



NEWSLETTER

of the
MICHIGAN ENTOMOLOGICAL SOCIETY

Volume 44, Number 1

March 1999

45TH Annual Meeting of the Michigan Entomological Society 3, 4, & 5 June 1999

“Insect & Ecosystem Diversity in the Great Lakes Region”

The time is here to firm up your plans to attend this year's annual meeting. We will be holding our meeting at the Ralph A. MacMullan (RAM) Conference Center. It is located on beautiful Higgins Lake, 11 miles south of Grayling off Military Road and just one mile east of US-27. This natural setting provides an ideal location for our annual meeting and other insect and recreational activities. The RAM center has been hosting conservation and environmental meetings for over 50 years. It has on-site lodging and meeting buildings. The RAM also prepares its own hearty and savory meals. Map directions are on page 7 and on the enclosed RAM brochure.

This year's theme will appeal to a wide variety of interests. Our keynote speaker, Dr. Dennis Albert has developed a rationale for dividing the Great Lakes area into a series of biological regions. He will discuss how this system was derived and implications it has for faunal and floral distribution. The remainder of our meeting will focus on two complimentary areas: distributions of various insect groups; and insect species whose habitats are threatened along with the challenges of protecting them.

Our meeting this year will begin Thursday evening with an open house. It is an ideal time to meet the speakers, chat with other attendees, and relax before Friday's talks. Do plan to arrive Thursday and join in the conversations!

We are again inviting poster displays and adding an invitation for equipment displays. Are you working as a student, avocational or professional, on a project that you could display as a poster? Even a photographic display of your favorite study areas, whether in the Great Lakes area or not, would be interesting to others. Have you developed equipment or a technique for recovering or studying insects that could be presented as a display? You don't have to be a "pro" to have a good idea, but it doesn't hurt either! Be a "showoff" and do a display. Time is being set aside for presenters to staff their poster or display and explain their work to others.

Meeting activities will continue Friday evening and Saturday. For those interested in surveying at night, black lighting will be offered. On Saturday, the area provides a number of activities for insect surveys as well as an opportunity to observe Kirkland's warblers, a species that is unique to the area.

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Costs for meals and lodging are located on the Pre-registration form. For individuals that prefer off-site accommodations the 3 closest options are:

1. DNR Higgins Lake North Campground is adjacent to the conference center, has 218 campsites and 429 acres. \$15/night. Reservations: (800)447-2757.
2. Holiday Inn is located at the south end of Grayling. Double or single rooms are: \$75 on 3 June and \$94 on 4 June. Reservations: (517)348-7611.
3. Days Inn is located next to the Holiday Inn. Double or single rooms are: \$69 on 3 June and \$79 on 4 June. Reservations: (800)329-7466.

If you plan to lodge at the RAM, you are encouraged to submit your reservations as soon as practical. Other groups are meeting concurrently and your early registration can help secure a room. Please call Ron Priest if you have questions, at: (517)355-1803; fax (517)353-4354; or evenings (517)349-7407.

Notices:

1999 Summer internship position. The Dow Gardens at Midland is advertising to fill a summer internship position as a research assistant. The intern would assist in field and/or lab work for a variety of research projects. Project topics include natural enemies in suburban garden settings, isopod ecology, vegetation sampling, and plant/insect interactions in greenhouses. If you are interested, please contact Jennifer Stoyenoff, The Dow Gardens, 1018 W Main Street, Midland, MI 48640-4292. Email: stoyenof@umich.edu

Butterfly Gardens and Educational Games. Contact Kathy Wildman by phone (614-965-2133) or by mail (PO Box 1069, Sunbury, Ohio 43074) to obtain a current list of items for sale, including butterfly garden designs, plants to attract butterflies, and several games.

Wanted. Michigan Orthoptera Records. Contact: Roger Bland, Department of Biology, Central Michigan University, Mt. Pleasant, MI 48859. Telephone: 517-774-3455; FAX 517-774-3462.

New Publication. Cathy Bristow and Barb Stinnett of the Entomology Department at Michigan State University have teamed up with Pennsylvania State University to produce a new newsletter, "Bug Bits," for amateur entomologists, kids and teachers. There is a special insert with activities for classroom use.

MOS Spring Meeting. The Michigan Odonata Survey will be holding its Spring 1999 meeting on Saturday, March 27 in Ann Arbor at the University of Michigan Museum of Zoology. The meeting will be held in Room 1088 from 2-5 PM. This meeting will feature slide shows, a chance to meet others interested in dragonflies, and some brainstorming for the season's activities. For more information, contact Mark O'Brien at 734-647-2199, or email at mfobrien@umich.edu.

MOS Volunteers Wanted. The Michigan Odonata Survey is looking for volunteers to survey various sites across Michigan. If you are interested in aquatic systems, and would like to know more about the dragonflies and damselflies in your area, this is a great opportunity to find out what species are present in your area. Sampling for odonates does not require much in the way of equipment, especially if one samples for exuviae or larvae. To get more information, check out the MOS web site at: <http://insects.ummz.lsa.umich.edu/michodo/mos.html>.

MOS Newsletter. The Michigan Odonata Survey newsletter, Williamsonia, is published quarterly, and contains news about Michigan and Great Lakes Odonata. If you would like a sample copy, email Mark O'Brien or write: Michigan Odonata Survey, Museum of Zoology, University of Michigan, Ann Arbor, MI 48109-1079.

Randy Cooper: New Editor of the Great Lakes Entomologist

Randy Cooper
16672 152nd Avenue
Spring Lake, MI 49456
Email: renzie@aol.com

I offer greetings to my fellow members of the Michigan Entomological Society. It is with much positive anticipation that I assume the editorship of The Great Lakes Entomologist. All of us can thank my predecessor Mark O'Brien for his many years as Editor in which he did much to enhance the professional status of our journal. So far the transition has been smooth due to Mark's careful preparation of a guidebook and software.

Now a little bit about myself. At about age 10, I picked up my first insect net. It was a cheese-cloth, coat-hanger and broom handle contraption my mother and father made for me from a diagram

I showed them. I truly "caught the bug" and gradually came to realize that I could make a profession out of this. After earning a B.A. in

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Biology from Valparaiso University, I went on to obtain M.S. and Ph.D. degrees in Entomology from the Ohio State University and the University of Georgia, respectively. Just before starting my Ph.D., I became engaged to my wife, Irene. My one "requirement" of her during our engagement was that she make an insect collection. This was a tall task for someone who majored in interior design and fashion merchandising! However, with a "little" help from me she did a fine job.

My early days of employment took us out to the East Coast where I worked for Rutgers University and the d-CON Company. In 1990 we were able to return to our native Michigan when I was hired as an IPM Agent for the Cooperative Extension Service. After the funding expired for my position, I moved on to the nursery business along Lake Michigan. For the last seven years I have been employed by Zelenka Nursery, Inc., a wholesale grower. Helping the nursery develop their IPM program has come naturally for me as my father was an avid gardener. It was among his perennials and flowering shrubs that I first started swinging an insect net more than 30 years ago.

I am an economic entomologist, but certainly an enthusiast of entomology in general. As I begin serving as your GLE editor, I know I have come a long way from the day in 1968 when I decided to "publish" a magazine for young people on insects called "Insect Life". After all, I was only 11 years old then. I now have the challenge of helping guide The Great Lakes Entomologist into the 21st century. I know I have your support, and this will be greatly appreciated.

Fencing Out Pests

Cindy Spence

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Institute of Food and Agricultural Science
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<http://impact.ifas.ufl.edu/>

When the children at St. Mark Catholic School hit the playground, the biting sand flies in the mangrove marsh next door start smacking their little bloodsucking lips.

Like all their biting kin—mosquitoes, deer flies, horse flies and black flies—sand flies use carbon dioxide to locate a host. So the huffing, puffing children on the playground present a smorgasbord, said University of Florida (UF) researcher Jonathan Day.

“They are all beacons out there, flashing ‘blood meal, blood meal, blood meal,’” said Day, a UF entomologist.

But Day hopes to use the sand flies’ thirst for blood against them. Between the marsh and the playground he has built a fence that seeps carbon dioxide. By simulating a human presence, the carbon dioxide tricks the sand flies into making a detour and lures them into traps along the fence line. The date with dinner becomes a date with death.

The carbon-dioxide fence at the school is the first field demonstration of Day’s system. A test of a similar fence at UF’s Florida Medical Entomology Laboratory in Vero Beach caught 200,000 sand flies per night. Already, he said, the real world test looks promising, and parents of students at St. Mark agree.

“My kids would come home with terrible bites all over their bodies, almost as bad as chicken pox,” said Carol DeCanio, whose son and daughter attend the school. “It was very difficult sending the kids to school knowing they would come home with these bites.”

Since Day turned the fence on in April, however, DeCanio’s son Michael said things started getting better.

“It used to itch so much I couldn’t stop itching,” Michael said. “This helps because in the middle of class you’re not itching anymore. You’re doing your work instead of scratching your bites.”

Repellents provide limited relief because sand flies are so persistent, Day said. With populations in the millions near swampy areas, it is inevitable that some sand flies will find little patches of skin not treated with repellent and even crawl up under hair.

“Their bite is very painful,” Day said. “They really can make life unbearable sometimes.”

Day said future applications of the carbon-dioxide fence range from small-scale use by homeowners to large-scale settings such as sport fields and resorts. In the Caribbean, particularly, he said sand flies are “unbelievable,” even spreading certain livestock diseases and preventing recreational use of some islands.

“(The fence) helps because in the middle of class you’re not itching anymore. You’re doing your work instead of scratching your bites.”

The fence system would be easy to adapt.

The fence is a lattice of PVC pipe, hung with mesh panels coated with mineral oil. The pipes carry carbon dioxide and octenol, a chemical that sand flies mistake for water-buffalo breath, which they relish.

Day said the panels act as “centralized killing stations.” The carbon-dioxide/octenol brew draws the flies to the fence, where they get trapped in the mineral oil on the panels and die.

To evaluate how deadly the fence is Day places traps inside the fence on the playground. The playground traps consistently have a lower sand fly count. Day also turns the fence off

periodically to do bite counts, which always go up when the fence is not operating. Day said he hopes for a long-term impact on the overall sand-fly population after the fence has been running for months or even years.

“Historically, we’d treat a marsh like this one near the school with DDT,...”

Sand flies infest coastal Florida from Jacksonville south to Miami and north to Pensacola. Day said many control strategies have been tried against sand flies, also known as no-see-ums and winged teeth, but all have failed because of the insects’ complex biology.

The carbon-dioxide fence grew out of a 14-year research project to develop environmentally friendly techniques for trapping sand flies. Mineral oil works beautifully because it is nontoxic and the sand flies are not strong enough to fly out of it.

“Historically, we’d treat a marsh like this one near the school with DDT, and that worked great. Later, we’d treat it with chlordane, and that worked great. The problem is DDT and chlordane stay in the muck forever, and now they’re banned,” Day said. “Besides, if you spray all the vegetation on the edge of the marsh with insecticide, you kill every insect that lands on that vegetation, not just sand flies.

“What we have essentially done is remove insecticide from the marsh. We bring the sand flies to the trap and catch them,” Day said. “So we’re not killing butterflies, fireflies, parasitic wasps or beetles or anything other than sand flies.”

UF and Air Liquide, an international company that produces carbon-dioxide gas, have patented the trap.

Condensed from: Impact 14(3): 14-15, 1999

US Forest Service Policy Letter on Noncommercial Collection of Insects on National Forests

Editor's note: On 15 May 1998 an internal letter was sent from the headquarters of the US Forest Service in Washington, D.C., to all Forest Service field offices. The purpose of the letter was to clarify the Forest Service policy for insect collecting on National Forest lands. Excerpts from that letter are printed below. Briefly, even if a permit is not needed, you should still contact each National Forest that you plan to visit to see if there are any areas that have been closed to collecting or if there are any other concerns. A Forest Service directory can be found at: <http://www.fs.fed.us/intro/directory/>

"This memorandum addresses the national inconsistency that exists in determining whether a special use authorization is required for the noncommercial collection of insects on National Forest System (NFS) lands.

Further direction is necessary primarily because the current regulations do not specify by example the noncommercial recreational collection of insects as an activity not requiring a special use authorization. Consequently, Forest Service Officers have been inconsistent in requiring or not requiring an authorization for this kind of activity.

Inconsistencies have occurred, in particular, with respect to organized collection activities for noncommercial purposes, specifically those that are conducted for research purposes, those conducted by universities, and collections by clubs or societies whose members share common interests in the study and/or collection of insect species. These types of collections have been considered by some Forest Service Officers to be a special use, while others have exempted them from the need to obtain an authorization.

Generally, the noncommercial collection of insects by Forest visitors, either in small groups or by individuals in pursuit of a personal interest, should be managed as a noncommercial recreational activity which does not require a special use authorization. Examples would include noncommercial recreational collections organized by clubs or hobbyist organizations. An authorization should be required for those insect collection activities that are not recreational in nature. Examples could include collections that are organized and conducted by universities, research institutions, and professional societies for nonrecreational purposes.

Some Forest Service field staff may have concerns about specific insect populations or species-specific pollinators. Where otherwise unregulated collection activities are a resource management concern, Forest Supervisors may exercise their authority to regulate this type of use by issuing a closure order. All parties, whether commercial or noncommercial, recreational or nonrecreational, are obligated to comply with Forest Service orders and with other Federal, State, and local laws and regulations that may apply to insect collecting activities on NFS lands. These include state wildlife and/or agricultural regulations, regulations designed to protect threatened or endangered species pursuant to the Endangered Species Act, and requirements to maintain viable populations pursuant to the National Forest Management Act. Likewise, if a particular noncommercial, recreational collection effort will involve the gathering of 75 or more people, authorized Forest Service Officers should require a noncommercial group use permit for the activity."

ESA Exotic Insect Pest Committee Seeks Suggestions

The Entomological Society of America has entered into a contract with the US Department of Agriculture to identify a list of potentially serious exotic insect pests to United States agriculture, including forest pests. The ESA selected a team to coordinate the review and draft a final report to be presented to USDA.

Team members:

William F Gimpel, Jr.,
Maryland Department of Agriculture, Annapolis
Susan E. Halbert,
Florida Department of Agriculture, Gainesville
Robert D. Waltz,
Indiana Department of Natural Resources, Indianapolis, Chair
Victoria, Y. Yokoyama,
USDA ARS, Fresno, California

Species suggestions are being sought now. Reviews will begin March 1, 1999. The committee is currently soliciting input from researchers, taxonomists, forest entomologists, crop specialists, and others with knowledge of specific exotic insect pests that could become pests in the United States.

For purposes of this initial call, an exotic insect pest is any species not currently known to occur in the United States but which, if established, could become a serious pest. The committee is seeking seriously to list and consider as many as possible exotic insect pests that could become established on crops and forests in the United States. Your knowledge and suggestions are welcomed.

If you wish to nominate a pest for consideration, you will be asked to submit information on the species scientific name, order, and family; its biology and life history; description of the damage that it causes; methods of dispersal; known or potential host plants; current world distribution; which USDA plant hardiness zones could it likely survive in; any known survey methods; any known control methods; and any relevant references.

To obtain the proper forms, please see details in the box below:

Forms to nominate an exotic pest for the committee's consideration may be obtained by calling

***Robert D. Waltz, Chair
Phone 317-232-4120
FAX 317-232-2649
e-mail waltz@dnr.state.in.us***

Michigan Entomological Society
DRAFT Annual Meeting Agenda DRAFT

Ralph A. MacMullan (RAM) Conference Center
Higgins Lake, Roscommon, MI
3, 4, & 5 June 1999

THURSDAY - 3 June

3:00 – 9:00 PM LODGING REGISTRATION – Administration Bldg.
4:00 – 5:15 PM MEETING REGISTRATION – Conservation/Education Bldg.
5:30 – 6:15 PM DINNER – Administration Bldg.
7:00 – 10:00 PM RECEPTION – Conservation/Education Bldg.

FRIDAY - 4 June

7:15 – 8:00 BREAKFAST
8:00 – 9:00 MEETING REGISTRATION – Conservation/Education Bldg.
9:00 – 9:15 Welcome Ronald Priest, President-Elect
9:15 – 10:15 Keynote Address: Great Lakes Regional Ecosystems Dennis Albert, Ecologist, MINFI
10:15 – 10:45 MI Natural Features Inventory: Goals and Challenges Judith Soule, Director, MINFI
10:45 – 11:00 BREAK
11:00 – 11:45 Great Lakes area Trichoptera Brian Armitage, Director, OH Biol. Survey
11:45 – 12:45 LUNCH
12:45 – 1:15 Poster/Display Session
1:15 – 1:45 Insect Conservation: MI Nature Conservancy Christopher Clampitt, Ecologist, MI-TNC
1:45 – 2:30 Lepidopteran Ecoregions of Ohio Eric Metzler, OH Lep. Survey
2:30 – 2:45 BREAK
2:45 – 3:15 Endangered Species Program: Goals and Challenges Raymond Rustem, MDNR, Nat. Heritage Prog.
3:15 – 3:30 Michigan Lepidoptera Survey Robert Kriegel, MI Lep. Survey
3:30 – 3:45 Michigan Odonata Survey Mark O'Brien, MI Odonata Survey
3:45 – 4:00 MI Butterflies & Skippers: A Field Guide. Mogens Nielsen, #1 MI Lepidopterist
4:00 – 4:15 BREAK
4:15 – 5:00 Business Meeting Leah Bauer, President, MI Ent. Society
5:00 – 5:30 Open
5:30 – 6:15 DINNER
7:30 – ??? Night Insect Surveys

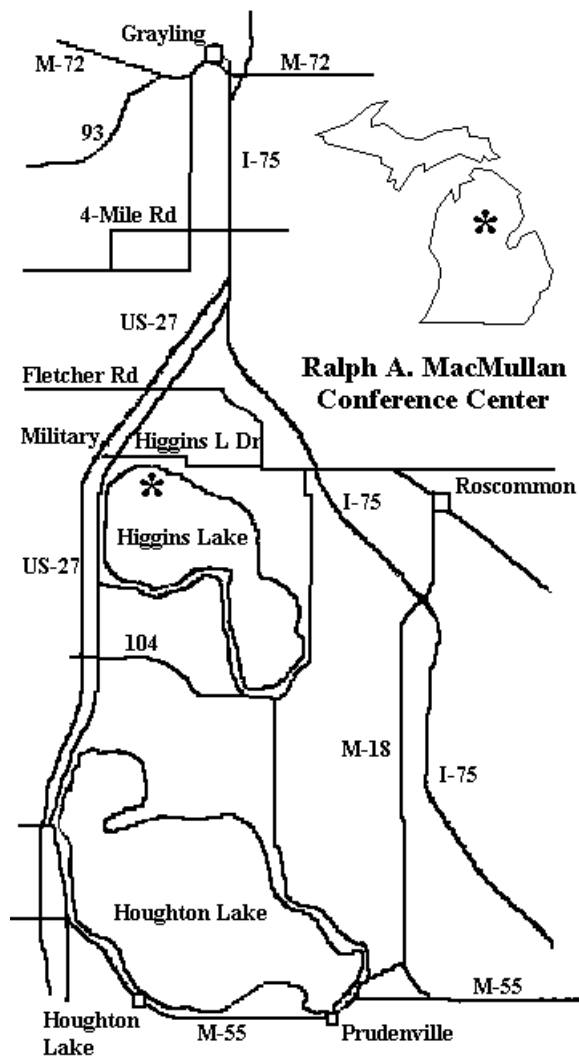
SATURDAY - 5 June

7:15 – 8:00 BREAKFAST
9:00 – ??? Daytime Insect Surveying, Nature Photography, Hiking, Kirtland's Warbler Viewing, etc.

Location for MES Annual Meeting 3, 4, & 5 June 1999

**R. A. MacMullan
Conference Center
104 Conservation Drive
Roscommon, MI 48653**

**Phone 517-821-6200
FAX 517-821-8878**



Highlights of the 1999 Mitchell's Satyr Working Group Meeting

Mark Hodgkins

U.S. Fish and Wildlife Service
2651 Coolidge Road, East Lansing, MI 48823
Email: mark_hodgkins@mail.fws.gov

The 1999 Mitchell's Satyr Working Group Meeting was attended by 17 representatives of the Michigan Department of Natural Resources (DNR), Michigan Natural Features Inventory (MNFI), The Nature Conservancy (TNC), and the U.S. Fish and Wildlife Service (FWS). Those who were involved in research and monitoring last year had some exciting news to report.

MNFI reported observations of Mitchell's satyr at four sites where they have not been observed for many years, some not since 1986. The best current estimate for the number of populations range-wide is 13 to 17.

Time constraints and land access were barriers to more accurate survey numbers. MNFI continues with their land owner contact and registry programs. Fifty-four sites were visited in 1998.

TNC conducted an analysis of vegetation change at 5 sites that host the Mitchell's satyr. The work is a continuation of Will Makinnon's with new technology, specifically Image Analysis, an extension of the Arc View program. 1938 and 1988 aerial photos were digitized and compared. Other work included continuation of butterfly surveys via Pollard transects, habitat use characterization, and defining weather predictors of behavior.

Ms. Jennifer Szymanski, a FWS employee, has been conducting research on two satyr populations in Berrien County for two years. Her research included mark-release-recapture (MRR) studies, which yielded insights into residence rates, movement patterns, and habitat use.

Estimates of total adult population size ranged from 164 to 362 at one site and 164 to 372 at a second site. More complete research results will be published soon. No nectaring by adults was observed during the entire study. Six oviposition events were observed: 1-12 eggs were laid per event and all occurred on the undersurface of very tiny forbs.

Ms. Szymanski also conducted captive larval rearing studies last year, 42 eggs that were collected from 8 females. Of these, 38 eggs hatched. Larvae suffered high mortality at first, until high humidity conditions were achieved. Five food preference experiments were conducted with 2-5 individuals in each. Despite the small sample sizes, a preference for mature, sun-grown sedge was observed.

Ms. Szymanski will be continuing her research during the 1999 field season. Results of her research should be available in the year 2000. Those interested in obtaining further information or sharing insights about Mitchell's satyr research can contact her by phone (612) 713-5342 or E-mail (jennifer_szymanski@mail.fws.gov).

**When?
Where?**

Saturday, 20 March 1999
9 AM until mid-afternoon
Room 244
Natural Science Building
East Circle Drive, MSU
(above the Bug House)

**Breaking Diapause
20 March 1999**

**Sponsored by the
Michigan Entomological Society
and
Michigan State University**

*Sure, you don't want to break anything, but it's
OK to break diapause!*

*Let's get the entomuscles in shape for the 1999
field season while getting a jump on spring!*

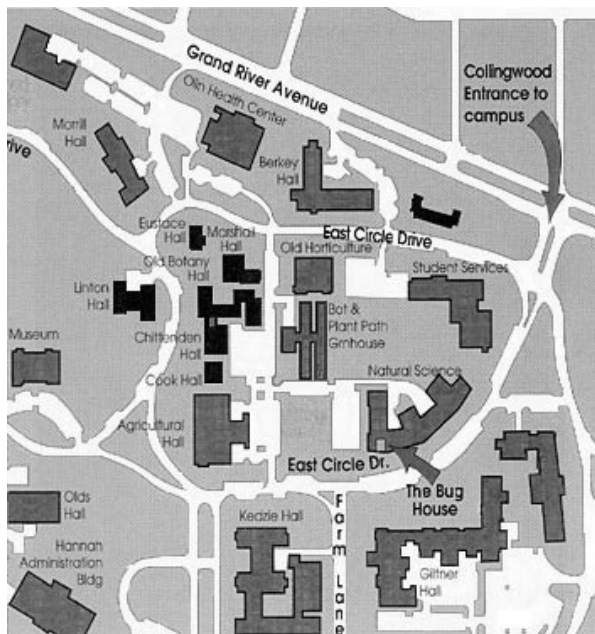
*Bring along your unidentified insects. The
museum will be open and folks available to show
you around if you're not familiar.*

*In addition to socializing with a variety of profes-
sional and avocational entomologists, there will be
plenty to do, including: sign up for a field trip,
look at various maps of the USA by county and by
watershed, exchange literature, show slides, look
over the current price list for entomological equip-
ment from Rose Engineering, and see sample cover
styles for binding journals or other softcover tomes.*

Refreshments will be provided.

For more information, contact:

Ron Priest by phone at (517) 355-1803



MICHIGAN ENTOMOLOGICAL SOCIETY



DEPARTMENT OF ENTOMOLOGY
MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48823

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