are helpful.

Bee venom can cause severe exaggerated reactions. It can destroy nerve tissue and liberate hemoglobin from the red blood cells. After an initial sting, a sensitive individual becomes hyper susceptible to a subsequent sting. In severe cases, epinephrine aerosol inhalers, and benadryl are helpful, but have no immediate effect.

## PLAIN TALK FOR ENTOMOLOGIST ABOUT ULTRAVIOLET LIGHT — VERNON A. BROU

During the past 40 years or so, entomologists have used ultraviolet lamps in ever increasing numbers to attract, collect, and sample insects of all types that have flight capability. This report discusses some basic issues concerning the various features of fluorescent and high intensity discharge lamps, both of which emit blacklight. Safety considerations, as well as which currently available lamps are better suited for attracting insects are included among the topics covered. The relationship of various lamps and light trap design is touched upon. Views expressed here are based upon valid conclusions from published research as well as my personal findings from designing, fabricating and operating light traps year-round for 22 consecutive years in Louisiana. During this period +/-300 light traps have been fabricated to many sizes and designs, and countless lamps have been experimented with by the author.

There is a plethora of published investigations in literature concerning these topics. Those wishing to learn more about the development of various insect light traps will find 1,000 or more published articles going back more than 100 years. More notable and relevant are those by Frost, Glick, Pfrimmer, and others, published nearly 40 years ago. Besides reports on visible and ultraviolet light, dozens of published investigations are available from around the world involving attraction of insects to many other parts of the electromagnetic spectrum, including radio frequencies, infrared radiation, X-rays, and gamma rays.

Definitions and abbreviations are listed here for some of the terms used in this discussion.

Angstrom — One ten-billionth of a meter.

Blacklight — Lamps which produce primarily near-ultraviolet radiant energy in the range of 320 to 400 nm.

Bulb — Specifically the glass envelope part enclosing a light source, or more commonly the term used to described the entire structure, glass envelope and light source.

Lamp — Any device for producing light or heat.

Mercury Vapor — (mv) A lamp in which the outer envelope is made of borosilicate glass and contains nitrogen, while the quartz arc tube contains mercury and argon.

Nanometer — (nm) One billionth of a meter.

Ultraviolet — (uv) Wavelengths less than visible light and longer than those of X-Ray, between 10 and 380 nm.

UV radiation generally encompasses 10 to 380 nm on the electromagnetic spectrum. The near-uv or blacklight band is 320-400 nm, the erythemal band is 280-320 nm, the bactericidal or germicidal band s 220-300 nm, and the ozone producing band is 180-220 nm. The erythemal band is responsible for sunburn, suntan, and producing vitamin D in the human body.

The uv radiation in a high pressure mercury arc is twice that of it's visual component. Eye protection is essential for all who are exposed to direct or reflected uv radiation. This is especially so if the radiation is intense or one is exposed to it for extended periods of time. Failure to protect eyes can result in temporary painful inflammation of the conjunctiva, cornea, and iris, also photophobia, blepharospasm. and ciliary neuralgia. Blistering of the cornea and conjunctivitis are common maladies among light trappers who use high intensity mercury vapor lamps. If the outer envelope is broken or punctured, serious skin burns and eye irritations are even more likely.

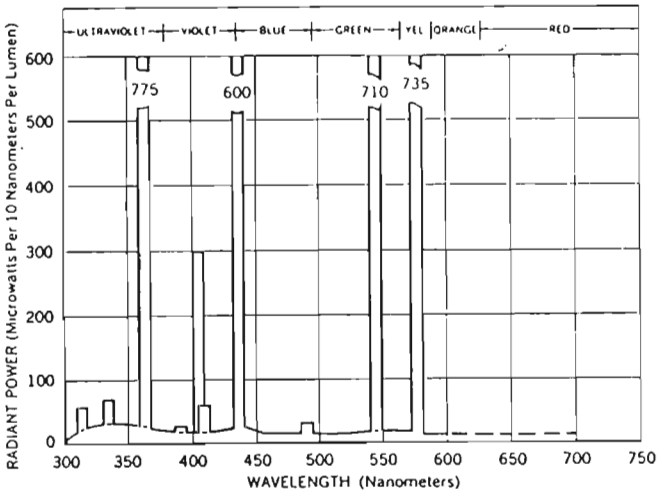
Photosensitivity, an abnormal skin reaction, occurs from both sunlight and artificial light. Adverse effects can occur in wavelengths of light between 250 and 800 nm. Continued exposure to lamps emitting wavelengths in the 290-320 nm area (peaking at about 297nm) are responsible for acute sunburn reactions. In this range, the shorter wavelengths cause quick sunburn, while the longer wavelengths penetrate deeper and cause tanning. Other photosensitizers (drugs, chemicals, and diseases) in combination with particular wavelengths can result in photo-toxic or photo-allergic reactions.

Sunlamps were introduced to the public in 1929. They were used for tanning at home. Many types of sunlamps were developed over the years. One type, the RS sunlamp (a self ballasted mercury vapor lamp) has been more often used by some insect collectors for the past 40 years. It incorporates a 175 watt tungsten filament resistance ballast and a 100 watt mercury discharge element inside a uv transmitting reflector type envelope. These lamps nearly disappeared in the early to mid 80's due to injury lawsuits. People would fall asleep while tanning under the lamps, causing skin and eye injuries. Laws were passed that they be made to operate only in conjunction with a timing device to limit exposure time. Consequently, several manufacturers opted to discontinue the lamp altogether. One manufacturer continued to produce the lamp, but with a mogul base. Thus preventing its operation from a medium socket (normal household socket). Along with the newly designed sunlamp the consumer was required to purchase a fixture containing a timing device with a mogul socket. For those familiar with electrical parts, this whole grand idea could be thwarted by purchasing an adapter for several dollars. The adapter allows a mogul base lamp to be screwed into a medium socket.

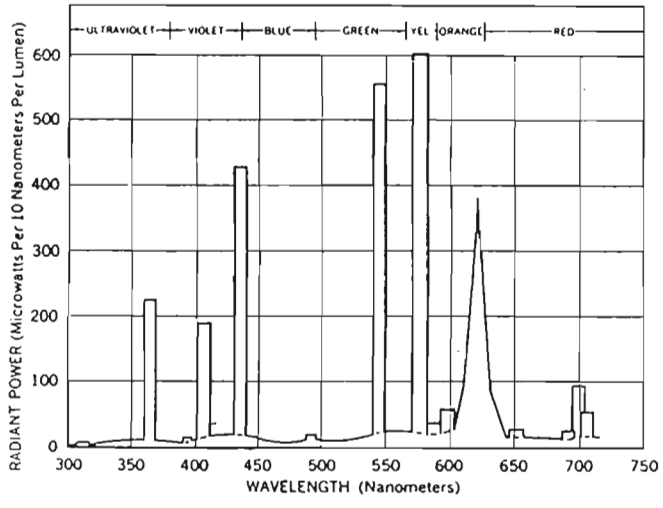
It seems the last manufacturer is no longer producing this lamp. The RS sunlamp and it's ability to attract insects was reported by Glick and Hollingsworth in 1955. Some collectors have routinely used it as an easy to use source of uv light and as an adjunct to fluorescent blacklights. The sunlamp provided a spectral distribution nearly identical to fluorescent blacklights, but from a more powerful source. Before the change to a mogul base, it required no special external device to operate. The RS sunlamp gained popularity because it was powerful and easy to use. In reality, it was a less than ideal choice for attracting insects. It was a spot type lamp. Several too many were needed to gain all around coverage of an area. They were expensive and were subject to breakage due to thermal shock (rainwater striking the glass). This was especially so when the lamp had a medium base. After the change to a mogul base, the lamp operated cooler and less thermal shock breakage occurred. Using several lamps to obtain wider area coverage consumed a lot of power. Also, 175 watts of each lamp was consumed by the internal ballast and was not generating uv light. A much superior alternative for a powerful blacklight source is discussed next.

Mercury Lamps - Most mercury lamps produce both visual and blacklight. They are the most powerful source of blacklight commonly used. They are compact and allow 360 degree coverage of large areas. They may be operated in any position. They do require auxiliary ballast and all have mogul bases. The auxiliary ballast can be a negative feature e.g. for a 1000 watt mercury lamp, the ballast alone may weigh 35 pounds. Lamp designations are explained in the following example of a 1000 watt clear mercury vapor lamp. Model No. H36GV-1000. H indicates mercury lamp, 36 indicates ballast type, GV indicates characteristics of the lamp, 1000 indicates lamp wattage. Additional letters after wattage would indicate type of phosphor or special glass coloring, no suffix means clear. Clear lamps are considered blacklights; fronted, white or other colored mercury lamps are not. The rated average life

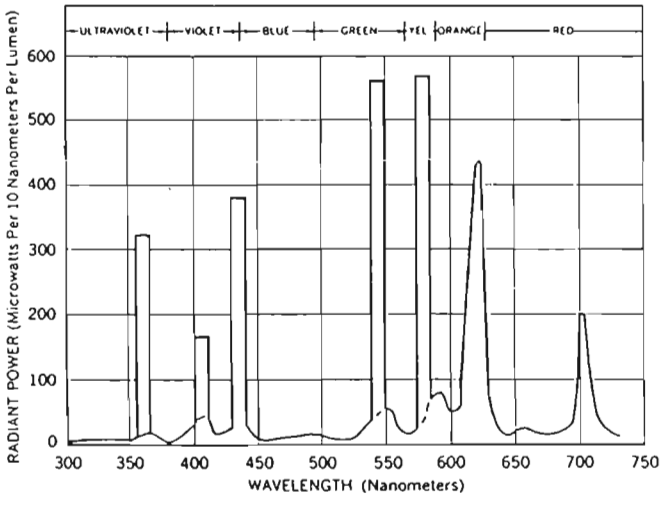
## CLEAR MERCURY




## DELUXE WHITE MERCURY




## WARM DELUXE WHITE MERCURY




of a 400 watt clear mv lamp is e.g. 24,000+ hours. In this case, 67% of these lamps continue to operate after 24,000 hours of burning. The light output of a new lamp declines with burning hours, and may be reduced to between 35 and 70% of it's original light output by the time it reaches 24,000 hours of operation. Wattage losses in ballast usually run 5-15% of lamp wattage depending on lamp and ballast type.

Mercury lamps are usually elliptical or bulged-tubular in shape depending on manufacturer. The envelope is made of heat resistant glass which also resist thermal shock. I have personally logged several million hours of operating all sizes of mercury lamps without any type of protective covering in all weather conditions, without a single lamp loss due to thermal shock. In wet conditions, the lamp base area should be taped shut to the socket with vinyl electrical tape. I have used the following mv lamps for over 10 years and consider them to have the greatest yields of any lamps currently available. Depending on manufacturer, the descriptive model numbers may differ, but are easily cross-referenced.

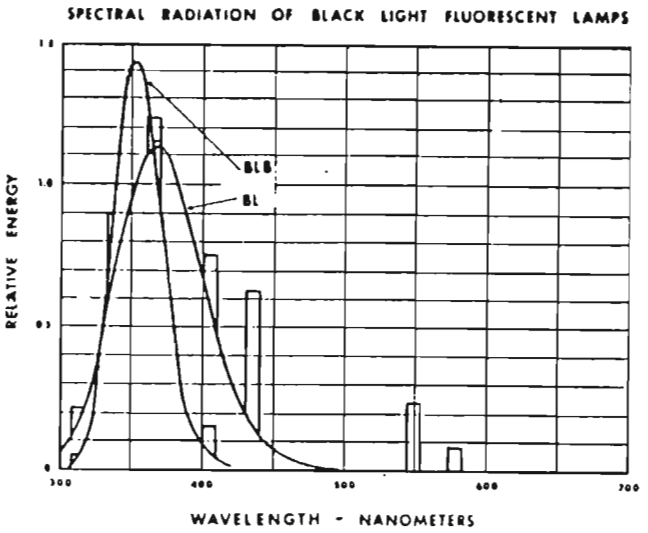
Mercury lamps generate visible radiation at four primary wavelengths (405, 435, 546, and 578 nm). Near ultraviolet radiation is primarily emitted at 365 nm. The quantitative distribution of the radiation is shown in these graphs. White (phosphor-coated) mercury lamps have been sold for many years to unsuspecting collectors. They are not as good producers of blacklight as clear mercury lamps. In fact, clear mercury lamps emit 2.5 to 3.5 times more radiant power in the ultraviolet region compared to the two common white mercury lamps. (see graphs)

1000 watt H36GV-1000
400 watt H33CD-400
250 watt H37KB-250
175 watt H39KB-175
100 watt H38HT-100

Fluorescent Lamps - these lamps are the most efficient source of blacklight and operate cool. They deliver full uv output immediately after being turned on. There are two kinds of blacklight fluorescent lamps (BL and BLB). Blacklight lamps differ from standard white fluorescent lamps only in the composition of their energy radiating phosphor. Fluorescent blacklight energy peaks about 350 nm in the near uv region. (see graph) The BLB lamps are the same as the BL except the tubes of the BLB are

made of a special filter glass. This filter glass absorbs nearly all the visible light, but some of the near uv energy is also absorbed by this filter. Compared to the BLB lamp, a BL lamp emits 25% more relative blacklight energy. The output of blacklight fluorescent lamps depreciate over time more rapidly than standard fluorescent lamps. Fifteen watt lamps are the most common size used by insect collectors, but wattages from 4 to 85 are available. Shapes are standard straight tubular, U-shaped, and circular.

Many light trap designs have evolved over the years. The most successful are those involving a light over a funnel or other collecting device. Not surprisingly, research has shown that insects approaching a lamp will more often dive below or at the base of the lamp, and not necessarily at the lamp itself. Also certain species of insects intersect the flowing area of the lamp at certain distances away from the lamp itself, not directly at the lamp itself. The addition of baffles also increases the quantities of insects collected. Other conclusions concerning light traps are: black baffles (non- reflective) increase yield, a larger funnel increases yield, baffle size is dependent on types of insects sought. Baffle size is dependent also on funnel size, both should compliment each other.




From literature, general conclusions about light sources used for attracting insects are: more blue = more insects, more red or yellow = less insects, brighter source = more insects, bare lamps attract more insects than lamps in reflectors or weather protecting devices.

Those wishing greater yields in light trapping should consider using traps with funnels and baffles as large as practical along with lamps of highest wattage. Ideally there should be some limiting relationship between size of the trap and the size of the lamp or amount of light it projects. There surely is a saturation point at which more light or trap size will not increase the yield significantly to warrant the increase cost of equipment and it's operation. Such conclusions are obviously dependent on numerous factors. All of these attempts to improve yield are somewhat negated by attempting to make light traps more portable. There are ways to lessen some of these negative factors in alternate designs.

## AN UPDATE ON INSECT COLLECTING ON FLORIDA PARKS, WITH SPECIAL EMPHASIS ON SOUTH FLORIDA

**DAVE BAGGETT**

For years entomologists have freely visited many places in Southern Florida seeking species with subtropical affinities. Most of these activities have been focused on the largely undeveloped and uninhabited portions of North Key Largo and on portions of Big Pine Key. Because of development and limited access, most of the other Keys Islands have been largely ignored by collectors for the most part, and due also to the fact that those seeking to visit the region have historically tended to visit the same places others have gone before them. However, things are not the same as they used to be for many reasons.

During the past few years a very aggressive land acquisition program has been in progress in the Florida Keys, an effort aimed at buying up undeveloped tracts to preserve and protect habitat for the many unique plants and animals that are found here and nowhere else in the United States. Unfortunately, many of the very same spots visited so freely in the past now are rather suddenly under either state or federal management and control, and

stringent rules and regulations applicable to these public lands are now being rigidly enforced. It is also very unfortunate that virtually no previous attempts have been made to inform the collecting community of the changes in access and policies which affect those wishing to visit and collect in the region.

A fact also unknown to most entomologists, professional and amateur alike, is that the entire Florida Keys region is regarded as a State Wildlife Refuge by the Florida G&FWFC, and attested to by the presence of a large sign as one approaches Key Largo from the mainland along US Highway 1. While the original intent of this sign was to warn against hunting, the interpretation now has also been extended to include collecting insects.

What this means to entomologist is that on all Florida State Parks and State Refuge Areas - all lands directly under the control of the Florida DNR - you must have a permit to legally collect insects. In addition, you must have a permit to collect on public land under the jurisdiction of the U.S. Department of the Interior, which includes the Crocodile Lakes NWR on Key Largo and most of Big Pine Key and surrounding land areas. The majority of territory familiar to most of us on Key Largo is now part of DNR holdings given the name of North Key Largo State Botanical Site.

Access to all areas directly under the control of either state or federal agencies is carefully regulated and controlled to prevent abuses mandated by laws and regulations. And since the entire Keys region is regarded as a State Wildlife Refuge, you could find yourself in trouble simply by walking down a road right-of-way with an insect net in hand. Monroe County police and Florida Highway Patrol both will stop you and ask for a permit if they see you collecting insects. These folks are only doing what they are supposed to do - enforce the law. The problem here is that most entomologists are not fully aware of the current laws, not to mention access, simply because in the past the laws were not enforced like they are today. Because of local publicity, you will also find that Keys residents are pretty familiar with many of the unique plants and animals - including insects - found in the Keys. The Florida Keys Audubon group apparently has taken a very negative view of general collecting, and has been very instrumental in applying pressure on both state and federal land managers; apparently they have not yet realized that the true biological diversity and uniqueness of the Florida Keys lies primarily in the insect fauna, and that we still know very little about most of them. Regardless, it is unwise to collect anywhere in the Keys region right now unless you have obtained the necessary permits.

The recent land acquisition process, coupled with the fact that there are a number of state and federally-recognized restricted plants, animals,and insects, has created problems for both entomologists and land managers. Perhaps the biggest portion of the current problem lies with the fact that very little has been done to communicate changes in public land access and differences in interpretation of the laws and regulations now in effect and being enforced. Apparently many collectors have been finding out the hard way, and at the same time those in land management positions have been given a generally unfavorable impression of entomologists.

Park personnel in the Keys region face many problems, and are very fearful of collectors who may be interested in restricted species. Indeed, EVERY collector is looked upon as a potential threat, simply because they do not know everyone, and they realize the foolhardiness in allowing unknown individuals access to areas where restricted species occur, while at the same time realize the entomologists know far more about both he activity and their prey than they do. There is little doubt here that they are also fearful of possible lawsuits by powerful environmental lobbies should anything happen to any of the restricted plant and animal species on lands under their jurisdiction and control. We should all be very much aware of the circumstances, as well as the rules and restrictions which apply.

Park personnel operate under the special set of rules and restrictions which apply, and also are fully obligated and expected to uphold laws of the state - most especially those which apply to restricted species. Butterfly collecting apparently is a big problem, at

least according to DNR personnel contacted in the preparation of this statement. (Bear in mind that anyone with an insect net in the daytime MUST be collecting butterflies!) These folks have continued to experience problems with insect collectors ever since the land acquisition process and the stricter policies and enforcement attitude have been implemented; apparently they have not seen the benefit of simply informing the collecting community about all of the changes, even though they have been encouraged and asked to do so. The only excuse I can think of is that it must be a lot more fun to catch and harass transgressors than it is to simply take time to inform the collecting community!

The matter is serious, and by no means are entomologists the only collectors the park personnel are having trouble with. Problems with snail collectors, shell collectors, plant collectors, and artifact hunters also are rampant, and it becomes understandable that all "collectors" from a land management perspective must be carefully scrutinized and evaluated, and those who have caused problems only add to the resentment of collectors in general. Illegal trespassing and trash dumping are also serious problems. Just how to best manage both these unique tracts of biologically sensitive and important lands for both the ecosystems and for people is a real issue for resolve for those in land management; just how to best go about the continued exploration of the unique Keys insect fauna without causing undue stress on park personnel and restricted species is another perplexing issue.

Perhaps one of the most pressing things is to try to inform some of the out-of-state visitors or new arrivals about all of the problem areas being faced by both the park personnel and entomologists with serious, legitimate research interests in the Keys. Apparently in the past, permits have been rather freely issued with restrictions and with the request for a written report of the activity after a trip. According to DNR, far too few of those receiving permits were submitting reports and lists, and these individuals have only made it that much harder for others to obtain permits. Remember here that your activities and actions reflect on all other entomologists.

Regardless, for some time now it has been mandatory for anyone wishing to collect on any Florida State Park to obtain a permit well in advance of any intended visit. Permits are not issued simply by walking into a park office. In addition, if you intend to collect butterflies, a special research permit must be obtained. Similarly, activities on U.S. Dept. of the Interior lands - places like Everglades National Park, the Merritt Island NWR, or Key Deer Refuge - also require that you obtain a permit and permission well in advance.

Collecting insects on park property is serious business, and it must be approached in this way, not just for purposes of simple general collecting. From the legal mandate which park personnel must adhere to, some net benefit from collecting activity must be realized, and it is up to the collector to state what he/she intends to do and how this will be of benefit. If you don't want to subject your time and effort towards the development of a proposal, nor be bothered with a report of your activities, then simply don't collect on the parks or preserve areas. By all means steer clear of the Florida Keys. Don't create unnecessary problems for either park personnel or for serious entomologists who do follow the laws, rules, and restrictions imposed, and who are willing to work within the framework allowed.

As mentioned earlier, the principal controllers of public lands in the Florida Keys region are the Florida DNR and the U.S. Dept. of the Interior. If you want to conduct collecting activities of any kind in the Keys region, you should be prepared to contact the agency or agencies well in advance of any intended visit. Permission must be obtained before the trip since proposals usually require review by regional staff biologists to weigh the merit and need of the request. This process usually will take up to six weeks. A short but complete research proposal must accompany all requests for permits in the Keys Region; at present it is virtually impossible to obtain permits for butterfly collecting, although you can submit a proposal oriented around research aspects. If you obtain a permit, you will also get a list of rules and restrictions, and more than likely you will get a limit as to numbers. You may also be asked to deposit a voucher for each species taken in the Florida State Collection of Arthropods, or other public museum.

In this particularly sensitive region, you should contact the Keys District Biologist at John Pennecamp State Park for permits and permission to collect on all DNR-controlled areas; the address is P.O. Box 2628, Key Largo, FL 33037. You may want to inquire about locally-determined rules and restrictions and ask for a research proposal form before submitting an actual request. You should anticipate some rather excessive limitations - especially if this is your first visit, and they don't know you from a poacher.

Similarly, if you want to visit Big Pine Key or the Crocodile Lakes NWR, you should write to the Refuge Manager, National Key Deer Preserve, P.O. Box 510, Big Pine Key, FL 33043. For Everglades or Merritt Island, you should similarly contact the respective refuge manager. No permits or permission are required to collect in either the National Forests or State Forests in Florida.

Should you wish to visit other state parks outside of the Keys region, contact in writing Dana Bryan, Bureau of Cultural and Natural Resources, Division of Recreation and Parks, Florida DNR, M.S. 530, 3900 Commonwealth Blvd., Tallahassee, FL 32399-3000. Dana can provide you with information regarding access, rules and restrictions, and who to contact for permits and permission for other parks within the DNR's 10-District system. Each has its own system and philosophy as dictated by the respective District Biologist staff and consideration for the restricted aspects.

There is very little reason for any entomologist not knowing which species are federally protected, since Dr. Paul A. Opler of the USF&WS has done a commendable job of keeping the collecting community updated regarding status changes and species listings of insects. However, state laws and listings often exceed federal ones, and Florida has extremely tough laws with regard to state or federally-listed species. During 1991, Florida State Bill 642 was amended to extend full protection to all plants and animals down to special concern categories: "...prohibiting the killing or wounding of any species designated as endangered, threatened, or of special concern..."; ironically, the Florida Black Bear, regarded as a threatened species by the state, was the subject of a hotly debated controlled hunt last year, and the alligator, still regarded as a species of special concern despite an estimated 1.5 million population, was also given a controlled hunt. We know a great deal more about these two animals than we do about most butterflies, let alone most other insects save cockroaches and honeybees, and it is equally ironic that most of what we learn about insects and their relative abundance and distribution is by collecting = "hunting" them!

Just to be on the safe side, for a complete listing of all plant and animal species considered to be "restricted" by the Florida G&FWFC, you should request a copy of the Florida G&FWFC Official Lists of Endangered or Potentially Endangered Fauna and Flora from Don Wood, Endangered Species Coordinator, FG&FWFC, Farris Bryant Building, 620 South Meridian Street, Tallahassee, FL 32301. Also of importance to the collecting community is that a revised edition of the invertebrate volume in the Rare and Endangered Biota of Florida series is currently in preparation under the editorship of Dr. Mark Deyrup of the Archbold Biological Station in Lake Placid. Florida listings will no doubt be greatly expanded in the future, and collectors will be wise to watch for updates as they become available.

There is certainly good reason to argue that proper habitat protection and maintenance are the most crucial factors involving all species of insects, and that sensible controlled collecting should not harm any population. Reproductive strategies and potential are very different from vertebrates, and even the USF&WS generally acknowledges that insect collecting activity will not cause harm to virtually all populations. However, land managers operate under laws and restrictions aimed at protecting the resources under their jurisdiction, and they also should be very much aware of the potential for abuse by collectors. As entomologists, we must also be keenly aware of the powerful environmental lobbies who generally equate us as hunters; it is also very difficult for laymen to understand the need to kill any animal unnecessarily, most especially if it happens to be something so aesthetically pleasing as a butterfly, even if there still are taxonomic questions waiting for answers, and a great deal of life history work and basic ecology which cannot be gleaned from a Field Guide or with a pair of binoculars.

Increased environmental awareness and education regarding ethical collecting practices which will not harm insect populations are essential roles of the entomological community; those in land management positions should learn to utilize collectors and their knowledge in constructive ways such as that demonstrated in Ohio, a state which currently is taking the lead with regard to lepidoptera surveys and development of a current database to assist in making evaluations - something which would not be possible without the strong cooperative effort forged between the local collectors and the Ohio DNR. Sadly, Florida still seems to be mired in the Dark Ages; the benefits of working constructively together always outweigh all other alternatives, but as long as abuses continue on state lands in the Keys the road will be a long and rough one. The bottom line here is that neither side really wants to contribute to the extirpation of any species, and that both sides need regular monitoring information, even in sensitive areas like the Florida Keys, and even for butterflies. The Florida Keys are simply too important and too dynamic to be placed off-limits from a biological standpoint.

## TEXAS FIELDING MEETING REPORT — ED KNUDSON

About 20 Southern Lepidopterists, quests, and family members were on hand to sample the beauty of the Texas Hill Country and its Lepidoptera during the spring field meeting at Neal's Lodge in Concan, Texas, the weekend of May 1 & 2. Although moth collecting was excellent, with over 200 species seen, butterfly collecting was somewhat hampered by cloudy weather. However, among the 50 or so butterfly species seen, there were a good number that were of interest to out-of-state visitors.

As is usual with field meetings, there was no business session. A brief get-together and photo session late Saturday afternoon was accompanied by the appearance of the sun, sending many off with their nets. Please see the Texas zone report for some of the more interesting catches. I am hoping that those attending will send me their records, so that I can use this information to compile a checklist for Neal's Lodge. I will also be glad to identify material collected during the meeting (or elsewhere in Texas).

Members in attendance: Joseph (Terry) Doyle III, Roy Kendall, Ed Knudson, John Lombardini, Bill Witteman (Texas); Jack Heinrich, Tom Neal, Jeffrey Slotten (Florida); and Joel Johnson (Utah). Members soon to be (we hope), included: Charles Borderlon, Ed Gage, Chuck Sassin (Texas); and Ron Leuschner (California).

For those who were unable to attend, picture in your mind thickly wooded hills deeply cut by a clear, fast running river, bordered by giant Bald Cypress trees. Fields and roadsides covered with wildflowers. Here in Texas, east and west meet, with additional influences from the tropics in Mexico. Hopefully we can meet here again, next time in the fall!

## NEWSLETTER UP DATE

It is with the deepest regret that I must resign my office as Editor of the Newsletter. This departure has resulted from a change in employers, combined with personal concerns which have caused my return to north east Ohio. I have thoroughly enjoyed the five years I have served as Editor. For me personally, they have been years of learning and great satisfaction.

In the fall of 1987, Dave Baggett and Jeffrey Slotten asked if I would take over as Editor of the Newsletter. I had absolutely no experience or educational background to qualify as an editor and English was my worst subject when I was in school. The Southern Lepidopterists were having some serious difficulties and needed some help, and I viewed this as short term until a qualified Editor stepped forward. Four years later I am still the Editor. I have attempted to do the best that I could to help this organization. I look back at where we were in 1987, and where we are at today. We have come a long way.

I want to thank all those who contributed articles, notes, news, book reviews and items of interest to the Newsletter. Without their in put the success we have experienced could not have been possible. There are also those who desire special recognition: Dave Baggett,

Hermann Flaschka, Vernon Brou, Bryant Mather, Ed Knudson, John Calhoun, Irving Finkelstein, Ron Gatrelle, and Jack Heinrich, all of whom provided and/or reviewed numerous articles, edited first copy, and helped make many decisions. A special thank you to Francis Anne Ecker, the artist of "Catocala Capers", who made us see ourselves and laugh. I would like to especially thank Tom Neal. Tom provide direction and guidance, he reviewed each newsletter before it was published, and listened to all my concerns and provided the criticism that shaped the Newsletter. Every editor should have a Tom Neal as a friend.

Being the Editor has brought many things: many new friends, lots of work, plenty of mail, a good share of criticism (constructive or otherwise), many challenges, and above all, great satisfaction. Thank you for your support!

## TOM NEAL AND JEFFREY SLOTTEN : INTERIM EDITORS

Tom Neal and jeffrey Slotten have agreed to serve as the interim Editors until a new one is found. Tom is currently Secretary-Treasurer (He will also continue in this capacity) and Jeff has served as Chairman of the Southern Lepidopterists. Both are familiar with the organization and its inner workings. They are aware of the goals and needs of the organization and will do their best to produce a quality newsletter. Please support Tom and Jeff by sending them your zone reports, news items, articles, research requests, notes and other items of interest. We wish these two fine fellows the greatest of success.

Send all items for the Newsletter to: **Jeffrey Slotten, 5421 N.W. 69th Lane, Gainesville, FL 32606-7000.**

## WANTED: EDITOR FOR THE SOUTHERN LEPIDOPTERISTS NEWSLETTER

Do you have a flair for editing? Are you creative and looking for a challenging and satisfying opportunity to serve an exciting organization? The Southern Lepidopterists are in need of a new Editor for the Newsletter. If you or anyone you know is interested in serving this important office, please contact: **John Calhoun: 813-736-3778.**

## THIS-N-THAT & OTHER TIDBITS

Several new and important books have been published recently and some of the authors are members of the Southern Lepidopterists Society. One book in particular is of regional importance, "Butterflies of the Florida Keys by Marc C. Minno and Thomas C. Emmel", to those interested in the Lepidoptera of Florida. Listed below are several titles, including cost:

**Butterflies of the Florida Keys by Marc C. Minno and Thomas C. Emmel**; 168 Pages with 29 color plates, 52 color figures and line drawings. The book deals with the Butterflies of Florida Keys. A total of 29 color plates (8 of which are life history plates) and 52 text photographs illustrate this new guide. Both authors have been studying the Butterflies of South Florida and the Keys area for many years.

$24.95 cloth; $14.95 paper. Available from: Scientific Publishers, P.O. Box 15718, Gainesville, FL 32604.

**Florissant Butterflies: A Guide to Fossil and Present-Day Species of Central Colorado by Thomas C. Emmel, Marc C. Minno and Boyce A. Drummond**; 148 pages, 278 color halftones, 58 other halftones and one map. This book identifies all the fossil (12 of the 44 know species of butterfly fossils in the world are from the Florissant Fossil Beds National Monument in Central Colorado) and modern species of butterflies found in Florissant.

$35.00 cloth; $14.95 paper. Available from: Stanford University Press, Stanford, CA 94305.

**The Owlet Moths of Ohio by Roy W. Rings, Eric H. Metzler, Fred J. Arnold and David H. Harris**; Biological Survey Bulletin, New Series Vol.9 No.2, 219 pages with 16 plates, 8 color & 8 B/W. An important regional work for anyone with an interest in Noctuid moths, especially those of Ohio and the mid-west.

$20.00 each. Available from: Ohio Biological Survey, Museum of Biological Diversity, 1315 Kinnear Rd., Columbus OH 43212.

**Butterflies and Skippers of Ohio by David C. Iftner, John A. Shuey & John V. Calhoun**; Ohio Biological Survey Bulletin, New Series, Vol.9 No.1, 212 pages with 40 color plates. This is the most thorough and complete treatment of a regional butterfly fauna yet published. The exhaustiveness of this study is the result of more than a decade of cooperation involving the authors, the Ohio Lepidopterists, the Ohio Biological Survey, and the Ohio Department of Natural Resources, Division of Wildlife. The treatment for each species carefully documents that butterfly's status through time. There are detailed distribution maps and charts for seasonal flight periods for each species. This is an important regional work for anyone with an interest in the Lepidoptera of mid-west, especially Ohio.

$40.00 each. Available from: Ohio Biological Survey, Museum of Biological Diversity, 1315 Kinnear Rd., Columbus OH 43212.

**Swallowtail Butterflies of the Americas by Hamilton A. Tyler, Keith S. Brown Jr., & Kent H. Wilson**; 360 pages with 154 in color. An exhaustive study of the swallowtails of Central and South America. Life histories, diversity, ecology of many important species are treated. This is a must for anyone with an interest in Papilioniidae of the Americas.

$40.95 hard bound. Available from: Scientific Publishers, P.O. Box 15718, Gainesville, FL 32604.

**Learning About Butterflies by Carolyn Klass & Robert Dirig**; 36 pages, color center spread and 16 figures. An educational publication on the butterflies of the northeast. Chapters on butterfly anatomy, life history, habitats, ecology, behavior, conservation and butterfly gardening. Numerous illustrations amplify the text. A good source of basic information for the amateur and professional alike.

$6.25 each. Available from: Resource Center, 7-8 Business & Technology Park, Cornell University, Ithaca, NY 14850. (payable to "Cornell University")

**CORRECTION:** Your Editor made a series of errors when transposing Vernon Brou's article, "Extended Duty Bait Traps designed For Continual Year-round Use" which appeared in Vol. 14, No.1. I added a fourth dimension, 180 degrees, for Platform Hangers and Platform Hooks. Delete the 180 degree dimension. Also, the paragraph on Rain Protection: sentence two should read."circumference for chain link". Please note corrections.

## RESEARCH REQUEST & MEMBERS NOTICES

FOR SALE: Light Traps, 12 volt DC or 110 volt AC with 15 watt or 8 watt black lights. The traps are portable and easy to use. Flow-through rain drain and beetle screens protect specimens from damage. For a free brochure and price list contact; **Leroy C. Koehn, 6058 Campbell Rd., Mentor on the Lake, OH 44060, Telephone 216-257-0796**

**LATEST ILLUSTRATED 12-PAGE WORLD WIDE LEPIDOPTERA CATALOG** includes Lepidoptera specimens from South America, Europe and the Far East Regions. Serving lepidopterists worldwide since 1976. Beginners to experienced collectors will find species of interest. Examples include Morpho rhetenor, M/F, M.titie, M/F, M.godarti, M/F, Prepona buckleyana, Papilio warscewiczi, Papilio cacicus, Graphium stresemanni, Papilio antimachus and more. Books and entomological pins. **WE OPERATE PERSONALIZED ENTOMOLOGICAL, NATURALIST, BIRDER TOUR PROGRAMS.** Latest catalog $1.00 or one year's monthly list via airmail $6.00. **TRANSWORLD BUTTERFLY COMPANY. Apartado 6951, 1000 San Jose, Costa Rica, Central America.**

**WANTED TO PHOTOGRAPH FOR BOOK:** Live ova/larva/pupa of lepidoptera from other areas. Most wanted: Papilios, Parnassius, Pierids, Nymphalids: (Fritilaries, Esp. S.diana, & S.idalia, Anaea sp., Basilarchia sp. A.bredowii, H.misippus, A.jatrophae, Polygonia sp., and Eunica.) Lycaenids, Heliconiids and Sphinx moths, Thysania zenobia, Ascalapha odorata, Saturniids and more, live Brown Recluse Spider and other interesting insects. Buy, trade specimens or slides. Send list to : **David Liebman, 981 S. Quail St., Norfolk, VA 23513, phone 804-853-4722**

## CURRENT ZONE REPORTS

**ZONE I TEXAS;** Coordinator, Ed Knudson, 8517 Burkhart, Houston, TX 77055

The following report is from the Southern Lepidopterists Field Meeting and immediately following.

Interesting moths from ConCan included: Phyllonorycter celtisella, Strobisia propserpinella, Pelochrista reversana, P.collilonga, Dysodia oculatana, Meskea dyspteraria, Stemorrhages costata, Pyrausta atropurpuralis, Goya ovaliger, Xenoecista tenebrosata, Drepanulatrix garneri, Plataea blanchardaria, Pigia multilinea, Gloveria sphingiformis, Hyalophora cecropia, Sphinx istar, S.eremitoides, Misogada unicolor, Forsebia perlaeta, Toxonprucha psegmapteryx, Cirrhophanus triangulifer, Abrostola microvalis, and Hemibryomima chryselectra.

The best butterfly catch at (or near) Concan was Astraptes fulgerator, by Bordelon and Sassin.

After the meeting, some members (Knudson, Doyle, Neal and Slotten) continued west to the Davis Mountains, with intermediate stops in several traditional collecting spots. The Davis Mountains proved to be too cool for good moth collecting, but butterflies were abundant on roadside flowers, which were even more spectacular here than in ConCan.

Best catches were (dates May 3-6): Del Rio, City Park, Ancyloxypha arene(all), Satyrium falacer(Slotten), Sanderson, 10 Miles east of, Thessalia fulvia, T.theona bolli(all), Chlosyne definita, C.lacinia crocale(Doyle) Phaeostrymon alcestis(Knudson), and Systasea pulverulenta. Sanderson, 20 Miles east of(Pecos County), Pyrgus scriptura, P,philetas, and P.albescens. Davis Mountains, Jeff Davis County: Chiodes zilpa(Slotten), Stinga morrisoni, Atrytonopsis ovinia, A.pittacus, A.vierecki, Amblyscirtes phylace, A.nereus, A.aenus, A.eos, and Mitoura gryneus(including siva phenotype).

Knudson, Neal, and Slotten also collected Catocala in the Houston area, May 7-8, Brazos Bend State Park; the following were seen or collected: Catocala ilia, C.pretiosa, C.mira, C.connubialis, C.micronympha. At Double Lake in Sam Houston National Forest: Catocala clintoni and C.andromedae.

**ZONE II ALABAMA, LOUISIANA, MISSISSIPPI, & TENNESSEE;** Vernon Brou, 74320 Jack Loyd Rd., Abita Springs, LA 70420; Bryant Mather 213 Mt. Salus Dr., Clinton, MS 39056; Mecky Furr, 7926 Cross Pike, Germantown, TN 38138.

Brou, Lefort and Kemp visited West Feliciana Parish, 3 km NE of Turnbull/Weyanoke, March 1, 1992 and found Graphium marcellus, Incisalia henrici turneri, Lethe portlandia, Celastrina ladon and the day flying moth, Psychomorpha epimenis.

Brou report record heavy rain fall for the first three months of 1992 in Louisiana, depending on the location, measurements of 124 inches plus were not unusual. Both day and night collecting was seriously hampered. Light Traps, Bait Traps and Pitfall Traps exhibited poor yields this spring.

Mecky Furr found the larvae of Euptoiepia claudia on the young sprigs of Passiflora on May 29, 1992 in Fayette County, near Collierville, Tennesse. 1st, 2nd, and 5th instar larvae were found at this location, this is extremely early.

Mecky Furr reported the following from Tennessee(all 1992):

March 29: Shelby County, Wolf River trails; Falcapica midea (common).

April 9: Hardin County, Pickwick Lake; Papilio polyxenes asterius, Eurytides marcellus, Callycops gemma, Hermeuptychia sosybius and Abeais nicippe. April 9: Hardeman County, near

Pocahontas; Pterourus glaucus necturing on Cardamine bulbosa. April 29: Shelby County; Polygonia comma and P.interrogationis larvae were found in large numbers, some were 5th instar indicating an earlier than usual brood.

May 1: Hardin County, Shiloh Mil. Park; Papilio polyxenes, Pterourus glaucus and Battus philenor, all nectaring on Lyre-leafed sage.

John Hyatt reported that the spring collecting in the mountains of east Tennessee and western Virginia were a collector's nightmare. After a warm winter (no snow here for the second year running!), butterflies were flying on March 1. However, on March 4 it got cold, a freeze or two occurred, and it did not get above 60 degrees again until April. A decent week or two in April followed by more overcast, wet, and cold (Highs in the 60's) until the first week in May. No weather fit for man or beast, much less a lepidopterist!

Hyatt reported Phoebis sennae eubule, from Lee County, Virginia during the first week of May, a species not normally seen there until mid-summer.

ZONE 111 GEORGIA; Irving Finkelstein, 425 Springdale Dr. N.E., Atlanta, GA 30305

Irving Finkelstein visited Altoona Dam Recreational Area, Bartow County on March 19 & 28, and April 11 & 18: he found Anthocaris midea(a long flight period), Feniseca tarquinius, Pieris virginiensis on April 11, and Glaucopsyche lygdamus lygdamus, a fresh female collected on March 28, although once fairly common, this species has not been seen since the late 1970's.

Finkelstein and William Russell visited the Pigeon Mountain Wildlife Management Area, 10 miles north of Lafayette, Walker County, April 16: they collected Pieris virginiensis, Lycaena phlaeas americana, taken by Finkelstein for a new county record and the first by him in Georgia since 1976, and Erora laeta, a fresh female taken by Russell, a new county record and only the second, the other being Union County. This is also the first spring record for the state, all other are July and August.

Ron Gatrelle made several attempts in the fall of 1991 to locate Megathymus cofaqui and found no adults or pupae, though three fresh empty tents were found near Augusta on August 6 and 23, 1991. Both Stone Mountain and Arabia Mountain near Atlanta were checked on August 23 & 24, 1991, with not even an old tent. Hundreds of plants were checked at both sites. I believe it is possible that M.cofaqui is near extinction in these two areas. If so, the loss of habitat over the past twenty years in these areas may have been a major contributor.

A total of three areas in both Georgia and South Carolina where M.cofaqui is known to occur yielded little evidence of the species presence in 1992. Gatrelle believes that M.cofaqui occurs widely from the upper Mississippi, Alabama, Tennessee, Georgia, and both North and South Carolina but is seldom seen or collected due to its restrictive habitat and reclusive habits.

Gatrelle visited several areas along Hwy. 28, Rabun County, April 9 & 10, 1992 and found Incisalia augustinus croesioides(worn), Celastrina ladon violacae, Everes comytas, Erynnis icelus, E.martialis, E.brizo, E.horatius, E.juvenalis(saw thousands of individuals), and Amblyscirtes hegon. He visited the area again on April 25 and found; Erynnis icelus, E.juvenalis(down to hundreds), E.lucilius(?), and Glaucopsyche lygdamus lygdamus.

Gatrelle visited the Cooper Creek area, Union County, April 10; he collected Erynnis brizo, E.juvenalis, and Celastrina ladon violacae.

ZONE IV FLORIDA; Dave Baggett, 403 Oleander Dr, Palatka, FL 32077

Andy Beck and Dave Baggett visited the Middleburg site in search of Incisalia irus on the morning of March 7, 1992. and they found them abundant. They were also abundant when Leroy Koehn visited the locality on March 16, 1992.

Andy Beck, Charlie Stevens, Dave Baggett, and Jeffrey Slotten visited Lake Delancy on March 7, 1992 in search of Incisalia niphon. The combination of great weather, warm and calm, in conjunction with flowers, especially wild cherry blossoms, produced a good catch of Incisalia niphon. Others who visited this location, either before or after, including Leroy Koehn, had the usual poor results.

John Kutis collected Celastrina ladon on April 12, 1992 in the Osceola National Forest. He also captured two specimens of a new Florida micro, Menesta mellonella on April 1 and 6 in Marion County; Lee Adair took the State Record last year (1991) near Lake Pendarvis during a visit with Kutis. Kutis reported Staphylus hayhurstii from Santos on March 8, 1992.

Jeffrey Slotten recorded Poanes zabulon on March 14, 1992 from Penny Farm, Clay County. Marc Minno reported Polites baracoa from the SJRWMD headquarters in Palatka during mid-April. On a fishing excursion (yes, there is something other than collecting Lepidoptera) on April 4, 1992, Dave Baggett, Charlie and Gina Stevens saw and positively identified Lybytheana bachmanii at Shell Bluff Landing on Crescent Lake, Flagler County. This is a new county record. Dave Baggett also observed Papilio palamedes on January 4, 1992 near his residence in Palatka. This is rather early for this species.

Baggett reported that many Monarchs remained in the area all winter, but they were definitely confined to staying close to the St. Johns River. Both Danaus plexippus and Danaus gilippus berenice have been regularly seen at Shell Bluff Landing since late January, at times abundantly.

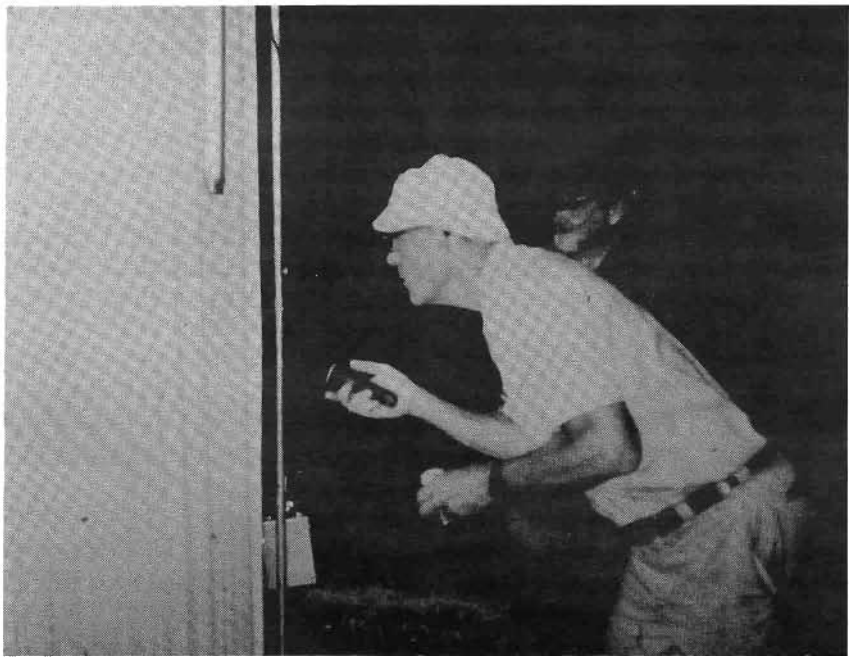
John Heinrich collecting in Fakahatchee Strand on Janes Scenic Drive, October 1991.

Baggett also reported that late winter and early spring moth collecting was way off, primarily due to cool evening temperatures, regularly in the 40's and 50's locally.

George Balogh, visiting from Michigan, reported finding Euphyes dukesi in Pasco County in mid-May. John Kutis reported finding the larvae of Parrhasius m-album, Eurystrymon favonius, and Calycopis cecrops while beating oaks for beetles. Kutis also reported collecting Feniseca tarquinius and Celastrina ladon at Aspalaga Landing in Gadsden County on May 22. William Nix reported finding polygonus leo at Miller Field, Delray Beach, Palm Beach County in June of 1991. Dave Baggett collected his first specimen of Cydia gallaesaliciliana in Palatka on March 27.

John Kutis received recent confirmation of the pyralid Niphograpta suffusalis, a new **U.S. RECORD**, from Collier County after sending the specimens to the British Museum, where the determination was made by Michael Shaffer. John thanks Dale Habeck and Paul Skelly of the University of Florida for their help in transporting the specimens to England.

Jeffrey Slotten reported taking Catocala lincolnana, C.orba, C.louiseae and C.coccinata at a light in his yard in Gainesville during April and May. He also found Callosamia securifera there in May.



Ben Williams and Don Bowman collecting moths at Collier Seminole State Park, August 1991

John Kutis, Woody Dow, and Sam Adams collected in Liberty County, Apalachicola National Forest on May 21 and found all three of the pitcher plant moths; Exyra fax, E.semicrocea, and E.nigrocaput, plus a small series of a recently described pyralid, Chrysendeton nigrescens. On May 22 they collected Goose Pasture, Jefferson County where they found Catocala orba and an interesting tortricid which apparently may be another new Florida record for an Acleris species. (Kutis felt the collecting was so-so based on past efforts, while both Dow and Adams we are sure were elated!)

Tom Carr, down on a visit from Ohio, reported good to excellent Catocala collecting in the Withlacoochee State Forest in Citrus County using bait: he collected Catocala amica complex, C.ilia complex, C.alabamae, C. similis, C.micronympha, C. louiseae, C. amestris, and C.consors.

ZONE V VIRGINIA, NORTH & SOUTH CAROLINA; Bob Cavanaugh, P.O. Box 734, Morehead City, N.C. 28557, Ron Gatrelle, 126 Wells rd., Goose Creek, S.C. 29445.

Ron Gatrelle reported that good collecting in coastal South Carolina continued into early December. The most interesting catches included:

Charles County, dirt road off Hwy.#17, 2 miles south of Ravenel, late October through November: Anthanassa texana seminole in good numbers.

Colleton County, Westvaco Park, Jacksonboro, November 1: Cyllopsis gemma, fresh brood emerging.

Calpodes ethlius was at pest levels in 1991 over coastal South carolina. Heliconius charitonius tuckeri was seen in unusual numbers and unusually far inland in the fall. The record warm winter of 1990-1991 no doubt benefited both of these species.

Gatrelle reported that 1992 began with a "bang" with temperatures in the 80's the first week of March. This seemed to bring out "everything". However, from late March to early June, below average temperatures were the rule. Incisalia niphon had a population explosion with as many as twenty specimens seen or taken in a day. This species is usually very rare in the lower coastal area (more common in the piedmont and upstate).

Lancaster County, near 40 Acre Rock, March 7: Anthocaris midea annickae(NEW COUNTY RECORD), Atlides halesus, and Celastrina ladon violacae.

Orangeburg County, Hwy.#172 near North, March 3, 5, 7, 27, 31 and April 6: Incisalia niphon (Each date), Anthocaris midea annickae on April 6, Incisalia henrici ssp March 5 & 27, Parrhasius m-album March5 (early SC date), Celastrina ladon violacea associated with Cherry. All were new county records.

Oconee County, on Hwy.#28 near Russel House, April 10: Anthocaris midea mid-continent ssp. On North Whitestone Rd. off Hwy.#28: several aberrant females of Pterourus glaucus were taken off a blue flowering hedge before he was run off by a dog.

Berkeley County, Goose Creek, April 30: 3 males of a large, pale blue, nearly unmarked white below, Celastrina ladon form were taken. (Normal C.ladon flies in May/June.)

Colleton County, Westvaco Park, Jacksonboro, May 1: Lethe creola, L.portlandia, Cyllopsis gemma, Satyrodes appalachia appalachia, Poanes zabulon, Pompeius verna sequoyah, Ancyloxypha numitor, and Lerema accius. Same area, May 15: Satyrodes appalachia appalachia, still fresh.

Leroy Koehn visited Virginia, near Afton, Augusta County, April 17: he reported swarms of Erynnis juvenalis and E.brizo, everything damp, the road, an old hat and sofa, newspaper, etc, were covered with these two species. He also found Incisalia augustus creosioides, I.niphon niphon, I.irus irus, and Celastrina ebenina.

Leroy Koehn and Denny Currutt joined forces near the Green Swamp. Brunswick County, North Carolina, April 18: they found Amblyscrites alternata, A.aesculapius, A.reversa, Atrytonopsis hianna/loammi, Insicalia irus arsace, and Erynnis horatius.

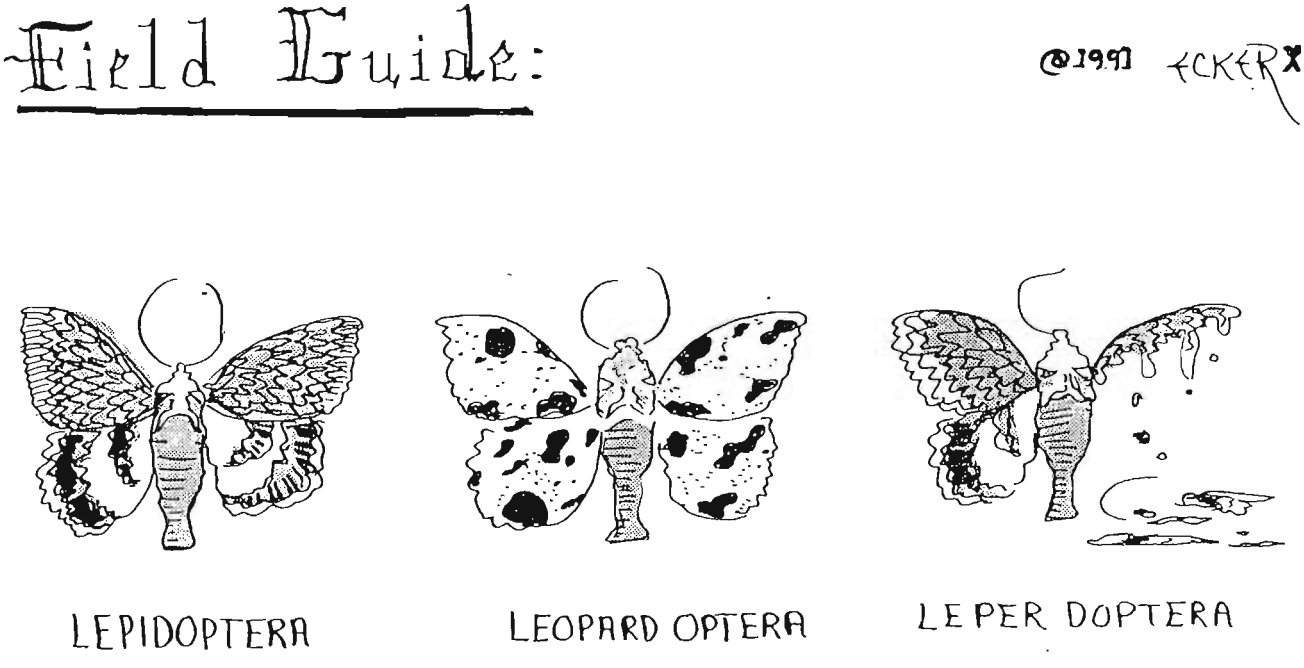
William Nix visited the Boone, North Carolina area in August of 1991 and reported good Catocala collecting, he found Catocala ilia, C.vidua, C,palaegama, C.neogama, and C.andromedea. He also collected Euparthenos nubilis.

Bill Grooms reported finding Megathymus yuccae at the Lumberton, North Carolina exit of I-95 and SR 20 on Feb. 22, 1992. A thriving colony with many tents in the yucca plants.

ZONE VI ARKANSAS; Mack Shotts, MD, 514 W. Main St., Paragould, AR 72450.

Mecky Furr found Lyceana hyllus on April 24, 1992 in Cittenden County. She has never seen this species this far south. although she states that it is common in northern Arkansas.

CATOCALA CAPERS — DR. FRANCIS ANNE ECKER



## SOUTHERN LEPIDOPTERISTS SOCIETY MEMBERSHIP LIST JULY, 1992

The following list is not to be used for the 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 33617; Rhop., Macro., esp. Sphingidae, Saturniidae, papilionidae, coll., ex.

James K. Adams, 1702-214 Crow Valley Rd., Dalton, GA 30720; Arctiidae, insect defenses, Neotropical leps., esp. Lycaenidae, Limacodidae, Noctuidae, and Sphingidae, biodiversity conservation in Neotropics.

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

Ken Alvarez, P.O. Box 398, Osprey, FL 33559; Naturalist, endangered spp.

R.A. Anderson, 836 Amelia Ct NE., St. Petersburg, FL 33702; Rhop., esp; Theclinae, Hesperioidea; coll., ex.

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

Ms Freddy Arthur, P.O. Box 1234, Murrells Inlet, SC 29576; Butterfly rearing, correspondence with other butterfly and moth breeders welcome.

Thomas L. Asby, 667 Halifax Dr., Mobile, AL 36609; Morpho, Ornithoptera, Troides, Trogonoptera, Agrias, Alcides, Urania; col., buy, ex.

Dave Baggett, 403 Oleander Dr., Palatka, FL 32177; Lep. of Florida, esp. Noctuidae and other moths.

Tom B. Bailey, 86 Magnolia Gardens Dr., Covington, LA 70433; Butterfly collecting, birding.

George Balogh, 6275 Liteolier, Portage, MI 49002; Lep. of Midwest, esp. Geometridae, Microlepidoptera.

Andrew F. Beck, Casa Irena, 3371 Knight St., Jacksonville, FL 32205-7858

Robert L. Beiriger, 711-408 Forest Club Dr., West Palm Beach, FL 33414; Tribe Polyommatini (Blues), photography.

Bob Belmont, P.O. Box 2626, Naples, FL 33939; Geomtridae, esp. Itame.

Michael Benton, 2911 NW 41st Place, Gainesville, FL 32606; Collecting and breeding of butterflies and moths.

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; butterfly farming.

Richard Boscoe, 150-A101 Ridge Pike, Lafayette Hill, PA 19444; Butterflies & Skippers; rearing & life histories.

Donald W. Bowden, 4130 Chatham Hill Dr., Winston-Salem, NC 27104

Byron H. Bratlie, 9705-909 Lake Bess Rd., Winter Haven, FL 33884; Observing & identifying butterflies and moths.

Jo Brewer, 256 Common St., Dedham, MA 02026; Rhop., photography, rearing.

Vernon Brou, 74320 Jack Loyd Rd., Abita Springs, LA 70420; Insects of LA, esp. Lep.; coll., Designing light traps.

Richard L. Brown, Mississippi Entomological Mus., Drawer EM, Mississippi State, MS 39762; Lep.(Heterocera) of eastern U.S.; Olethreutinae of the world; museum development.

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

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

Donald E. Burtschi, RR 5 Box 623, Alvin, TX 77511; Rearing & breeding of swallowtails longwings & other Nymphalidae. Live stock sources wanted.

John V. Calhoun, 1731 San Mateo Dr., Dunedin, FL 34698; Hesperiidae, Pieridae; butterfly dist. in OH & FL.

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

K.L. Casses, 6000 McClure Rd., Fairburn, GA 30213; Butterfly gardening and photography.

Robert Cavanaugh, P.O. Box 734, Morehead City, NC 28557; Rhop.,; coll., photograph, rear. Japenese, Korean, Philippine.

Dr. Hoe H. Chuah, 7746 Spruce Haven Dr., Houston, TX 77095; Butterflies, Coll., photography & life history

Morris Clark, 575 Bobwhite Dr., Pensacola, FL 32514

Dale Clark, 11518 Desdemona Dr., Dallas, TX 75228; Butterfly gardening.

Colorado St. University, Colorado St. Univ. Libraries, Serials Dept., Ft. Collins, CO 80523

Patrick J. Conway, 4533 Stanley Ave., Downers Grove, IL 60515; North American Lepidoptera.

Charles V. Covell, University of Louisville, Dept. of Biology, Louisville, KY 40292; Geometridae, esp. Nearctic & Neotropical, esp. subfamily Sterrhinae; KY Lep.; Theclinae Nearctic & Neotropical.

Ray Coyle, P.O. Box 1321, Modesta, CA 95353

Dennis A. Currutt, 7533 Mulberry Rd., Chesterland, OH 44026; Lycaenidae, Hesperiidae; Pyralidae; coll., ex.

Harry N. Darrow, 1470 Midland Ave., Bronxville, NY 10708 (summer residence)

Harry N. Darrow, Rt. 1, Box 430A, Marthon, FL 33050 (winter residence)

Richard E. Davis, P.O. Box 15, Buda, TX 78610; Rhop.: rearing and collecting life cycles.

Jim Davis, P.O. Box 442, Viburnum, MO 65566-0442; Moths.

Eve Dingus, 69 Glenway Place, Brandon, MS 39042; Butterfly rearing, gardening, collecting.

Tom & Pat Dooley, 145 Sea Park Blvd., Satellite Beach, FL 32937; Lepidoptera.

Joseph F. Doyle III, 13310 Bar C, San Antonio, TX 78253; Lep., Esp. Limenitis, Lycaenidae, Hesperiidae; life histories, coll., ex., buy.

Gene T. Drummond, 1614 Evans St., Arkadelphia, AR 71923; Lepidoptera habitats and host plants.

Boyce A. Drummond, P.O. Box 9061 Woodland Park, CO 80866

C. Jack Dunston, 19500 Arch Mclean Rd., Wagram, NC 28396

Dr. Frances A. Ecker, 2506 Crill Ave., Palatka, FL 32177

Simon Ellis, Transworld Butterfly Co., Apartado 6951, San Jose, Costa Rica, Central America.

Thomas C. Emmel, University of Florida, Dept. of Zoology, Gainesville, FL 32611; Rhop., esp. Satyridae, Riodinidae; ecology, genetics, evolution; coll., ex., buy.

Mark Etheridge, 9422 Fairleigh St., Burke, VA 22015

Carl E. Fannin, 720 15th Ave., SW, Largo, FL 34640; Butterfly gardening.

Douglas C. Ferguson, USNM Natural History, Syst. Ent. Lab. USDA, Washington, DC 20560; Taxonomy & biology of N.A. Geometridae, Arctiidae, "Deltoid" Noctuids; biogeography, moth migration.

*John Filiatrault*, 4608 Fabric St., Laval, Quebec, H7C1C8, Canada; Butterflies, esp. Papilio, Pieridae.

Irving L. Finkelstein, 425 Springdale Dr. NE, Atlanta, GA 30305; Rhop., esp. Papilionidae, Lycaenidae; coll., ex., rear.

Hermann Flaschka, 2318 Hunting Valley Dr., Decatur, GA 30033; Sesiidae, trapping.

Hugh A. Freeman, 1605 Lewis St., Garland, TX 75041; Catocala; ex., buy, will determine specimens for any collector in North America.

Mecky Furr, 7925 Cross Pike, Germantown, TN 38138; Rhop., Macro., esp. Sphingidae, Saturnidae, Catocala, rear, ex., buy, sell; esp. interested in distribution in Tennessee

Dr. Lawrence F. Gall, Yale University, Peabody Museum, Div. of Entomology, New Haven, CT 06511; Catocala; evolutionary biology; numerical systematics; computer applications in biology.

Ron Gatrelle, 126 Wells Rd., Goose Creek, SC 29445; Lep., esp. Hesperiidae, Lycaenidae, Satyridae, taxonomy; coll., ex., buy, correspondence welcome.

Col. Clyde F. Gillette, 3419 El Serrito Dr., Salt Lake City, UT 84109; Detailed butterfly dist. & research in Utah, esp. Colias, Lycaena, Polygonia, & Boloria; Editor UTAHENSIS - A Lepidoptera Journal.

Rick Gillmore, 2255 College Dr., Lake Havasu City, AZ 86403; Lepidoptera, esp. Catocala

Ada Ginsburg, 710-1102 N. Ocean Blvd., Pompano Beach, FL 33062; Photography of Hemiptera

John D. Glaser, 6600 Loch Hill Rd., Baltimore, MD 21239; Noctuidae.

Doris I. Gliser, 555 Carlos Ct., Ft. Myers Beach, FL 33931

Robert Godefroi, MD, 24 Yardley Rd., Andover, MA 01810

Vincent Golia, 5250 Jog Lane, Box 19, Delray Beach, FL 33484.

Ben Gregory Jr., LSU, Dept. of Entomology, 402 Life Science Bldg., Baton Rouge, LA 70803; Systematics, Noctuidae.

Dana M. Gring, 6126 Harvest Lane, Toledo, OH 43623; All Lep. except micros; coll., ex., rear.

Dale H. Habeck, University of Florida, Dept. of Entomology, Gainesville, FL 32611; Lep.; immatures, biology, esp. aquatic Pyralids & Arctiidae.

Gordon Halvorsen, RR 1 Box 137, Lovingston, VA 22949; Rhop., esp. Saturniidae, Papilionidae, ex., buy

Hank Hammatt, 73615 Military Rd., Covington, LA 70433

Ken Hansen, 3348 Edgewood Rd., Eureka, CA 95501

John C. Heinrich, 22531 Tuckahoe Rd., Alva, FL 33920; Coll. eastern U.S.A., list for Lee, Hendry & Collier counties in Florida.

John R. Heitzman, 3112 harris Ave., Independence, MO 64052; Nearctic butterflies, Lep. of Missouri, life histories.

Parker & Donna Henry, 10960 SW 89th Terrace, Miami, FL 33176; Leps., general.

John B. Heppner, Florida State Collection of Arthropods, P.O. Box 14700, Gainesville, FL 32614-7100; Micro.

Larry A. Hill, 404 Brookshire Dr., Lilburn, GA 30247

The Natural History Museum, (No. 2 A/C) Cromwell Rd., London, SW7 5BD, England

Robert C. Hollister, 2347 S. Baird Dr., (5/15-11/1) Highland, MI 48031; Lep.; ex.

Robert C. Hollister, 4500-326 Hwy. 92 (11/1-5/1) Lakeland, FL 33801; Lep.; ex.

Dr. John Holoyda, 5407 N. Oketo Ave., Chicago, IL 60656; Mostly Sesiidae; trap studies involving pheromone isomers which attract these moths; collection of U.S. leps. maintained.

Jeff Hooper, 5397 Paddy Ct., Norton, OH 44203

John Hyatt, 439 Forest Hills Dr., Kingsport, TN 37663; Rhop., Macro; coll., ex., buy.

David C. Iftner, 8 Alpine Trail, Spartan, NJ 07871; Rhop. of NJ & their life histories, habitats, distribution; also prairie & wetland spp., esp. Hesperiidae & Lycaenidae.

Michael Israel, 421 E. Shore Rd., Great Neck, NY 11024; Rhop., Macro., rearing, coll.

Michelle W. Jensen, 1011 NW 21st St., Gainesville, FL 32605; Butterfly gardening.

Joel M. Johnson, 59 E. 400 N., Payson, UT 84651; Cercyonis, Notodontidae, Arctiidae, Hemileuca; will exchange.

Jonathan Kemp, Rt. 1 Box 153-A, Roseland, LA 70456; Video and still photography, col. ex. mostly butterflies.

Roy O. Kendall, 5598 Mt. McKinley Dr. NE., San Antonio, TX 78251; Lep., life history, parasites, predators, distribution.

Rick Kergosien, 116 Buena Vista Dr., Long Beach, MS 39560; U.V. light trapping including "cold trapping".

Ed Knudson, 8517 Burkhart, Houston, TX 77055; Heterocera, Hesperiidae, Lep. of Texas.

Leroy C. Koehn, 6058 Campbell Rd., Mentor on the Lake, OH 44060; Lep. light traps, bait traps, pheromone traps, correspondence invited.

Tom W. Kral, 6600 N. Galaxy Rd., Tuscon, AZ 85741; Rhop. Macro., esp. Satyridae (esp. Lethe, Cyllopsis, Neonympha, Cercyonis pegala); Lycaenidae, Apaturinae, Hesperiiae, (esp. Megathymus & Agathymus); Catocala, Arctiidae; correspondence welcome.

Marc Kutash, 4314 S. Anita Blvd., Tampa, FL 33611; Heterocera dist., Geometridae; trade only.

John S. Kutis, 9783 SE Hwy 441, Belleview, FL 32620

Ron & Kathy Larson, 1006-405 Cardinal Rd., Brunswick, GA 31525; Butterflies: life histories.

Michael Lefort, RR 1 Box 31A, Galliano, LA 70354; Lep.; coll., ex. correspondence welcome.

Harry E. Legrand, 1109 Nichols Dr., Raleigh, NC 27605; Lepidoptera distribution and ecology, esp. N.C.

Kim S. Lewis, 2125 Scudder St., St. Paul, MN 55108

David Liebman, 929 S. Quail St., Norfolk, VA 23513; Photography of life cycles, esp. species from other parts of the U.S.

Anton Littahorsky, RR 2 Corkery Rd., Carp, Ontario, K0A 1L0, Canada; Lep.

J. Barry Lombardini, 3507 41st St., Lubbock, TX 79413; General collecting.

Deborah M. Lott, University of Florida, Dept. of Entomology, Gainesville, FL 32611; Pterophoridae, systematics, life history, rearing

Vincent P. Lucas, 800 - 301 Brick Mill Run, Westlake, OH 44145; Sphingidae, Hesperidae; lep. of stamps (philately)

Alvin Ludtke, 6524 Stoneman Dr., North Highlands, CA 95660; Lep., esp. of western U.S.; Riodinidae, coll., life histories.

Dennis Maccagno, 208 Highlands Circle, Alford, FL 32420

John R. MacDonald, P.O. Box 78, Starkville, MS 39759

Howard Maier, 4679 Pine Green Trail, Sarasota, FL 34241; Naturalist: educator.

Julie Ann Martin, Dept. of Entomology/LSU, 402 Life Sciences Bldg., Baton Rouge, LA 70803;

John W. Mason, 32 Maple Vale Dr., Woodbridge, CT 06525; Lep., esp. Lycaenidae, Satyridae; coll., ex.

Susan Massey, 1322 SE 37th Place, Gainesville, FL 32601

Bryant Mather, 213 Mt. Salus Dr., Clinton, MS 39056; Lep., Neuroptera, Trichoptera, Mecoptera of MS; coll., ex., buy, sell.

James Maudsley, 400 University Circle,Athens, GA 30605; Rearing, breeding, evolution of mimicry.

Michael McInnis, 6020 Benchmark, Floyds Knob, IN 47119

Stephanie McKnown, 650 Cotterell Dr., Boise, ID 83709; Butterflies and moths of the Great Basin.

Mrs. Joyce McNamara, 1311 Riverside Circle Dr. W., Bradenton, FL 34209; Nymphalidae, Saturnidae, philately, coll., buy.

SRA Alma Garces Mendina, Museo De Zooligica, Facultad De Ciencias, Apartado 70-399, 04510 Mexico DF

James R. Merritt, 1729 S. 3rd St., Louisville, KY 40208

Eric Metzler, 1241 Kildale Sq. N., Columbus, OH 43229; Noctuoidae; life history.

Jacqueline Y. Miller, Allyn Museum of Entomology, FSM, 3621 Bay Shore Rd., Sarasota, FL 34234; Lep. zoogeography, taxonomy, systematics, esp. Castniidae, Hesperiidae, Nymphalidae.

Lee D. Miller, Allyn Museum of Entomology, FSM, 3621 Bay Shore Rd., Sarasota, FL 34234; Systematics & biography of butterflies.

Paul F. Milner, 713 Bransford Rd., Augusta, GA 30909; Rhop. of Caribbean & Central America, Eurema; life history, photography.

Marc C. Minno, 303-18 Diamond Village, Gainesville, FL 32603

Rick Miramon, 2639 N. Johnson, New Orleans, LA 70117; Breeding, rearing, Saturnidae & Automeris.

Steve Mix, 4033 Glouchester Rd., Rocky Mount, NC 27803; Macro., esp. of NC.

Robert C. Mower, 378 N. 650 E., Orem, UT 84057; Arctiidae, Saturniidae, Sphingidae & Catocala.

Clint J.A. Murphy, 424 S. Sappington Rd., Oakland, MO 63122

Gregory V. Myers, 205 Jay Ave., Sebring, FL 33872; Papilio troilus, Pterourus, thoas & homerus groups; New World Papilionidae.

Ira Nadborne, 7241 North Olene Place, Tuscon, AZ 85741; U.S. lepidoptera & Coleoptera worldwide. Papilionidae, Morphidae, Saturniidae, Sphingidae; Costa Rican Lep. & Coleoptera.

Thomas M. Neal, 3820 NW 16th Place, Gainesville, FL 32605-4633; Lep., esp. Noctuidae, Geometridae; coll., rear.

John D. Neely, 322 Neely Rd., Franklin, KY 42134; Schinia: distribution & life histories; Saturniidae.

Barry S. Nichols, 7004 Ethan Allen Way, Louisville, KY 40272

Stanely Nicolay, 1500 Wakefield Dr., Virginia Beach, VA 23455; Rhop., esp. Lycaenidae, Hesperiidae; coll., ex

William Nix, 3430 Blvd. Chatelaine, Delray Beach, FL 33445

Dr. James H. Norwood III, 708 E. Anderson, Weatherford, TX 76086; Moths of Texas.

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

David K. Parshall, 4424 Rosemary, Columbus, OH 43214; Arctic & Nearctic Lepiodoptera, esp. Oeneis & Hesperia, neotropical Lepidoptera.

Brain Pasby, 1025 Main St., Shrub Oak, NY 10588; Captive colonies, Heliconiids, Papilionidae, etc., behavior, conservation ecology.

Steven Passoa, USDA APHIS PPQ Bldg 3 #109, 8995 E. Main St., Reynoldsburg, OH 43068; Taxonomy of immatures, esp. Pyralidae & Oecophoridae.

Harry Pavulaan, P.O. Box 2494, Rockville, MD 20847; Lycaenidae (esp. Celastrina complex), rearing, conservation, geographical distribution, mapping, butterfly gardening, coll., ex. Correspondence welcome.

John W. Peacock, 51 Mill Pond Rd., Hamden, CT 06514; Macro., esp. Catocala, life histories, rear, coll.

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

W. Levi Phillips, 2835 N. 840 E., Provo, UT 84604; Macro., esp. Hemileuca; life history, taxonomy, ex., buy.

Maria Plonczynski & Drew Hildebrandt, 227 Hartfield St., Jackson, MS 39216; Butterfly & moth collecting, Esp. Lycaenidae & Noctuidae; Carabid beetles of the area.

Floyd & June Preston, 832 Sunset Dr., Lawrence, KS 66044; Butterflies of North America north of Mexico.

Michael A. Quinn, 401-12 Cooner St., College Station, TX 77840-1702; Butterfly gardening, photography.

Chip Reed, 224 Blackthorn rd., NW, Calgary, Alberta, T2K 4X6, Canada; Lep.: rearing, ecology, life histories, coll., ex.

W.B. Richfield, P.O. Box 1066, Goleta, CA 93116; Rhop., esp. Lycaenidae, Hesperiidae, Sesiidae; buy, ex., sell.

Michael A. Rickard, 4618 Holly, Belleaire, TX 77401; Roph., Macro, esp. Hesperiidae; life history, coll., ex., buy.

Pete Ritenour,RR 1 Bos 1276, Brazoria, TX 77422; Discovering butterflies & moths of TX; naturalist.

Robert Robbins, Smithsonian, Dept. of Entomology, NBH 127, Washington, DC 20560; Hairstreaks (Lycaenidae) of the New World, phylogeny.

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

Dale E. Roth, 202 Pickerelltown Rd., West Liberty, OH 43357

Bill Russell, 765 Yorkshire Rd., NE, Atlanta, GA 30306; Roph. of N.A. and Amer. Tropics, coll., ex., photography and butterfly mechanics.

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

Edmund H. Sallee, P.O. Box 38, Letohatchee, AL 36047; Lep.; coll., rear, sell, trapping & photography.

Robert Schade, 504 Queensbridge Dr., Lake Mary, FL 32746; Butterfly gardening.

Mack Shotts MD, 514 W. Main St., Paragould, AR 72459; Lep., esp. Catocala; buy, trade.

John Shuey, 739 Hastings, Traverse City, MI 49684; Phylogenetics, Neotropical Hesperiidae, conservation biology.

Leroy Simon, 2215 Hialeah Dr., Leesburg, FL 34748; Rhop., Saturniidae, rearing photography.

Jeff Slotten, 5421 NW 69th Lane, Gainesville, FL 32606-7000; Rhop., esp. Hesperiidae, Saturniidae, Sphingidae & Catocala.

John A. Snyder,Furman University,Dept. of Biology, Greenville, SC 29613; Insect biochemistry.

Evelyn L. Somerville, 4401 NW 2nd Terrace, Boca Raton, FL 33431; Butterfly gardening.

John Spahr, 613 Locust Ave., Waynesboro, VA 22980; Lep., coll., photography.

Dr. Thomas Stelnicki, 6545-2 Ridge Rd., Port Richey, FL 34668

Charles Stevens, 1026 Riviera St., Jacksonville, FL 32207

Major Jim Stevenson, 3900 Commonwealth Blvd., Tallahassee, FL 32399; Rare & endangered species, park checklists.

Allan M. Stodghill, 831 Laurel St., Tallahassee, FL 32303

J. Bolling Sullivan III, 200 Craven St., Beaufort, NC 28516 Rhop., esp. Theclinae, Riodinidae & Euptychia; coll., ex.

Donald R. Tangren, 205 Cranor Rd., Murphreesboro, TN 37130; Macro. of N.A., esp. Noctuidae.

Stephen Treadway, Cheekwood Botanical Gardens, 1200 Forrest Park Dr., Nashville, TN 37205

Linden Trial, MO Dept. of Conservation, 1110 S. College Ave., Columbia, MO 65201;

Tom W. Turner, P.O. Box 6272, Clearwater, FL 34618; Rhop., esp. Pieridae; life history, coll.

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

Richard D. Ullrich, 1108 Saybrook Circle, Lilburn, GA 30247; Lep., coll.

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

Ms Tory Vornholt, 4306 Edgewater Dr., Kennesaw, GA 30144; Butterfly gardening; painting & photography of same.

David L. Wagner, 916 Pudding Hill Rd., Hampton, CT 06247

Dr. Thomas J. Walker, University of Florida, Dept. of Entomology, Gainesville, FL 32611; Butterfly migration.

Charles N. Watson, Clemson University, Dept. of Entomology, Clemson, SC 20634; Rhop., Macro., esp. Pieridae; coll., ex., buy.

Howard V. Weems Jr., P.O. Box 760, Hawthorn, FL 32640-0760; Diptera, Lep. of New World, esp. Florida.

Frances Welden, 7826 Willow St., New Orleans, LA 70118; Lep.; life history, photography, mitigation of urban stress.

John R. Westerfield, P.O. Box 188, Nordheim Rd, TX 78141

James A. Wiker, RR #1, Tox 244, Athens, IL 62613

Dr. Steven G. Williams, 6633-230 Hillcroft, Houston, TX 77055; Butterflies, skippers and moths of SE and S TX (and others).

Benjamin D. Williams, P.O. Box 211, Pomfret Center, CT 06259; Het., Arctiidae, Catocala, Saturniidae, Sphingidae & Sesiidae; rear, coll., ex.

William D. Winter, 257 Common St., Dedham, MA 02026; Lep., life histories, photography.

Bill Witteman, 12220 Sulphur Springs, Rd., Adkins, TX 78101

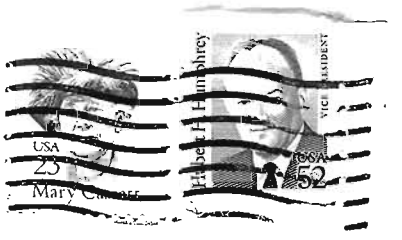
Don A. Woods, Florida Game & Fresh Water Fish Commission, 620 Meridian St., Tallahassee, FL 32301

Richard W. Workman, Coastplan Inc., 7181-34 College Pkwy., Ft. Myers, FL 33907; Ecological restoration.

Roger A. Zebold, 675-B Sprague Rd., Wilmington, OH 45177; Speyeria, esp. idalia, diana; all N.A. Rhop., Heterocera; habitat loss, species decline and other environmental concerns.

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

The Southern Lepidopterists' News is published four times annually. Membership dues are $10.00 annually. The organization is open to anyone with an interest in the lepidoptera of the southern United States. Information about the Society may be obtained from the Secretary-Treasurer, Tom Neal, 1705 N.W. 23rd Street, Gainesville, Florida 32605


The SOUTHERN LEPIDOPTERISTS' NEWSLETTER
c/o Tom Neal
1705 N.W. 23rd Street
Gainesville, FL 32605

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