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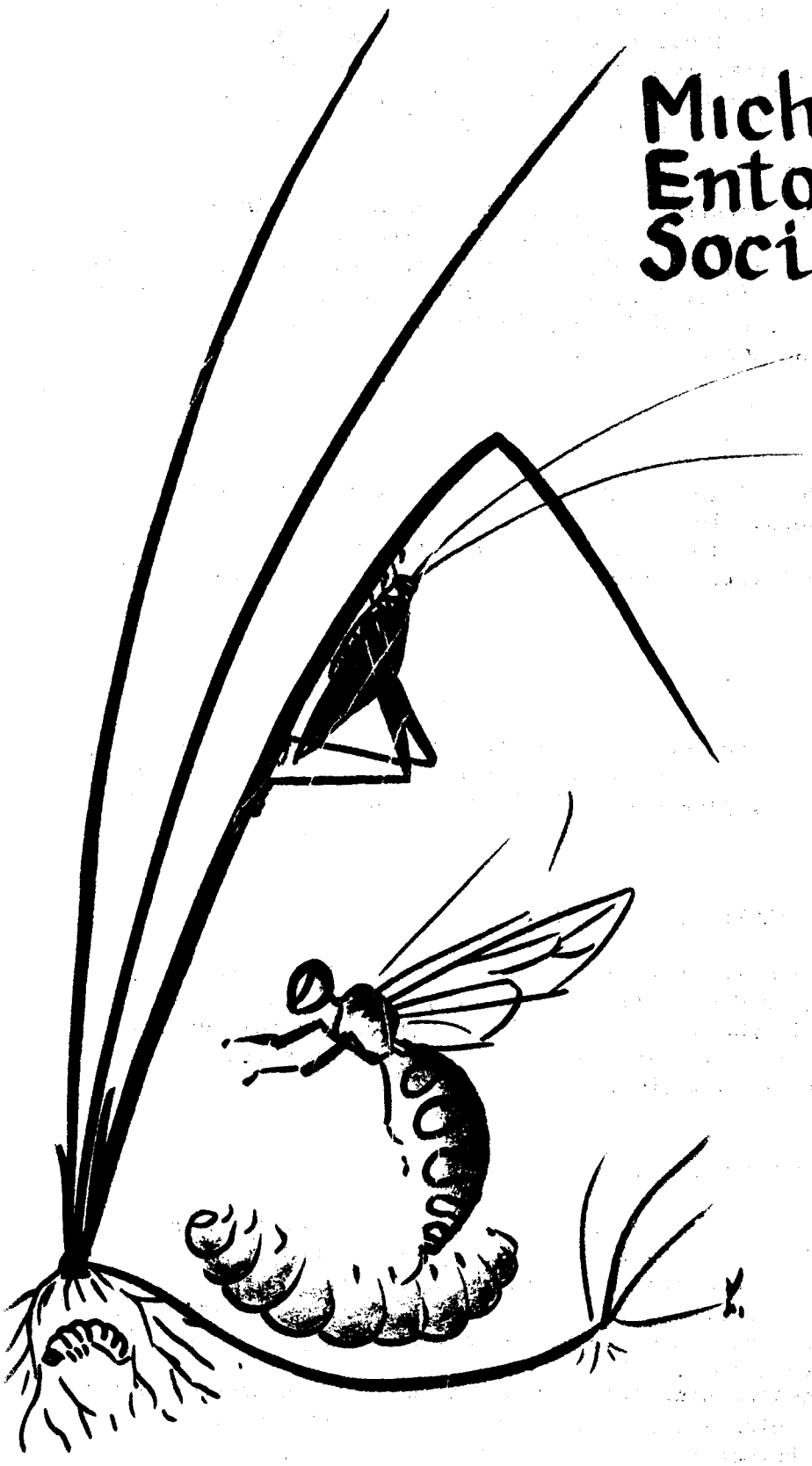
Newsletter

Michigan Entomological Society



Volume 9, No. 2
East Lansing, Michigan
Mailed 18 August 1964

JJJ

FROM THE EDITOR'S NICHE

WE NEED CONTRIBUTORS. . . Some of you probably disagree violently with my choice of material for inclusion in the NEWSLETTER, which is to be expected--I can't please everybody. But if you think that I am sadly neglecting some phase of entomology (such as the GOOD done by pesticides), then the best way to rectify the situation is to send me some material of your own choice (Cyanide will not be accepted). As my correspondents have learned, I seldom, if ever, refuse to put anything in the NEWSLETTER. Articles contributed on request (such as those by Kraft, Newman, and Voss in this issue) have been sent promptly and most willingly, for which the Editor is most grateful. If there is some phase of entomology you would like to hear more about, let me know, and I'll try to find out about it, or have somebody else write about it.

Oh, by the way: I ran out of whatsits in the first issue of the NEWSLETTER. If any of you can stoop so low as to send me some more, to poison the minds of other members, I'll be glad to put them in the NEWSLETTER. Besides, they make good space-fillers at the bottom of the page. (Whatsits, for the uninitiated, are things such as: What is green, warty, weighs 20 tons, and swims in the ocean? Bet you thought I was going to give you the answer, didn't you?)

AFTER DROPPING 22 . . .

members for non-payment of dues (two or more years in arrears), the Michigan Entomological Society has 68 members. This is surely only a small portion of Michiganders with an interest in entomology. If you have already returned your questionnaire-application, please invite a friend to join. More applications will be sent on request.

AS WE GO TO PRESS . . .

thirty-three members have returned the questionnaire on page 16 of the last NEWSLETTER--did YOU?? If not, be sure to complete the one in this issue. If you have already sent your questionnaire, please give it to a colleague. We need YOUR help to build our Society.

CALLING ALL SUSTAINING MEMBERS (POTENTIAL, THAT IS) . . .

All three of our sustaining members failed to respond to the letter telling them they were in arrears with their dues ($25 or more per year), so we are now sustaining memberless. Individuals who wish to contribute more financial support to the Society are invited to become Sustaining Members. See the Constitution in the back of this issue for more information.

THE LAST NEWSLETTER WAS IN SHORT SUPPLY . . .

because so many extra copies were sent out, and because the counter on the mimeograph machine was not functioning properly. Extra copies of the present issue are available for members and potential members, as are extra copies of the Constitution and By-Laws of the Society. If you have no use for the last issue of your NEWSLETTER, Please send it to the Executive Secretary, so that he may send it to new members who did not receive a copy.

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This NEWSLETTER is published periodically, with luck, by the Executive Secretary, Julian P. Donahue, Department of Entomology, Michigan State University, East Lansing, Michigan 48823. All correspondence pertaining to the Society and the NEWSLETTER should be addressed to him.

ENTOMOLOGISTS AND PLANTS

by Edward G. Voss

Since an interest in recording the flowers (and other attractants) which different butterfly species were visiting was one of the major factors originally diverting me toward botany, it is perhaps appropriate to comment upon some matters of mutual interest.

I. HABITAT. It is superfluous to point out the close relationship between most kinds of insects and their environment. Comparatively few species are found "everywhere." In fact, some species are found in very restricted habitats. The reason may be a simple straightforward correlation with, for example, a food plant of restricted or wide distribution; or it may be more complex, involving conditions in a whole plant community. The entomologist who is alert to habitat differences, who learns to recognize the food plants and general ecology of the insects he is seeking, will find his field work much more productive. And the entomologist who regularly finds certain insects in restricted areas but does not know why, may be able to contribute to science by determining what relationship (often with one or more plants) does exist.

II. PLANT IDENTIFICATION. Often the entomologist will want to preserve a plant specimen for identification by a botanist or simply as a voucher for pollination studies, food plant records, or other reason. The following brief notes may help with vascular plants (flowering plants and ferns), at least:

1. MAKE A COMPLETE SPECIMEN. Just as a butterfly minus its wings, or a beetle's isolated legs, might be identifiable, so an aster without flowers and roots, or an isolated leaf, might be identifiable. But the botanist will always appreciate, and often require, an adequate specimen for identification. Flowers, fruit, leaves, and basal parts (roots, rhizomes) are all desirable.

2. KEEP SIZE IN MIND. Standard herbarium mounting paper is $11\frac{1}{2}$ by $16\frac{1}{2}$ inches. Specimens should never exceed these dimensions if they are ever to be included in a herbarium. Bend long stems of herbaceous plants into a V, N, or W shape as needed, or cut and make into two or more sheets. (Only a suitable-sized branch of a tree or shrub need be collected.) If excess leaves are removed, leave a stub to show where they were. Never remove all basal, or middle, or upper leaves; whether the leaves vary from the base of the plant upward, and if so, how, may be essential information. Thick roots, rhizomes, and fruits may be split to avoid bulk.

3. DRY CAREFULLY. A specimen should be as flat as possible, and not look as if it had been pressed in a waffle iron. Keep specimen in a folded newspaper or absorbent magazine (not slick paper), under even pressure from a weight or tied in a plant press with straps. A layer of corrugated cardboard next to the paper will aid circulation of air and hasten drying. Mild artificial heat may be applied. Two days to 2 weeks may be needed, depending on the nature of the specimen and drying conditions. The plant should remain "in press" until no part remains clammy, moist, limp, or soft to the touch. After a few hours in press, a specimen can often be arranged more neatly before further drying [turn some leaves so both upper and lower surfaces are shown; avoid having leaves on top of flowers, fruits, and stems (they should be beneath--or beside); trim out excess leaves, etc.].

4. LABEL FULLY. Provide a neat, preferably typewritten, label with:
   (a) Exact Locality. In addition to county and straightline distance from nearest town, the section or quarter-section can usually be determined from a county map.

(b) any information which will not be evident after the specimen is dry, e.g., flower color; distinctive odor of flowers or foliage, if any; colored juice?; sticky or waxy-white surface?; size of entire tree or shrub and kind of old bark.

(c) Collector's name, reference number, if any, and date.

Within reasonable limits, I will be glad to identify for Michigan entomologists vascular plants collected in Michigan and for which identifications are needed for their work--if the specimens are neatly prepared and labeled as above, so that determination is possible and so that, if the record is a botanically desirable one, the specimen retained will be a credit to both the University of Michigan Herbarium and the collector.

E.G.V., Herbarium, North University Building, University of Michigan, Ann Arbor 48104.

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THE MICHIGAN BOTANIST

The Michigan Botanical Club (an organization of both amateurs and professionals, just like our Society) publishes a journal which appears four times a year (January, March, May, and October--only two large issues the first year). Volume 3 will conclude with the October 1964 issue, which will include a complete three-year index.

A section of new literature not only refers to strictly botanical literature but also lists new topographic and other maps, and other publications of aid to all kinds of naturalists in the state. The early numbers included briefly-annotated bibliographies on identification of Michigan plants (useful general guides and floras), county lists and floras, etc. Feature articles range throughout the plant kingdom and the field of botany in the Great Lakes region, and often include distribution maps (maps of the distribution of 20 species in Michigan or the Great Lakes region have appeared thus far).

Entomologists who wish to subscribe should send their orders to the business and circulation manager, Mrs. Laura T. Roberts, 2120 Washtenaw Road, Ann Arbor, Michigan 48104. Subscription rate is $2.00 per year, and all back volumes are still available. ($8.00 will bring all 1962-1965 issues, including the three-year index in the October 1964 number.)

Articles on relationships between insects and plants, if they contain some botanical information (for example, on pollination), will be considered for publication by the editors. A sheet of "Information for Authors" may be obtained from the editor in chief, Edward G. Voss, Herbarium, North University Building, University of Michigan, Ann Arbor, Michigan 48104.

BUTTERFLIES FEATURED ON NEW CONSERVATION STAMPS

Five of America's most colorful and common butterflies, painted by Roger Tory Peterson, are highlighted on a new set of 50 stamps issued by the National Wildlife Federation. The "living jewels of the outdoors" pictured are the sulphur, monarch, zebra and giant swallowtails, and the white admiral. Stamp sheets are available for a $1.00 donation, from the National Wildlife Federation, 1412 Sixteenth Street, N.W., Washington, D.C. 20036. [from the NEWSLETTER of the Michigan Audubon Society]

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HELP YOUR SOCIETY GROW--ENLIST A NEW MEMBER TODAY.

THE MICHIGAN BLACK LIGHT PEST SAMPLING PROGRAM

by John H. Newman

Many of you are aware, I'm sure, of the many advances science has produced to aid agriculture. Indeed, agricultural production in many categories has doubled in the past five or ten years--much of it due to scientifically improved techniques. Today we have milking parlors, caged laying houses, streamlined beef production, etc., all of which serve to illustrate the result of scientific investigation and application. All of these mean less cost to the producer, with the result that in order to remain competitive in today's market, the agricultural producer must adopt scientific techniques.

A constant problem in satisfactory pest control has been the accurate timing of pest control measures. In many growing areas the emergence date of a particular resident pest has been as much as ten days different from the emergence of the same pest only 120 miles away. Climatic conditions greatly influence the time of emergence, so it is essential to know exactly when a certain pest is flying in a particular year and particular locality.

Normally, the male of a lepidopterous pest species emerges three to five days before the female. Full advantage should be taken of this vital bit of knowledge, for it becomes clearly evident that we have from three to five days to prepare for the actual culprit--the egg-laying female.

Since the next requirement is to sample the pest species as soon as possible after it emerges, here is where we have a scientific assist with the better qualities of modern light inducement, which is near ultra-violet. With the light attraction peaking close to 3650 Angstrom units (an Angstrom, which is the unit used to describe wavelengths of light, is one ten-thousandth of a micron, or one ten-millionth of a millimeter) the night-flying insects are irresistably attracted to the trapping machine, where they are killed and later collected. The insect trapping machine can thus pinpoint the actual time when many pest species emerge in a localized area. This enables the agricultural producer to time the pesticide spray program in his own area for specific pests on specific drops. In other words, this can well be called an individualized custom spray timing program. All one needs to know in order to properly utilize this new scientific advance is what the adult pest species looks like. This problem can be easily solved with a new device developed recently in cooperation with Michigan State University--a sturdy card to which are laminated the wings of pest species, so that the operator can tell at a glance whether any of the pest species are showing up in his light trap.

Last year the U.S. Department of Agriculture instituted a pest-sampling program throughout many parts of Michigan. Through this program we are able to learn of the spread or invasion of pest species, as well as the time of emergence for well-established pests. The belief that natural rivers and valleys constitute flyways for pests on the move enables the entomologist to station his black light trapping machine at strategic points for sampling. With proper calculations, pest-sampling stations can be set up so that invading pest species can be sampled on their journey northward in Michigan. Again, the sampling of the males can forecast several days in advance the arrival of the females.

When the pest-sampling program is in full operation, with the optimum number of blacklight stations, very reliable assistance can be provided for most agricultural producers.

J.H.N., 9821 Peer Road, South Lyon, Michigan 48178.

THE FORD FORESTRY CENTER

by Kenneth J. Kraft

The Ford Forestry Center, a part of the Michigan College of Mining and Technology, was created in 1954 when the Ford Motor Company Fund donated the sawmill community of Alberta to Tech. Alberta, built in 1938 as a model self-sustaining sawmill community in the heart of the extensive Ford forests, is located in Baraga County about 12 miles south of L'Anse. The Center now consists of the sawmill, twelve houses, several dormitories, a large laboratory building, weather station, greenhouse, shop buildings, and over 3600 acres of forest land.

The Center has a fair-sized herbarium and a modest insect collection. Tech's forestry summer camp and various other training programs utilize the center. I have come to Alberta from Tech's Department of Biology for the past three summers, to investigate the ecology of Laspeyresia toreuta (Lepidoptera: Olethreutidae), a cone-insect found in jack pine and several other pines. In addition, I have begun an insect collection this summer. Two Michigan State University students, Ronald B. Willson (collecting insects) and Wendel Johnson (collecting herptiles) made the Center their headquarters for a time while they collected in the area.

Visitors are welcomed by the Center, which is in an interesting and scenic part of the state. It has the highest elevation (Arvon Hills) in the state. The area has been collected very little, probably because most people skipped over it on their way from the Huron Mountains to the Keweenaw Peninsula. Entomologists are especially invited to examine our insect collection.

K.J.K., Dept. of Biology, Michigan College of Mining & Technology, Houghton 49931.

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NOTICES

[Members may use this section of the NEWSLETTER without charge, to advertise products or services, or to request entomological merchandise.]

WANTED: ONE SMOOTH BORE .22 RIFLE. Robert H. Winkler, 165 Smith Street, Mount Clemens, Michigan 48043.

PLASTIC MOUNTS OF CEREAL LEAF BEETLES NOW AVAILABLE from John H. Newman. The mounts, which consist of a beetle embedded in a plastic circle fitted with a key chain, are ideal for extension workers, elevator operators, and others to whom identification of this beetle is vital. Information regarding making or purchasing the mounts, which are made by 4-H students in entomology, may be obtained from Mr. Newman, Dept. of Entomology, Michigan State University, East Lansing, Michigan 48823.

LAMINATED PLASTIC MOUNTS OF LEPIDOPTERA AVAILABLE SOON. A series of many categories of lepidopterous material, including pest species, butterflies, etc., will be available soon in special laminated plastic mounts. These mounts, which will be supplied for particular purposes, such as pest identification, are prepared from the wings of actual specimens laminated to sturdy card stock. Many 4-H students in entomology will be making these mounts to aid insect identification and study. This project is headed by John H. Newman, from whom more information may be obtained. Department of Entomology, Michigan State University, East Lansing, Michigan 48823.

KEEP MICHIGAN GREEN--DO YOUR SHARE TO BACK THE ATTACK ON LITTER

NEWS OF MEMBERS

RON WILLSON, weary and bone-tired, has just staggered back from Michigan's Upper Peninsula, where he spent the summer collecting insects--especially aquatic beetles. Ever trying to please his lepidopterist friends back home, he condescended to collect a few leps, with the result that he got a new state record butterfly (Euchloe ausonides), and caught two specimens of Macoun's Arctic (Oeneis macounii), a butterfly which has not been recorded from Michigan since the first specimens were taken on Isle Royale a quarter of a century ago. Ron got both of these butterflies on Isle Royale, where the Chief Park Naturalist, William W. Dunmire, gave him much assistance. When the complete collection is mounted (groan), there will surely be many new county records for all types of insects. All of the insects collected will be deposited at the Entomology Museum of Michigan State University.

ROBERT H. WINKLER writes: I recently completed my first entomological study, concerned with a survey of the Odonata (dragonflies) of Macomb County, started in the fall of 1961 and continued during the summers of 1962 and 1963. All specimens collected have been worked up [taxonomic jargon for identified, Ed.], and several new county records are forthcoming. A paper dealing with this research is being readied for the annual meeting of the Society next March.

M.C. NIELSEN sends this preliminary report of summer collecting activities:

Up to now, the season has been full of surprises in collecting Michigan Lepidoptera. Ultraviolet light (UV) continues to produce new and unique moth records such as Xylophanes tersa, Sphinx luscitiosa, Eutolype electilis, Polia pulverulenta, Dasylophia thyatiroides, Gluphisia lintneri, G. avimacula form slossoniae, and Adelocephala bisecta. Oarisma powesheik was taken again on July 4th in the Grand Rapids area--amid expanding suburbs. A new colony of Euptychia mitchellii was discovered on July 5th in the Yankee Springs Area in Barry County. Also, two new acid bogs in Chippewa County yielded Boloria eunomia dawsoni--thus giving us a better idea of its distribution in the U.P.

Perhaps the biggest surprise came with the discovery of a new state record: Heteropacha rileyana Harvey. This species was taken in a most unusual manner. Several Catocala-like larvae were beaten from young honey locust trees in the Morenci area in Lenawee County on June 13th. I had high hopes that these larvae represented Catocala minuta, which is specific to honey locust. However, in July the first moth emerged from its cocoon and, to my disappointment and amazement, it was NOT a Catocala, but a Lasiocampidae--a different family completely!!! It would appear that H. rileyana has been previously overlooked, inasmuch as it failed to show up at UV and mercury lights during the past two weeks.

Recent collecting for Catocala proved rewarding, especially with the capture of C. epione, illecta, coccinata, and subnata. These beautiful and interesting moths start emerging during the latter part of June and fly through September. Various methods of collecting are employed in taking these elusive moths--no one method will GUARANTEE success! UV has recently turned up species heretofore scarce in Michigan, as has the mercury light. Baiting is still one of the better methods to take a large number of species. I find a mixture of beer and black-strap molasses the cheapest and best. However, not all "cats" are collected after dark, as many species can be easily "bottled" while resting on the trunk of large trees during the day. Shagbark hickory and swamp white oak are two favorite trees for many species. Wild bergamot, milkweed and other suitable flowers are equally productive in attracting Catocala after dark. John Newman has indicated that approximately 46 species of Catocala have been recorded from Michigan, and there is a good prospect that another dozen species can be taken in this state--SO DON'T GIVE UP!!!

NEWS OF MEMBERS (continued)

T.H. HUBBELL is spending two months this summer collecting Gryllacrididae (camel crickets) in Montana, Idaho, Washington, Oregon, and California. His son STEPHEN was married last June, and is spending the summer in San Jose, Costa Rica, where he is assisting in planning field work for a course in tropical biology.

RICHARD ALEXANDER, DAN OTTE, and BUZ HULL went to the Florida Gulf Coast and Texas, where they recorded cricket and katydid songs earlier this year.

TED COHN has accepted a new position at San Diego State College, California, in the Zoology Department. This summer Ted and his wife Jean will work in Mexico. While Ted collects orthops, Jean will study the flight mechanism of hummingbirds, to compare the morphology and functional anatomy of the hummers to that of the swifts, a group to which the hummingbirds are now considered to be related. Ted's revision of the genus Neobarrettia (Mexican and southwestern U.S. katydids) will be published by the Museum of Zoology this fall, with a colored frontispiece.

IRVING J. CANTRALL has completed the identification and preliminary study of all new world Pseudophyllinae (katydids) in the collections of the University of Michigan [and they've got gobs of them]. The task now remains to describe the new species.

HERBERT WEINERT was recently employed as the new preparator for the Insect Division at the University of Michigan. Mr. Weinert formerly was a preparator in geology museums, and is an expert photographer.

VISITORS TO THE UNIVERSITY OF MICHIGAN: Dr. Carlos S. Carbonell, of the Universidad de la Republica, Montevideo, Uruguay, visited Ann Arbor and East Lansing in late June. Dr. Carbonell is a specialist on the taxonomy and morphology of the Acrididae (Orthoptera), and has been studying the collections of South American Acrididae at the University of Michigan, the U.S. National Museum, and the museum of the Academy of Natural Sciences in Philadelphia.

JULIAN P. DONAHUE has been busy this summer. So busy, in fact, that not only did he get a lot of his Indian butterflies identified, but he got engaged. Julian will be married in September, and will continue work on the butterflies of India during the coming school year. He is working on a Master's thesis on the butterflies of Delhi, India. Recently, he received a grant from The Society of the Sigma Xi and RESA Research Fund, to help support his studies.

JOHN H. NEWMAN recently lost his amateur standing when he became a full-time employee of the Department of Entomology at Michigan State University. John divides his time between the pest sampling program (see his article on page 4) and the entomology museum, where he assists with the curating (or is it curation?) of those motley moths. He reports that many new state and county records of moths have turned up in the samples he receives for weekly analysis from the black light operators.

DAVID COOK returned from India last September, where he worked in Poona on a Fullbright research scholarship for a year, on water mites. He is continuing his research on water mites this summer, and is specializing on Michigan forms under a grant sponsored by the National Science Foundation.

STANLEY GANGWERE is continuing his NSF-sponsored work on food selection of Acrididae in southeastern Michigan. The last week of June he left for the 12th International Congress of Entomology in London, which was held July 8-16. There he presented a paper entitled "The phylogenetic development of food selection in Orthoptera." His attendance at the meeting was supported by an NSF travel award. After the congress he visited museums in Paris, Madrid, and Lisbon.

[continued on next page]

STANLEY GANGWERE (continued)

Dr. Gangwere's recent papers include: "Methods of marking insects, with a special reference to Orthoptera," (with W. Chavin and F.C. Evans), Ann. Ent. Soc. America, in press; "The feculae (feces) of some Orthoptera of Tunisia," with E. Morales Agacino, Ent. News, in press; and "The behavior of the oedipodine grasshopper Arphia sulphurea (Fabricius), with a special reference to its food-habits," submitted to the American Midland Naturalist.

CECELIA CHANG will get her Master's degree this summer (hopefully), under Dr. Gangwere at Wayne State University.

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NEW MEMBERS OF THE MICHIGAN ENTOMOLOGICAL SOCIETY

ALFRED C. DOWDY, Department of Entomology, Michigan State University, East Lansing, Michigan 48823. Dr. Dowdy works with extension and 4-H.

ROLAND L. FISCHER, Department of Entomology, Michigan State University, East Lansing Michigan 48823. Dr. Fischer specializes in the taxonomy of the Hymenoptera, especially bees (those nasty creatures that sting!)

DAVID M. FRIMODIG, 718 Lakewood Lane, Marquette, Michigan. Mr. Frimodig, a regional naturalist for the Michigan Department of Conservation, is interested in life history, biology, behavior, and control of insects.

ISLE ROYALE NATURAL HISTORY ASSOCIATION, Isle Royale National Park, Houghton, Mich. 49931. The Association is interested in the insect fauna of Isle Royale, such as aquatic insects, life history, biology, behavior, collecting, taxonomy, and insect photography. See the notice elsewhere in this NEWSLETTER for information on joining this Association.

FRED B. KNIGHT, School of Natural Resources, University of Michigan, Ann Arbor 48104. Dr. Knight is primarily interested in forest entomology and biological control, and is concerned with the Scolytidae and Cerambycidae (Coleoptera).

E.C. MARTIN, Department of Entomology, Michigan State University, East Lansing, Mich. 48823. Dr. Martin specializes in apiculture (I found out that that means bees, and not raising chimpanzees, Ed.) and pollination.

EUGENIA I. McDANIEL, 317 South C, Herington, Kansas 67449. Miss McDaniel used to work for the Department of Entomology at Michigan State University.

DAVID G. SHAPPIRIO, Department of Zoology, 1116 Natural Sciences Building, University of Michigan, Ann Arbor, Mich. 48104. Mr. Shappirio is interested in insect growth and metamorphosis, and is working with Saturniidae (Lepidoptera) and Mutillidae (Hymenoptera). He is also interested in insect photography.

NORMAN OTHELLO SIBLEY, Whittemore, Michigan. Mr. Sibley has been a 4-H Club Leader for 30 years, and his interests run the gamut of entomology. He has also tagged Monarch Butterflies since 1957.

USDA ISSUES REVISED HANDBOOK ON INSECTICIDE RECOMMENDATIONS

Single copies of "Insecticide Recommendations of the Entomology Research Division for the Control of Insects Affecting Crops, Livestock and Households--1964" (Agricultural Handbook 120) may be obtained for $1.00 from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

RESEARCH REQUESTS

SPECIMENS OF THE ARCTIID MOTH PHRAGMATOBIA ASSIMILANS AND THE FORM OF P. FULIGINOSA which resembles it (i.e., has one or two bands on the forewing) are needed for the possible description of a new species. Both of these moths are rather similar: P. assimilans flies in the Upper Peninsula and northern lower Michigan, while the form of P. fuliginosa with the bands on the forewing occurs in southern Michigan. Both resemble figure 31 on plate XIV, and figure 70 in Holland's The Moth Book, except that they have a postmedial and submarginal line on the forewing (sometimes faint). All specimens sent will be returned. Julian P. Donahue, Department of Entomology, Michigan State University, East Lansing, Michigan 48823.

I WOULD BE INTERESTED IN HEARING FROM COLLECTORS WHO HAVE USED ANY TYPE OF LIGHT source to collect moths. The source, trap (if any), weather, location, and species should be included if available. Also desired are opinions as to why moths are attracted to lights. My goal is to perfect a 100% suitable method for grouping moths at a light. Richard W. Holzman, 7076 Hyde, Detroit, Michigan 48211.

I WOULD LIKE TO CONTACT COLLECTORS WHO REAR MOTHS, AND ARE ABLE TO OBTAIN OVA. Information on the rarer Phingidae and Arctiidae would be appreciated. Richard W. Holzman, 7076 Hyde, Detroit, Michigan 48211.

MICROSCOPIC SERIAL SECTIONS OF BUTTERFLY BODIES . . . I am working out a method for making such sections of Pieris rapae, but results so far are not completely satisfactory, although they show promise. If anyone has information relative to this activity, their suggestions would be greatly appreciated. Richard C. Fleming, Department of Biology, Olivet College, Olivet, Michigan 49076.

WANTED: SPECIMENS OF MOTHS AND LARVAE FOUND ON OR IN PITCHER PLANTS (Sarracenia purpurea) for study. Distributional records are needed on Exyra rolandiana Grote and Papaipema appasionata Harvey, two noctuids whose larvae feed on this plant. The larva of the former feeds on the leaves and flowers, while that of the latter bores into the stem and roots. Presumably, the moths rest on the flowers or in the pitcher leaves. Data on location, date, and position of the plant will be appreciated. Postage will be paid for specimens sent to M.C. Nielsen, 3415 Overlea Drive, Lansing, Mich. 48917. (P.S. Perhaps some of you botanists can help with this request.)

LIVING PUPAE OF CECROPIA, POLYPHEMUS, AND OTHER GIANT SILKMOTHS (SATURNIIDAE) NEEDED for research on insect growth and metamorphosis. I wish to purchase large numbers, at prevailing prices. David G. Shappirio, Zoology Department, 1116 Natural Science Building, University of Michigan, Ann Arbor, Michigan 48104.

CHRYSOMELIDAE OF MICHIGAN ARE NEEDED FOR A FAUNISTIC AND TAXONOMIC STUDY now being undertaken by Rev. Prof. Carlo Brivio. Specimens will be gladly identified, if possible. Maryglade College, 400 Stoddard Road, Memphis, Michigan 48041.

RECORDS OF INSECTS FEEDING ON OR POLLINATING POISON IVY will be much appreciated by William T. Gillis, who is studying poison ivy of the world for his Ph.D. thesis. Department of Natural Science, Michigan State University, East Lansing, Mich. 48823.

FAMED MICHIGAN ENTOMOLOGIST DIES

It is with great regret that we note the death of Robert R. Dreisbach of Midland, in June. Dr. Dreisbach was in the process of putting finishing touches on the Check List of Michigan Insects, but this important publication will now be finished by other workers in the state. The Michigan Entomological Society was represented by several members and a floral tribute at the funeral. Dr. Roland L. Fischer is preparing an obituary for the next issue of the NEWSLETTER.

MORE MICHIGAN INSECT SPECIALISTS

The response to our request for more specialists to identify Michigan insects has been very gratifying. The following people have added their names to those published in the last NEWSLETTER. Please be sure to correspond with the individual concerned before sending specimens for determination.

HOMOPTERA OF MICHIGAN will be identified by Dr. Thomas Moore, Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48104.

CRICKETS AND KATYDIDS OF MICHIGAN will be identified by Dr. Richard Alexander, Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48104.

MICHIGAN ORTHOPTERA IN GENERAL will be identified by Dr. Irving J. Cantrall, Museum of Zoology, University of Michigan, Ann Arbor, Michigan 48104.

CHRYSOMELIDAE OF MICHIGAN will be gladly accepted for study by Rev. Prof. Carlo Brivio, Maryglade College, 400 Stoddard Road, Memphis, Michigan 48041. Because of the size of this unwieldy family, Rev. Brivio cannot promise to identify all specimens. The beetles should be mounted and with accurate date-locality information. Data on food plants, especially for genera such as Chrysomela, Calligrapha, Paria, etc., are very important.

MORE LITERATURE ON MICHIGAN INSECTS (continued from the last issue)

FLEMING, RICHARD C., "An annotated list of Papilionoidea of Van Buren County, Michigan," Occas. Papers Adams Ctr. Ecol. Studies, No. 9, 27 June 1963. Reprints available from the author, Dept. of Biology, Olivet College, Olivet, Mich. 49076.

MOHRHARDT, DAVID E., "Swallowtail butterflies of the Kalamazoo Nature Center," Research Publication of the Kalamazoo Nature Center, No. 1. March 1964. Reprints available from the Kalamazoo Nature Center, Inc., 7000 North Westnedge Avenue, Kalamazoo, Michigan 49001.

NEWMAN, JOHN H., "A new noctuid from Michigan and Tennessee (Lepidoptera)," Occ. Papers Mus. Zool., Univ. Mich., No. 509. 27 April 1948. Reprints are available from the author, 9821 Peer Road, South Lyon, Michigan 48178. [Oligia ambifusca]

NIELSEN, M.C., "More on butterfly predators," Lep. News 12: 202. 1958.

_____, "My highest catch of Catocala species in one evening at bait," Lep. News 12: 201-202. 1958. Reprints of these two papers are available from the author, 3415 Overlea Drive, Lansing, Michigan 48917.

VOSS, EDWARD G., "Arthur Ward Lindsey (1894-1963)," Journ. lep. Soc. 17: 181-190. 1963. [biographical obituary, with complete bibliography, of noted authority on Hesperiidae]

_____, "Notes on Pieris virginiensis and Erora laeta--two butterflies hitherto unreported from Michigan," Lep. News 10: 18-24. 1956. [Constitutes a supplement to the paper below, with a few records of additional species.]

_____, "The butterflies of Emmet and Cheboygan Counties, Michigan, with other notes on northern Michigan butterflies," Amer. Midl. Nat. 51: 87-104. 1954. [an annotated list with dates, flower visitations, collecting spots, etc.] Reprints of the last three papers may be obtained from the author, Herbarium, North University Building, University of Michigan, Ann Arbor, Michigan 48104.

DON'T BE A SCATTERPILLAR--WE LIKE CLEAR VIEWS, NOT KLEENEX

BOOKS AND LITERATURE OF INTEREST TO ENTOMOLOGISTS [The editor does not have time to expand this section to all that it should be. Members are requested to submit brief resumes of recent literature they believe will be of interest to others.]

OUR BUTTERFLIES AND MOTHS, by William H. Howe. A well-illustrated book for the layman, dealing with striking butterflies and moths of the world. 135 species illustrated in color, 60 species in black-and-white, and 241 species discussed in the text. Available for $15.45, postpaid, from the publisher, Pierce Book Company, Winthrop, Iowa. 208 pages, 8½ by 11 inches.

KIRTLAND'S WARBLER MANAGEMENT AREA is a leaflet describing the areas managed for the preservation of Michigan's unique bird. For copies and more information, write the Forest Supervisor, Lower Michigan National Forest, Cadillac, Michigan.

ECOLOGICAL GENETICS, by E.B. Ford. "Over the last forty years, the author and his colleagues at Oxford University have made an intensive study of evolution and adaptation. By combining field work with laboratory experiment, they have isolated situations in which evolution takes place fast enough to be observed and analyzed. Ecological Genetics offers an authoritative review of the results and findings obtained through this pioneering research work." Available from the publisher for $7.75. 335 pages. John Wiley & Sons, Inc., 605 Third Avenue, New York, New York 10016.

FRESHWATER ECOLOGY, by T.T. Macan. "The book first treats those communities for which reasonably complete species lists are available. It then goes on to consider one by one the factors that cause alterations in the composition of a community. Finally, the book describes important ecological methods and discusses production." 338 pages. $6.50. Available from the publisher, John Wiley & Sons, Inc., 605 Third Avenue, New York, New York 10016.

PROTECTED WILDFLOWERS OF MICHIGAN, by R.D. Burroughs. This little leaflet, which features two pages of color illustrations of protected wildflowers, is available free from the Michigan Department of Conservation, Lansing, Michigan 48926.

THE INTERNATIONAL CODE OF ZOOLOGICAL NOMENCLATURE is now available for the first time in many years. In both English and French. A must for all taxonomists. $3.00, postpaid, from the Publications Officer, International Trust for Zoological Nomenclature, 14 Belgrave Square, London, S.W.1, England.

POTENTIAL NATURAL VEGETATION OF THE CONTERMINOUS UNITED STATES is a full color map by A.W. Kuchler. Accompanying the map will be a manual describing the methods used by the author in establishing the 116 vegetation types differentiated on the map. The map, which is 65 by 40 inches, with the accompanying manual, will be available this fall from the American Geographical Society, Broadway at 156 Street, New York, New York 10032, for $8.00. A slip case to contain the folded map and manual, purchase of which is optional, will be $2.00 extra.

BIOLOGICAL CONTROL OF INSECT PESTS AND WEEDS, ed. by Paul De Bach. 930 pp. 1964. Available from the publisher for $22.50 (may be returned within 30 days for refund). Reinhold Book Division, Dept. M-385, 430 Park Avenue, New York, New York 10022.

ECOLOGY, by Peter Farb. A new book in the Life Nature Library series. Highly recommended. 192 pp., illust. $3.95. Time, Inc.

WE'VE LOST A MEMBER . . .

Mail sent to Dan Ratliff, 2709 Capitol, Warren, Michigan has been returned stamped UNKNOWN! We're especially anxious to locate Mr. Ratliff, since he owes us dues since 1960. If you know of his whereabouts, why not rat on him?

NEWMAN COLLECTION OF LEPIDOPTERA TO GO TO MSU

John H. Newman, of South Lyon, announces that his fine collection of Michigan Lepidoptera will be deposited at Michigan State University at some future date. This collection, rich in Michigan Noctuidae, contains a quantity of type material, including paratypes and topotypes of a noctuid he described in 1948,*Oligia ambifusca. Monodes georgei, described from the Edwin S. George Reserve in Livingston County by Moore & Rawson, is represented by a small paratype series. Paratypes of Lycaena epixanthe michiganensis Rawson, a butterfly from Proud Lake, Oakland County, are also in the collection. Rawson collected the types while on a field trip with Mr. Newman. Approximately 15,000 specimens collected over the past 30 years are contained in the Newman collection, one of the most important private collections of Lepidoptera in the midwest. [* Oligia is now in the genus Meropleon, Ed.]

PRELIMINARY CALL FOR ENTOMOLOGICAL PAPERS . . .

for the meeting of the Entomology Section of the Michigan Academy of Science, Arts, and Letters, to be held at the University of Michigan next March. Papers should run from 10 to 15 minutes in length. Cash prizes will be awarded in the Undergraduate and Graduate/Advanced Amateur categories. Projection equipment will be available. Those members who are already planning to present a paper should contact the President, M.C. Nielsen, so that he can reserve time for you on the program. Manuscripts should be sent to the President before next February. More information will be given in a later issue of the NEWSLETTER. M.C. Nielsen, 3415 Overlea Drive, Lansing, Michigan 48917.

NEWS OF THE DETROIT BRANCH (S.K. Gangwere, Department of Biology, Wayne State University, Detroit 48202 is the Secretary of this Branch)

On April 16th the Detroit Branch met at Wayne State University to hear a paper by Sylvan Thomas, entitled "Some notes on the embryology of a walking stick," and a talk by T.J. Cohn, "When canibals meet: a problem in evolution in Mexican katydids.'

On May 21st the Branch met again at Wayne State, where Lois Conklin spoke on "Biogeographical view of the genus Acrida," and David Cook spoke on "The ground water habitat: with special reference to the water mite fauna," the paper he was unable to present at the last annual meeting in March.

THE PILOT REGISTER OF ZOOLOGY . . .

is a new experiment in publication in the field of systematic zoology. This series is published on large Royal McBee Keysort Cards. The 20 cards are ". . . intended to demonstrate the advantages of publishing basic taxonomic information by employing species and genera as modular units that can be used to build a register file (card catalog). Possibilities for improved retrieval of information are embodied in the keysort margin of the card. The top edge, for instance, is designed to take punching for a card serial number of up to nine digits. The right, left, and bottom margins are free for punching according to any system of coding the user cares to develop, including those based on morphology, taxonomic affiliation, behavior, ecology, geographical distribution, or others." For the complete Pilot Register of 20 cards, which include many insects, send 25¢ to Register, Department of Entomology, Cornell University, Ithaca, New York.

THE DIRECTORY OF MEMBERS . . .

will probably be mailed towards the end of the year. The sooner members return their membership questionnaires, the sooner the directory can be prepared.

TWO MAJOR PIECES OF CONSERVATION LEGISLATION PASS THE HOUSE

The House of Representatives has recently passed two very important conservation bills: The Land and Water Conservation Fund Bill, which provides for a system of financing the development of recreational land, and the Wilderness Bill, which permanently designates certain wilderness areas to be maintained as such. The Executive Secretary has several copies of the Wilderness Bill as it was reported out of committee (the bill received two worthy amendments before it was passed on the floor of the House), and the Rport of the bill, kindly provided by Charles E. Chamberlain, Representative, 6th District, Michigan. These copies are available for members while they last. Julian P. Donahue, Department of Entomology, Michigan State University, East Lansing, Michigan 48823.

THE ISLE ROYALE NATURAL HISTORY ASSOCIATION . . .

is organized to encourage and stimulate an interest in the natural history of Isle Royale National Park, Michigan's only national park. Members of the Association receive the periodical WOLF'S EYE. Eventually, some booklets on the insects of Isle Royale will hopefully be published. Members are urged to support the Association--the annual dues are only $2.00. Write to William W. Dunmire, Executive Secretary and Chief Park Naturalist, Isle Royale Natural History Association, Isle Royale National Park, Houghton, Michigan 49931.

MORE SOURCES OF ENTOMOLOGICAL SUPPLIES

Jack R. Powers, 302 South 9th Street, Moorhead, Minnesota prints insect museum labels for a nominal price. Write for price list.

Bio Metal Associates, P.O. Box 61, Santa Monica, California 90406 stocks a wide variety of entomological equipment. Rev. Prof. Carlo Brivio says that their printed labels cost only $1.25 per thousand, and are "pretty good." Catalog available.

Clair Armin, 417 Palm Avenue, Reedley, California has insect pins which, last we heard, cost $4.00 per thousand, plus **postage**. Write for sizes and prices.

PESTICIDE POLICY STATEMENT BY THE MICHIGAN AUDUBON SOCIETY

A six-page statement of policy on pesticides use was adopted by the board of directors of the Michigan Audubon Society at its May meeting in Kalamazoo. Copies of the complete report are available from the chairman of the society's conservation committee, Edward M. Brigham, Jr., Kingman Museum of Natural History, Battle Creek.

INSECT ANECDOTE (from the Lansing State Journal)

TAIPEI, Taiwan (UPI)--Col. Roderick D. Eason and his wife had just put out the lights and retired for the night Thursday when squadrons of mosquitos began their nightly attack. Eason was ready for them. He fumbled around in the dark, found the push-button spray can he was looking for, and proceeded to counter-attack. He buzz-bombed them in the air, on the walls and around the furniture.

When the Easons woke up the next morning, they found that the colonel had grabbed the wrong can. The bedroom was covered with blue paint.

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)

_____Aquatic Insects

_____4-H Member

_____Extension Worker

_____Life History, Biology, & Behavior

_____Pest Control (flit-gun entomology)

_____Collecting and/or Taxonomy

_____Insect Photography

_____Physiology

_____Apiculture

_____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!

CONSTITUTION
of the
MICHIGAN ENTOMOLOGICAL SOCIETY

Article I--Name

Section 1. This organization shall be known as THE MICHIGAN ENTOMOLOGICAL SOCIETY.

Article II--Object

Section 1. It shall be the purpose of this society to promote the science of entomology in all its branches and by all feasible means, and to advance cooperation and good-fellowship among persons interested in entomology.

Article III--Membership

Section 1. The classes of membership shall be Active, Honorary, Student, and Sustaining.

Section 2. Active Membership. All persons professing an interest in entomology may become active members by vote of the Governing Board, after a regularly executed application, endorsed by two Active Members and accompanied by the requisite fee, has been filed with the Executive Secretary.

Section 3. Honorary Membership may be conferred upon anyone who has performed long and distinguished service in the field of entomology with especial reference to the State of Michigan or upon anyone who performs an outstanding service to the Society. Proposals for Honorary Membership shall be made in writing with a supporting statement by two active members and shall be acted upon by the Governing Board and submitted to the Society for vote by mail ballot. Nominees must receive four-fifths of the ballots cast to be elected. The total number of Honorary Members shall not exceed five at any one time, and not more than two shall be elected in any one year. Honorary Members shall be exempt from payment of dues, but shall have all the privileges of active membership.

Section 4. Student Membership. Any person who is enrolled in a recognized educational institution and professes an interest in entomology, whether studying that subject or not, may become a student member at reduced dues to be specified by the Governing Board. Application shall be endorsed by two active members and filed with the Executive Secretary, accompanied by the requisite fee. Election shall be by vote of the Governing Board. Student Members shall not be allowed to vote, to hold office, nor to receive scientific publications of the Society, but shall be permitted all other privileges of membership.

Section 5. Sustaining Membership. Any person, institution, or organization desiring to support the aims of the Society by an annual contribution of not less than $25.00 may become a Sustaining Member. An Active Member may also become a Sustaining Member by the contribution of the proper fees.

Article IV--Officers

Section 1. The officers of this Society shall be a President, a President-Elect, and an Executive Secretary.

Section 2. President and President-Elect. The President-Elect shall be elected by mail ballot as specified in the By-Laws. He shall serve one year as President-Elect and the following year as President. He shall assume the office of President at the close of the annual meeting next following his election.

Section 3. Executive Secretary. The Executive Secretary shall be elected by mail ballot as specified in the By-Laws and shall serve for one year. He shall assume office at the close of the annual meeting next following his election.

Article V--Governing Board

Section 1. The Governing Board shall conduct the business of the Society, subject to the decisions on policy by the membership by mail ballot or at an annual meeting. This Board shall consist of the following officers: President, President-Elect, Executive Secretary, the most recent available Past President, and the Chairman, or his appointed representative, of each regional branch.

Article VI--Regional Branches

Section 1. Regional Branches shall be established on the basis of convenience, for all the avowed purposes of the Society.

Section 2. Choice of Regional Branch Membership, if any, shall be voluntary with individual members and such choice shall be filed with the Executive Secretary of the Society. Each member shall be restricted to voting with the Branch of his choice, but shall be entitled to attendance at all meetings and other activities of every Branch.

Section 3. Officers of Regional Branches. The officers of each Branch shall be a Chairman, a Vice-Chairman, a Secretary-Treasurer, and a Recording Secretary. These officers shall be elected annually by procedure adopted by their respective Branches.

Section 4. Activities of Branches. Each Branch shall operate autonomously in such manner as it sees fit, subject to the provisions as set forth in the Constitution and By-Laws.

Section 5. Establishment of Regional Branches. To become established, proposed Branches must formally petition the Society, be endorsed by the Governing Board, and be approved by the Society. The petition must indicate clearly that an organized unit of at least ten persons exists and that its establishment will be useful to the Society and to entomology.

Section 6. Financial Responsibility of Branches. Regional Branches shall not incur financial indebtedness in the name of the parent Society without explicit prior approval of the Governing Board.

Article VII--Funds

Section 1. All monies due the Society shall be collected, disbursed, and accounted for by such officers as are to be specified in the By-Laws or as the Governing Board may determine.

Section 2. A permanent fund shall be established to include donations, bequests, and such other property and funds as may be added to it. This permanent fund shall be in custody of the Governing Board. The principal of this fund shall be invested and may be expended only upon the recommendation of the Governing Board and approval by the Society by mail ballot or at any meeting, notice of such action to be given in the call for said meeting. The interest on this permanent fund in any year may be used to meet necessary expenses of the Society on approval of the Governing Board, but if not so expended during the year shall be added to the principal. Loans from the permanent fund may be made to other established funds of the Society for self-liquidating projects, on recommendation of the Governing Board and the approval of the Society.

Article VIII--Publications

Section 1. The publications of the Society will be a scientific entomological journal and a news bulletin, to be sent to all members of the Society except Student Members, who receive only the bulletin.

Article IX--Standing Committees

Section 1. Standing Committees shall be such as are deemed necessary by the Governing Board or the Society. The duties of these committees and the manner in which their members shall be elected are set forth in the By-Laws.

Article X--Meetings, Voting, and Office-Holding

Section 1. The annual meeting shall be at such time and place as may be decided upon by the Governing Board. Special meetings may also be called by the Governing Board. Voting and holding of office shall be limited to Active and Honorary Members.

Section 2. Mail Ballots. Matters of major importance shall be placed before the entire membership by mail ballot. Any matter shall be voted on by mail ballot upon written petition to the Governing Board by ten members.

Article XI--Amendments

Section 1. All proposed amendments shall be presented at an annual meeting. The president shall at that time appoint a special committee to consider the amendment or amendments and to report its recommendations at the next annual meeting. At this time the annual meeting may make changes germane to the subject and purpose of the amendment, which shall then be referred by mail ballot to the entire membership. If two-thirds of the votes cast are in the affirmative, the amendment shall be adopted.

10-21-55

BY-LAWS
of the
MICHIGAN ENTOMOLOGICAL SOCIETY

Article I--Members

Section 1. Privileges. All members shall have equal privileges, except as otherwise herein specified.

Section 2. Membership of persons who are accepted before July 1 shall begin with the preceding January 1; membership of those accepted at a later date shall begin the following January 1, unless the earlier date is requested and the required dues have been paid.

Article II--Officers

Section 1. President and President-Elect. The President shall have and exercise such powers as are reasonably necessary to carry out his official duties, including with the approval of the Governing Board, the filling of vacancies in the standing committees; such appointees to serve until the next annual meeting. In case of inability of the President to serve, the President-Elect shall become President.

The President-Elect shall be elected by mail ballot by the following procedure: At least four months prior to each annual meeting the Executive Secretary shall invite each member of a special nominating committee consisting of the immediately preceding Past President and the Chairmen of the Branches, to propose one name for President-Elect. All of these names, arranged alphabetically, shall be placed on a ballot to be mailed to each member not later than three months before the annual meeting, with the request that he indicate his preference on the ballot and return it in a special envelope marked "Ballot." A deadline for the return of the ballots, not less than thirty days from the date when they are mailed out, shall be specified, and no ballots received later than the specified deadline shall be counted. Members may write in other names of their choice. The votes shall be tabulated by a special committee of three members selected by the Executive Secretary.

If no candidate receives a majority of all votes cast, the two candidates receiving the greatest number of votes, or in case of a second-place tie, the three receiving the highest number of votes, shall be placed on a run-off ballot, which shall be mailed to the membership, with a time limit of not less than thirty days from the date of mailing, for their return, as with the first ballot. The ballots shall be counted as before. On the run-off ballot, the candidate who receives the greatest number of votes shall be declared elected. The Governing Board and the candidates shall be promptly notified of the outcome.

A vacancy in the office of the President-Elect shall be filled as soon as practicable by written ballot by the Governing Board from the two eligible nominees in the most recent election who received the highest number of votes.

Section 2. The Executive Secretary shall serve as Secretary, Treasurer, and Business Manager of the publications and other affairs of the Society. He shall keep a record of the proceedings, attend to the general correspondence, shall collect all monies due, pay all bills incurred by the Society, submit a report at each annual meeting, and perform such other duties as may be delegated to him.

He shall furnish a suitable corporate-surety bond (premium to be paid by the Society) when the funds of the Society total more than $500. His accounts shall be audited annually, or more frequently if so directed by the Governing Board, by a certified public accountant or by two members of the Society chosen by the Governing Board. He shall attend as far as possible the annual and special meetings of the Society and receive reimbursement for necessary expenses.

Section 3. The Executive Secretary shall be elected in the same manner and at the same time as the President-Elect.

Article III--Governing Board

Section 1. If any Chairman of a Regional Branch should be elected to the position of President-Elect, his position as Chairman of the Branch shall be considered vacated and the Branch shall fill the office in their designated manner.

Article IV--Dues

Section 1. Dues shall be set by the Governing Board, subject to the approval of the Society by letter ballot.

Article V--Publications

Section 1. General responsibility for the publications of the Society shall rest with the Governing Board.

Section 2. Editorial Boards. The Editorial Board shall consist of the Editor, the Executive Secretary (ex officio), and a member of the Society from each Regional Branch. Terms of office shall run for three years, with one member elected each year.

Section 3. Editor. The Editor shall be appointed by the Governing Board and shall serve as chairman of the Publications Committee.

Article VI--Standing Committees

Section 1. Terms of Office and Rotation. Unless otherwise indicated, members of standing committees shall serve for periods of three years each. Their election shall be so arranged that one-third of the terms shall expire each year.

Section 2. Election of Standing Committees. The Governing Board shall serve as the nominating committee to propose a slate of candidates for election to positions on standing committees not filled in other ways. The candidates nominated by the Board, together with any nominated from the floor, shall be voted upon at the annual meeting. The Board shall designate which member of each standing committee shall serve as chairman.

Article VII--Delegates

Section 1. The President shall appoint such delegates or representatives to such other organizations, meetings, etc., that occasion may require.

Article VIII--Meetings, Quorums, Voting, etc.

Section 1. Ten active members shall constitute a quorum for the transaction of the business of the Society.

Section 2. Four members of the Governing Board shall constitute a quorum for the transaction of its business, provided, that one of those four shall be a Branch Chairman.

Section 3. No officer or committee of the Society or of its Branches shall solicit in the name of the Society contributions for use in obtaining or paying for specialized entertainment.

Article IX--Miscellaneous

Section 1. Members two years in arrears of dues shall be dropped from the rolls by the Executive Secretary after twenty days' notice.

Section 2. Members shall not use the name of the Society for financial advantage.

Section 3. Members in good financial standing have the right to resign. The right to terminate the membership of any member for due cause is reserved by the Society, but except for non-payment of dues, no member shall be dropped until opportunity has been given him for a hearing before the Governing Board.

Section 4. In voting at meetings or in mail balloting, a majority of votes cast shall be considered as deciding in all matters, unless otherwise specified in the Constitution or By-Laws.

Article X--Amendments to the By-Laws

Section 1. Changes in these By-Laws may be made by a two-thirds vote of any general meeting or by a two-thirds majority of all votes cast in a mail ballot; provided, that written notice of the proposed amendment shall have been sent to every active member at least one month before the date of the meeting at which it is to be considered, or the last date for the receipt of the ballots in case of mail vote.

10-21-55

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

*** RETURN POSTAGE GUARANTEED ***