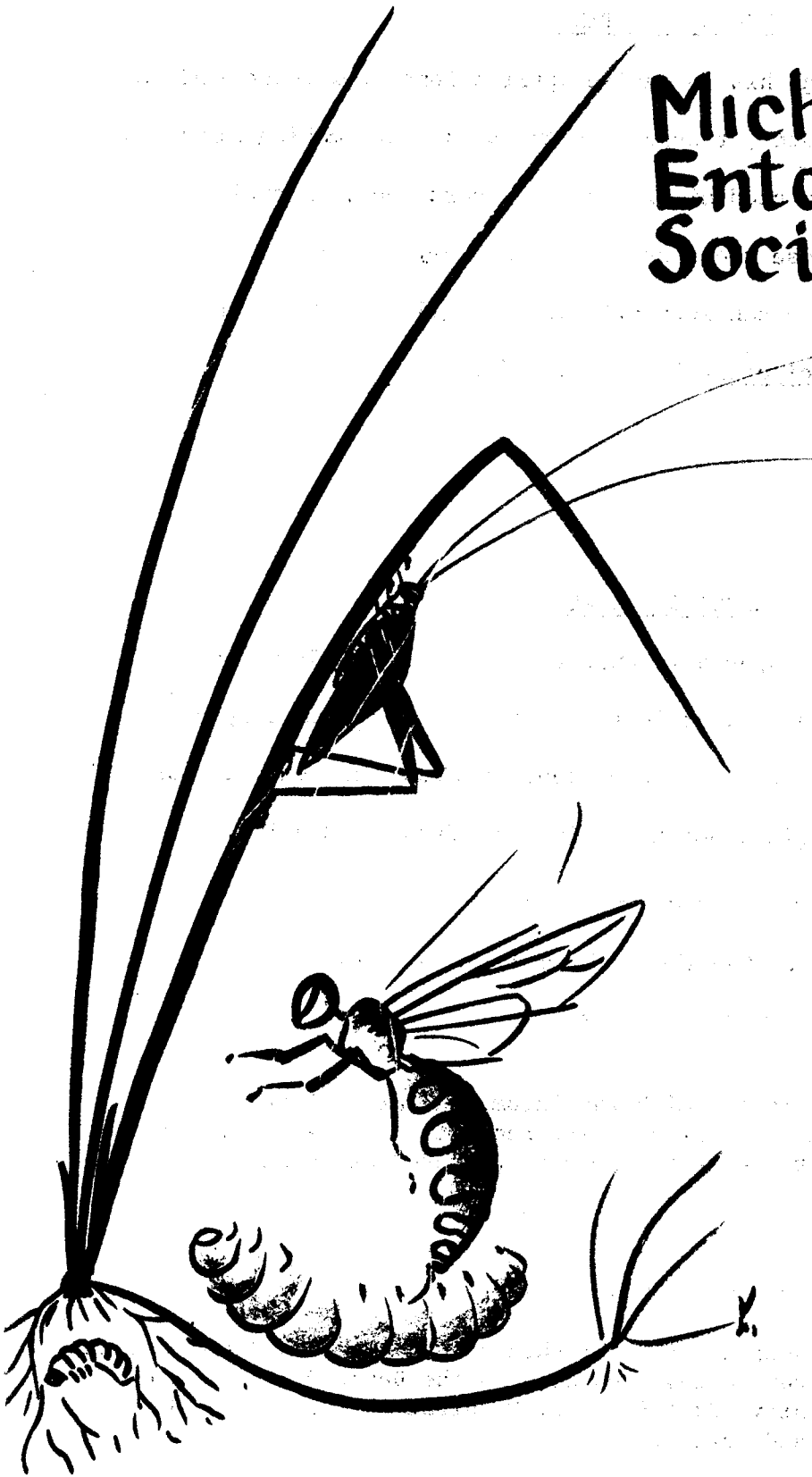


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Newsletter

Michigan Entomological Society

Volume 9, No. 1
East Lansing, Michigan
mailed 23 June 1964



K. J.J.

WORTH REPEATING

"Man has in truth, through his intensive applications of science without regard to long-range consequences, triggered changes that are making his world less fit for those who will succeed him in future generations. A truly scientific civilization will use the perspective, and not merely the expedients, which science alone can supply." (from "Tell-Tale Dust," by Paul B. Sears, in American Scientist 52: 1-15, 1964.)

ABOUT OUR COVER

Our new cover design was especially executed for the NEWSLETTER by Jeffrey J. Jackson, a graduate student in the Department of Entomology at Michigan State University. A Gestafax Electroprint mimeograph stencil was made directly from Jeff's original 8½" x 11" ink and charcoal drawing.

YOU, TOO, can become an author. See the back page for details

An application for membership in the Michigan Entomological Society will be found on page 16. All current members are also requested to fill in and return the form, so that our Directory of Members may be prepared at an early date.

This newsletter of sense and nonsense is published by the Michigan Entomological Society, with offices in an overcrowded cubbyhole in the Department of Entomology, Michigan State University, East Lansing, Michigan 48823. Julian P. Donahue, Executive Secretary and Editor.

REPORT OF THE 1964 ANNUAL MEETING

The Michigan Entomological Society held its ^{10th} annual meeting in conjunction with the 68th annual meeting of the Michigan Academy of Science, Arts, and Letters at Michigan State University on 28 March 1964.

The interesting series of papers was attended by at least 65 persons. Dr. S.K. Gangwere chaired the meeting.

The \$25.00 cash prize for the best undergraduate paper was awarded to Miss Ann Carolyn Voegtline of Northern Michigan University, for her paper on "The effect of weather conditions on biting activity of Stomoxys calcitrans (L.)."

Robert Carlson of Michigan State University received the \$25.00 first place award in the graduate and advanced amateur category for his paper on "Zimmerman pine moth ecology." Steve Ilnitzky of Michigan State University was awarded the \$15.00 second-place prize in the same category for his paper on "Sawfly predation by Formicidae."

At the business meeting the following officers were elected:

PRESIDENT ELECT: Dr. Henry Townes
(to take office at the 1965 annual meeting)

PRESIDENT: M.C. Nielsen
3415 Overlea Drive
Lansing, Michigan 48917
(elected at the 1963 annual meeting)

EXECUTIVE SECRETARY: Julian P. Donahue
Department of Entomology
Michigan State University
East Lansing, Michigan 48823

Retiring Executive Secretary Ted Cohn presented both the Secretary's and Treasurer's reports (since he served in both capacities), which were approved. Before awarding the 1964 prizes the Society had a total of \$380.19 in its accounts.

MINUTES OF THE EAST LANSING BRANCH MEETING, 8 MAY 1964

The East Lansing Branch met on 8 May 1964 at Michigan State University, in the Natural Science Building. The meeting was called to order by Chairman Arthur Wells. The Secretary-Treasurer, M.C. Nielsen, read the minutes of the previous meeting, which was held on 26 February 1964; the minutes were approved as read. The Chairman gave a brief account of the Society's history and purpose.

The meeting was attended by 53 insect and photography enthusiasts, which included faculty, school teachers, students, and amateur entomologists. The Chairman introduced Mrs. Lois Fitch, President of the Lansing Camera Club, which had received a special invitation to attend the meeting.

The matter of having another meeting before the summer was discussed, and it was decided that the next meeting be scheduled early next October, after the

beginning of fall term. Also mentioned was the possibility of having a field trip during the summer, but no definite plans were made.

Chairman Wells then turned the meeting over to Dr. Gordon Guyer, Chairman of the Department of Entomology, who introduced the guest speaker, Dr. Donald T. Ries, Professor of Biology, Illinois Normal College, Normal, Illinois. Dr. Ries presented a superb colored slide talk entitled "Look before you step," which consisted of many award-winning slides of plants and animals encountered in the field, woods, bog, and lake shore. A stimulating question and answer period followed Dr. Ries' presentation.

Respectfully submitted, M.C. Nielsen, Secretary-Treasurer, East Lansing Branch.

ANN ARBOR BRANCH NEWS

The last meeting of the Ann Arbor Branch was on May 1st, when Dorothy Merrill spoke on "Case-building and case recognition in caddis worms," and showed some magnificently clear movies of normal behavior and hoodwinked behavior of larvae. The same night Dr. Warren H. Wagner (the botanist) had the junior group over to his house, where he spoke on why some butterflies are rare, and discussed a number of cases of the discovery of colonies of rare butterflies in the area. The next day he took the junior group out to the Ida area, where, true to his prediction, he found one of those rare butterflies in a small, restricted colony (the Pepper and Salt Skipper, Amblyscirtes hegon). The colony couldn't have been much more than one or two hundred yards in diameter, and was much smaller than the distribution of the food plant at that locality. Much food for thought on the subject of rarity. (Our thanks to Ted Cohn for sending in these notes. Your Editor would like to have a correspondent at the Ann Arbor Branch submit regular reports of meetings, for inclusion in the NEWSLETTER.)

DETROIT BRANCH NEWS

No news is bad news. Could we find someone to send us regular reports of the Detroit meetings? Volunteers???

A NEW EDITOR

Dr. Theodore J. Cohn has stepped down from the demanding office of Executive Secretary, a post which he has held since 1961. (I assure the members that the accounts were relinquished in proper order.) We wish to thank Dr. Cohn for serving our Society.

The Executive Secretary has many tasks--secretary, treasurer, and editor of the NEWSLETTER. And, as is usual when an editorship changes hands, you can expect a different look in the NEWSLETTER. Our greatly expanded coverage and canary paper (locust paper was out of stock) are two obvious departures.

But the job of Executive Secretary can become onerous without a response from the members. Whether the response is favorable or unfavorable, voice your opinion, and we'll let the other members read it in the NEWSLETTER. Biologists are notorious for their reticence, and I can't hope to do much about it in a single year--but I'll try!

What's black and yellow and goes zzub zzub? (A bee flying backwards.)

I wish to thank the persons who so "readily" contributed to this NEWSLETTER. Now let's hear from the rest of you. When you mail in your membership questionnaire will be a good time to jot down a few notes for our next issue. Your comments on this issue will be welcome, as will your suggestions for additions and improvements.

A LECTURE IN BUGOLOGY (author unknown)

Bugs is critters with small bodies and large appetites. They are the things most seed catalogs don't tell you about, but you'll soon find out about. They is well-known to old gardeners. You new gardeners can read about them here or just wait--you'll meet them.

Bugs is divided into two classes: bad, and very bad. Most all bugs fit the second group. Bugs is also divided into red bugs, blue bugs, striped bugs, etc., but that don't do much good--all colors eat about the same.

Bugs could eat each other, but they don't. They eat in gardens. Sometimes they eat gardens. They especially like what you like. They never eat things you don't want anyway. Their appetites is enormous things and if they ever get full, which I doubt, they go on tearing holes in things just for the fun of it.

Besides large appetites, bugs also have large families. Two or three trillion little bugs per year is about average. In extra good gardening years they have ten trillion. In fact, if little bugs was dollars we could pay off the national debt, but they ain't. But if little bugs was dollars there would be some sense to them. Little bugs never grow up to anything good, they always grow up into big bugs. And they all come to my garden to live.

Some bugs is specialists. They eat only muskmelons or they eat only cucumbers, hence they are called cucumber bugs, etc. But don't you believe it. I never yet saw a bug go hungry even if his specialty wasn't in your garden.

There are various ways to deal with the bug problem: some people move, some people go hungry. But most people use bug dust or sprays to control them.

MICHIGAN UNITED CONSERVATION CLUBS AFFILIATION?

The Executive Director of the Michigan United Conservation Clubs, Mr. James L. Rouman, has invited the Michigan Entomological Society to become an affiliate of MUCC. The Michigan Entomological Society would then be eligible to attend and vote at meetings, as well as join the Michigan conservation movement. The Society would receive 10 subscriptions to the monthly "Michigan Out-of-Doors" newspaper (to which your Executive Secretary already subscribes), and the President and Executive Secretary of MES would receive all publications of MUCC. The affiliation fee is \$10.00 a year.

Do we have enough to offer, or can we receive enough benefits to make affiliation worth while? Your Executive Secretary would like to have your viewpoint.

PRINTED COLLECTOR'S LABELS are available from Ward's Natural Science Establishment, Inc., P.O. Box 1712, Rochester, New York 14603. The labels are supplied in strip form, each label measuring $\frac{1}{2}$ " x $\frac{5}{8}$ ". They cost \$7.50 per thousand labels of one kind, minimum order 2,000. (The labels can be ordered with blanks for the month and date, which can be inked in by hand as needed.)

GOING COLLECTING?

Get out in the field this summer and enjoy Michigan. Take a back road, camp out, cook over an open fire, look for a pileated woodpecker, breathe some unused air, and COLLECT. There is no quicker way to stimulate and maintain an interest in insects than by collecting--and then trying to find out what you have!

This issue of the NEWSLETTER has many tips to make your summer collecting more enjoyable and profitable. So browse through it, order some maps, plan your trip, and GO. Then, as soon as you return, and while memories are fresh, why don't you write a report for publication in your NEWSLETTER?

If you can't go north to the Michigan wilds, go to the wild areas which are virtually in your back yard. Scattered throughout Michigan are recreation areas and state game areas, which one may visit with a minimum of travel time. These state-managed areas don't offer tourist amenities, but you can carry your own water and camp out. These areas are conspicuously indicated on the Michigan county maps, details of which are given below.

MICHIGAN COUNTY MAPS

Michigan county maps are available which not only show all roads, parks, recreational areas, and other features, but show the Township, Range, and Section numbers for all localities. These maps are ideal for pinpointing precise localities, and have plenty of marginal space for notes on habitats.

The county maps, each 14" x 18", have been bound in three folders: Southern Lower Peninsula (all counties north to and including Ottawa, Kent, Montcalm, Gratiot, Saginaw, Tuscola, and Huron); Northern Lower Peninsula (available after July 1); and Upper Peninsula. Each book is \$1.00, plus 4¢ sales tax. A map of a single county may be obtained free, but more than one single map cost 10¢ each. Send all orders, with payment, to the Michigan Department of Conservation, Lansing, Michigan 48926.

MICHIGAN TOPOGRAPHIC MAPS

are available for most parts of Michigan. Write the Michigan Department of Conservation, Lansing, Michigan 48926 for the free "Index to U.S. Geological Survey Topographic Quadrangles."

THE 1964 OFFICIAL MICHIGAN HIGHWAY MAP

...is available free from the Michigan State Highway Department, Lansing, Michigan 48926. This colorful map gives the latest details of the freeway system, with interchanges and rest areas clearly marked.

200 NEW STATE FOREST CAMPSITES IN NORTHERN MICHIGAN

By mid-June more than 200 new campsites will be completed in northern Michigan state forests. The new Upper Peninsula sites are located on Ross Lake, Schoolcraft Co.; the Two Hearted River, Luce County; Hog Island Point, Mackinac Co.; Bay City Lake, Mackinac Co.; the Big Cedar River, Menominee Co.; the Blind Sucker River, Luce Co.; and Mead and Merwyn Creeks, Schoolcraft County.

In the northern Lower Peninsula work is nearing completion at Reedsburg Dam, Roscommon Co.; Lake Margrethe and Shupac Lake, Crawford Co.; Tomahawk Lake, Presque Isle Co.; and at Ossineke campground on Lake Huron, Alpena Co. (MICH. OUT-OF-DOORS)

BUMBLEBEES AND MITES (by Robert W. Husband)

Many of the bumblebees you see in the field are carrying passengers you may have never seen before, unless you have examined a bee under a hand lens. As many as 90% of the spring queens, and 10-20% of the summer and fall workers, are carrying mites (Arachnida, Acarina).

What do the mites do? Some of them feed on the pollen carried by the bumblebees, while other kinds of mites are true parasites, and occur either on the surface of the bee or in the tracheae or air sacs. The nests of the bees also contain pollen-feeding and predacious mites of several families. Some nests may have thousands of mites, while an individual bumblebee may carry as many as 200 mites on her. If the mites are numerous on a queen, the effects may be serious; she may stop foraging flights and starve, or she may be weakened so much that she is unable to combat disease.

Putnam, in 1363, was one of the first Americans to record mites on bumblebees. A few other reports have been published, but, until recently, little work had been done to determine which of the many species of mites are associated with bumblebees.

Many Michigan bumblebees have been collected since 1939, when Milliron published a paper on bumblebee distribution in Michigan. These collections serve to broaden our knowledge of bumblebee distribution in the state. The exact number of bumblebees in the Michigan State University Entomology Museum is not known, but in 1962 alone I collected over 2,000 specimens.

The geographical distribution of the various bumblebees and the mites associated with them is one of my main interests. Eventually, I hope to relate the distributions of bumblebees and their mites, and investigate bumblebee distribution in central Michigan, where the ranges of northern and southern species overlap.

(Editor's Note: Bob is a graduate student in the Department of Zoology, Michigan State University. See RESEARCH REQUESTS elsewhere in this NEWSLETTER to learn how you can help him in his studies.)

"In the wake of the Mississippi River fish kills, traced to the pesticide endrin as the most probable cause, Sen. Abraham Ribicoff (Conn.) introduced a bill (S. 2792) in the Senate on April 30. Among early co-sponsors were Sen. Gaylord Nelson (Wisc.) and Claiborne Pell (R.I.). The bill was referred to the Committee on Agriculture and Forestry.

"To be known as the 'Federal Pesticide Control Act of 1964,' Sen. Ribicoff's bill would require registration of manufacturers producing any economic poison, permit inspection of their factories and plants by federal inspectors, require quality controls to insure safety, and regulate disposal of waste materials resulting from the manufacture of poisons." (from CONSERVATION NEWS, vol. 29, no. 10, May 15, 1964)

State College, Miss.--The first lure ever obtained from male insects has been extracted from the male boll weevil. Entomologists working on insect control measures hope such attractants may lead to ways to limit or avoid the use of pesticides. (newspaper clipping, from the Lansing STATE JOURNAL)

NEWS OF MEMBERS

DR. TED COHN is spending the summer in northern Mexico, where he will be collecting Orthoptera for his studies at the University of Michigan.

JEFF JACKSON, whose artwork graces our cover, was recently appointed nature center supervisor and naturalist at the Carl G. Fenner Arboretum in Lansing. Jeff formerly directed the Michigan Audubon Society's day camp program at the Baker Sanctuary, and worked at the Kalamazoo Nature Center and the Kellogg Bird Sanctuary. Jeff is now a graduate student in entomology at Michigan State University.

DR. ROLAND L. FISCHER, Curator of the Entomology Museum at Michigan State University, was recently made full professor.

On 24 April 1964 Dr. Fischer prepared a "Report on the Status of the Entomology Museum at Michigan State University: 1954-1963, a Decade of Growth." Dr. Fischer reports that about 50,000 insects are annually added to the collection through the direct collecting efforts of the museum personnel, while numerous specimens have been added through the acquisition of private collections, notably the Walter C. Stinson collection of Michigan moths (some 7,000 specimens), the Arthur Yates collection (with some 3,000 Michigan moths), the Gunnar Hejgaard collection of European Lepidoptera (8,000 specimens), and the Thomas Farr collection of some 3,000 Coleoptera and Diptera.

"The University collection has now reached the stage of a major research collection in North America," Dr. Fischer adds, "with roughly a million and a half to two million specimens representing some 35,000 species. The collection is now considered by many individuals throughout the world as a major depository for material, and yearly attracts individuals to borrow material, to inquire about types, or to work in the collection itself. Such activities will undoubtedly increase as the years progress."

This summer Dr. Fischer will be teaching at the Gull Lake Biological Station.

RONALD B. WILLSON writes: "In an attempt to complete the Michigan State University Entomology Museum's species and distribution records from the Upper Peninsula of Michigan, I will be collecting there for two months this summer. I hope to obtain records from all 15 counties, and Isle Royale National Park. The major emphasis will be on obtaining aquatic Coleoptera and other aquatic insects. This material will be used in my proposed Master's thesis on the 'Taxonomy and Distribution of the Aquatic Hydrophilidae of Michigan.' It will be interesting to learn how much of a barrier the Straits of Mackinac is to the migration and distribution of water beetles.

"General collecting of terrestrial insects by means of light trapping and sweeping will also be done. Investigations will be made concerning the recent tick migration from Wisconsin into the Upper Peninsula. Sweeping, dragging wool cloth through the brush, and examination of domestic animals and road kills will be made to help determine the relative numbers and distribution of the pest. Last spring there were reports of people removing 60 to 70 ticks a day from their dogs.

"Any donations of water beetles from Michigan would be gratefully accepted. All material will be placed in the Michigan State University Entomology Museum. Who knows, that little black speck in your net or light trap may be a new record for Michigan, or even a new species."

NEWS OF MEMBERS (CONTINUED)

M.C. NIELSEN writes: "During the season, I hope to spend more time in the sphagnum-heath bogs of the Upper Peninsula in search of new Lepidoptera records and foodplant data for recently-discovered colonies of two sub-arctic butterflies: Boloria frigga and B. eunomia dawsoni. These northern acid bogs have been infrequently collected for insects in previous years; however, recent trips have produced a surprising number of new state records of Lepidoptera. The use of ultraviolet ('black') lights has materially contributed to many of these records. It is urged that other persons interested in entomology will take time to collect insects in these bogs in the coming years. Our new expressways and 'Big Mac' have made the U.P. more accessible to downstate entomologists than ever before. Some of the larger acid bogs which should be of interest to ALL entomologists include the following:

Chippewa County	T44N, R6W,	Sections 11, 12
" "	T49N, R7W,	Sections 9,10, 15, 16
Luce County	T47N, R9W,	Sections 16, 19, 20, 21
Marquette County	T50N, R29W,	Sections 9, 10, 13, 14, 15
Schoolcraft County	T42N, R16W,	Sections 10, 11, 13, 14."

KEEP MICHIGAN BEAUTIFUL

The Michigan State Chamber of Commerce has recently initiated the "Keep Michigan Beautiful" campaign, which is affiliated with the Keep America Beautiful, Inc. movement.

We have all expressed disgust at the litter along our roadsides and in our campgrounds, BUT HAVE YOU DONE ANYTHING ABOUT IT?

ITEM: On a national scale, litter cleanup costs U.S. taxpayers an estimated \$500,000,000 a year.

ITEM: The U.S. Forest Service annually budgets over \$3,000,000 for sanitation and litter removal from national forests. Another \$1,500,000 goes for litter cleanup of the 190 parks, monuments, and recreation areas comprising the National Park System.

When you are on the roads and in the field this summer, do your share. Carry litter bags in your car, and leave your campsite cleaner than it was when you arrived. (Just once, after you have broken camp, take five minutes to pick up the cans, bottles, and paper which were thoughtlessly left there by those who came before you. You'll be amazed at the change, and with so little effort.)

There are anti-litter laws in Michigan, but, in the absence of a witnessing officer of the law, it is a tedious process for the private citizen to take an offender to court. If you are so inclined, you must a) have some of the litter as evidence; b) be able to identify the offender; c) sign a complaint at the nearest law-enforcement agency, and d) appear in court to testify. It is the job of the police to find and arrest the litterbug. Your supplying his license number will help.

If you want more information, write the Michigan State Chamber of Commerce, 215 South Washington Avenue, Lansing, Michigan 48933.

* * * * *

It already looks like the English Beatles are losing their power. I wonder if we can find the secret and use it on the Japanese Beetles?

PESTICIDE RESEARCH CENTER ESTABLISHED AT MSU

The Michigan Legislature recently appropriated \$191,000 for the establishment of a Pesticide Research Center at Michigan State University. Heading the program is Dr. Gordon Guyer, Chairman of the Department of Entomology.

- Scientists in 17 different university departments are already working on pesticide problems, which include
- a detailed study of the Dutch Elm Disease control program
 - monitoring the side effects of mass spraying programs aimed at the Japanese and cereal leaf beetles
 - tracing the movements of pesticides through aquatic communities
 - the movement of pesticides in the soil

Dr. Guyer says that the Center, which he hopes will ultimately be consolidated in a new building, is concerned with how pesticides affect and move in the ecosystem. Eventually, Dr. Guyer adds, this research will become involved with the non-chemical control (parasites, predators, diseases, cultural practices) of harmful economic pests.

NEW MEMBERS

We welcome the following new members to the Society. We hope that many more names can be added to this list in the next issue. GET BUSY.

- ROBERT CARR, Water Resources Commission, 200 Mill Street, Lansing. Aquatic insects.
- DAVID E. BIXLER, 1316 Hagadorn Road, East Lansing, Michigan 48823. Spiders, Coleoptera, moths.
- RAYMOND K.H. TSUI, 1405-K Spartan Village, Michigan State University, East Lansing, Michigan, 48823.
- ROBERT W. MATTHEWS, Department of Entomology, Michigan State University, East Lansing, Michigan 48823. Solitary wasps and bees.
- DAVID B. CROCKETT, Department of Entomology, Michigan State University, East Lansing, Michigan 48823. Mallophaga.

NOTICES

Members may advertise entomological items free of charge in this section.

FOR SALE: Insect trapping and sampling machine complete with the necessary killing liquid and attachments. This machine can be operated with ordinary household electrical current or with an automobile battery (in which case it is necessary to use an inverter plugged into the cigar lighter outlet). Price, complete and postpaid, \$32.95. For complete literature and more information, write John H. Newman, 9821 Peer Road, South Lyon, Michigan 48178.

BUTTERFLIES OF THE INDIAN REGION, by M.A. Wynter-Blyth. One new copy of this book remains in stock. Discusses all Indian butterflies except a few rare Lycaenidae and Hesperidae. Many black-and-white and color plates. \$7.00, postpaid. Julian P. Donahue, Department of Entomology, Michigan State University, East Lansing, Michigan 48823.

"How to make an insect collection," a 66-page illustrated booklet for the beginner, is available for 50c from Ward's Natural Science Establishment, Inc., P.O. Box 1712, Rochester, New York 14603 (but note that Ward's minimum order is \$2.00).

LITERATURE ON MICHIGAN INSECTS

MAYFLIES OF MICHIGAN TROUT STREAMS, by Justin W. and Fannie A. Leonard. Cranbrook Institute of Science, Bloomfield Hills, Michigan. \$7.00. A splendid little book which figures most species of Michigan mayflies, many of them in color.

"OBSERVATIONS OF HESPERIA PAWNEE IN MICHIGAN," by M.C. Nielsen. (Lepid. news 12: 37-40, 1958). It was later learned that this paper referred to H. ottoe (corrected in Journ. lepid. soc. 14: 57, 1960). Reprints available from the author, 3415 Overlea Drive, Lansing, Michigan 48917.

AN ANNOTATED LIST OF THE MOTHS OF MICHIGAN EXCLUSIVE OF TINEOIDEA (LEPIDOPTERA), by Sherman Moore. 87 pages. Available for 90¢ from the Museum of Zoology, University of Michigan, Ann Arbor, Michigan.

A REVISED ANNOTATED LIST OF THE BUTTERFLIES OF MICHIGAN, by Sherman Moore. 39 pages, one plate, color cover. Available for 75¢ from the Museum of Zoology, University of Michigan, Ann Arbor, Michigan.

"THE WALTER C. STINSON COLLECTION OF LEPIDOPTERA," by Roland L. Fischer (Journ. lepid. soc. 15: 121-123, 1961). Reports on a collection of over 7,000 specimens and nearly 1100 species of Michigan Lepidoptera donated to the Entomology Museum, Michigan State University. Reprints are available from the author, Department of Entomology, Michigan State University, East Lansing, Michigan, 48823.

"A PALEARCTIC SPRINGTAIL, LEPIDOCYRTUS PARADOXUS UZEL, FOUND IN NORTH AMERICA (COLLEMBOLA, MYDONTIDAE), by Richard J. Snider and Roland L. Fischer, (Trans. American Microsc. Soc. 83: 86-89, 1964). The first North American record was in Michigan, where this distinctive species appears to be widespread. Reprints are available from the authors, Department of Entomology, Michigan State University, East Lansing, Michigan 48823.

WHERE IS THE BURDEN OF PROOF WITH PESTICIDES?

(reprinted from the 1 May 1964 issue of Conservation News.)

Conservationists attending a U.S. Department of Agriculture hearing in Washington, D.C., on April 2 certainly agreed with part of a statement by the head of the department of entomology of a large southern university. He said, "We take the unequivocal position that if the use of any insecticide, or group of insecticides, creates a hazard to human health, its use must be discontinued." But his testimony also included this statement: "It is also our position that before any recommendation is made which would result in the complete withdrawal from use, or which would impose severe restrictions upon the use of an insecticide, it should be established without reasonable doubt that such hazards are involved." The inference was that federal, state, or local governments should bear the burden of proof that insecticides or pesticides are a hazard to human health. Conservationists have long felt that the burden of proof of safety should rest squarely on the manufacturer, just as it does with any drug, medicine, or food marketed for human consumption.

What goes 99-clump, 99-clump, 99-clump? (A centipede with a wooden leg.)

PUBLICATIONS OF THE MICHIGAN DEPARTMENT OF CONSERVATION

The Michigan Department of Conservation, Lansing, Michigan 48926, has a number of publications, many of them free, which may be of considerable interest to members. The Department has four lists of publications, which may be obtained on request: Forestry Publications, Geological Survey Publications, Game Publications, and Parks and Recreation Publications. Some of the more interesting publications are listed below. All are free unless otherwise noted.

1. Michigan Canoe Trails
2. Forest Insects: Damage, Detection, Type of Control
3. Michigan Campground Directory
4. Michigan's Shore-to-Shore Hiking-Riding Trail
5. The Kirtland's Warbler
6. Animal Tracks
7. Camping Kinks
8. Game Recipes
9. Good Eating from Woods and Fields
10. Guns, Cameras, and Game Areas
11. The Cusino Wildlife Experiment Station
12. Camping Information
13. Information Folders on State Parks and Recreation Areas (specify areas for which folders are desired)
14. How to Enjoy Michigan (recreational information)
15. Michigan State Parks and Recreation Areas
16. State Forest Campgrounds
17. State Parks in our Water Wonderland
18. Ecological Survey of Isle Royale (\$2.00 + tax)
19. Michigan's Sand Dunes

LAKE STATES FOREST EXPERIMENT STATION PUBLICATIONS

A number of publications dealing with economically important forest insects and research methods are available from the Lake States Forest Experiment Station, St. Paul Campus, University of Minnesota, St. Paul, Minnesota. The "List of Publications" should be requested; they are available for the periods 1923-1955, 1956-1960, and for 1961, 1962, and 1963. Some of the reports which may be of interest to the members are listed below. They may be obtained free by writing to the address above. Please include the order number with your request.

- | | |
|-----------------------------------------------------------------------------------------------------------|---------------------------------|
| Walkingstick (FEL-82) | Forest Tent Caterpillar (FPL-9) |
| European Pine Shoot Moth (FPL 59) | The Jack-Pine Sawfly (FPL-17) |
| The Yellow-headed Spruce Sawfly (FPL-69) | |
| White-Spotted Sawyer (FPL 74) | |
| Identification of Conifer Insects by Type of Tree Injury, Lake States (SP-100),
41 pages, illustrated. | |
| A Portable Device for Mass Collecting or Sampling Foliage-Inhabiting Arthropods
(R-278) | |
| Frass Size as an Indicator of Spruce Budworm Larval Instars (R-158) | |
| A Method for Measuring the Insect Population on trees 6 to 12 Feet Tall (TN-455) | |

BOOKS WORTH NOTING

- PHOTOGRAPHING NATURE**, by David Linton. Illustrated with numerous black and white photos and sketches. 262 pages, paper cover. The Natural History Press, 575 Madison Avenue, New York 22, New York. \$1.95. The specific problems of photographing nature are covered in detail. There is sound advice on the fundamentals of photography, and the emphasis throughout is on practical techniques rather than expensive equipment.
- CAMPGROUND ATLAS**, by James A. Bier and Henry A. Raup. 186 pages, illustrated. Alpine Geographical Press, P.O. Station A, Champaign, Illinois. The 1964-65 edition contains 59 pages of two-color maps showing locations of nearly 9,000 campgrounds in the U.S. and Canada. A new feature is climate information on each map, showing average daily high and low temperatures, amount of rainfall, and number of rainy days during the camping season in all states and provinces.
- AN INTRODUCTION TO THE STUDY OF INSECTS**, by Donald J. Borror and Dwight M. DeLong. 819 pages, illustrated. Holt, Rinehart and Winston, New York (about \$14). This standard work features completely-revised keys. Presumably, the classifications for the orders represent current taxonomic thinking, as a result of which many more families are recognized (such as 32 families of Homoptera, where the first edition had 10 families).
- THE BEETLES OF THE UNITED STATES (A MANUAL FOR IDENTIFICATION)**, by Ross H. Arnett. Catholic University Press, Washington, D.C. \$29.95.
- ADVANCES IN INSECT PHYSIOLOGY**, by J.W.L. Beament. Academic Press. \$14.80.
- THE PHYSIOLOGY OF MOSQUITOES**, by A.N. Clements. The Macmillan Co., New York, New York. \$12.50.
- A SYNONYMIC LIST OF THE NEARCTIC RHOPALOCERA**, by Cyril F. dos Passos. The Lepidopterists' Society, 314 Atkins Avenue, Lancaster, Pennsylvania. \$4.50 to members of The Lepidopterists' Society, \$6.00 to others. Postpaid.
- HOW TO KNOW THE BUTTERFLIES**, by Paul R. and Anne H. Ehrlich. Wm. C. Brown Co., 135 South Locust Street, Dubuque, Iowa. \$2.75. A spiral-bound (a hard-cover edition is available) illustrated key for all butterflies found in North America north of Mexico, with notes on their distribution, habits, and larval food, and suggestions for collecting and studying them.
- ILLUSTRATED KEYS TO THE FAMILIES OF NORTH AMERICAN INSECTS**, by Harrison M. Tietz. Burgess. 206 pages, illustrated. \$5.75.
- WASP FARM**, by Howard E. Evans. Doubleday & Co. \$3.95. A lively popular account of the ways of wasps, by a competent student of them.
- INTRODUCTION TO COMPARATIVE ENTOMOLOGY**, by Richard M. Fox. Reinhold, New York. \$9.50.

DIRECTORY OF MICHIGAN INSECT SPECIALISTS

It would be of great value to the membership if the Executive Secretary could refer interested persons to specialists of various groups of Michigan insects. The questionnaire included with this NEWSLETTER has a place where specialists can list those groups of insects they would be willing to identify for members, under the usual terms of this sort of assistance (i.e., 1) first obtain permission to send the specimens; 2) the specialist has the privilege of retaining any specimens he desires, with the approval of the sender, as payment for the identification service; 3) the sender pays transportation charges both ways; 4) specimens should be mounted (if customary) and ready for study; 5) all specimens must have accurate date, locality, and collector information. Further notes as to habitat, weather conditions, etc. are often of value).

Each specialist volunteering for this service can write notes on collecting, preservation, and type of additional information needed, for inclusion in the NEWSLETTER as new specialists are announced in this column. The first volunteers are listed below. We hope that the next issue of the NEWSLETTER will contain the names of many more specialists willing to help identify Michigan insects.

BUTTERFLIES OF MICHIGAN: M.C. Nielsen, 3415 Overlea Drive, Lansing, Michigan 48917; telephone IVanhoe 4-3471. Correspondents should contact Mo before sending specimens. Mo keeps a card file of all county and state records of Michigan butterflies, so he is particularly anxious to learn of records made since the publication of Moore's revised 1960 checklist (see page 10 for ordering information). Eventually, a new checklist will be published to incorporate all the new records.

MOTHS OF MICHIGAN: John H. Newman, 9821 Peer Road, South Lyon, Michigan 48178. Although Jack is busy, he will attempt to identify mounted specimens of Michigan moths, except Microlepidoptera. Please write before sending material. Jack maintains a card file of state and county records of Michigan moths, so any records that are not contained in Moore's 1955 Michigan moth checklist will be especially desirable (see page 10 for ordering information).

COLLEMBOLA (SPRINGTAILS) OF MICHIGAN: Richard J. Snider, Department of Entomology, Michigan State University, East Lansing, Michigan 48823. All specimens should be collected and preserved in 95% ethyl alcohol, with date, locality, and habitat information (e.g., under bark, on water, in deciduous leaf litter, etc.).

SOURCES OF BIOLOGICAL SUPPLIES

Four of the more prominent biological supply houses are listed below. Their inclusion here should not necessarily be construed as an endorsement.

CAROLINA BIOLOGICAL SUPPLY CO., Burlington, North Carolina

CENTRAL SCIENTIFIC, 1700 Irving Park Road, Chicago 13, Illinois (apparatus)

GENERAL BIOLOGICAL SUPPLY HOUSE, INC., 8200 South Hoyne Avenue, Chicago 20, Ill.

WARD'S NATURAL SCIENCE ESTABLISHMENT, INC., P.O. Box 1712, Rochester, New York 14603. Many useful field and laboratory items for the entomologist.

DEATHS FROM VENOMOUS ANIMALS IN THE UNITED STATES, 1950-1959

	<u>Number</u>	<u>Percent</u>
HYMENOPTEROUS INSECTS	229	49.8
Bees	124	
Wasps	69	
Yellow Jackets	22	
Hornets	10	
Ants	4	
POISONOUS SNAKES	138	30.0
Rattlesnakes	94	
Cottommouth Moccasins	8	
Coral Snakes	2	
Exotic & Unidentified snakes	34	
SPIDERS	65	14.1
SCORPIONS	8	1.7
COELENTERATA (jellyfish, Portuguese Man-of-War)	1	0.2
STINGAREE (sting ray)	1	0.2
ANIMAL OR INSECT, UNKNOWN	18	3.9
TOTALS	460	99.9

It is interesting to note that the Hymenoptera are responsible for as many human deaths as all other poisonous animals combined. (The data above are taken from H.M. Parrish, Deaths from bites and stings of venomous animals and insects in the United States. Arch. Int. Med. 104: 198-207, 1959.)

What do you do for an insect sting? Because their stinger is barbed, honey bees leave the stinger and poison sac on the victim (we can take comfort in the fact that the bee dies). So honey bee stings should be scraped off the skin, because pinching it with tweezers is likely to squeeze more poison from the poison sac into the victim. Cold water or ice will slow down the circulation and keep the poison from spreading, while a thick past of baking soda, calamine lotion, witch hazel, or diluted ammonia may alleviate the pain. John H. Newman reports a remedy that every entomologist carries with him in the field: get some ear wax on the end of your finger and rub it on the stung area. This treatment (as yet untried by the writer) reportedly eliminates the pain. Perhaps the members who are unfortunate enough to be stung by bees or wasps this summer can tell us whether this method is effective for them.

AN INSECT LIGHT TRAP TO SEPARATE MOTHS FROM BEETLES

Mr. H.A. Denmark, writing in the Journal of the Lepidopterists' Society vol. 18, no. 1, evaluates a light trap designed to separate moths from beetles on the principle that, when striking a solid object, beetles tend to fold their wings and drop, while moths tend to climb upward. Mr. Denmark finds that the trap is about 50% effective in separating some species of moths from beetles. Reprints of the article, which gives design details, may be obtained by writing the author at the Entomology Section, Florida Department of Agriculture, Gainesville, Florida. The article is entitled "Evaluation of an insect light trap designed to separate beetles and moths."

RESEARCH REQUESTS

MICHIGAN WATER BEETLES are currently being studied by Ronald B. Willson, c/o the Department of Entomology, Michigan State University, East Lansing, Michigan 48823. Although he may not be able to identify all specimens, Ron will be glad to accept all water beetles with accurate date-locality information. The specimens can be sent dry or in alcohol. All donated specimens will be deposited in the Entomology Museum at MSU. Ron will be doing his proposed Master's thesis on the aquatic Hydrophilidae of Michigan (for a report of his activities this summer, see p. 7).

MITES FROM BUMBLEBEES are being studied by Robert W. Husband (see his article on page 6). Members are requested to send their infested bumblebees to Bob, who will preserve the mites and identify the bee for you. To see the mites, it may be necessary to examine the bumblebees with a handlens or low power microscope. Of course, all bumblebees sent should be accompanied with complete date-locality information. Specimens will be returned, if desired. Bob will pay postage both ways. Robert W. Husband, Department of Zoology, Michigan State University, East Lansing, Michigan 48823.

INSECTS OF BIRD NESTS. Julian P. Donahue is looking for a certain species of wingless fly that occurs particularly in the nests of birds that nest in rock or tree cavities. So far this fly has only been recorded in New York and Florida, in the nests of flickers and screech owls, respectively--although it occurs all across Europe at least to the Himalayas. The fly looks like a louse, and may be either crawling on the young birds or on the bottom of the nest hole. Look for the fly in nests of woodpeckers, screech owls, titmice, chickadees, kingfishers, kestrels (sparrow hawks), bank swallows, etc. Any and all insects found in the nests can be put in a vial of 95% ethyl alcohol, along with date-locality data, identification of the bird, and other notes. Send them to Donahue at the Department of Entomology, Michigan State University, East Lansing, Michigan 48823.

PREDATORS AND PARASITES OF MICHIGAN BUTTERFLIES

Mo Nielsen, who is maintaining a file of all predators and parasites of Michigan butterflies, would be very interested in adding your observations to his list, which will eventually be published. The most common predators would be dragonflies, robber flies, praying mantids, spiders, etc., while various kinds of wasps and flies would be parasites. If you have any question about the specific identity of either predator or prey, either or both specimens may be sent to Mo for identification. Send your observations and specimens to M.C. Nielsen, 3415 Overlea Drive, Lansing, Michigan 48917.

HOLLYWOOD (AP)--It's harder to cast a butterfly in a movie than Elizabeth Taylor.

Columbia Pictures needs a live butterfly for the movie "The Collector."

The prop department almost went nuts trying to find one. One prop man sent a man by car some 440 miles to a Northern California butterfly farm and then south to another one in Santa Barbara. He came back butterflyless.

Next a phone call went to James C. Brooks in Macon, Ga., a noted collector. He referred him to another collector.

Edmund Salle, Fort Deposit, Ala., told the studio representative that he had lots of live butterflies but they would disintegrate if shipped airmail for the movie schedule. Butterflies live only two weeks. /But we know better than that, don't we?--Ed./

Salle referred prop man Bernie Levine to a butterfly farm at El Cajon, in nearby San Diego County. (from the Lansing State Journal, 14 June 1964).

The Michigan Entomological Society was formed in 1955 to "promote the science of entomology in all of its branches and by all feasible means, and to advance cooperation and good fellowship among persons interested in entomology."

The Society has grown from the 22 members who attended the first meeting on May 7, 1955, to nearly 100 members today. Annual meetings are held in conjunction with the Michigan Academy of Science, Arts, and Letters, of which MES is an affiliate. The three branch chapters, in Ann Arbor, Detroit, and East Lansing, hold regular meetings with interesting programs.

We need your support if the Michigan Entomological Society is to grow and usefully serve its purpose. You can help by sending in your membership dues promptly, sending in notes and news for the NEWSLETTER and, perhaps most important of all, enlisting new members, so that they may share our enthusiasm and mutual interest in insects.

Even if you are now a member, please complete and mail the questionnaire below. Members in arrears will be dropped from the mailing list.

MICHIGAN ENTOMOLOGICAL SOCIETY
Application for membership
AND
Membership Questionnaire

NAME (please print) _____
ADDRESS _____
CITY & STATE _____ ZIP CODE _____

- I am presently a member
- I wish to join. My 1964 dues are enclosed
 - Student Member (includes college students)--\$1.00 per year
 - Active Member--\$2.00 per year
 - Sustaining Member--\$25.00 or more per year

Our records show that you have _____ have not _____ paid your 1964 dues.

GENERAL INTEREST AREA(S)

- | | |
|-------------------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> Aquatic Insects | <input type="checkbox"/> Collecting and/or Taxonomy |
| <input type="checkbox"/> 4-H Member | <input type="checkbox"/> Insect Photography |
| <input type="checkbox"/> Extension Worker | <input type="checkbox"/> Physiology |
| <input type="checkbox"/> Life History, Biology, & Behavior | <input type="checkbox"/> Apiculture |
| <input type="checkbox"/> Pest Control (flit-gun entomology) | |

OTHER (please specify) _____

SPECIFIC INTERESTS (order, family, genera) _____

If you are an authority for certain insect taxa, would you be willing to identify Michigan specimens for members(see page 13 for details)? YES _____ NO _____

Make checks or money orders payable to the Michigan Entomological Society, and mail to the Executive Secretary, Julian P. Donahue, Department of Entomology, Michigan State University, East Lansing, Michigan 48823. DO IT NOW, so we can get our membership list out soon!

THIS NEWSLETTER IS YOURS

Publication of the NEWSLETTER of the Michigan Entomological Society has, in the past, been spastic at best. In the next few months the editor at least hopes to regularize that spasticity.

The more you contribute, the better this NEWSLETTER will be. Items for the following categories are especially solicited:

1. Recent literature on Michigan insects. This section will hopefully include an annotated bibliography of papers concerning all aspects of Michigan insects (excluding chemical control).
2. Tidbits. You are invited to send magazine or newspaper clippings, or items from your own research or observations, about the strange or unusual aspects of insect life, or insect anecdotes (browse through this issue for some examples).
3. Field reports. Here we hope to put notes on unusual collecting localities (such as the bogs discussed on page 8), and end-of-season reports of rarities, new state records, and other interesting notes.
4. NOTICES will be accepted from members and printed in the NEWSLETTER free of charge. Ads should pertain to entomology. See page 9 for examples.
5. Research Requests. Any researcher desiring material or data pertaining to Michigan insects may submit a request for inclusion in the NEWSLETTER (see p. 15).
6. Book Reviews. Any member is invited to submit reviews of entomological books or papers, for publication in the NEWSLETTER. The Editor will appreciate it if members bring to his notice the titles of new entomological books.

The NEWSLETTER will be published as often as sufficient copy accumulates. So the best time to write is NOW! Glancing through this issue should give you plenty of ideas for articles, comments, and criticisms. Ready, aim, FIRE!

MICHIGAN ENTOMOLOGICAL SOCIETY
Julian P. Donahue, Exec. Secretary
Department of Entomology
Michigan State University
East Lansing, Michigan 48823

RETURN POSTAGE GUARANTEED