

NEWS

of the LEPIDOPTERISTS' SOCIETY

No. 4
Jul/Aug 1978

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CHILDREN PURSUED BY HOSTILE BUTTERFLIES
casein tempera 24x34

Carroll Cloar

LETTER TO THE EDITOR:

Dear Jo,

Last November 20, 5 other collectors and myself had the opportunity to visit with John Emmel and discuss butterflies. During the visit, reference was made to a certain *Papilio indra* subspecies being investigated by Dr. Emmel at that time. A subspecific name, albeit proposed, was used amongst ourselves. Subsequently, I included this name in my field summary.

The fluency with which this name was used in privileged communication does not justify its publication. I'm relieved to see the correction in the Zone 1 errata that appeared in the last issue of the NEWS

The problems in premature use of a name are obvious. What if I were to receive any credit for the discovery or naming of this insect? What if the proposed name were modified or derricked altogether? A mistake such as mine would surely take us back to the days of Holland and Wright, taxonomically speaking. While no malice aforethought was intended, my use of the name smacks of both disrespect and scientific inaccuracy.

I feel the NEWS and the Zone 1 Coordinator have suffered unjust criticism for my blunder. In the preparation of the field summary, their role should be largely organizational. They simply do not have the time or means to verify every dubious collecting report. The ultimate responsibility for the reliability of a report lies in the collector alone.

This incident has been as embarrassing to Dr. Emmel as to myself. Although I've apologized to Dr. Emmel via personal letter, I feel a public apology in the NEWS is appropriate. Thank you.
Dr. Bruce A. O'Hara, Saugus, CA 91350.



THE FRONT PAGE

CHILDREN PURSUED BY HOSTILE BUTTERFLIES (now owned by Miss Marguerite Piazza of Memphis) has been reproduced on the jacket of a book devoted to the work of a remarkable man. The book, *HOSTILE BUTTERFLIES and other paintings*, published by the Memphis State University Press, is a catalogue of 30 lithographs and 489 paintings by Carroll Cloar, 118 of which are reproduced in the book. Together they illustrate in a poignant and sometimes disturbing manner, life as it was thought and felt by a small boy growing up on an Arkansas farm in the early years of this century. One of the most absorbing aspects of the book is Mr. Cloar's own preface, a succinct genealogy --tragic, robust, humorous--of his pioneer ancestors, who were among the early settlers of Arkansas. The paintings have a haunting quality which seems to compel one to return to them time after time.

Exhibitions of Mr. Cloar's work have been held in Albany NY, Nashville & Memphis TN, Atlanta GA, Little Rock AR. Also, between 1953 and 1973, 6 exhibitions of his work were mounted in New York City.

When I asked him about the symbolism of *CHILDREN PURSUED BY HOSTILE BUTTERFLIES*, Mr. Cloar replied that there isn't any hidden meaning to the picture. The idea just came to him and so he painted it. However, one can hardly dispel the notion that if "the worm should turn", so to speak, and the butterflies should gather to pursue the Lepidopterists, the latter would indeed head for shelter. Massed butterflies have been known to break limbs from trees with their weight. They could doubtless smother a Lepidopterist with ease.

CHILDREN PURSUED BY HOSTILE BUTTERFLIES as well as 3 other paintings: *BUTTERFLIES*, *THE BUTTERFLY HUNTERS*, and *CHARLIE MAE AND THE BUTTERFLIES* are now all privately owned, as are most of Mr. Cloar's works.

Monarch Migration Studies

(An Autobiographical Account)

My interest in the study of insects began as a hobby. My career was focused on becoming a concert violinist. My first insect collection, made when I was 7 years of age, consisted of house flies, bumble bees, honey bees, and a few common Pierid butterflies. By the time I was 16, the collection had grown to a fairly reasonable representation of the insect fauna of my local area, particularly in regard to the Noctuid moths collected at night on sugar-baited trees.

I had read a short paper at the library of Mr. Hall, a local collector, which stated that the monarch butterfly overwintered beneath logs in the breeding areas. Although I never found one under a log in winter, I did add the mourning cloak, red admiral and 3 species of angle wings to my winter collection as a result of looking for the monarch.

In 1926 I read an article in NATURE by C.B. Williams dealing with the migration of butterflies, but it was not until 1931 that my real interest was aroused when I perused a copy of THE MIGRATION OF BUTTERFLIES, a voluminous work by the same author. Dr. Williams later became my very good friend, and one of my proud possessions is an autographed copy of this same book.

During the depression years of the 30's there was little employment in the realm of music. After careful consideration involving discussions with my musical colleagues, I decided to enroll in a course in biology at the University of Toronto with the intention of becoming a teacher in one of our Canadian secondary schools. On graduating, as the result of being the top student in the graduating year, I was offered a B.A. Bensley Fellowship which allowed me to enter the Graduate School as well as to do some teaching. I accepted, since there were no secondary school teaching jobs available --not because I felt I had any ability in biological research. However, I completed a Doctorate, my thesis dealing with the ecology and taxonomy of the Orthoptera.

My interest in the monarch butterfly continued as a hobby. My first attempts to follow its migrations commenced in the summer of 1937, at which time I experimented with different methods of marking the migrants. These efforts eventually led into what has been termed the "alar tagging method". At first one of the wings, usually the right front one, was marked by applying a combination of colored dots or stamping a number or letters. Since both proved unsuccessful as well as time consuming, a third approach was tried. An instructive label was applied to one wing requesting the return of the specimen to the University. These instructions were given in both English and Spanish, since it was anticipated that some would be recaptured in Mexico and Central America. The original tags consisted of a sheet of labels with a water soluble glue backing. Each label had to be cut separately. Although a few recaptures from short distances resulted, it soon became obvious that glue would not remain fixed to the wing under moist conditions. This difficulty was overcome with the advent of the pressure-sensitive adhesives.

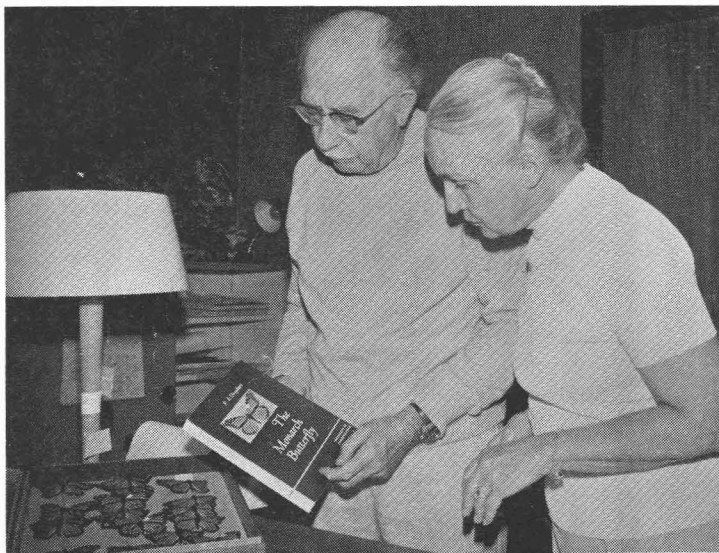
Individual numbers were written on the tags by hand at first, using a 4H pencil so that if the pencil carbon was eroded one could still read the number impressed on the paper. Many of our early long-distance captures were documented in this manner. Later the numbers were individually typed using a carbon ribbon. Now the numbers are printed serially on the labels by a numbering machine attached to the printing press, and the alar tags are made of light weight plastic coated with permanent pressure adhesive.

During the Second World War (1940-1945) I was attached to the Service Flying Training School of the Royal Canadian Air Force. Being stationed at various airports across western Canada, I was able to continue my interest in the study of the Orthoptera and also to locate breeding areas of the monarch butterfly. At the conclusion of the hostilities I met and married Norah Roden Patterson, and so began the monarch team of Norah & Fred Urquhart.

In 1952 we wrote a short article about our interest in the migration of the monarchs, which was published in NATURAL HISTORY. As a result of an editorial footnote requesting volunteer assistance, 12 individuals responded. From this group evolved the Insect Migration Association.

I occupied the position of Curator of Insects at the Royal Ontario Museum, as well as a cross-appointment to the University of Toronto, until 1950 when I was appointed Director of the Royal Ontario Museum of Zoology and Palaeontology. In 1961 I decided to leave the museum and join the Faculty of Arts and Science of the University in order to devote all of my time to research and teaching. Norah joined the faculty at the same time. We were now able to continue our research on the monarch butterfly with laboratory facilities for experimental studies, and the assistance from students in the Graduate School.

Funds for this type of research were woefully absent, and for many years we had covered all expenses out of our own rather meagre University stipend. Then in 1962 we received, much to our delight, financial assistance from the Massachusetts Audubon Society in the amount of \$150.00. This donation seemed to act alchemically, for in the same year we received our first grant from the National Research Council of Canada.



The Team of Nora & Fred Urquhart

Further grants from the National Research Council, the Committee on Research and Exploration of the National Geographic Society, and donations from the Research Associates of the Insect Migration Association, enabled us to add more field expeditions, hire more secretarial help, and procure the numbered and pre-printed alar tags in greater quantities. We were now well on our way to solving the question, "Where do the monarch butterflies from eastern North America spend the winter months."

The ultimate spectacular success of the tagging program was possible partly because of the system of tagging, and partly because of the dedication of members of the Insect Migration Association who did a large part of the tagging. Over a period of 35 years, the number of associates had risen from the original 12 to 3,000, and in all, over 300,000 monarchs were banded. Field expeditions were undertaken which extended from the New England states to the California coast, from the southern part of Canada to the coast of the Gulf of Mexico, from Yucatan to the state of Jalisco, Mexico, and through sections of Central America and the Canal Zone. In all over 296,000 km. were covered in the search for the overwintering site.

The Association members have had a more intimate relationship with each other and with us than is the case with many other similar research organizations. The monarch migration studies had begun as an interesting natural history hobby, and we have attempted to keep it that way. When a tagged specimen is recaptured and returned to our central office, the individual who captured it is informed of the release point of the butterfly, and the associate who released it is informed of the point of its capture, receiving a xerox of the original communication.

We have filed all recapture data and field observations permanently in a central office at Scarborough College, University of Toronto, Canada. The number of tagged specimens, the city or town nearest to where the specimen was re-captured are all recorded. A master file gives full particulars as to name, place, activity and tag numbers issued for each Associate. Recapture data are plotted on topographic maps. It was the plotting of numerous release & recapture lines which eventually led to Mexico and the discovery of the overwintering site.

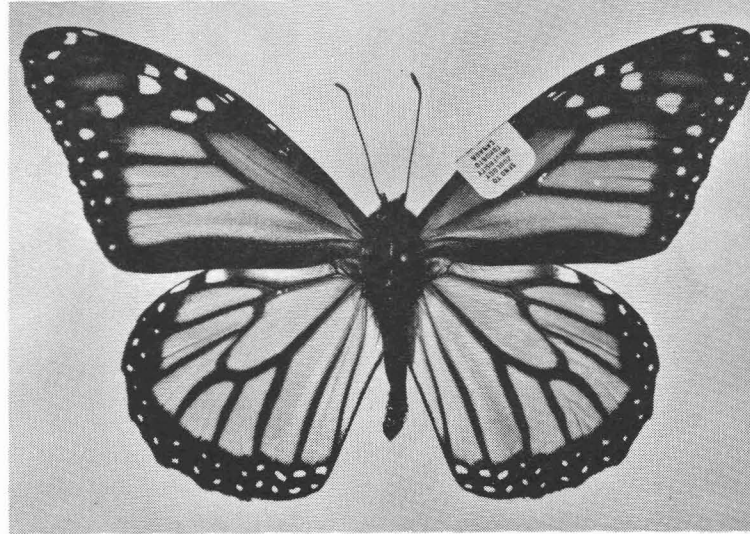
We plan to continue our research in order to fill in the gaps in our knowledge, particularly with respect to the vernal migration, by tagging in some unpublicized overwintering area in Mexico. When carrying out the tagging program in one of those sites where monarchs are massed together for several months, labels of different colors are used. White is used for the fall migrants on their way to the overwintering sites. Fluorescent pink and yellow are used in alternate years for individuals tagged at the overwintering sites. We will depend on these tagged butterflies for information on the routes taken in the northern migration. It is important that anyone capturing a tagged specimen should record the number and release the specimen unharmed with tag still attached. This is most important in overwintering sites where monarchs remain in a restricted area over a period of many weeks. We have had many hundreds of tagged specimens collected at such sites and sent to us, thus destroying the data on spring migration.

Our research has been rewarding in many ways. In our travels we have visited 58 universities and colleges. We have received thousands of letters expressing interest and offering assistance in our program. Of considerable delight have been the many letters received from the young people of our two countries, many of whom, having started to study the monarch butterfly, have attended the University, taking courses in biology, and are now occupying various positions in academic institutions. At local science fairs our young helpers have taken many prizes and won scholarships as a result of their work with us, and this, in many respects, has meant more to us than the final results.

Six protected areas have been set aside for the Monarch butterfly as a result of our research. At present we are having discussions with Mexican authorities for the purpose of protecting the overwintering site in Mexico. A recent delegation from Mexico to our home, with representatives from the offices of the Mexican Consulate and Ambassador, was most successful.

Our sincere thanks go to all those members of the Lepidopterists' Society who have given us so freely of their time to assist us, and who have imparted so many important field observations. As a result of your assistance, the financial help of the National Research Council of Canada, the Massachusetts Audubon Society and the National Geographic Society in the United States, and the tireless dedication of the Insect Migration Associates, the question of where the monarch butterflies go in the winter time has finally been solved.

Dr. Fred A. Urquhart, Scarborough College, University of Toronto, West Hill, Ontario, CANADA.



Ed. note: The discovery of the overwintering sites leaves little doubt that the monarch is the most numerous, the most successful, the most familiar to people, the most spectacular, the most widely travelled, and the longest actively living and the most thoroughly documented member of the butterfly community, and well worth the time spent in "beating a path to its door".

Serendipity — (imagines)

LIFE LINES

His life on the line,
the performer balanced his way
across the tight wire,
thrilling the crowd below,
to applause and cheers.

A long strand of silken web
swung from tree to wall:
hundreds of tiny spiders strung
like beads upon a thread...
and no cheering crowd to see.

Mary Weeden Stiver
RD# 3 Box 2-A
Hopkins, SC 29061

THE HYBRID?

Take one black *promethea*,
one *angulifera* queen,
hand hold them close and pray
they cling to the silver screen.
Let's cross breed; the hybrid
will be colorful and more.
It will whisper promises
we've never heard before.
It could be disaster
or a child bright and new.
It could mean a progeny
we shared, just me and you.

Dona Kelly
PO Box 547
Beverly, WV 26253

RESEARCH REQUESTS

INFORMATION WANTED for a Fascicle on the Pieridae of Mexico.

Text will be written in Spanish by Dr. Carlos Beutelspacher, Instituto de Biologia, Apartado Postal 70-153, MEXICO 20, DF, and published by the University of Mexico City.

Color figures of every known Mexican Pierid will be prepared by William H. Howe, 822 E. 11th Street, Ottawa, Kansas 66067.

We need both specimens and state records of rare and/or undescribed species known to inhabit Mexico, especially from Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon & Durango. Also needed are any verified reports of mass movements or migrations from any part of Mexico, with dates, approximate location & species names. WILLIAM H. Howe, 822 E. 11th St., Ottawa, KA 66067. (Any information given to Dr. Beutelspacher should be written in Spanish or sent to me for translation. W.H.H.) Full credit for specimens will appear in Introduction and also line credit op. figure.

TENNESSEE COLLECTORS: A planned Tennessee Lepidoptera faunal survey needs records from Tennessee collectors. Data on all families is requested, and contributions will be acknowledged. Send moth records to: Amos H. Showalter, 352 Willard Dr., Nashville, TN 37211. Butterfly records to: John A. Hyatt, 439 Forest Hills Dr., Kingsport, TN 37663.

SERIES OF *Battus philenor* wanted from any location for taxonomic study. I will accept worn material as well as fresh. Must have location & date. Will trade or purchase. All assistance will be acknowledged. George T. Austin, Dept. Biol. Sciences, University of Nevada, Las Vegas, NV 89154.

WANTED FOR A CHECKLIST OF OKLAHOMA butterflies & skippers: I would like to hear from any members who have collected in Oklahoma. If possible, please send list of species, dates & localities. Have been working with 4-H & other youth groups, and see a need for such a project in the state. Any information, assistance or advice will be greatly appreciated. John M. Nelson, Dept. of Natural Science, Oral Roberts University, 7777 South Lewis, Tulsa, OK 74102.

DATA WANTED on butterfly species collected on San Bruno Mountain, San Mateo County, California, for publication of a faunal list of this endangered habitat. Likewise, data for species collected in San Fransisco, CA. Richard A. Arnold, Dept of Entomology, 201 Wellman Hall, U. of Calif, Berkeley, CA 94720.

COLLECTION DATA WANTED on Noctuidae from Ohio. To be used in a forthcoming faunal list of Ohio Moths. Data for other families will be solicited later. All replies will be acknowledged. The authors may wish to verify some records. Reply to: Eric Metzler, 1241 Kildale Sq, N. Columbus, OH 43229.

!!! ONLY A YEAR AWAY !!!

1979 Thursday 28 June through Sunday 1 July 1979

These are the dates of

THE 30th ANNUAL MEETING OF THE LEPIDOPTERISTS' SOCIETY IN
FAIRBANKS, ALASKA

These dates have been picked to ensure the best time for a one day field trip to Eagle Summit after the meeting, and for a longer trip (provided there is sufficient interest) to either the Brooks Range or Seward Peninsula after that. More information will be forthcoming from Ken Philip, Host, later in the season. He is currently bound for NE Siberia via Tokyo, Niigata and Khabarovsk. His destination is Magadan.

Ripples

Feb. 11, 1978

Dear Jo:

Don Thomas's letter-in Ripples in NEWS No. 3 May/June 78, about lots of mostly dark *Catocala* at the Lamar Life Building in Jackson in 1935 is of great interest to us!

We arrived in Mississippi in 1946 and, upon our arrival, a colleague - W. G. Mitchell - who had gotten here a few weeks earlier (in July), told us of great quantities of mostly black *Catocala* around the Governor's mansion, which is directly across the street to the north of the Lamar Life Building, and in Smith Park - the one-block sized park just north of the Governor's mansion - and in the doorways of stores for a block or so in all directions. We went and we saw them. It was quite a spectacle.

We didn't begin seriously to accumulate moth records until about 1959. On 11 July 1959 right around there I took 12 ♂♂ and 17 ♀♀ of *Catocala agrippina subviridis* Stkr (determined for me by Sid Hessel). I took a bunch more in July 60, 62, 63 etc.

However the major outbreak of which I am aware took place there in 1970. I collected there for about an hour in the middle of the day on 3 and 5 July and took 124 *Catocala* representing 15 species. I took them mostly on tree trunks, windows, walls, and doorways - all within a block of the Lamar Life Building. The species were *C. innubens* Gn, *C. viatrix* Grt, *C. obscura* Stkr, * *C. residua* Grt*, *C. sapho* Stkr*, *C. agrippina* Stkr, *C. ulalume* Stkr, *C. dejecta* Stkr, *C. insolabilis* Gn, *C. vidua* J.E. Smith, *C. maestosia* Hlst, *C. lacrymosa* Gn, *C. nebulosa* Edw, *C. neogama* J.E. Smith, and *C. ilia* Cram. (* these three were new records for Mississippi so far as I could tell).

I mentioned this outbreak in a letter to Ron Wilkinson who published an account of it (with my approval) in *The Michigan Entomologist* (vol 4, no 2, 1971, p 60) - from which it was picked up and reprinted by Ted Sargent in "Legion of Night" (Univ. of Mass. Press, 1976, p 78).

Following the 1970 outbreak I naturally looked carefully early in July in 71, 72, 73 etc. Also naturally, after a major outbreak there was a major famine -- I found nothing. Then the Governor had a high wall built around the mansion. Then Smith Park got dug up completely and rebuilt by landscape architects. My guess is that outbreaks such as Don saw in 1935, that W. G. Mitchell and we saw in 1946, and that I got in on in 1970 will not occur there again. A pity. Sincerely, Bryant Mather, Box 631, Vicksburg, Miss. 39180.

Dear Ms. Brewer:

April 18, 1978

After digesting the contents of the Mar/April NEWS I thought a couple of comments might be of interest.

Relevant to the article on the occurrence of *Ceratomia hageni* in Tenn. and Ohio (page 13), I have 3 specimens from Corbin, Ky., I captured in 1971 (2 on June 26, 1 on July 24) at gas station lights.

Regarding the comments in the summary on the occurrence of *Sphinx libocedrus* in Texas (p.8 3rd line from bottom) Mr. John MacRoy of Olean, N.Y. captured several specimens (4 of which are in my collection) at gas station lights in the vicinity of Lawton, Oklahoma.

Sincerely, Tom Carr, RFD 4, Box 403, Swanton, Ohio 43558.

Dear Jo:

I was horrified to see an advertisement in NEWS (Jan/Feb 1978 p. 8) for butterflies to make butterfly pictures. No butterfly lover should tolerate this truly ghastly trade and for a society to carry such an advertisement is really AWFUL. Altogether I think one should sift the advertisements pretty carefully, because some of them should be discouraged in the interests of conservation. All good wishes, Miriam Rothschild, Ashton Wold, Peterborough, ENGLAND

Ed. note: The advertisement in question was included in error. The purposes of the Lepidopterists' Society as set forth in the Constitution, do not include using butterflies or parts thereof for purely decorative artifacts.

Dear Editor:

On December 30, 1977, in Melborne, Brevard Co., Florida, my brother John and I were collecting when we discovered a colony of approximately 200 *Heliconius charitonius tuckeri* just inside the edge of an old citrus grove. The day was cloudy and, on two occasions earlier, a light rain had fallen. Our collecting and observations of *H.c. tuckeri* were carried out between 11:00 and 12:00 a.m. The temperature was, to the best of my recollection, 63° F. It was noticed that no passion flowers were to be found here or at any of the locations where we had searched for pupa and larva. John found a pupa from which a specimen emerged around noon. However, as stated, no food plant was seen. Perhaps the passion flower of Florida is a different species from that with which we are familiar in Alabama and Mississippi, which could account for our inability to find the food plant. However, such is probably not the case. It was observed that the butterflies were sluggish in flight and, when stirred up, many would land in an inverted resting position.

Sincerely yours, Steven MacDonald, 4002 Woodberry Drive, Dothan, Alabama 36301.

P.S. Most specimens caught were of excellent condition.

Ed. note: In Florida, passion vine often grows among other tangled vines in deep woods, or among the branches of hibiscus trees. In both cases, much of it is hidden from view. It therefore appears to be neither luxurious nor plentiful.

To the Editor:

Last March (1977) while in Mexico I observed two phenomena which I have not read about for these specific species. If it has been documented in the past, I would like to further strengthen that documentation.

First, one night about 9:30 p.m. my wife spotted an assemblage of *Caligo memnon memnon*. There were 5 or 6 individuals all hanging upside down, each on a broad leaf over a small stream. All the individuals were captured as we could not return to that spot to see if they roosted there every night.

The second occurrence was a day assemblage of *Smyrna karwinski*. These were hanging under the overhang of a large waterfall. They appeared to be gathered in small groups of 20 to 100 individuals, and there were 20 or 30 groups. Several individuals were taken on the wing, but the overhang was much too high to determine exact numbers and whether other species were mixed in.

I would be happy to correspond with any who have specific questions or desire more precise information as to location, etc.

Ron McCluskey, PO Box 583, College Place, WA 99324.

Dear Editor:

Feb. 8, 1978

On August 17, 1974, I collected a specimen of *Papilio victorinus* Doubleday in Laredo, Texas.

As near as I can ascertain, this is the first capture of this species in the U.S. The specimen was collected visiting a flower bed, which included marigolds, on the eastern edge of the city. The specimen is a male in very fresh condition and is presently in the collection of the author.

Tyler in his book *The Swallowtail Butterflies of North America* (1975, p.128) gives the range of this species as 'Temperate and tropical regions of E. Mexico as far N. as Nuevo Leon and Tamaulipas.' Five additional specimens of this subspecies; *v. victorinus*, were collected during August, 1974, in Monterrey, Nueva Leon, Mexico. These records may indicate that this species is extending its range northward.

If anyone else has collected it in the U.S. I could like to hear about it.

Sincerely, James K. Adams, 135 N. Missouri, Liberty MO 64068

Dear Ms. Brewer,

The 77 summary has arrived. There is a report to the effect that *Vanessa atalanta* was not seen in British Columbia for the past 6 years. Well, now, I have been collecting Vancouver Island for more than 30 years, and I cannot recollect ever failing to at least see *V. atalanta*. The thing has been quite common in at least 2 or 3 of the last 6 years, not particularly so in 77. I have no written records, and did not bother to report it as I never thought it of any interest.

Now seems a good time to explain why I seldom contribute to the summary. When the idea first came up I visualized a continuous record for each area, giving a synopsis of weather and notable abundances or scarcities. This might in time have built into a valuable tool for research into the causes of population fluctuations. It soon appeared that the summary was in fact, if you can excuse my bluntness, only a vehicle for bragging. I can see now that this was inevitable, most members are city dwellers who go collecting on their annual vacations, usually to a different place each year. They have no year by year record of any one area. They send in a list of what they THINK to be notable captures, and these lists comprise the "season" summary. In fact they indicate exactly nothing regarding any particular season.

For my part I have never collected anywhere but Vancouver Island. Year after year I visit my known spots at known times, knowing exactly what I will get. To send in every year the same list seems senseless. To do as I hoped to do, (report the varying population densities) is out of the question, because sufficient space is not allowed, and because I do not care to be a lone voice crying in the wilderness.



ACID RAIN, A SUSPECTED KILLER OF LEPIDOPTERA IN NEW JERSEY

My home in Lebanon, Clinton Township, Hunterdon County, New Jersey, is situated at an elevation of approximately 500 feet on Cushetunk Mountain (elevation 800 ft.). Round Mountain is located nearby. I own approximately 98 acres of land. The surrounding area consists of dairy farms. Open field are both planted and untilled. There are many host plants for lepidoptera on my property. I have identified 56 species of trees, shrubs and miscellaneous plants.

I settled in this area over 20 years ago. At that time I installed five black light tubes (40 watts) dispersed at the outer edge of an 8-acre open field. The lights faced east. Two more black light tubes (20 and 40 watts) were fastened on the front of the car garage and faced west. During various years I collected the following material: *H. cecropia*, *A. luna*, *A. polyphemus*, *C. regalis*, *E. imperialis*, *C. promethea*, *C. angulifera*, *P. pandorus*, *P. achemon*, *C. jasminarium*, and many other large forms of lepidoptera. Larvae and cocoons of the mentioned forms were observed in large numbers; cocoons of *Callosamia promethea* were especially abundant.

A decline in the number of indigenous species of lepidoptera was first observed 15 years ago. Since then the decline in species population has increased rapidly. No Larvae or cocoons have been observed in recent years, the absence of *promethea* cocoons being especially striking. Roadside stands of sassafras contained large quantities of cocoons years ago; single cocoons are no longer observed. The large number of insects attracted by my black lights are no longer observed. Collecting at my black lights has dropped to a few species.

A recent article in a popular nature magazine related how a fish kill was probably due to "acid rain." The area affected was northern New York State. That acid rain was generated by airborne pollutants. The source was reported to originate in mid-western industrial regions. It is estimated that one million vehicles transit New Jersey interstate highways alone. My described property is also a fly-over for jet aircraft leaving metropolitan airports. Chinese nuclear fallout during heavy rain was also reported in the area. The fallout was claimed to be insignificant in terms of harm to humans; however the fallout could harm the various life history stages of lepidoptera.

The Senate Commission recently reported that manmade carcinogens spewed into the air by industrial processes are the most likely source of our high cancer death rate in New Jersey. Another report by the National Cancer Institute showed New Jersey with the highest cancer death rate of any state in the Nation. The press renamed the Garden State "Cancer Alley".

Two lepidopterist friends, one in New York State and one in New Jersey, both claim that larvae enclosed in bags around trees die for no reason. The one in New Jersey washes the leaves with a certain solution before feeding.

There has been very little habitat destruction in the area I have described; further, insecticide spraying has always been confined. It is my belief that rain-borne pollutants may be an important factor in the destruction of the lepidoptera population. In contrast, I have been collecting in Cape May County, New Jersey, for many years. This area is relatively isolated since most of the land mass is on a peninsula. All the large forms of lepidoptera are still found in this region in large numbers
Joseph Muller, Rt. #1, Lebanon, NJ 08833.

SHORT LIVED PHENOMENON

During the week of April 9th I noticed much activity by the Zebra butterflies (*Heliconius charitonius*) in my yard in Coral Gables, Florida. About a dozen at a time were flitting between the ferns and other plantings, searching for something. They were attracted by several pupae hanging underneath large fern fronds and low-hanging palm fronds. Half a dozen crysalids were scattered around a small area.

One or two male Zebras would hang onto a crysalis for hours, with others hovering nearby or trying to alight on the crysalis. At times I saw a male mating with an unhatched crysalis. Others just spent the night hanging on to a crysalis, usually two males at once, there being no room for more. Sometimes wings were spread, and sometimes wings were over their backs. Only some of the hanging crysalids attracted this attention -- the females no doubt. Others were ignored.

By the following week most of the crysalids seemed to have hatched, and the butterflies had moved to different areas and were in smaller numbers.

Perhaps these butterflies have solved the problem of trying to determine the sex of the unborn before birth; something we have not been able to do very well.

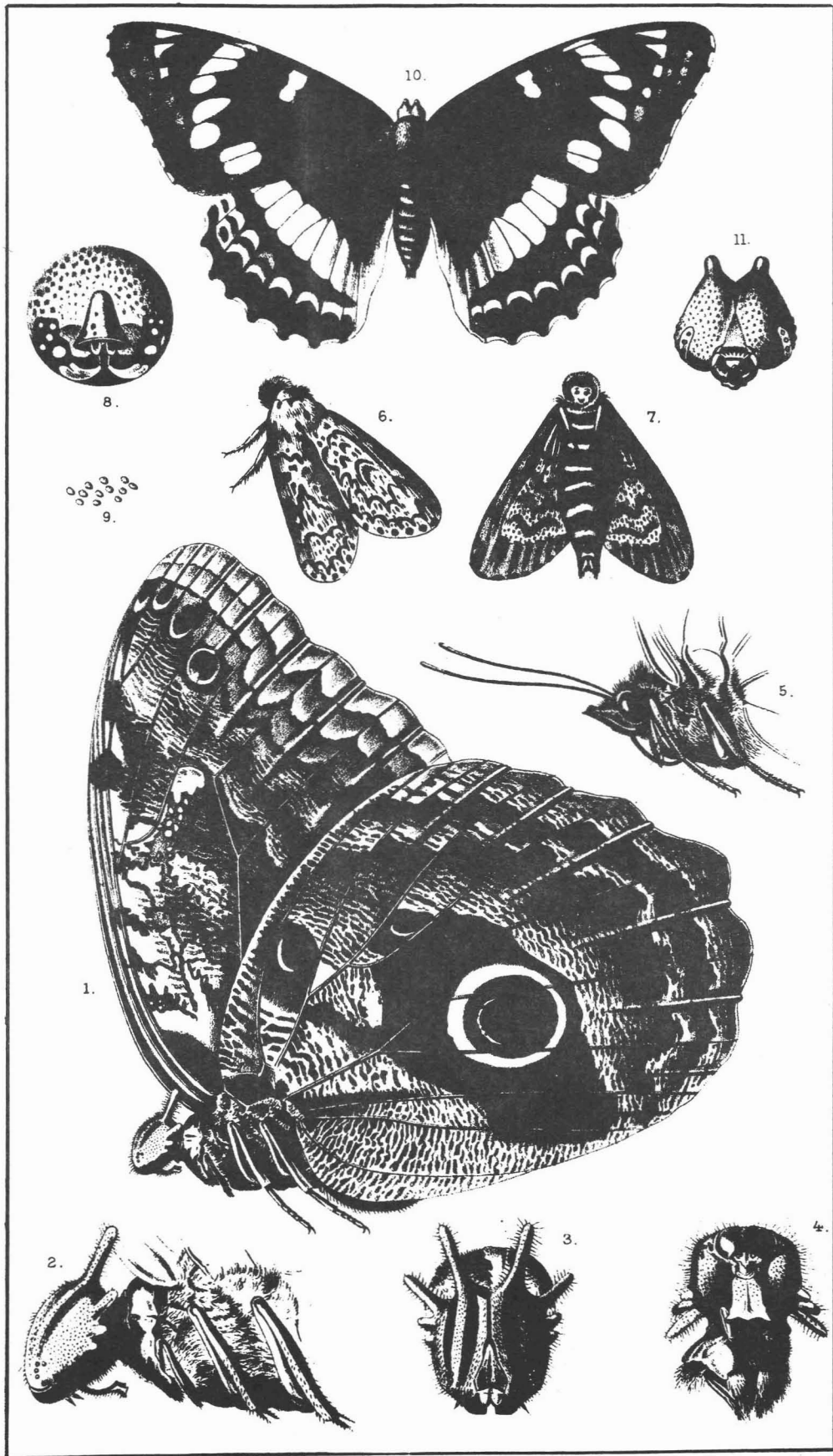
Don Thomas, 837 Majorca, Coral Gables, FL 33134

Reporting new locality records on a deadline basis is also impossible. With priority given to my customers' needs there is no way I can get the seasons' catch worked over, and possible "strangers" sent out to a determiner in time to get the specimens back before spring. In any case the possibility of finding butterfly records is small. They have been too intensively collected for too many years. As for moths; -- well, last year (or was it the year before, I am not sure) I sent in a brief list of moths all of which I knew to be unusual for V.I. It was not used, though equal space was given to "records" of butterflies which, had I thought them of any interest, I could have reported without even bothering to visit the place, knowing full well they would be there. When I mentioned this matter to the then editor of the NEWS, he replied that the coordinator was not interested in moths. Frankly, I am not about to waste my time writing up reports which will be subject to the personal whims of coordinators. Anyway, trying to deal with several hundred species in the space of 2 lines is a bit of a headache; perhaps I am glad to be out of it.

That leaves migrations. Should I waste postage reporting migrations, knowing that every other contributor in the same and neighboring zones will do the same. You seem to have enough trouble fitting in what you get, I am happy to opt out and not complicate your problems.

Sincerely, Richard Guppy, Thetis Island, British Columbia, VOR-2Y0 CANADA.

Ed. note: An ad hoc committee to re-evaluate the Field Summary is in the formative stage. Any further opinions on the usefulness and/or content of this very costly annual feature in the NEWS will be welcomed.



THIS ILLUSTRATION

appeared in a recent publication, accompanied by a caption which began,

"What is Wrong with this Picture?"

Anyone sending in the correct answer to this question, will have the pleasure of seeing his name on the front page of the Nov/Dec issue (1978) of the NEWS, along with the correct answer and all proper references.

Do not let this chance for fame pass you by!

We are giving you until October 7 to have your reply in the mail, so that members from far and near will all have an equal chance to be honored

Try to make your diagnosis brief (Ha!), since we anticipate a DELUGE of responses.

Mail replies to:

Jo Brewer; Editor,
 The NEWS of the Lep's Soc.
 257 Common St,
 Dedham, MA 02026
 U.S.A.

Postmarked on or before
OCTOBER 7 1978.

THE FOURTH OF JULY BUTTERFLY COUNT: REQUEST FOR PARTICIPATION

For many years North American bird watchers have spent one day at Christmastime counting birds. Selected areas are visited each year by teams of local enthusiasts coordinated by experienced leaders. A great deal of comparative data has accumulated on year-to-year fluctuations in population levels, local extinctions, and so on. The results, published in American Birds, have been used to trace range expansions, to plot diversity indices, and in many other ways.

In 1975 Sally Hughes of the Xerces Society proposed a comparable count of butterflies and suggested dates around the 4th of July. Despite minimal advertisement, 28 groups participated that year, in 12 states, with the results published in Atala. Many of those counts have been repeated each year, the total reaching about 40 in 1977, with more than 180 participants. It is important to realize that the butterfly count is neither a duplication of the annual season summary of The Lepidopterists' News, which involves no comparative, quantitative data, nor an attempt to obtain the highest count for any given area. Sites should be selected mainly on the basis of their potential as a count center year after year in the foreseeable future, rather than for richness or rarities.

Obviously, July 4 is not the optimum for all areas -- it may be too early or too late depending upon conditions in various areas. For example, the highest numbers of species in the Berkeley area fly in early June, about a month ahead of count week, when 55 of 84 species in Contra Costa County have been collected (Opler & Langston, 1968, J. Lepid. Soc., 22:89). Thus counts are allowed within 2 weeks preceding or following July 4. Although this may not be best time at every locality, it should be emphasized that this is a year-to-year comparative count, and the 4 weeks should be an acceptable range. In general places with a short season have most species active as adults in mid-summer compared to areas with longer activity seasons and fewer species active at any one time. So, the number of species observed in one day in coastal California would not be as diverse as at a rich site in the Rocky Mountains no matter what season was selected for the California locality.

Experience with the Berkeley count, which encompasses fairly diverse habitats, has been that 4-6 parties are necessary for adequate coverage. Correlating numbers of species and individuals with party-hours, we found that 2-3 hours/locality and about 9-12 localities are approximations of the effort needed to bring diversity curves near asymptotic. Each party spending 2-3 hours in each of 2 or 3 habitats can pretty well reach a point of diminishing returns.

Even if the July 4 season is not optimum, many interesting comparisons can be produced from annual, standardized counting. For example, in 1977, after 2 years drought we documented neither of the often-heard generalizations, i.e. that results would be "poor" and that flight would be "early." In fact, 1977 produced a larger number of species (43), higher average individuals/party-hour, and several spring species not seen in the 1975-76 counts, 2 being all-time late records for the county.

Several rules must be followed in order to make the data comparable: an area 7.5 mi. radius from a center, not to be varied year to year, a one-day count of all butterflies collected or sighted (and positively identified), and accurate records of party-hours and party-miles in the field. A self-help sheet and forms for recording data are available from the count coordinator: Mary Hathaway, P.O. Box 123, Durham, New Hampshire, 03824. It is hoped that with increasing awareness of the project, greater numbers of localities will be sampled, enabling comparisons within and between more parts of the country.

J.A. Powell, University of California, Berkeley.

PUBLICATIONS

"The Moths of Autumn" John F. Cryan & Robert Dirig. Pine Bush Historic Preservation Project, Inc. 16 pp. Lavishly illustrated with 16 drawings and a page of 9 photographs showing the life cycle of the Buck moth, *Hemileuca maia* (Drury). Available from the Pine Bush Historic Preservation Project Inc., PO Box 22820, 1400 Washington Ave, Albany, NY 12222 USA.

Memoirs of the Lyman Ent. Museum & Res. Lab.

No. 5. "The Skipper Butterflies of the Province of Quebec/ Les papillons hesperides de la province de Québec (Lepidoptera: Hesperiiidae)." By D.N.Duffy and J.A.Garland. 165 & 1 pp., 4 colour plates. Published June 12, 1978. Price (including handling and mailing) \$8.50. Write to: Lyman Entomological Museum & Research Laboratory, Box 800, Macdonald College, Ste. Anne de Bellevue, Que. CANADA HOA 1C0.



James Huffman Baker

James Huffman Baker was born August 10, 1910 in Baker, Oregon, and died April 14, 1978 in St. Luke's Hospital, Boise Idaho.

"Jim" was a well known business man in eastern Oregon, but was more widely known as an enthusiastic and prominent lepidopterist who specialized in the Lepidoptera of Oregon, particularly the Geometridae of eastern Oregon and neighboring areas.

In 1969 he earned the Smithsonian Institution Award for Meritorious Service.

He collected in many areas, but most importantly in "Spring Creek", about 10 miles west of Baker, where his family had a cabin. He also knew many of the interesting and productive collecting spots in the intermountain area from Arizona to the Canadian border. Jim was a delightful companion in the field, and will be greatly missed by his many friends and colleagues.

Survivors include his wife, Ilah, a son James Michael of Baker, a daughter Judith Ann Haswell of Pullman, Washington and two grandchildren.

IMPORTANT NOTICE

This is to draw the attention of members to Order in Council under the Fauna Conservation Act 1974-1976 dated 29 August, 1974, that provides:-

" Cairn's birdwing butterfly *Ornithoptera priamus*
Mountain blue butterfly. *Papilio ulysses*
are both protected insects."

Your attention to this enactment will be appreciated.
G.W. SAUNDERS, Director, National Parks & Wildlife Service, Queensland, AUSTRALIA.

PUBLIC NOTICE

The trade name, THE BUTTERFLY MAN, Federal Registration No. 1,082,560 is held by Kenneth Denton, Box 906 Laguna Beach, CA 92651. Trespassing upon it in the butterfly business is against the Law, and anyone so doing acts at his own risk.

NOTICES - Buy, Sell, Exchange

Members of the Lepidopterists' Society are invited to use this section free of charge to advertise their offerings in Lepidoptera. We cannot guarantee any notices, but all are expected to be made in good faith. By decision of the Board, prices of specimens offered for sale will not be published henceforth. Please be brief, clear and check spelling. Notices will be limited to two appearances. The Editor reserves the right to alter or reject unsuitable copy.

- FOR SALE: Limited quantity of Celestrina ebenina; or will exchange for other hard to get N. A. Lycaenidae. Daniel P. Oosting, 3113 Creek Dr. NE, Apt 1-D Kentwood, MI 49508.
- FOR SALE: Glass topped display cases for pinned specimens. Riker mounts 6 sizes. Covered insect boxes. High quality colored tropical Lepidoptera and Coleoptera stationary, 8 varieties. Papered butterflies. For free list send to: Mark P. Sitter, 12915 N.E. Morris Court, Portland, OR 97230.
- FOR SALE: Butterflies from West Irian, such as rare Ornithoptera, Delias, Polyura. Also from Moluccas, Philippines, Korea, and Japan. All inquiries to Bin Koiwaya, 3-14-15 Shimo-Takaido, Suginami-Ku, Tokyo, JAPAN 168.
- WANTED: Clearwing wasp-like moths (Sesiidae). World-wide interest; specimens need not be named, but other data wanted. Many so-called "common" species needed in my collection. John Holoyda, 2819 N. Marmora Ave, Chicago, IL 60634.
- FOR SALE: Indigenous Lepidoptera of NE Texas. Papered w/data. A-1 condition. Price list upon request. John Kemner, 9018 Liptonshire, Dallas, TX 75238.
- EXCHANGE: Nearctic Rhopalocera for Palearctic Satyridae. R. Rahn, 411 W. Stewart Av. Wausau, WI 54401.
- EXCHANGE: Rhop, Macro - Live material only; especially Papilio, Sphingidae, Saturniidae, Catocalinae. SELL: Live & papered material, everything with exact data of origin. John Reichel Box 789 Revelstoke BC V0E-2S0 CANADA.
- WANTED: or to buy, a large pair of Ornithoptera alexandrae and Ornithoptera victoriae from personal collection only. Send the price, size & condition of the pair to: Brian Donnelly, 2990. Provert, Apt 4, Ste-Foy, G1X 1A7, P. Quebec, CANADA.
- FOR SALE: 12 drawer formica covered Cornell Cabinet, with 9 Cornell drawers \$350.00 plus shipping. R. Rahn, 411 Stewart Wausau, WI 54401.
- WANTED: The Butterfly Book (W.J. Holland) Pref. 1st edition. Good Condition. Also, Butterflies of Trinidad & Tobago (Malcom Barcant - Hard cover, good condition. Advise price. Molly Monica 11 Putnam Ave Berkeley Heights NJ 07922.
- FOR SALE: Japanese butterflies; or will exchange for any foreign butterflies. Will also buy foreign butterflies. Fine specimens of almost all Japanese butterflies available. Write for price list. M. Asakawa, Asakawa trading Co. 41-3 Minanibiraki, Komatsushima, JAPAN.
- FOR SALE: Beautiful fresh (from SE Bolivia, W. Brazil) rare Agrias varieties orlansi, similar to godmani - also belsazer. Send for free list. Photos available at nominal charge refundable with purchase. Robert E. Aronheim PO Box 239, Middlebury CT 06762 USA.
- FOR SALE OR EXCHANGE: Large stocks of butterflies and moths of the world including Agrias, Ornithoptera, Thecla, Morpho, and Colias species. Also Saturniidae. Also some beetles, such as Dynastes hercules and D. neptunus. Send \$2.00 for 10 month subscription to price lists. David W. Bouton, Box 25, Main St., Kirkwood, NY 13795.
- FOR SALE: Cocoons, ova, and papered specimens of Actias selene, Actias sinensis, Attacus atlas. Also pupae of Taiwan Rhopalocera, esp. Papilionidae, Pieridae, Danaidae, Nymphalidae. A large number of Formosan butterflies, beetles and other insects available for collectors. Price List on request. Mr. Ying Mun Wu, Formosa Insect Farm, P.O.Box 2-046, Pei Tou, Taipei Taiwan, R.O.C.
- FOR SALE: Rare butterflies of Indonesia, mostly from West Irian, Halmahera, Bachan, Ceram, Aru and Celebes. Please write for list. G. Sankowsky, Queensland Butterfly Co., PO Box 175, Nth. Tamborine, Queensland, Australia 4272.
- FOR SALE: Moths from Ecuador. Rothschildia, Automeris spp. Catocala agrippina and many others. Also Arctiidae, Noctuidae, Sphingidae: Diurnals: Dynastes hercules and other large beetles & insects of several families. All sold in collections of 100 (assorted spp). Write for price list to: Rosario Lafebre, P.O. Box 1265, Quito, ECUADOR.
- WANTED: Papered cecropia, gloveri, and luna in A.1. condition. Also the commoner U.S. Papilios, etc. Will buy, or trade for lepidoptera from Europe, Asia and Africa. Write for detailed exchange list. Brian Wurzell, 47 Rostrevor Ave, Tottenham, London, N.15, ENGLAND
- FOR SALE: A total of four beetles: 2 female and 1 male Ctenocelis coeus at \$4.00 each; 1 female Macropus longimanus for \$2.00. Mike Taylor, PO Box 160, Logan, UT 84321.
- WANTED: Livestock (ova or pupae) and any notes regarding habits, locality and life history of species of the genera Hemileuca, Pseudohazia and Saturnia. Will exchange for species of exotic or native moths or butterflies, papered or livestock. Write for details. Jeff Lepore, 1707 Millersville Pike, Lancaster PA 17603 U.S.A.

from: The Lepidopterists' Society
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NEWS of the Lepidopterists' Society. Some recent issues are still available at \$.25 per copy, postpaid. Inquire as to availability before sending money.

ORDER FROM: Dr. Charles V. Covell, Jr., Memoirs Editor, Dept. of Biology, University of Louisville, Louisville, KY 40208 U.S.A.

INFORMATION ABOUT THE SOCIETY....

Membership in the Lepidopterists' Society is open to all persons interested in any aspect of Lepidopterology. Prospective members should send the TREASURER the full dues for the current year, (\$13, U.S.A.) together with full address and areas of interest in Lepidoptera. Remittances in dollars (U.S.A.) should be made payable to the Lepidopterists' Society. All members will receive the JOURNAL (published quarterly) and the NEWS (published bimonthly). A biennial membership list will comprise one issue of the NEWS in even-numbered years. Back issues of the JOURNAL may be purchased from the TREASURER.

Information on membership may be obtained from the TREASURER, Ron Leuschner, 1900 John St., Manhattan Beach, CA 90266, U.S.A. Change of address must be sent to him alone, and only when changes are permanent or very long-term.

Other information about the Society may be obtained from the SECRETARY, Julian P. Donahue, Dept. of Entomology, Los Angeles Co. Mus. of Nat. Hist., 900 Exposition Blvd., Los Angeles, CA 90007, U.S.A.

Manuscripts for publication in the JOURNAL are to be sent to the EDITOR, Dr. Austin P. Platt, Dept. of Biological Sciences, UMBC, 5401 Wilkens Ave., Catonsville MD 21228, U.S.A. See the inside back cover of a copy of the JOURNAL for editorial policies.