NEWSLETTER

of the

MICHIGAN ENTOMOLOGICAL SOCIETY

Volume 29, Number 2 May 5, 1984

Carabid Beetle Collecting on Beaver Island

by

Gary A. Dunn

Beaver Island is the largest in a chain of islands located in northern Lake Michigan 28 miles northwest of Charlevoix and 35 miles west-southwest of the Straits of Mackinac. The 58 square mile island is 90% forested--mostly northern hardwoods and some conifers (fir, cedar, hemlock, and spruce). The remainder of the island consists of agricultural land, fields, alder thickets lakes, marshes, and beaches. The beaches range from steep bedrock bluffs (north side) to narrow sand and stone beaches (east side) to well-developed sand beaches with large dunes (south and west side.)

This past summer, during the week of July 24 to 30th, I had an opportunity to visit the island as a volunteer staff member of the 4-H Great Lakes Natural Resources Camp. The camp was held at the Charlevoix School District facility next to the old lighthouse at the southeast end of the island.

Much of the collecting was done in the vicinity of the camp and lighthouse. Beetles were taken both during the day and at night, by hand, with nets or with traps. Only three primary habitats were explored: the beaches, marshes and edges of lakes, and a hardwood stand.

On the beaches a number of beetle species were active during the daylight hours, including Cicindela hirticollis (shermani Casey form), C. repanda Dejean, and Bembidion carinula Chaudoir. When the same beaches were checked at night with a headlamp the following species were active: Omophron americanum Dejean, Chlaenius cordicollis Kirby, Bembidion transversale Dejean, and Agonum errans Say. Examination of beach drift (which was rather sparse) produced the following species: Pterostichus melanarius Illiger, Bembidion americanum Dejean, B. obscurellum Dejean, B. scopulinum Kirby, B. cordatum LeConte, B. patruele Dejean, B. affine Say, B. impotens Casey, B. versicolor LeConte, B. mimus Hayward, Agonum gratiosum Mannerheim, A. placidum Say, A. thoyeri Dejean, A. tenue LeConte, Stenolophus comma Fabr., and Harpalus laticeps LeConte.

Treading in the soft mud and vegetation around the perimeter of lakes and marshes yielded the following species: Loricera pilicornis Fabr., Elaphrus olivaceus LeConte, Dyschirius integer LeConte, D. globulosus Say, Bembidion rapidum LeConte, B. patruele, B. versicolor, B. mimus, B. impotens, Stenolophus ochropezus Say, and Chlaenius pennsylvanicus Say.

Five barrier pitfall traps were placed in a hardwood stand (beech-maple-birch) near the camp, and large numbers of carabids were taken, including: Pterostichus melanarius, P. coracinus Newman, P. tristis Dejean, Synuchus impunctatus Say, Sphaeroderus lecontei Dejean, Myas coracinus Dejean and Calathus ingratus Dejean.

Previous collections of beetles have been made in Charlevoix Co., including Beaver Island, between 1919 and 1923. The results of this collecting was published by M. H. Hatch in 1924 (Papers of the Mich. Acad. Sci., Arts and Letters 4:543-555). In this paper, Hatch lists a total of 80 species known from Beaver Island (after adjustments for synonomy).

One of the major goals of my collecting was to see if there was any change in the island's carabid fauna. As it turns out there were some. I was able to duplicate 45% of Hatch's

(cont. on p. 4)

The NEWSLETTER of the Michigan Entomological Society is published as four numbers yearly, at irregular intervals. Please send all notes, news, new insect records, research requests, notices, season summaries, membership inquiries, etc. to the Executive Secretary, Michigan Entomological Society, Dept. of Entomology, Michigan State University, East Lansing, Michigan 48824.

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Notices

(Notices will be run for a year or 4 numbers of the Newsletter unless notified to drop them. Members desiring longer runs should notify newsletter editor, L. F. Wilson, Dept. of Forestry, Michigan State University, 48824)

WANTED: Data on Michigan butterflies for use in a new publication on the butterflies of Michigan. Doubtful specimens can be forwarded for determination or confirmation. Especially interested in Lycaenidae and Hesperiidae records. Contact M. C. Nielsen, 3415 Overlea Dr., Lansing, MI 48917 (517-321-2192).

WANTED: Correspondence with anyone interested in exchanging ants (need not be determined) from outside of Michigan for Michigan insects (ants or others). Write to: Ronald Merchant, 4334 W. Holt Road, Holt MI 48842.

WANTED: Collecting data on Michigan Formicidae. Prefer county, township, range, and section, but county only acceptable. These data will be used in compiling a county list. Send data to: Ronald Merchant, 4334 W. Holt Road, Holt, MI 48842.

WANTED: Studies on the Comparative Ethology of Digger Wasps of the Genus Bembix by Evans; Beetles of the Pacific Northwest by Hatch (5 vol.); Biology of the Leaf Miners by Hering; The Ecology of Plant Galls by Mani. Write stating condition and price to John E. Holzbach, 229 Maywood Drive, Youngstown, Ohio, 44512. *(long run)*

EXCHANGE: I'm working on Noctuidae (Orbis terrarum) and would like to exchange Noctuidae of all nearctic species for Old World Lasiocampidae (nearly all European species possible). The Noctuidae are for scientific use. They can be damaged, but they have to be complete, especially the genitalia, legs, and antennae. If interested, write to Hermann Hacker, Dipl.-Forsting, Gries 38, 8621 Ebensfeld, West Germany.

FOR SALE: Entomologische Arbeiten aus dem Museum G. Frey Band 1 to 27 (1950-1976) -- Abstracts of Entomology, vol. 1-14 (1972-1983) complete except for cumulative index (available only for 1972-1973). BEST OFFER. Rev. Carlo Brivio, 17400 Quincy, Detroit, MI 48221, phone (313) 342-4066.

RESEARCH NOTICE: To those participating in the Sesiidae pheromone Project, if you have caught anything interesting wirh the pheromone please notify me at your convenience. I can be reached evenings at (312) 237-0543 or write to Dr. John Holoyda, 2819 N. Marmora, Chicago, IL 60634. *(long run)*

WANTED: data and/or specimens of Michigan carabid beetles (including Cicindelinae) for a state faunal study aimed at studying the distributions, seasona activity and ecological requirements of all species. Collections of undetermined material will be accepted for making or verifying determinations. Contact Gary A. Dunn, Department of Entomology, Michigan State University, East Lansing, MI 48824.

EXCHANGE: Wish to exchange specimens of Nearctic Cicindelidae (and Carabidae). Also, correspondence welcomed from those interested in these groups. I am interested in records, label data and other information of Cicindela spp., especially hirticollis. Write: Gary A. Dunn, Department of Entomology, Michigan State Univ., East Lansing, MI 48824.

VOLUNTEERS NEEDED: A number of Michigan 4-H Entomology clubs are in need of technical support and guidance from experienced entomologists. Your help is needed to lead field activities, help at leader workshops, judge collections at the fair, and provide helpful hints to club members. If you are interested in helping a 4-H club, please contact me and I will attempt to match you up with the nearest club.

Along similar lines, the Teen International Entomology Group (TIEG), which is based at Michigan State University in East Lansing, is in need of both long and short articles on any entomology-related topic.

If you are interested in helping either of these organizations, contact Gary A. Dunn, Department of Entomology, Michigan State University, East Lansing, MI 48824-1115.

RESEARCH REQUEST: The following Lepidoptera, Noctuidae, are becoming pests of corn: Hydraecia immanus Guenee, H. micacea Esper, and Oligia fractilinea (Grote). I have no Michigan records of the first two, but they should be present in Michigan. The last is an "old fashioned" pest of grasses and should be fairly common in collections. Would you please check your collections and, if you find specimens, let me know the species, locality, date, host, and sex? R. F. Ruppel, Department of Entomology, Michigan State University, East Lansing, Michigan 48824.

FOR SALE: Fossil Insects. . . from Florissant, Co., Cockerell, 1910; Injurious Insects of MI, Cook, 1874; Mon. of Twisted Winged Insects. . . Strepsiptera, Pierce, 1909; Directions for Coll. . . . Preserving Insects, Banks, 1909; . . . Mershon Exp. to Charity Is. . . . Coleoptera, Andrews, 1910; New NA Cicadas. . ., David, 1938; Ecology of Orthoptera and Dermaptera of Geo. Res. . . ., Cantrall, 1943; Burrowing Beetles. . . Mycotrupes, Olson, et al., 1954; Tax. . . . of Elliptoid-eyed. . . Schinia. . ., Hardwick, 1958; Social Biol. Polistine Wasps, Eberhard, 1969. Contact M. C. Nielsen, 3415 Overlea Dr., Lansing, MI 48917. (517) 321-2192.

WANTED: Any recent collection (within last 2 years) of blow flies (Calliphoridae) from the southwestern United States. Material sent will be used as part of an ongoing project following the spread of a newly introduced species. All specimens sent wil be identified and returned. Donald Baumgartner, University of Illinois at Chicago, Department of Biological Sciences, P. O. Box 4348, Chicago, IL 60680.

FOR SALE: Insect Pins: Std. Black, Elephant, Stainless Steel, Minutens and Label Pins. Sizes 000 thru 7 available. For complete list write: Ianni Butterfly Enterprises, P. O. Box 81171, Cleveland, Ohio, 44181. (216) 888-9763.

FOR SALE: Worldwide, collectible butterflies, Beetles and rare insects, named with data. For subscription to butterfly and beetle price lists send $5.00 to Ianni Butterfly Enterprises, P. O. Box 8117I, Cleveland, Ohio, 44181.

BOOKS FOR SALE: Beetles of the World, Gakken. A magnificent color pictorial reference book containing illustrations of over 600 worldwide beetles with English names and origins. Text is Japanese, ($32.50 postpaid). Beetles, Bernard Klausnitzer. Fascinating and most informative easy reading! Summarizes the most interesting representatives of the beetle family. Fantastic color & b/w illustrations of many rare and extraordinary species. ($21.50 postpaid). The Dictionary of Butterflies and Moths, Lathwait, Watson & Whalley, 405 color photographs representing over 1000 species in this A-Z Dictionary that is chock full of facts such as size, habitat, etc. An excellent addition to any library. Send $19.50 (postpaid) to Ianni Butterfly Enterprises, P. O. Box 81171, Cleveland, Ohio, 44181.

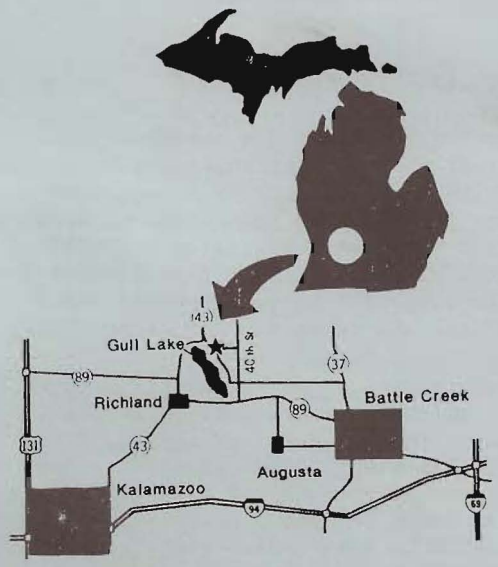
Society Decals

We have just received a new order of Society decals. Anyone wishing to have a decal should remit 50 cents (or five decals for $2.00) to the Executive Secretary. Do it NOW! Your car window is naked without one!

M.E.S. Meets at Gull Lake

Plan now to attend the 30th Annual Meeting of M.E.S. Dave Evans has promised a good show for this year's meeting at the W. K. Kellogg Biological Station on Friday and Saturday, June 8 and 9.

The Kellogg complex offers exceptional opportunities for field research and classwork. Winter Green Lake, located entirely within this area, contains 40 acres supported by 10 smaller impoundments. A total of approximately 2,000 acres of farm land, forests, lakes, ponds and streams is available for insect study and collecting. Sherriff's Marsh nearby is a 200-acre tract of land containing a bog lake, small stream and tamarack swamp with adjoining highland that is also available for collecting.



The country surrounding the station includes a variety of glacial terrain, drainage conditions, slopes and soils. The many lakes, ponds, streams and various types of bogs and swamps make this area ideal for terrestrial and aquatic arthropod studies. Allegan State Forest, which strikingly resembles certain areas in the Upper Peninsula, lies 35 miles to the northwest. The Barry County State Game Area and Yankee Springs Recreational Area, which provide additional habitat for field study, lie 12 miles to the north. Lake Michigan, with its famous dunes and unique ecological habitat, is approximtely 40 miles to the west.

A most enjoyable day of information exchange followed by field collecting and Saturday field trips is being organized for your interest and pleasure. Plan NOW to join us at the Biological Station. Please return the enclosed prereregistration form so we can get an approximate head count.

Also, plan to bring a few bug slides to the meeting to show at the slide fest.

Warczynski Collection to Chippewa Center

The Chippewa Nature Center recently acquired the Virgil J. Warczynski collection of Michigan butterflies and moths. His obituary appeared in Volume 27, Number 3 & 4 of this Newsletter. A third party purchased his collection of Michigan lepidoptera, composed of forty drawers, and donated it to the Center. CNC Director, Winslow M. Shaughnessy, would be happy to have any serious lepidopterist examine the Warczynski collection at anytime; naturally, he would perfer some prior notification. Virgil's collection contained a good representation of Michigan's butterfly and moth fauna there are many unusual species. For an appointment, contact the Director, Chippewa Nature Center, Inc., 400 S. Badour Rd., Rt. 9, Midland, MI 48640 or call 517/631-0830.

Y.E.S. Replaces T.I.E.G.

Recently an effort was undertaken to revitalize the Teen International Entomology Group (TIEG) formed in 1965. the organization had been facing a two year slump in financial resources and member participation. After examining all of the facts it was decided that the organization could be resurrected, and so it was reorganized and renamed. And so the Young Entomologist's Society (Y.E.S.) was born.

Y.E.S. serves as an organization through which members from a variety of geographical locations (currently all 50 states, 2 U.S. territories, and 15 other countries) can exchange information about insects through correspondence and group publications. The organization's name reflects its youth orientation, but "young" members of any age are needed for its many activities and functions.

The Society's publication, Y.E.S. QUARTERLY, is full of how-to articles, collecting tips, news field notes, life history information, identification tips, and virtually every other entomological topic, including the non-insect arthropods. Nearly all of the articles are written by the members themselves! In addition, the members tell about themselves and their specific interests via a member directory and the "tradingpost".

Membership in Y.E.S. is open to all individuals, young or old, amateur or professional, with an interest in entomology. Therefore, there are four membership categories: youth members (up to age 18), collegiate members, adult members and sustaining members.

Y.E.S. is sponsored by the U.S. Department of Agriculture, Cooperative Extension Service, Michigan State University and the Department of Entomology, Michigan State University.

For additional information contact Gary Dunn, c/o Department of Entomology, Michigan State University, East Lansing, MI 48824-1115.

More on the Early Hairstreak

As reported in Volume 28, No. 4 of the Newsletter, Erora laeta, the Early Hairstreak, was again collected in Emmet County on June 11 and 12, 1983--28 years after it was first collected in Emmet County, Michigan. Edward Voss (one of the first who collected E. laeta in Mich.) reported that" a fresh gravid female E. laeta was taken May 17 (1983) at Colonial Point on Burt Lake, Cheboygan County, after it was photographed and lit on an old dead beech leaf on the ground." The specimen is now in the collection of Olle Pellmyr, the collector, of the University of Uppsala, Sweden. Recently, Jim Bess located a pinned, unspread E. laeta female (worn) in some miscellaneous material in the MSU entomology museum. The specimen was collected on May 31, 1964, by Robert Husband in Alger County, T47N, R21W, Section 7. It is suggested that anyone interested in finding this elusive hairstreak search northern hardwoods along sunlit trails in late May-early June, and again in mid-July. Good luck!

Mo Nielson

Michigan Mapbook

The new County mapbook for Michigan has recently had its first up-to-date printing in 35 years. The first time printed in full color, it includes all 83 counties depicted on 96 maps using a 3/8 inch per mile scale. Besides separate colors for ownership the map has a 300-item index and shows campgrounds, fishing sites, state parks and other features. The cost is $9.95. Ask for mapbook of Michigan counties, code 4C606. In Michigan, call 1-800-292-2525 Outstate, call 1-800-248-5848.

(Carabid Collecting from p. 1)

records, and, was able to collect an additional 20 species. Of these 20 species, most were simply overlooked in previous collecting (which had always been concentrated at the northern end of the island). However, at least one species is new to the island since 1923. This species is Pterostichus melanarius, a recent European introduction into northeastern North America and which is now established in Michigan. In addition, I was able to determine that Hatch's record of Chlaenius solitarius Say for Beaver Island is erroneous. Large numbers of a green Chlaenius species could be found on sand and stone beaches at night, but as it turns out the species is actually cordicollis Kirby a closely related allopatric species.

As a result of this one week's collecting at the south end of the island, the island's carabid (and cicindelid) fauna list now stands at 100 species. However, additional species will no doubt be discovered as additional collecting is undertaken at the south end of the island and in the interior forested areas.

Entomology Department Claims Another Winner

For the fourth year running, the Department of Entomology at Michigan State University can claim a winner of an Entomological Society of America (ESA) award for graduate student excellence.

Gloria DeGrandi-Hoffman was recently presented the John H. Comstock Award by the North Central Branch of ESA.

The award is presented each year to a doctoral graduate student in entomology who has made an oustanding contribution to the science of entomology prior to receiving his or her degree. Students who win the ESA award are considered the top graduate students in the country.

Since the award was conceived 11 year ago, MSU's Department of Entomology has taken home the award seven out of the 11 years.

"Students are judged on the wholeness of their activity in graduate school," says James E. Bath, Department of Entomology chairperson. "The award goes to students who have demonstrated excellence in all areas--teaching, research and classwork. But the main thing is that they make a major contribution to entomology."

For DeGrandi-Hoffman, that contribution was the development of a computer systems model to predict the rate of fruit set in red delicious apple orchards in Michigan. The program also can be used by growers to determine how many colonies of honey bees they need per acre to get good pollination and, therefore, high yields.

"To my knowledge," says Mark E. Whalon, associate professor of entomology, "it is the first practical pollination prediction model in use in the United States."

"Whole concepts in pollination and fruit orchard design and management will now be changed because of this research," adds Roger Hoopingarner, professor of entomology. "It will revolutionize the way growers design their orchards."

The ESA presents five awards each year to graduate students - one in each of five regions of the country. The North Central region, of which MSU is a part, is the largest of the five regions with 15 states that include some of the finest and most competitive universities in the country, including Illinois, Purdue, Ohio State, Wisconsin, Minnesota and the University of Michigan.

New Journal Starting

Volume I of the new journal International Quarterly of Entomology is going to press in 1984. The journal forms an entirely international medium for the publication of papers dealing with the natural history of insects and other arthropods. The types of contributions include normal length research papers, reviews of specialized topics, shorter communications, and book reviews. Emphasis is placed on rounded-off topics.

The International Quarterly of Entomology will be mailed during the months of March, June, September, and December. Subscriptions should cover calendar years only. Claims for issues not received should be made within three months of publication of the issue, since otherwise such claims cannot be honoured free of charge.

SUBSCRIPTIONS. Annual dues (including postage and handling) in Europe and Middle East are $67 U.S. funds or equivalent, elsewhere $70 U.S. funds.
Subscription orders and problems concerning order fulfillment should be sent to: OMER ERKIN, PK 1318 Istanbul, Turkey.

Rocky Mtn. Butterflies

Edited by Clifford D. Ferris and F. Martin Brown. This comprehensive field guide is written especially for the growing number of butterfly collectors who visit or live in the Rocky Mountain states. It is the first and only book to cover all the Rocky Mountain species and most of the sub-species.

Each of the major families of North American butterflies is treated by a recognized scholar. The species descriptions include life histories when known, flight periods, and habitats, as well as distinguishing characteristics. Common names are included with the scientific names. For the first time in book form, distribution maps are provided for all species. Each species is illustrated.

Several features add to the guide's usefulness and definitiveness. Five introductory chapters cover butterfly ecology, biology, anatomy, taxonomy, collection, and preservation. An appendix covers techniques for genitalic dissection as an aid in identification. There are also a complete glossary of terms, a general bibliography, and a checklist of species. A historical preface relates the history of entomology to the early exploration of the West. The washable cover completes this functional reference guide.

Like its predecessor, the popular *Colorado Butterflies*, by F. Martin Brown (now out of print), this guide is directed toward a wide audience that includes weekend naturalists and casual collectors, as well as the serious collector and professional entomologist. Biologists interested in the ecology and natural history of the Rockies will need it for reference.

400 pages, 352 photographs, 9 line drawings, 315 maps, indexes. Send to University of Oklahoma Press, 1005 Asp Avenue, Norman, Oklahoma 73019.

New Members

BALL, JOHN, Horticulture Technology, Univ. of Minnesota Tech. College, Waseca, MN 56093.
BEROMISA, ROBERT D., P.O. Box 271, Berrien Springs, MI 49103.
DRAPEK, RAYMOND, 1657 Haslett, East Lansing, MI 48823.
HALL, RICHARD L., 4400 Mobile Dr., Apt. 217, Columbus, OH 43220.
HERMS, DANIEL A., Dow Gardens, 1018 W. Main St., Midland, MI 48640.
IANNI, CONNIE, Ianni Butterfly Enterprises, P.O. Box 81171, Cleveland, OH 44181.
JONES, R. BRIAN, 426 Malzahn St., Saginaw, MI 48602. (Student)
NIXON, PHILIP L., Coop. Extension Service/Univ. I1, 1010 Jorie, Suite 300, Oak Brook, IL 60521.
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WILSON, J.W., 15 Martin Park Rd., Wallaceburg, Ontario, CANADA N8A 2J7.

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HUSBAND, SUZANNE, 1035 Scottdale Dr., Adrian, MI 49221. (Student)
JONES, PATRICIA, 22100 Francis, Dearborn, MI 48124. (Student).
KORNBERG, HARRY, 7075 Pine Manor Dr., Lake Worth, FL 33463.
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WALDBAUER, GILBERT P., Dept. of Entomology, Univ. of Illinois, Urbana, IL 61801.
WALTZ, ROBERT D., Dept. of Entomology, Purdue Univ., West Lafayette, IN 47907.
ZALINSKI, MARK, 3224 Toth, Saginaw, MI 48601 (Student).

Herig, T. L., 5903 Cutler Rd., Dewitt, MI 48820.

New Sustaining Members

HANNA, MURRAY, 654 Cornell Ave., East Lansing, MI 48823.
FISCHER, DR. ROLAND L., Dept. of Entomology, Mich. State Univ., East Lansing, MI 48824.
SHERWIN, EDWARD A., M.D., 6519 Pinehurst, Dearborn, MI 48126

Address Changes

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KLOPSHINSKI, RICHARD, 409 Howard St., Delta, CO 81428.
PAUSCH, ROBERT D., 411 S. Third, St. Joseph, IL 61873.
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ROBERTSON, DAVID J., FL Inst. of Phos. Res., 1855 W. Main St., Bartow, FL 33830.
SHEPHERD, JACK C., 21108 Robingwood, Farmington, MI 48024-3039.
CANNON, WILLIAM N., JR., USDA Forest Service, 359 Main Rd., Delaware, OH 43015.
CANTRALL, IRVING J., 1531 Las Vegas, Ann Arbor, MI 48103.
CHARLES, PIERRE-JEAN, DR., INRA Station d' Ecologie, Domaine de 1'Hermitage, Pierroton - 33610 - CESTAS, FRANCE.
DAVIDHIZAR, JOANNE, 13218 Vischer, Addison, MI 49220.
FINK, THOMAS J., 201 Biology Bldg., Univ. of Utah, Salt Lake City, UT 84112.
GALL, WAYNE, 36 St. Marys St., Lancaster, NY 14086-2016
HAACK, ROBERT A., Pesticide Research Center, Michigan State Univ., East Lansing, MI 48824.
KNIGHT, ALLEN W., Dept. of L.A.W.R., Univ. of California, Davis, CA 95616.
KOEHN, LEROY C., 19121 Nottingham #703, Cleveland, OH 44110.
MCCABE, TIM L., Cultural Education Center 3132, Albany, NY 12230

(Cont. on next page)

SASTRY, K.S.S., 19016 Mills Choice Rd. #4, Gaithersburg, MD 20789.
SCHAFER, JAMES, 6427 Lederer Ave., Candga Park, CA 91307.
SHEPHERD, JACK C., 6508 Gloverton, Waterford, MI 48095-1303.
STOAKS, RALPH D., 8047 El Capitan Dr., La Mesa, CA 92041.
TAFT, WILLIAM, JR., 314 N. Bridge St., P. O. Box 675, DeWitt, MI 48820.
WARD, ROBERT D., 10361 Steamboat Landing Ln., Burke, VA 22015.
WEINTRAUB, JASON D., Section of Ecology & Systematics, Corson Hall, Cornell Univ., Ithaca, NY 14853-0239.
YOUNG, DANIEL K., 5835 Winchester, Marshall, WI 53559.

ROTH, JAMES C., 260 Lee St., #204, Oakland, CA 94610.
RUSH, PETER A., USDA Forest Service, Forest Pest Mgt., 1992 Folwell, St. Paul, MN 55108.
TOCZEK, DONALD R., 1771 N. Lk. Pleasant Rd., Hillsdale, MI 49242.
WEBSTER, REGINALD P., Dept. of Entomology, Univ. of Massachusetts, Amherst, MA 01003.

Why is it, despite the tent caterpillars, gypsy moths and other defoliators we had last summer, there is still no decrease this fall in the number of leaves to be raked?

MICHIGAN ENTOMOLOGICAL SOCIETY
FINANCIAL STATEMENT, 12 MONTHS ENDING 31 DECEMBER 1983

RECEIPTS

Savings Account Interest	$ 375.50
Dues	2,800.00
Subscriptions, THE GREAT LAKES ENTOMOLOGIST	2,203.00
Sale of Separates to Authors	1,883.01
Sale of Back Issues, Journal and Newsletter	120.58
Subsidy (page costs)	4,713.30
Donations, Decals, Misc. Income	33.00
TOTAL RECEIPTS	$ 12,128.39

DISBURSEMENTS

Checking Account Charges		1.52
Publication Expenses:		
NEWSLETTER, print and mail	$ 1,341.93	
JOURNAL, compose, print, mail	6,877.17	8,219.10
Postage, Mailing Fees, Mailing Permits		667.01
Addressograph, Graphic Services		88.16
Supplies, Equipment		153.28
Annual Meeting Expenses		469.75
Misc. (Copyrights, 4-H Foundation, Bond, etc.)		235.00
TOTAL DISBURSEMENTS		$ 9,833.82

Arthropod List

ARTHROPOD SPECIES IN CULTURE. Edited by W. A. Dickerson et al. The most comprehensive list of arthropod colonies in existence. Includes over 1,000 colonies comprising 480 species in 109 taxonomic families (maintained at over 200 facilities in the U.S. and 19 foreign countries). An invaluable reference tool for entomologists, zoologists, and anyone involved in arthropod rearing. 93 pages Soft Cover, ESA Member Price $5.95; non-member price $8.35.

Directory

DIRECTORY OF NORTH AMERICAN ENTOMOLOGISTS AND ACAROLOGISTS. Edited by William B. Hull and Gerald C. Odland. If you need to know who's doing what and where in entomology, then this is the book for you. The result of a massive survey of North American entomologists and acarologists, this directory contains separate alphabetical, geographical and discipline sections, all carefully cross-referenced to give you the Who, What, and Where on over 4,800 professionals in the field. 189 pages soft cover, $8.95. Mail to: Entomological Society of America, P.O. Box 4104, Hvattsville, MD 20781.

MICHIGAN ENTOMOLOGICAL SOCIETY
STATEMENT OF FINANCIAL CONDITION
AS OF 31 DECEMBER 1983
(PERIOD OF 1 JAN. 1983 TO 31 DEC. 1983)

ASSETS

CURRENT ASSETS

Cash on Hand		$ 11,289.89
Accounts Receivable		1,625.00
Prepayments (Postal Fee)		40.00
Inventories:		
Postage	$ 1.48	
Supplies, Equipment	450.00	
NEWSLETTERS, at cost (est.)	450.00	
THE GREAT LAKES ENTOMOLOGIST, at cost (est)	4,500.00	
TOTAL CURRENT ASSETS		5,401.48
		$ 18,356.37

LIABILITIES

CURRENT LIABILITIES

Accounts Payable		$ 0.00
Prepaid Subscriptions:		
Volume 16 (No. 4)	$ 532.50	
Volume 17	1,385.00	
Volume 18	60.00	1,977.50
Prepaid Dues		658.00
TOTAL CURRENT LIABILITIES		2,635.50
SURPLUS		15,720.87
TOTAL		$ 18,356.37

MONIES OF THE SOCIETY, 31 DECEMBER 1983

Petty Cash	$ 00.00	
Checking Account	1,962.67	
Savings Account	9,327.22	11,289.89

MONIES OF THE SOCIETY, 31 DEC. 1982 (last fiscal report) . . . 8,753.44

MEMBERSHIP: As of 31 December 1983, the Society had 404 members in good standing--compared to 422 on December 1982.

SUBSCRIPTIONS: As of 31 December 1983, there were 142 paid subscriptions to THE GREAT LAKES ENTOMOLOGIST.

M. C. Nielsen
M. C. NIELSEN
Executive Secretary

Date: 14 April 1984

MICHIGAN ENTOMOLOGICAL SOCIETY

Membership Application

Please enroll me as a member of the Michigan Entomological Society, in the classification checked below.

- ☐ Student Member (including those currently enrolled as college sophomores)--annual dues $4.00
- ☐ Active Member--annual dues $8.00
- ☐ Institutional Member (organizations, libraries, etc.)--annual dues $15.00
- ☐ Sustaining Member--annual contribution $25.00 or more.

● [NOTE: Membership is on a calendar year basis (Jan. 1-Dec. 31). Memberships accepted before July 1 shall begin on the preceeding January 1; memberships accepted at a later date shall begin the following January 1 unless the earlier date is requested and the required dues are paid.]

I enclose $_____(cash, check, or money order) as dues for the calendar year(s)_____, appropriate for the class of membership checked above. (Please make remittance payable to Michigan Entomological Society).

NAME (please print)_____

ADDRESS_____

_____ ZIP_____

Please provide the information requested below, so that it may be included in our directory of members.

MY SPECIFIC INTERESTS ARE (orders, families, genera, geographical area)_____

_____

_____

● Publications: THE GREAT LAKES ENTOMOLOGIST, a journal dealing with all aspects of entomology with emphasis in the Great Lakes Region, and a quarterly NEWSLETTER. Persons requesting student membership must furnish proof of their student status. Student members cannot vote nor hold office in society affairs.

The Michigan Entomological Society, a non-profit organization, derives its sole support from membership dues, contributions, and bequests, all of which are deductible for income tax purposes.

▶ MAIL TO: Michigan Entomological Society, Department of Entomology, Michigan State University, East Lansing, Michigan 48824.

MICHIGAN ENTOMOLOGICAL SOCIETY

DEPARTMENT OF ENTOMOLOGY
MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48823

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