

NEWSLETTER

MICHIGAN

ENTOMOLOGICAL

SOCIETY

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SIXTH

ANNUAL MEETING

ANN ARBOR

MARCH 26

THE NEWSLETTER OF THE  
MICHIGAN ENTOMOLOGICAL SOCIETY

VOL. 4, NO.1

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The Michigan Entomological Society is a state organization devoted to the study of insects. The group is an outgrowth of the former Detroit Entomological Society. It has three branches; one in Ann Arbor, associated with the University of Michigan; one in Detroit, associated with Wayne State University; and one in East Lansing, associated with Michigan State University. Membership is open to anyone with an interest in insects or other arthropods, and among the society's members are amateur entomologists, bee keepers, pest control operators, teachers, students, and professional biologists.

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OFFICERS

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| President . . . . .           | Roland L. Fischer<br>Department of Entomology<br>Michigan State University |
| President-elect . . . . .     | Warren H. Wagner, Jr.<br>Department of Botany<br>University of Michigan    |
| Executive-secretary . . . . . | S.K. Gangwere<br>Department of Biology<br>Wayne State University           |

Chairman of the Ann Arbor  
Branch, . . . . Theodore J. Cohn  
Insect Division,  
Museum of Zoology  
University of Michigan

Chairman of the Detroit Branch, . David L. Cook  
Department of Biology  
Wayne State University

Chairman of the East Lansing  
Branch . . . Roland L. Fischer

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A NOTE FROM THE EXECUTIVE SECRETARY

The Constitution of the Michigan Entomological Society states that "It shall be the purpose of this society 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 several means at its disposal to meet the challenge outlined in the Constitution. Its Annual Meeting offers members from all branches an opportunity to meet, to discuss their interests and problems, and to participate in an interesting program. These meetings have been well attended and enthusiastically received in the past, and we hope that the Sixth Annual Meeting to be held this month in Ann Arbor will not deviate from this pattern.

The responsibility for the second and probably most important function of the Society rests solely with the three branches. They hold monthly or semi-monthly meetings, the programs of which include short, non-technical talks, demonstrations, and films

designed to appeal to a wide group. To the extent that the branches are effective in their programs the Society is effective. Though the branch activities have usually been rewarding in the past and hold promise for the future, there is clearly room for improvement. While the branch officers bear this responsibility they can do nothing without the wholehearted cooperation and interest of the membership. Let us all get behind our respective branches and help improve them! Happily surprise your officers by volunteering your help in planning and giving programs, in handling some of the organizational duties, and in bringing in new members.

A third means, the Society has to help fulfill its aims is afforded by the Newsletters. These issues, though simple and unpretentious, entail considerable work on the part of the Executive-secretary but are well worth the effort if they accomplish what they are designed to do; namely, to report news of interest to the group. By doing so they give continuity to all of the activities of the organization and of its members. While the responsibility for the Newsletters rests with the Executive-secretary he can do nothing without the help of each individual member. Only if each member takes the time to jot down notes on his personal activities will there be sufficient news to make possible regular Newsletters. Won't you help in this way?

It should be pointed out that the Constitution provides that only paid members may receive the Newsletter, so that it behooves each member to mail in his check today. It should be made payable to the MICHIGAN ENTOMOLOGICAL SOCIETY. Dues are \$1.00 for student membership, \$2.00 for active membership, and \$25.00 or more for sustaining membership.

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The Sixth Annual Meeting of the Michigan Entomological Society will convene at 1:00 P.M., Saturday, March 26, in the Seminar Room, University of Michigan Museum of Zoology, Ann Arbor, Michigan. It will be preceded by a luncheon at 11:45 A.M., in Conference Room #1, Michigan League (not Michigan Union). This room was chosen on the basis of the number of reservations received, but additional members can doubtlessly be accommodated.

The following is the agenda of the Sixth Annual Meeting:

11:00 A.M. Meeting of the Governing Board, Michigan Entomological Society. Seminar Room, Museum of Zoology, University of Michigan.

11:45 A.M. Luncheon. Conference Room #1, Michigan League.

1:00 P.M. Business meeting. Seminar Room, Museum of Zoology, University of Michigan.

1:15 P.M. Scheduled papers.

Some leafhoppers of the East Lansing area (1954-1956) . . . . . Oscar Taboada

Family limits in the Trypetoidea as indicated by the male postabdomen . . . . . George Steyskal

The sibling species of the Schistocerca alutacea complex . . . . . T. H. Hubbell

Some relationships of tree swallows (Irido-  
proene bicolor) and arthropods . . . . .  
Mary-Elizabeth Whelan

Phylogeny of the water mites . . . . .  
David Cook

Modification of the furcula in the Collembola  
Richard Snider

Muscular mechanisms of the abdomen in bees . .  
Roland L. Fischer

Notes on the biology of Trypoxylon (Trypoxylon)  
pennsylvanicum Saussure . . . . .  
Sylvan Thomas

Beekeeping in action, an 8 mm. color film ...  
Fred Dittmer

Some notes on Michigan Microlepidoptera . . . .  
Ralph Beebe

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#### DETROIT BRANCH NEWS

On Wednesday, Nov. 18, the Detroit Branch met in Room 311, Science Hall, Wayne State University. There was a brief business meeting followed by the program which consisted of Stan Gangwere's talk on "The phylogenetic significance of feeding behavior in Orthoptera." Approximately thirty persons attended. On Wednesday, Dec. 9, in the same room, the Detroit Branch met to hear George Steyskal's discussion of the First Annual Meeting of the Entomological Societies of Canada, Ontario, and America, recently held in Detroit, and Gottfried Hogh's talk on

oviposition habits of certain Tenthredinidae. Approximately twenty persons attended. There was considerable discussion after each of the above papers, and it continued during the coffee hour following the meetings. The next meeting of the branch will be held in April. The program is to be announced.

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#### ANN ARBOR BRANCH NEWS

The officers for 1959-'60 are Ted Cohn, Chairman, Irving Cantrall, Vice-Chairman, and Thad Curtz, Secretary.

The first meeting of the term was held Nov. 6. It included the traditional informal discussion of the summer activities of the 13 members present. Irving Cantrall described at some length his trip to Mexico with Ted Cohn and illustrated his talk with slides.

The next meeting, Dec. 11, attracted 17 members. It featured a talk by Warren Wagner on "Insects and pollination." Accompanied by a liberal supply of flowers and, when these ran out, by colored slides, he discussed the numerous adaptations of flowers for pollination and some of the evolutionary aspects of this interrelation between flower and insect. Henry Townes exhibited his tent-like wind trap, which produced during the summer and fall a steady supply of ichneumon wasps, many of them hard to collect by other methods. Dennis Owen exhibited the mercury discharge lamp which he has used very successfully for moths.

For the third meeting, Feb. 6, Henry Townes gave a talk on "The beginnings of entomology in America." He discussed the nature of the study of entomology in Europe during the 17th and 18th centuries as back-

ground for the early studies of insects made in this country. He traced American entomology up to the development of school, museum, and governmental centers of entomology. Fred Dittmer followed with a film which he produced, acted in, and directed himself. It illustrated the yearly cycle in the bee yard, both of the bees and and of the beekeeper. Sixten persons attended this meeting.

The March 4 meeting drew a capacity crowd of 27 persons, as well as the greatest amount of electronic equipment ever used in a Michigan Entomological Society meeting. Frank Ammermann, the speaker, used a closed-circuit television system with a 16 mm. table top camera to describe the "Ways of the Weevils." He demonstrated the relationship between structure, especially that of the beak, the selection of oviposition host plant, and the nature of the oviposition. Donald Maynard gave the seond talk of the evening, entitled "Brains and the beast, the functioning of the insect nervous system." He discussed the general structure of the insect nervous system, compared this and its functioning with that of the vertebrate system, and compared their potentialities and limitations. He illustrated his talk with slides and demonstrated nervous discharge in the leg of a roach.

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#### PROGRESS REPORT ON MICHIGAN LIST OF INSECTS

Henry Townes reports that the state list of insects, announced in last year's Newsletter, is now well underway. R. R. Dreisbach is general editor and is responsible for all groups not assigned to others. He has had a typist hard at work on the project during most of last year. Specialists working on the list include, among others, Henry Townes

(Ichneumonidae and parasitic Hymenoptera), Irving Cantrall and T.H. Hubbell (Orthoptera), George Steyskal (Otitidae, Sciomyzidae, and various other Diptera), Frank Ammermann (Rhyncophora), M.C. Nielsen (butterflies), Tom Moore (Cicadidae), Gordon Gill (Helomyzidae), Jack Newman (Macrolepidoptera, except butterflies), Richard Malcolmson (Mallophaga), Arland Edgar (Phalangidae), Leslie Drew (spiders), LaVerne Curry (Tendipedidae), Justin Leonard (aquatics), and Roland Fischer (bees). Many specialists residing outside the state are also engaged in work on the project.

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#### NEWS FROM THE MEMBERSHIP

A recent request for news resulted in a most gratifying response. In fact, there is so much information that a second Newsletter will be issued toward the latter part of the spring. To those whose accounts appear below, the Society is grateful. Those whose accounts are not used may expect them in the next issue. Again, we exhort you to keep the news coming! the more news, the more Newsletters.

TOM MOORE, Insect Division, University of Michigan:

"In June I flew to Veracruz, Mexico, for a 15-day field trip to record and collect Homoptera, Hemiptera, and Orthoptera in Veracruz and Oaxaca. The data on all of the Hemiptera and Homoptera that I collected is included in a paper now in press on audiospectrographic analysis of noises produced by these groups.

"The last two weeks in May, Dick Alexander and I were in Missouri, Arkansas, Illinois, Kentucky, Tennessee, and Mississippi studying the behavior, acoustics, and distribution of 13-year cicadas. As a result of this work, we distinguished three species

of 13-year cicadas and a third species of 17-year cicadas and came up with an hypothesis for the evolutionary relationships of periodical cicadas.

"During the month of August I took my family on a cicada collecting-recording trip on which our ultimate destination was the Big Bend Region in Brewster Co., Texas. This jaunt was interrupted by a quick trip to the Florida Keys to record and collect Diceroprocta bicosta, known only from the Keys. On the way to and from Texas we recorded and collected animals in many parts of Missouri, Arkansas, Louisiana, Oklahoma, Kansas, Iowa, and Illinois. This was an extremely profitable trip. Twenty-one species of cicadas were recorded and collected and, in addition, several species of other Homoptera, Hemiptera, and Orthoptera were taped and collected.

"I was chairman of the General Entomology Section of the North Central Branch of the Entomological Society of America this year, and I organized a symposium on "Mechanisms of Species Dispersal" for the annual meeting in March. In March I presented a paper on audiospectrographic analysis of sounds of Hemiptera and Homoptera at the North Central Branch meetings, and this past November I gave an invitational paper on the evolutionary relationships of 17-year and 13-year cicadas at the Chicago meeting of the Society for the Study of Evolution."

STEPHEN HUBBELL, TOM PLISKE, and TIM NEWCOMB, who were accompanied during the first three weeks by BOB WYMAN, made a two-months trip by car last summer to collect Lepidoptera in the western states. They spent about two weeks in the high Rockies of Colorado, proceeded to the Olympic Peninsula of Washington, went down the coast to San Francisco, and then up into the Sierras, spending a few days in the Yosemite

Valley; thence they returned to the high elevations in Colorado for another period of collecting, and from there went in a single uninterrupted drive to Brownsville, Texas. From that point they worked along the Texas coast, and then headed home.

In Colorado they were particularly successful, securing material of nearly all the high altitude forms known from the state, as well as many new locality records. The total number of specimens taken on the trip is estimated to be in excess of 10,000 specimens. The boys started with about \$150.00 apiece and came home with about \$20.00 between them.

The MICHIGAN LIST OF BUTTERFLIES that has been in process of revision for some years is now about to go to press. HERB WAGNER, ED VOSS, MOGENS C. NIELSEN, and JACK NEWMAN have revised SHERMAN MOORE'S old manuscript and have brought the distributional data and nomenclature up to date.

TOM PLISKE and STEPHEN HUBBELL had already completed their paper on the life history of Euptychia mitchellii when they discovered that WILBUR S. McALPINE had made a study of the same species nearly twenty years before but had not published his results. The three of them agreed to combine their data in a single joint paper, which has been completed and is being submitted to the Lepidopterists' News.

H.H. ROSS, Illinois Natural History Survey, Urbana, Illinois: "Last year an extremely fine set of winter stonefly records were collected and filled in much-needed spots on our maps. Two items of unusual interest cropped up. One of the Missouri-Arkansas populations proved to be distinct from its eastern counterpart, and a rather distinct little species was segregated from older collections of the forbesi complex. S.E. Neff

and Rev. Rene Malouin each picked up an additional record of this northeastern form.

"When the records are plotted on maps, however, we find that we are still a long way from having really well-spotted maps for all the species. A few puzzles keep cropping up. For Allocaupnia minima and the new species near forbesi we have records only from previously glaciated areas. It would seem that somewhere there should be a few relict populations of these species outside of glaciated terrain. So far, Allocaupnia sandersoni is known only from near Fayetteville, Arkansas. It seems that with these and other species many records of great interest should pop up, probably unexpectedly. Dr. Ricker and I would therefore appreciate it if you would again keep an eye open for these little winter stoneflies."

DICK FOX, Entomology Department, Clemson College, Clemson, South Carolina:

"Since my departure from East Lansing in 1958, I have been enjoying the sunny south and its rather different entomological aspects. My position is somewhat confusing to me inasmuch as each morning presents a major decision of which hat to wear: the teaching hat, the research hat, or the detection survey hat. For the sake of the latter two, my teaching is confined to the fall semester, the rest of the year being spent killing snakes and scratching chiggers. This, however, is wonderful country with a near perfect climate and a never-ending supply of new things for this danyankee to see.

"I am very pleased with Clemson College, and the future will hear from our Entomology Department as well as from our football teams. We have an excellent staff and are obtaining one or two more assistantships each year, each leading to the M.S. or Ph.D.

"A good deal of my time recently has been spent working over and building up our collection of immature insects. This is a very good collecting area and I will be quick to admit that many, many forms leave me cold even with the excellent training that I received from our past mogul, Roland Fischer. Most of the other research work has dealt with bark beetles and will continue along that line. At present, I am a howling success at failing to develop a technique for rearing these critters on artificial media, but never say die."

LAWRENCE THOMAS, 1284 N. Huron River Drive,  
Ypsilanti, Michigan:

Lawrence Thomas last spring showed his insect slides to the Science Club, Eastern Michigan University. Along with his young grandson, Jamie, he also reared tomato worms (*Phlegethontius*) and observed and photographed stages of their metamorphosis. Lawrence, accompanied by his wife, Maude, his daughter, Anne, and her husband, took a summer non-credit course at the University of Colorado, Denver, Colorado.

R.R. DREISBACH, 301 Helen Street, Midland, Mich.:

"My wife and I set out in our housetrailer and spent the summer collecting in Michigan, using a light trap and a Townes Malasian trap. Collections were made in 38 Michigan counties, and 24,000 specimens were pinned. These were labelled and 18,500 have been shipped out for determination.

"Sent out one paper describing 17 new species of *Priocnessus* from Mexico, Central and South America, and proof has been read. I am working on another paper on *Auplopus* from the same region, in which I am describing 75 new species. This paper includes keys to all known species and five pages of genitalia plates. In all, last year I wrote descriptions of 106 new species of spider wasps."

ADOLPH BEYER, 5145 N. Okemos Road, East Lansing, Michigan: "I am a retired entomologist, with 7 years experience with the U.S. Bureau of Entomology, 5 years as Assistant Entomologist of the Experiment Station of the University of Florida, and 24 years as Entomologist of the Michigan Department of Agriculture, cooperating with Michigan State University. Though retired, I am still interested in entomology and seek to render service when I can.

"Last summer I made collection trips in the vicinity of East Lansing during the early part of the season. During the latter part of the season, I did general collecting and experimenting with trap lights in the region of Traverse City. Last summer I presented a portion of my collection to the M.S.U. Entomological Museum. I plan a collecting trip to the northwestern part of the United States next summer."

DENIS OWEN, Edwin S. George Reserve, Pinckney, Michigan: "Several species of moth found in and around Ann Arbor have developed black forms which were once rare but which have become increasingly common. A similar phenomenon has occurred in Europe, where it has been found that black specimens are much more frequent in industrial areas than in the country; hence, the condition has been called "industrial melanism." The black individuals are evidently better adapted to living in cities than are the pale. The species most studied in Europe, Biston betularia, has a direct counterpart here, Amphydasys (Biston) cognataria, and I have been trying to ascertain the frequency of the black form of this species, and also to start investigations into the genetics of the form.

"On every fine night during the summer of 1959, I operated a mercury discharge lamp before a white

sheet, on which insects, including moths, settled. Collections were made in Ann Arbor and at the E.S. George Reserve. In all, I obtained over 100 A. cognataria, about 95% of which were black. It is known from old collections that the black form was once rare in this area, and, hence, it has increased in frequency. I plan to continue the work in 1960, also collecting specimens of other species which have black forms, including Phigalia titea, Ectropis crepuscularia, and Nacophora quernaria.

"I should be glad to hear from any collectors who have specimens, especially old ones, black or otherwise, of any of the above-named species, and I should also like to know of any collected in 1960. So far I have had very little luck in catching females of these species and am particularly anxious to obtain some for breeding purposes."

HENRY TOWNES, Insect Division, University of Mich.:

"I continued work on monographs of ichneumon flies. The first number (Subfamily Metopiinae) was published in 1959 and the second part (Ephialtinae, Koridinae, and Acaemitinae) is now in page proof. A third number (Mesostinini) is nearing completion. During the collection season several experimental models of a flight trap for insects, especially ichneumonids, were made, and three were put into operation. One such trap, which ran all season, collected 6,000 ichneumonids. A collecting trip was made to the Huron Mountains during the last half of July. Results: more ichneumon flies."

DR. HARLOW MILLS, Illinois Natural History Survey, recently visited the Entomology Department, Michigan State University, and DR. A. E. EMERSON, University of Chicago, will spend next term as a visiting professor on that campus.

The DEPARTMENT OF ENTOMOLOGY, MICHIGAN STATE UNIVERSITY, now has a twice-monthly television show which originates at 12:15 M., over W. M. S. B., Channel 10.

Recent masters graduates from the DEPARTMENT OF ENTOMOLOGY, Michigan State University, include DAVID CROSS (The effects of feeding various dosages of D.D.T. on Japanese quail), WILLETT VAN VELZEN (A survey of clover insects in Michigan), CHARLES GIBBONS (The biology of one of the oak leaf miners, Bucculatrix ainsliella), JORDAN TATTER (The biology of apple apids), and SYLVAN THOMAS (The biology of one of the twig nesting wasps, Trypoxylon pennsylvanicum).

GEORGE EICKWORT of the Department of Entomology, Michigan State University, has begun working on the taxonomy of one of the genera of bees, Lasioglossum. He has been awarded a National Science Foundation Undergraduate Fellowship. New students of the Department include TOM CASTRO from India; HANK GILES from Colorado; and ROBERT McCLANAHAN from Canada. R.J. SNIDER has begun work on the taxonomy and distribution of the Collembola of Michigan.

ROGER HOOPINGARNER, a recent Ph.D. graduate from the University of Wisconsin, has joined the staff of the Entomology Department, Michigan State University. He will have charge of courses in toxicology and physiology.

HENRY TOWNES, MARJORIE TOWNES, and V.K.GUPTA recently completed the bibliographic work for a catalog of the ichneumon flies of the Indo-Australian area. About 3,000 species are included.

STAN GANGWERE, Biology Department, Wayne State University: Gangwere has recently completed a two-year

study on feeding behavior in Arphia sulphurea, an oedipodine grasshopper, and Atlanticus testaceus, a decticine katydid. This project was supported by grants from the National Academy of Sciences, the American Philosophical Society, and the Graduate School of Wayne State University. One of the two papers which will result from this investigation is now in manuscript form.

His paper on "The feeding and culturing of Orthoptera in the laboratory" appeared in the January and February issues of Entomological News. Two other papers, "Notes on drinking and the need for water in Orthoptera" and "The use of the mouthparts of Orthoptera during feeding," are now in press. A film based on the latter paper will shortly be released commercially by the Auditory-Visual Services of Wayne State University.

Gangwere has also been awarded a salary grant by the Graduate School of Wayne State University. This grant, effective this summer, will enable him to devote the entire summer to the completion of a number of long put-off manuscripts.

TED COHN, Insect Division, University of Michigan:

Following hallowed tradition of the Museum of Zoology, IRVING CANTRALL and TED COHN made the annual pilgrimage to Mexico during the past summer and fall. Ted left early in order to survey the distribution of carnivorous katydids of the genus Rehnia in the northern part of their range in Texas and northeastern Mexico.

Cantrall arrived by air at San Luis Potosi and was greeted at the airport by tremendous crowds of cheering Mexicans, bands, mariachis, and an army honor guard, an honor rarely bestowed on entomologists and in this case marred only by the removal, under heavy police guard, of a champion prize fighter who had snuck aboard the same plane.

Cantrall passed up the comforts of a hotel and a restaurant to get to work immediately. Notes indicate that within a half hour of his arrival—and this includes time to change clothes—they had 200 grasshoppers, including a few new species and a toptype or two. Collecting in the high desert in this general area was particularly good, and they netted a great variety of species, proving that the early fall is the best season for grasshoppers in Mexico. One of the objects of the trip was to secure toptypes of species described many years ago, the types of which are in European collections. They were most successful in this by dint of very extensive collecting in places which figured to be the most accessible to collectors of the early 1900's. Unfortunately, at many of the localities they found so many closely related species, mostly new, that they had trouble identifying the toptypes.

Their route carried them from the high desert country in the state of San Luis Potosi through Mexico City, then, via the old colonial cities of Corboda and Orizaba, to the wet, hot coastal plain of Vera Cruz. Unfortunately, the traditionally bad weather here did not disappoint them, and they had several miserable days of rain, during which the grasshoppers, by staying under cover, seemed to have more sense than they did. Despite weather and almost total coffee cultivation the two adventurers got some of the animals they were after and demonstrated that Rehnias do not live in such moist environments.

Their route carried them down the coast to the wettest part of Mexico in the state of Tabasco. They were extremely disappointed with this region, reputed to be solid rain forest and swamp, because in the few years since the road was put through all the forest had been cut down, leaving only a few scattered gaint

trees. Near the base of the mountains they found extensive cultivation of cacao and again very little natural vegetation. Collecting during the day was very poor, only a few of the common and widespread species being present. At night, however, even in the cacao plantations they collected a good variety of native Orthoptera.

Thence across to the dry southwest coast via the Isthmus of Tehuantepec and down the sub-humid corridor in Chiapas. This corridor appeared to be more dry than sub-humid and yielded a poor variety of the same Orthoptera found on the dry lowlands around Tehuantepec. That area did yield a few of the most bizarre grasshoppers of the trip, as well as an unpleasantly large number of almost foot-long walking-sticks, which, unhappily, required special killing jars and packing.

They then worked their way up the Oaxaca road, and short of Mexico City swung west to Cuernavaca, and thence south through the hot, dry desert of the Rio Balsas Valley to Chilpancingo, where a genus closely related to Rehnia reaches its southernmost distribution. This area is of considerable historic interest and is dotted with type localities, which they worked very carefully and with a fair degree of success. After travelling over this road they developed a great admiration for the early entomologists who got into these areas without even the dubious modern improvements.

They returned to Mexico City and headed west through the high volcanic chain country, making side trips to the south of the Huetamo Road and to Apatzingan. At the latter place they found in great abundance a species of true katydid restricted to the Rio Balsas drainage and separated by hundreds of miles from its nearest relatives in Northern Mexico and Texas. These were so abundant as to make a continuous roar with their combined voices.

They also made a side trip to Colima, where, by automobile bad luck, they had collecting good luck. Forced to camp here, they made a tremendous collection of Orthoptera of all kinds, including a number of fantastic little created 'hoppers whose generic identity still remains secret.

The two adventurers then roared on to Guadalajara, where Cantrall was to catch the plane for home, but they made one stop before plane time in order to pick up some more topotypes and a nice series of other species. Cantrall managed to squeeze in among the 40-odd cigar boxes crammed with 8,700 specimens only his toothbrush and an extra handkerchief. Despite this he arrived home safely and just in time to sit in on a Museum staff meeting.

Cohn proceeded to the west coast and made a stop in the Culiacan region, where he made an intensive study of the interrelations of the two west coast species of Rehnia and then after five months in the fields returned home the long way—via Arizona and California.

DAVE COOK, Biology Department, Wayne State University:

This summer Cook is initiating a three-year study on the water mites of subterranean waters. His project is being supported by a National Science Foundation grant. He has also received a grant from the Graduate School, Wayne State University, to defray the cost of publishing a monograph on Liberian mites.

FRED TURNER, Biology Department, Wayne State University: "My wife, Mabel, and I were in Tempe, Arizona, where I was participating in an Institute of Desert Biology at Arizona State University. Using a 10-meter grid of buried tin cans we collected data

on the local distribution of various terrestrial arthropods in a creosote bush-burroweed area near Tempe. The ant Pogonomyrmex barbatus far exceeded any other species in numbers taken and seems to be randomly distributed. Tenebrionid beetles and a thysanuran were common. Two species of spiders were fairly abundant. Other types were mites, scorpions, solpugids, nymphal roaches, mutillids, other ants, and an isopod. Ted Spilman is still identifying the tenebrionids, so an analysis of the data is pending.

"A 2-day visit to the Southwestern Research Station in Cochise County was a part of the Institute program. All of the bug-buffs except me caught one or more of the beautiful green scarabs with silver lines (like a highly adorned Polyphylla crinita). I was told this form occurred only in the Chiricahua Mountains of Arizona, so I figured I was out of luck. However, in late July I got one—in Prescott!

"Entomologists participating in the Institute were Frank Beer, Oregon State; Kenneth Kraft, Moorhead State College; James Tilden, San Jose State; and Robert Sanders, Los Angeles Pacific College."