

ANNUAL NEWSLETTER

Department of Entomology
University of Illinois
at Urbana-Champaign
Urbana, Illinois

April, 1972

DEPARTMENTAL ROSTER, 1971-72

Faculty

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- Chadwick, Leigh E. - Professor of Entomology, Emeritus
- Decker, George C. - Professor of Entomology, Emeritus
- Fraenkel, Gottfried S. - Professor of Entomology
- Friedman, Stanley - Professor of Entomology
- Ghent, Arthur W. - Professor of Entomology and Zoology
- Horsfall, William R. - Professor of Entomology
- Jaycox, Elbert R. - Professor of Apiculture, Depts. Horticulture & Entomology
- Kearns, Clyde W. - Professor of Entomology
- LaBerge, Wallace E. - Professor of Entomology and Agricultural Entomology
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- Sternburg, James G. - Professor of Entomology
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As we come to Newsletter time again, we are most thankful to the gals in the office, Ruth Plymire, Judy Michael and Barb Hanner for their untiring effort and "willingness" to make it possible for the Newsletter to come out again. We also would like to thank Alice Prickett, staff artist from the School of Life Sciences, for her beautiful cover design which allows us to honor Dr. Fraenkel in this year of his retirement. We are also grateful to our graduate students, fellow colleagues, and all of you alumni who share your activities and allow us to present the information in the Newsletter each year and keep you appraised of departmental activities.

The Editor-JRL

MESSAGE FROM HEAD OF DEPARTMENT
Joseph R. Larsen

At the end of another successful year I would like to share with you the activities in Entomology at Illinois. While we were fraught with a great deal of change at the University during the past year, there seems to have been no dilatorious effect and in fact if anything, a strengthening of not only the department, but the University as a whole. Dr. Corbally was inaugurated as the 13th President of the University. Dr. Weir has taken over as Vice-Chancellor for Academic Affairs and Dr. Leon Campbell, former Head of Microbiology, assumed the reigns of Director of the School of Life Sciences.

At this University as with many institutions across the country we are suffering from severe budgetary stringencies and there seems to be less money available for doing the things we would like to do. However, we still have a vital and exciting program in the department. Our graduate student numbers have maintained themselves at approximately the same level though there were fewer applicants this past year. We hope this will be rectified in the coming year. We feel strongly that entomology has a vital role to play in those problems that confront not only this nation but the world and certainly entomologists have to be vitally involved in such problems as pollution and maintaining and being responsible for environmental control.

We are delighted to report that Dr. Clyde Kearns will be returning from his two-year stay in England and will again be with us on the first of June. We look forward to his return and know that he will bring back some stimulating experiences and research programs from his stay at the Sittingbourne laboratories of Shell Research.

While Dr. Gottfried Fraenkel will be retiring this year we are delighted to note that he will still be associated with the department and continue his active research programs as well as directing graduate student research. Dr. Fraenkel has made a very lasting impression on this department with his expertise and international renown and we are delighted to dedicate this issue of the Newsletter to him.

This year we have added an additional full time staff member to the department. Dr. Fred Delcomyn, a graduate from the University of Oregon who did his work under the direction of Dr. Graham Hoyle, will join our staff. For the past two years he has been working in the laboratories of Dr. Peter Usherwood in Glasgow, Scotland. Dr. Delcomyn will be coming to Urbana the first of September. He brings with him expertise in neurophysiology and we are delighted to add his background to the department. He has already done some excellent work in walking movement in cockroaches.

In spite of difficulties in terms of fewer positions available for students completing their work and some cutback in research funds and support from the state, we feel we have a serious responsibility in these important and critical times. We will continue to maintain our excellence and train outstanding young men and women who will give of their talent and ability in entomology to a world greatly in need of this kind of training. We will continue to maintain the tradition of excellence perpetuated by this department over the past. Our graduate students have excellent training and we feel are in a position to make a significant contribution to entomology. We look to you, our alumni, to help our graduating students find positions for the coming year and we appreciate your interest and dedication to Illinois. We are delighted that all of our students thus far have been able to find positions and we anticipate continued success in finding jobs for all of our graduates.

While we were unable to have an alumni breakfast at the Los Angeles meetings we are looking forward to getting together with all of you from Illinois at the meetings in Canada. We will be in contact with you to set up such a gathering. We look forward to a successful year and to our continued association with all of you who have helped make the Department of Entomology what it is today.

ACTIVITIES OF THE SCHOOL OF LIFE SCIENCES

As reported to you last year, the School of Life Sciences and the University were undergoing a great deal of internal change. In August 1971 Dr. L. Leon Campbell, former Head of the Department of Microbiology, was appointed Director of the School of Life Sciences.

It has become apparent from Dr. Campbell's brief tenure in office that there will be some additional change in the School of Life Sciences directly affecting the various departments of the School. Already there has been a centralization of some of the housekeeping activities. There will continue to be support of the interdisciplinary programs generated in the past. Realizing the need for continued support of these interdisciplinary programs in biology, a new member of the Executive Committee has been established in the form of a Coordinator of all biology courses being taught under the egis of the School banner.

We welcome Dr. Campbell in his new position and wish him success in his newly acquired responsibilities in the very important role of maintenance and development of new programs in the School of Life Sciences. Members of the faculty of the Department of Entomology continue to be involved in teaching responsibilities in the School. Dr. Judy Willis still has a very major responsibility in managing the Honors program in biology. Also Drs. MacLeod, Selander and Friedman have all had teaching responsibilities in the interdisciplinary programs in the School.

We are delighted with the selection of the new director. While these are times of extreme budgetary stringency, calling for difficult sacrifices on all our part, we look forward to continued growth and development, not only in the Department of Entomology, but in the School of Life Sciences. We anticipate exciting and innovative programs under the direction of Dr. Campbell in welding together the diverse departmental interests into a unified concept of biological sciences.

TRIBUTE TO G.S. FRAENKEL

Professor Gottfried S. Fraenkel takes up the position of Professor Emeritus in Entomology at the end of this academic year. In recognition of his achievements and the time and effort he has given to our department the decision has been made to dedicate to him this issue of the Newsletter. I am both pleased and grateful to have been chosen to write this dedication, pleased because it gives me an opportunity to share with you some of the contributions he has made to entomology over his long career and grateful because it provides me with an occasion to publicly mark the affection I hold for my colleague and friend of these many years. I hope that by taking you through a very abbreviated review of his work you will be as impressed as I by the enormous breadth of intellectual activity he has demonstrated throughout his career.

Fraenkel's early work (1925-1932)⁽¹⁾ on the orientation reactions of invertebrates provides no clue to the directions he was subsequently to take in research, but it does give us an indication that his future was to be bound up in an analytic rather than integrative approach to science. His intelligent extension and clarification of the mechanistic ideas of Loeb and Kuhn was first impressed upon me when in 1958, trying to work out a simple method of increasing the flight range of tethered Phormia, I went back to the literature and read his lovely (1932) description of flight reflexes in insects.⁽²⁾ From this I was drawn to his book with Gunn, entitled, The Orientation of Animals,⁽³⁾ probably the best effort extant which brings together and makes sense of the early experiments on kinesis and more complex orientation reactions in animals.

This first phase of his career ended in 1932 (long before publication of the book), with a massive work on insect migration,⁽⁴⁾ and by 1934 his love affair with the cyclorrhaphous Diptera had begun. This has continued off and on for 28 years. It is of special interest to note that his first paper on these animals, entitled "Pupation of flies initiated by a hormone,"⁽⁵⁾ and published on a single page in Nature in 1934, is not only a classic in insect endocrinology, providing us with one of the earliest evidences of the hormonal control of metamorphosis, but also contains the bio-assay used in the 1960's by Karlson's group to follow the purification and finally crystallization of the moulting hormone, ecdysone.

From 1935 through 1940 Fraenkel was consolidating his and our knowledge of blowflies, and out of those five years two important papers appear: one, with Pringle, establishing the function of halteres in the flight orientation of Diptera^(6,7) and the second, with Rudall, a quantitative study of cuticle structure.⁽⁸⁾ This latter continues to be a mine of information for more recent investigations on the same subject at the University of Illinois and by others.

In 1940, under pressure of England's wartime restrictions Fraenkel moved in a different direction, opening an entirely new field of insect physiology, that of insect nutrition. The general similarities between insect and mammalian requirements were established in his laboratory⁽⁹⁾ as were the absolute sterol requirement for all insects⁽¹⁰⁾ and the long

chain unsaturated fatty acid requirements for certain species.⁽¹¹⁾ He arrived at the University of Illinois in 1947, and in 1948 he announced a new insect vitamin, B_t, required by a single family of beetles.⁽¹²⁾ This compound, later identified by a group of chemists as carnitine, was shown by Fraenkel to be distributed across the entire animal kingdom,⁽¹³⁾ and his laboratory established its involvement in acyl transfer reactions.⁽¹⁴⁾ It has recently been found to be of general importance in animals in the transport of fatty acids across mitochondrial membranes. His studies on insect nutrition also led, in 1956, to a theory concerning host preferences based on secondary plant compounds⁽¹⁵⁾ which has, in effect, kept Fraenkel in the center of an ongoing debate concerning the evolution of defense mechanisms in plants.

By 1962, his contributions had so established the field of insect nutrition that with the exception of investigations concerned with examining the validity of some of the ideas set forth in his host selection papers⁽¹⁶⁾ he once again looked elsewhere for his primary research effort. Turning back to his flies, he immediately discovered a hormone involved with adult tanning,⁽¹⁷⁾ which he named Bursicon, and to which he attributed a significance extending beyond the Diptera.⁽¹⁸⁾ Work continued here for five years with some success in establishing the locus of action of the hormone,⁽¹⁹⁾ and recently other laboratories have taken it up, demonstrating the correctness of his interpretation by showing its importance in the darkening of cockroach and locust cuticle after ecdysis. Most recently (1969-present) he has undertaken studies on other aspects of hormone action. These investigations already appear to have borne fruit, complicating the simplistic views we have had concerning the action of ecdysone in puparium formation.⁽²⁰⁾

In this short review I could not hope to do justice to the content of those contributions I had space to mention, nor could I touch on many of the less well known but equally interesting investigations into such phenomena as salivary secretion,⁽²¹⁾ respiration,⁽²²⁾ symbiosis,⁽²³⁾ cuticular calcification⁽²⁴⁾ and temperature adaptation in marine invertebrates.⁽²⁵⁾ However, in spite of the shortcomings of the survey, the use of any of the usual criteria for success in science would establish the very high degree of professional competence exhibited by Professor Fraenkel. Yet, I do not think that this judgment would completely satisfy most of us who have seen him in action. It is not the quantity or variety of work which so overwhelms us, but rather the exquisite simplicity of the initial experiments in so many areas which have led so directly to the breakthroughs. For those of you who have never had the opportunity to read them, I recommend a perusal of some of the papers listed below. They reveal much better than I could the general features of the research strategy which Fraenkel has practiced with such great success for so long.

I cannot close this without a more personal indication of the high esteem in which he is held by his colleagues and especially myself. He is always available for conversation, a good story teller, a better listener, a loyal friend, and a man with interests which transcend science; knowledgeable in art and literature, an accomplished amateur

musician and musicologist, (26,27) he is a true Renaissance man. I, and all of us in the department, look forward to the pleasure of his company for many years to come.

Stanley Friedman

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PROGRESS REPORT ON THE BALDUF RESEARCH AWARD
IN ENTOMOLOGY FOR 1972

This is the first year the Balduf Research Award has been offered. Its purpose is to encourage excellence in entomological research and publication among graduate students in the Entomology Department. The award consists of a certificate and cash prize of \$100, and the opportunity to present the winning paper orally at a special departmental seminar. Dr. Larsen has assured us that by the time the award is given in 1973 there will be sufficient funds to put it on a permanent endowment basis. We are very proud to have this award in our department, named after such an eminent entomologist who served many years on the faculty. We hope that graduate students will rise to the challenge that this award provides.

Under the chairmanship of Dr. Richard Selander a committee established the regulations and procedures by which the Balduf Research Award could be administered. The present selection committee has received all applications and each entry has been sent to three reviewers. The reviews will be returned by May 1, and the winner will be announced on May 12, 1972.

It is now time to prepare for next year's award! The deadline date for receipt of entries will be April 15, 1973. All students enrolled in the department during or after the Spring Semester 1972 may enter the competition. Eligible material will include any of the following:

- i) reprints of a paper published no earlier than April 15, 1972.
- ii) a paper submitted for publication no earlier than April 15, 1972, but not published.
- iii) a paper meeting editorial requirements of a specific journal, but not submitted for publication.

So if you have any papers to submit do so as soon as you have them prepared. We will be happy to receive entries (in triplicate, plus entry form) throughout the year for next year's award.

The Balduf Award Selection Committee
W.E. LaBerge
P.W. Price (Chairman)
K.R. Solomon

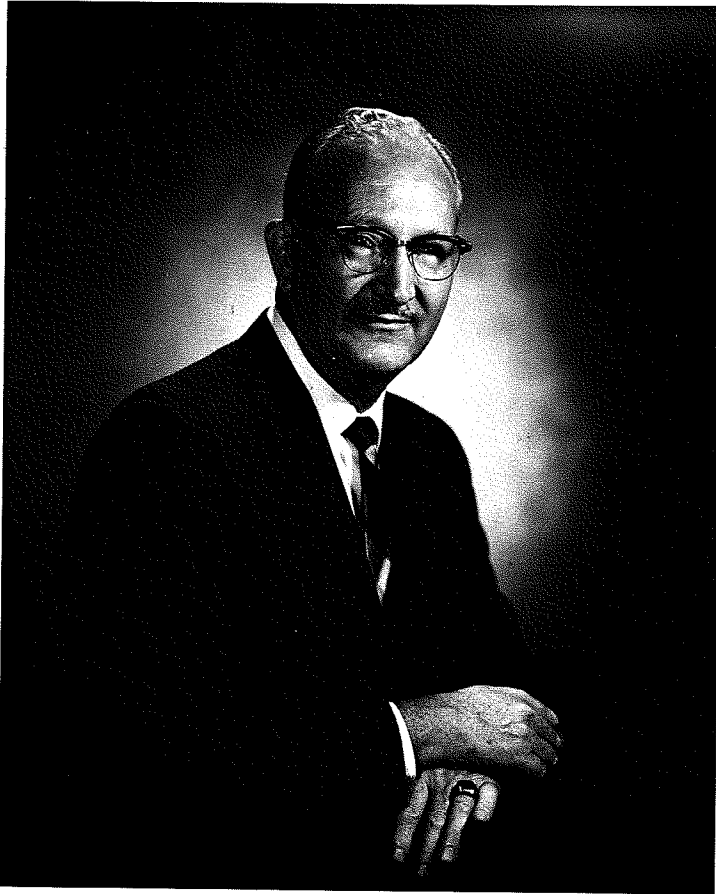
WALTER V. BALDUF MEMORIAL FUND

You may recall last year we reported in the Newsletter that a number of alumni had indicated their desire to pay tribute to Dr. Walter V. Balduf. Subsequently, in response to that request, a memorial fund was set up in his name. We also established the Balduf Prize to be awarded to the graduate student with the most outstanding thesis research in the year in which he or she completes the Ph.D. work. The Awarding Committee is at the present time working on the first group of participants who are in competition for the first Balduf Prize.

At the time the prize was set up we indicated that there would be a cash award of \$100 with a certificate or medallion indicating that the student had been the recipient of the Balduf Prize as a result of his outstanding research. As former members of the department we encouraged you to participate in the Walter V. Balduf Memorial Prize Fund. We hope to obtain sufficient money to set up a perpetual endowment enabling us to award the prize on a yearly basis. We are grateful for your participation thus far. However, we are short of our desired goal. The Illinois Foundation has indicated that if we could obtain \$2000, the money could be invested at approximately 5% interest and this would give us \$100 annually for awarding the Balduf Prize. With our distinguished alumni, \$2000 is not an inordinate amount to raise. We would greatly appreciate your participation and encourage all of you to send a contribution. If we all pitch in there should be no problem in raising the necessary funds to set up an endowment.

You should make your check payable to the University of Illinois Foundation and mail it directly to the Executive Director of the University of Illinois Foundation, 224 Illini Union, University of Illinois, Urbana, Illinois 61801. You should indicate with your check that it is being sent to the Walter V. Balduf Memorial Prize Fund. This money will then be sequestered into a separate account and when we have reached the \$2000 mark the money will be invested and the yearly interest can be used to award a prize to the outstanding graduate student. I am sure that many of you have a desire to participate and honor Dr. Balduf who gave so generously of his time and talents to the development of excellence in entomology at the University of Illinois.

IN MEMORIAM--Harlow B. Mills



1906-1971

We note with sadness the passing of Dr. Harlow Burgess Mills, former Chief of the Illinois Natural History Survey who died April 5, 1971, in Austin, Texas. Dr. Mills was born in Le Grand, Iowa, August 20, 1906, the son of E.M. and Anna Mills. He attended Iowa State University where he earned Bachelor's and Master's degrees and a Ph.D. in 1934. Dr. Mills served as assistant professor of entomology at Texas A&M University. He was a ranger, naturalist, and wildlife technician at Yellowstone National Park. He moved to Montana in 1935 where he was assistant State Entomologist and subsequently became Head of the Department of Zoology and Entomology at Montana State College. He was invited to head the Illinois Natural History Survey in 1947.

Dr. Mills was a national authority on Collembola. He was a distinguished scientist serving in many areas other than entomology. He spent 6 weeks in the 1950's on a

Guggenheim fellowship studying insects in the Antilles. He served in 1962-1963 as Chief Scientist for National Science Foundation in Rio de Janeiro. He served on the Governor's Scientific Advisory Council and other State committees and organized and participated in several National Academy of Science symposiums. He was also adviser to the U.S. Department of Agriculture and U.S. Department of the Interior concerning control of the fire ant in the southern states. He was author of more than 100 technical articles plus articles for scientific matters written for children's magazines, and two books, Collembola of Iowa in 1934 and Bugs, Birds, and Blizzards in the Yellowstone in 1937.

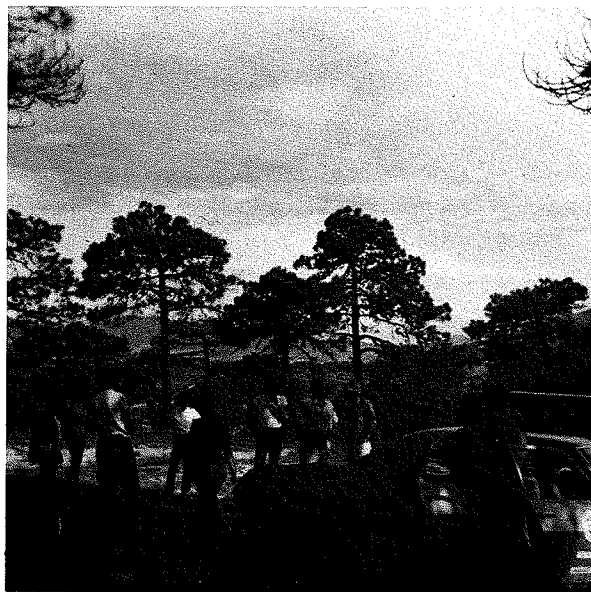
At the time of his retirement from the State Natural History Survey, Dr. Mills was honored at a dinner where Dr. Herbert H. Ross, Assistant Chief of the Survey, was quoted to have said "Dr. Mills' greatest achievement was that of welding together the Survey into a marvelous cohesive scientific structure. His success in developing the survey was partly due to his dual knowledge of entomology and wildlife, two principal subjects of Survey research, combined with his remarkable ability to get people to cooperate."

While Dr. Mills was never a staff member of the Department of Entomology his influence was felt by this department through the spirit of cooperation generated between the insect control and taxonomy sections of the Survey and the Department of Entomology. We feel that it is noteworthy to mark the passing of a great entomologist and one who has contributed indirectly to the success of entomology at the University of Illinois.

ENTOMOLOGY 302

Summer Session 1971

As in the previous year, Entomology 302 (Classification of Insects) was offered in the summer and was conducted primarily as a field course. The first field trip (June 26-July 2) was to Natchez Trace State Park, Tennessee. On the second trip campsites were established at Mason State Forest, near Havana, Illinois, and at The Shades State Park, Indiana. The third trip (July 24-August 6) was to northeastern Mexico. On the way to Mexico the class camped at Little Rock, Arkansas, near Houston, Texas, and at Bentsen Rio Grande Valley State Park, near Mission, Texas. After entering Mexico at Reynosa, the group continued on to Monterrey, where a former student of the Department, Dr. Juan M. Mathieu, now Professor of Biology at the Instituto Tecnológico de Estudios Superiores de Monterrey. Dr. Mathieu subsequently led the group southward to establish a camp in the mountains of southern Nuevo Leon near the village of Galeana. Perhaps our most memorable event there was a drive to a microwave relay station high on the slopes of the Cerro de Potosí. From the station Dr. Mathieu took a good part of the class to the summit of the Cerro at about 12,500 feet.



Insect collecting at most localities was even better than last year, in terms of both numbers of specimens and taxonomic diversity. However, heavy rains, particularly on the Mexican trip, hampered field activities to a considerable extent.

Enrolled in the course were Jeanette Bowles, Nancy Edmunds, Stephen R. Gast, David Haas, Rosanne Hess, Carol Hilfiker, Sandy Limerick, Christina Mascarenhas, Richard Pope, and Jo Ann Riecke. These students represented the Departments of Entomology, Zoology, and Botany. The teaching assistants were Cheryl Adams and Kurt Redborg.

ENTOMOLOGY GRADUATE STUDENTS ASSOCIATION

The changing of the EGSA guard this fall semester brought Carol Hilfiker (as faculty representative), Keith Solomon from the second floor (as Chairman), John Marlin from Natural History Survey (as Vice Chairman), Andrew Chen from the third floor (as Treasurer) and Mark McClure from the fourth floor (as Secretary) into the breach for this year.

Our efforts this year have been directed to the improvement of student-faculty communications and to this end we have developed an Advisor-type questionnaire which will be used to evaluate the graduate courses in the Department. We hope that this feedback to the faculty will aid the continuing improvement of the courses offered here. The questionnaires will be screened for any unnecessary death threats, etc. before the faculty gets them but should any alumni have any grievances we would be glad to send them a questionnaire as well!

SEMINAR

The Departmental Seminar Committee under the able direction of Bert Clegern last semester and Dick Lipsey this semester has brought a number of interesting speakers to the Department this year. These included Dr. Horsfall, Dr. Metcalf, Dr. D.H. Jazen of Chicago, Dr. Francisco Dy of Manila and Dr. W. Campbell of Purdue to name but a few. The seminar has also given the graduate students a useful opportunity to discuss their research before a gathering of interested friends. Dr. Lewis Stannard gave a most interesting and at times libelous seminar titled "History of Entomology at the University of Illinois and Natural History Survey". Attendance at the seminar by students and faculty has been better than ever before.

CHRISTMAS PARTY

This years Christmas party was attended by about 60 people and was held in the Unitarian Church Hall. Food in the form of snacks was supplied by the student wives and judging by the way it disappeared it was very good. The highlight of the evening was a visit from a very well padded Santa. As usual, funds were low and he was unable to give actual gifts, but at least read a list of what would have been given. Some of the gifts are listed below; Dr. Booth - a shovel so that he can find the desk organizer he was given two years ago. Dr. Friedman - a do-it-yourself repair kit for the LSC and one hot comb. Dr. Larsen - a tachometer, disc brakes, rear wheel slicks and asbestos gloves for doing wheelies down the Department hallways. Dr. MacLeod - a sleigh with eight tiny reindeer. Dr. Metcalf - a bronzed model ecosystem. Dr. Selander - six open entry visas to Mexico, a sombrero and two weeks supply of Kaopectate. Dr. Stannard - a gold lame sequined jacket with velvet collar and rhinestone buttons to serve as a conservative addition to his wardrobe. Dr. Willis - the lead role in the Broadway musical version of The Hellstrom Cronicle, and for the Secretaries - an eight hour recording of typewriters at work, a years supply of pound cake and an early warning system to detect wheelchairs in the elevator.

The party was a great success and a good time was had by all. Our grateful thanks to all those who helped with the decorations, food, drink and the clearing up afterwards.

Keith Soloman, Chairman
EGSA

SPORTS REVIEW

The departmental softball team had many chances to display its talent last year, participating in both spring and summer intramural leagues. There were many close games, providing some tense moments, and we seemed invariably to be ahead in the late innings, only to choke on our lead and go down by one or two runs. A few wins helped keep the spirit really high despite the close losses and a couple of "laughers". Our Captain and Manager, Bert "Knuckles" Clegern, was mostly responsible for the morale holding up so well in the rest of us. The second annual Purdue-Illinois softball game was held at Kickapoo State Park on a lovely Saturday in May and coincided with the Department spring picnic, to make a full day for everyone. For that day we joined forces with the Survey entomologists to thoroughly trounce Purdue - until the last inning of course.

In the Fall our "Flea-Flickers" took the gridiron and won their first two games by forfeit; it was all downhill after that, losing the remaining three games, each time by one touchdown. Coach Larry Hansen's football wizards showed a tenacious defense throughout but they had a few problems getting untracked on offense. Nevertheless our lovers of sandlot football enjoyed the chance to compete intramurally.

Basketball season saw the "Dung Beetles" ramble through a rather short season to a 0-3 record. There was a lot of enthusiasm, good exercise, and several new faces on the basketball team, coached by Joel Coats. The games were played in the new Intramural Physical Education building.

The softball season has come again and if the interest and the enthusiasm from the past year carry through this spring, we should have a very successful season.

Joel Coats
Sports Reporter

RECENT GRADUATES

Lena B. Brattsten, 1971

Lena Brattsten was born, September 15, 1940, in Gotebora, Sweden. She attended Goteborgs Hogeasatiskola University in Goteborgs where she received a MKIP Degree in 1959. She then attended Lunds University in Lunds, Sweden, where her major field of study was in Life Sciences. She received a Filkand Degree in 1962. Lena then came to the United States in 1962 where she entered the University of California at Riverside on a University of California fellowship to pursue graduate studies with Dr. Robert L. Metcalf who was then Professor of Entomology at Riverside. This was part of a reciprocal agreement between the University of Lund and the University of California. Lena received exceptionally fine training in general biology and chemistry during her studies in Sweden.

When Dr. Robert Metcalf joined the staff of the Department of Entomology at the University of Illinois in the fall of 1968, Lena transferred her residence from Riverside to Urbana, Illinois, where she continued her graduate work under the direction of Dr. Metcalf. During her tenure as a graduate student at Illinois where she completed her research, Lena received financial assistance from Dr. Metcalf on his WHO grant. She carried out her research on the investigation of distribution of the mixed function oxidases in 33 species of insects. The title of her thesis was: "Role of mixed function oxidases of insects in their response to xenobiotics."

Upon completion of her degree in February 1971 she accepted a post-doctoral position in the Department of Entomology at Cornell University where she will continue her work in insect toxicology with Dr. O'Brien's research group.

David L. Denlinger, 1971

Dave was born November 20, 1945, in Lancaster, Pennsylvania. He grew up in Lancaster where he attended the Conesioaga Valley High School and graduated in the spring of 1964. Dave spent one year at Goshen College, from September 1963 to 1964, where he did work in biology. He then entered Pennsylvania State University, University Park, Pennsylvania, where he completed his Bachelor's degree in Zoology in 1967. Dave has had a long interest in entomological research. He was very active in 4-H Club work and in the summer of 1964 served as leader in charge of entomology projects. He worked at the Rocky Mountain Camp in the summer of 1965 where he was head of nature activities and also served as a tourist guide in the Lancaster County Tourist Bureau in the summer of 1965. Dave applied to the Department of Entomology at the University of Illinois in 1967 and started his graduate studies that summer. During his stay here, Dave was the recipient of a NDEA Title IV Fellowship in entomology. He also was active in teaching in Entomology 103 and in the insect physiology and morphology courses. Dave carried on his research under the direction of Drs. Judy Willis and G.S. Fraenkel where he worked on diapause in Sarcophaga flies. The title of Dave's thesis was: "Physiology and ecology of pupal diapause in Sarcophaga (Diptera: Sarcophagidae)."

Upon completion of his degree in the spring of 1971, Dave went to Wageningen, Holland, where he has been carrying on postdoctoral studies at the Laboratorium voor Entomologie, Landbouwhogeschool, Binnenhaven 7 - Postbus 62, Wageningen, Netherlands. He has been supported there by a fellowship from the Netherlands Ministry of Agriculture and Fisheries.

Already a great deal of his thesis work has been published in conjunction with Drs. Willis and Fraenkel in the Entomological Society of America and Journal of Insect Physiology. Dave has had a life-long interest in ecology and the wonders of nature. He has been trying to wangle a post-doctoral study in Africa to work on diapause in equatorial Diptera. Dave is an outstanding graduate of the department and we certainly wish him well in his continued pursuits in entomology.

Lawrence J. Krone, 1971

Larry was born September 8, 1940, in Chicago, Illinois. Though Illinois-born Larry has had a great deal of experience and studied in a number of places prior to his coming to the University of Illinois for graduate work. Larry attended Kelly High School in Chicago where he graduated in June 1958. At that time he entered the University of Illinois College of Pharmacy where he spent one year. He then transferred to Kendall College for a year and then spent one year at Colorado State College. Larry finally received his Bachelor's degree in Biology with a minor in psychology and education from North Park College in June 1963. At that time he obtained a position in Chicago Public Schools where he taught science in the academic year, 1962-63. After teaching a year in the Chicago Public Schools Larry was drafted in the army. While on military service he had the good fortune to work in the medical entomology section where he assisted in arbovirus research while stationed at Fort Detrich, Maryland. It was this experience in the military that prompted Larry to shift gears from teaching of science to the field of entomology and to pursue a research degree. In the summer of 1966 he worked with the Aedes aegypti eradication project where he served as foreman and had a great deal of opportunity to broaden his knowledge in field work in entomology. Larry subsequently attended Yale University where in September 1965 he received a Master's degree in Public Health with a major in medical entomology. He completed that degree in 1967. As a result of his interest in medical entomology, Larry applied for admission as a graduate student to the Department of Entomology in September 1967. When he first came to this university he worked with Dr. William Horsfall and then subsequently transferred his interests and completed the Ph.D. degree under the direction of Dr. Robert Metcalf. While a graduate student at Illinois, Larry held positions as a teaching assistant and NSF trainee. Under Dr. Metcalf's direction Larry worked on some of the behavioral physiology and feeding habits in the Culex pipiens complex. The title of his thesis was: "A study of members of the Culex pipiens complex in relation to public health." Larry is a member of the American Public Health Association as well as the Entomological Society of America and the American Society of Tropical Medicine and Hygiene. Larry was also a LSU Tropical Medicine fellow in 1968. He is currently working with the Bureau of Vector Control, Los Angeles, California.

Robert D. Morden, 1971

Bob was born March 16, 1939, in Jefferson, Iowa. He spent his early years in Iowa and graduated in 1957 from Scranton Consolidated High School in Scranton, Iowa. He then entered Iowa State University where he studied for two years from 1957-59 with a major in chemistry. He then went to the State College of Iowa from 1959-62 and received a Bachelor's degree in Science. From 1962-65 Bob was teaching in the secondary schools of Iowa and Illinois. He taught science at Dysart Community High School in Dysart, Iowa, for one year and he also taught science in Auburn Senior High School in Rockford, Illinois. In 1965 Bob returned to the State College of Iowa where he received a Master's degree in Biology in 1966. At that time Bob applied to the University of Illinois, Department of Entomology, where he was admitted in 1966. With his 3-1/2 years of high school teaching experience in general science and biology, Bob has a strong orientation toward teaching and upon completion of his Ph.D. he obtained a position at Wisconsin State University where he is now teaching in the Department of Biology. While a graduate student in the department, Bob was a trainee on our USPH Training Grant and also did some teaching in the entomology courses. He started his graduate work in the area of toxicology but later transferred into insect ecology and completed his graduate studies under the direction of Dr. Gil Waldbauer. The title of Bob's thesis was: "Biology of the evergreen bagworm Thyridopteryx ephemeraeformis." We trust Bob will have an opportunity to continue his research work in his present position as well as get involved in his first love, that of teaching science to undergraduate students.

Louis J. Moretti, 1971

Lou was born November 6, 1944, in Utica, New York. He moved to Herkimer, New York, where he graduated from the Herkimer Central High School in 1962. At that time he entered the State University of New York at Oswego where he majored in biology receiving the B.S. degree in June 1966. Lou is a member of Kappa Delta Pi, Sigma Zeta and graduated cum laude. At that time he applied for graduate school at Illinois in the Department of Zoology where he was accepted and granted a NDEA Title IV Fellowship. He carried out a research program under the direction of Dr. Watterson and received the Master's degree in July 1968. He did a master's thesis on the unilateral obstruction of the mesonephric duct of the chick embryo with a histological analysis of the changes in the unaffected kidney. Lou switched his interests to entomology and was accepted into the Department in the fall of 1968 where he did his initial work with Dr. William Horsfall working with the Aedes mosquitoes. Lou's primary interest in embryology and postembryonic development lead him into the area of insect embryology. He completed his graduate training under Dr. Joseph Larsen where he carried out a research program on the basic embryology of Aedes vexans. His thesis title was: "The embryology of Aedes vexans (Meigen) (Diptera: Culicidae)." During his last two years of graduate work Lou became interested in the medical profession and somewhat involved in human ecology problems especially population pressures and was very

active in such groups as Zero Population Growth. His interests and social awareness of some of the problems facing mankind in today's environment led Lou to apply to Medical School where he was accepted to the College of Medicine at the University of Illinois in the fall of 1971. He has a strong motivation for his newly chosen interest and will do an outstanding job and we wish him success in his change of careers.

Gerald L. Nordin, 1971

Jerry is a product of the midwest having been born August 14, 1944, in Rockford Illinois. He attended high school in Kirkland, Illinois, where he graduated in 1962. At that time he entered the University of Illinois at Urbana in the College of Agriculture where he received a Bachelor's degree in the area of Forest Production. He graduated in 1966 and at that time made application to the Department of Entomology. During his tenure as a graduate student he was employed by the State Natural History Survey and did his graduate work under the direction of Dr. William Luckmann. Jerry's work at the survey during his student days was as a half-time research assistant where he worked under the direction of Dr. Appleby on the insects of ornamental crops. The title of Jerry's thesis research was: "Studies on a nuclear polyhedrosis virus and three species of microsporidia pathogenic to the fall webworm Hyphantria cunea (Drury)." Upon completion of his graduate studies in the spring of 1971 Jerry accepted a position at the University of Kentucky at Lexington.

Larry L. Sanburg, 1971

Larry was born June 6, 1942, in Rural (Clay County), Nebraska. Larry's family moved west to California where he completed grade school and attended Alhambra Union High School in Martinez, California, where he graduated in 1960. At that time Larry entered Diablo Valley College in Concord, California, where he studied for three years. He also spent a summer session at the University of California at Berkeley. Larry then entered Humboldt State College at Arcata, California, where he received an A.B. degree in 1965 with a major in zoology. He served as a research and teaching assistant at Humboldt State College in his junior and senior years. At that time Larry applied for admission to the Department of Entomology at Illinois where he entered in 1966. He was awarded an NDEA Title IV Fellowship from 1966 to 1969. In addition to his NDEA Fellowship at the University, Larry also served three years as a teaching assistant in both the undergraduate general education and graduate courses in the department. While here at the University Larry did his graduate work under the direction of Dr. Joseph Larsen. He worked on a problem in diapause and made an attempt to answer some of the questions regarding yolk deposition as related to hormones during adult diapause in Culex mosquitoes. Larry is currently working on a postdoctoral position with Dr. John Law in the Department of Biochemistry at the University of Chicago. He is having an opportunity to broaden his background and hopefully will

be better prepared to assume a role in the teaching and research career. Larry completed his Ph.D. requirements in September 1971. The title of his thesis was: "The effects of photophase and temperature on diapause in Culex pipiens pipiens L. (Diptera: Culicidae)."

Gurcharan (Ghouna) K. Sangha, 1971

Ghouna was born November 26, 1944, in Punjab V. Lohera, India. She did her undergraduate work at Punjab University from 1958 through 1962 where she received a B.Sc. degree in Botany with minors in zoology and chemistry. She also attended Punjab University where she received a Bachelor of Education degree in Agricultural Teaching Science and English. Ghouna also attended the Birla Institute of Technology and Science from 1963-65 where she received a Master's degree in Zoology and Fisheries. She received a gold medal in 1966 for outstanding scholarship. She was first in the University in her Master of Science examination and received first prize for high academic standing in both her Bachelor of Education and Bachelor of Science degrees at Punjab University. Her father is a professor of biochemistry at Punjab Agricultural University in Lumemia.

Ghouna came to the United States in 1966 where she entered the University of California at Riverside. Her first work at that University was in the Department of Zoology. She very quickly, however, transferred into the Department of Entomology where she started doing graduate work under the direction of Dr. Robert Metcalf. In 1968 when Dr. Metcalf joined the staff of the Department of Entomology at the University of Illinois he brought with him a number of his students, one of which was Ghouna. With her ecological background she started work with Dr. Metcalf in setting up model ecosystems being used in the development of laboratory methods for evaluation of pesticide biodegradability. Her excellent training in invertebrate zoology and ecology gave her the background to do an outstanding research thesis. Tracing metabolism, dispersal and biodegradability of C¹⁴-labeled carbamate insecticides in simulated environments of model microecosystems. While a graduate student at the University of Illinois, Ghouna was supported on the Herman Frasch grant awarded to Dr. Metcalf. She completed her Ph.D. requirements in the spring of 1971. The title of her thesis research was: "Environmental effects of carbamate insecticides as assayed in the 'model ecosystem': a comparison with DDT."

Upon completion of her research, Ghouna accepted a position at Estalco Aluminum Co. She currently has returned to her home in India where she is presently residing and in the process of looking for a position where she can carry on her research and make application of her graduate training.

Joseph K. Sheldon, 1972

Joe was born November 11, 1943, in Ogden, Utah. After living his early years in Ogden, Joe's family moved to St. Helen's, Oregon, where Joe graduated from St. Helen's High School in 1962. At that time he

Mr. Singh came to Illinois to take advantage of course work and increase his proficiency and expertise in entomology and, under the direction of reliable researchers on this campus, carry out his research in his home country where he can be involved in Indian problems. We are delighted that Mr. Singh has been able to complete his research, finish the thesis and receive his Ph.D. We trust that the training and background he received in this department will be of benefit to him and to all of his countrymen. At the present time he is on the faculty of the Jawaharlal Nehru Agricultural University in Jabalpur.

Thomas H. Wilson, 1971

Thomas was born February 23, 1943, in Camden, Arkansas. Thomas and his family had their roots in Arkansas for many generations. He grew up in Camden where he attended the Camden Arkansas High School from which he graduated in 1961. That fall Thomas entered Ouachita Baptist University in Arkadelphia, Arkansas. He majored in zoology with a minor in botany and received his Bachelor's degree in 1965. He also received an ROTC commission. He then entered the University of Arkansas where he received a Master's degree in 1967 with a major in entomology and a minor in zoology. While at Ouachita Baptist he served as an undergraduate laboratory assistant. He also worked for the Arkansas Water Pollution Control Commission in 1962. While a graduate student at Arkansas he worked on the cotton scouting program and also as a teaching assistant. Thomas entered graduate school at the University of Illinois in the Department of Entomology in September 1967. While he was a student here, Thomas did his work at the State Natural History Survey under the direction of Dr. Lew Stannard. The title of his Ph.D. thesis was: "A monographic revision of the subfamily Heliothripinae (Thysanoptera: Thripidae)." He had an assistantship in entomology working on the biology and taxonomy of thrips with emphasis on agricultural crops. Thrips are of considerable economic importance in tropical and subtropical areas and he had an opportunity to conduct part of his research in India which gave him an excellent opportunity to study first-hand knowledge of entomological problems in that portion of India where his research was carried out. In 1969 he was the recipient of a Midwest University Consortium for International Activities Fellowship in Entomology. Thomas is also a member of the Entomological Society of America.

We just now received word that Thomas accepted a position at Judson College in Marion, Alabama. [Note that this was not received in time to put in the "Corrections and Additions to Newsletter Mailing List" portion of this year's Newsletter.]

PRESENT ENTOMOLOGY GRADUATE STUDENTS

Tsuey-chung (Susan) Chang

I was born on March 10, 1947, in the Republic of China. In June, 1969, I graduated from National Taiwan University with a B.S. degree in entomology. Now, I am working towards my master's degree. Outside interests include hiking, traveling, movies and music.
Advisor: G.P. Waldbauer

Andrew C. Chen

Pat and I got married last summer. She is a graduate student in veterinary medicine--but she is trying to become a virologist not an animal doctor. We built our nest on Illinois Street, not far from campus. Anyone who wants to visit us is welcome.

As far as research goes, I am just starting to try to get my hands dirty. Under Dr. Friedman's direction I am working on the hormonal control of the blood trehalose level in the blow fly.
Advisor: S. Friedman

Robert (Bert) W. Clegern

My last year of graduate study was a busy and enjoyable one. A thesis will be finished by June (Population Dynamics and Environmental Stress Studies of House Flies in the Laboratory). The family and I are looking forward to a vacation, the length of which will depend on the sale of our present house and purchase of a home at our next assignment. That position will be as Medical Entomologist in the Environmental Health Lab at Kelly Air Force Base, in San Antonio, Texas. We will enjoy the change in schedules and scenery but will miss all of the friendships that have developed here at Illinois.
Advisor: R.L. Metcalf

Joel Coats

I am in my second year at Illinois after getting my B.S. at Arizona State University. I got married last June, and my wife Susan is now a lieutenant in the U.S. Air Force, stationed at Chanute AFB. My research problem is studying comparative toxicities, metabolism, and biodegradability potentials of a class of new insecticides structurally similar to DDT. I'm happy with the course work and research opportunities I've found here.

Publications: (co-authorships)
Comparative metabolism of DDT, methylchlor, and ethoxychlor in mouse, insects, and in a model ecosystem. J. Ag. Food Chem. 20(1):1-6.
A GLC assay for microsomal thioether oxidation. J. Ag. Food Chem. 20(2): in press.
Advisor: R.L. Metcalf

Jerry Freier

This past year has been both exciting and busy in terms of establishing my research and completing the necessary course work. I have chosen as a topic for my thesis research a problem dealing with the interrelationships that exist between an insect host and its parasite. Using Aedes aegypti and Plasmodium gallinareum as my model system I hope to get at some of the details of susceptibility and refractiveness as they exist on the cellular and molecular levels.

In addition, I have been working on another research project studying the control of digestion in Sarcophaga bullata. This investigation has been conducted with several other students and our first publication should be out later this year.

Travel during 1971 has been limited to a camping trip last June to Colorado, attendance at the 11th annual meeting of the American Society for Cell Biology held in November in New Orleans, and I try to find time to take numerous fishing trips to any place in the country that has record size walleyes, bass, and trout.

Advisor: S. Friedman

Richard Lipsey

I received a B.S. in biology-education from Eastern Michigan University and an M.S. in entomology from the University of Arkansas and expect to take finals in April or May of this year. My Ph.D. research has shown that tomato seedlings grown 10 days in 0.006 ppm methyl mercury hydroxide concentrated 374 x in tomato terminals, 2500 x in aphids feeding on tomato terminals and 6300 x in lacewing larvae. While 0.004 ppm CH₃HgOH did not stunt seedling growth, it did inhibit aphid fecundity by 34.89 after 16 days and aphid development by 17%. While 1.5 ppm CH₃HgOH in vitro completely inhibited the oxidation of malate-pyruvate by isolated tomato seedling mitochondria, higher concentrations resulted in tomato seedling roots lacking nucleotides and other U.V. absorbing materials.

Advisors: R.L. Metcalf

Alan Haney (Botany)

Mark McClure

This is my first year at the University of Illinois, having arrived this fall from Massachusetts where I had lived for 23 years.

On October 27, 1948, I was born in Whitinsville, Massachusetts. Two years later we moved to Natick, located about 15 miles west of Boston and I was educated in that town's primary and secondary school system. In September of 1966 I began my college education at the Boston campus of the University of Massachusetts where I soon developed interests in animal behavior and environmental biology. I received my B.A. degree in biology from that university in June of 1970. After spending the following summer traveling around the country I was employed by the

Leonard Morse Hospital in Natick. My position was that of a laboratory technician, working chiefly in the departments of bacteriology, hematology and histology.

The summer of 1971 brought many changes in my life. On August 20 I married my beautiful wife Laura, a native of East Boston who is also a graduate of the University of Massachusetts at Boston, receiving her B.A. degree in biology in 1970. Laura holds a teaching certificate in Massachusetts in the fields of biology, chemistry and general science and is currently on leave of absence from the Boston Public School System where she had been teaching junior high school biology and general science.

Following an enjoyable honeymoon in Bermuda, we started the 1,100 mile from Boston and arrived safely in Champaign-Urbana in September.

My current interests lie in the areas of ecology and evolutionary biology and, working with Dr. Peter W. Price I soon will be starting active research in the field of ecological entomology.

Advisor: P.W. Price

Nalini Ratnasiri

I have now spent 2 1/2 years here at the University of Illinois. This past year saw the completion of course work, the passing of the preliminary examination and a start on my thesis research on the inhibition of pupariation in flies. The present phase of my studies deals more specifically with the anterior inhibition of post-critically ligated Sarcophaga bullata larvae.

We enjoyed a trip through the Smoky Mountains and the East Coast last summer. Janaka completed his studies and returned to Ceylon in early February and I am now working very hard to finish my work to return home as early as possible.

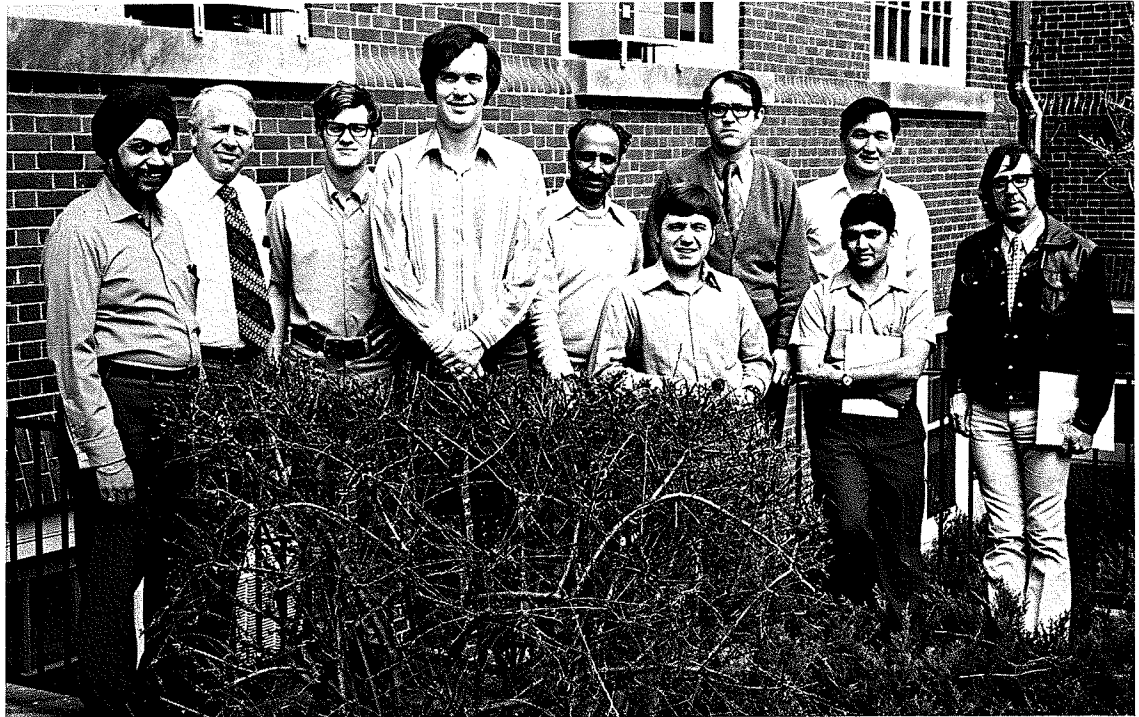
Advisor: G.S. Fraenkel

Keith Solomon

With course work nearly out of the way I look forward to being able to devote myself full time to research next fall. In the mean time I have been building up colonies of Tenebrio molitor and Oncopeltus fasciatus for my work on juvenile hormone. I have been working with Dr. J. Katzenellenbogen and S. Bowlus of Organic Chemistry and, based on known detoxification mechanisms in insects, they have prepared some novel JH analogues that should be interesting material for metabolism studies.

My family and I have not been able to do much traveling outside of Illinois but we hope to get out west this summer when my inlaws are here to visit us.

Advisor: R.L. Metcalf



SURVEY. M.S. Khalsa, Dr. W.H. Luckmann, J. Marlin, R.K. Sprenkel, C. Shinde, J. Bouseman, C. Chen and Dr. L.J. Stannard. In front: J.R. DeWitt and S.M. Vaishampayan.



SECOND FLOOR. Back row: J.R. Coats and J. Sanborn. Middle row: I.P. Kapoor, T. Chang, Dr. J.G. Sternburg and H.N. Nigg. Front row: K.R. Solomon, A. Lee, R.W. Clegern and D.E. Nye.



THIRD FLOOR. N. Ratnasiri, J.E. Freier, C.L. Adams, L. Pappas, A.C. Chen, R.L. Lipsey and A. Berrios-Ortiz.



FOURTH FLOOR. Back row: M.S. McClure, K.K. Liem, R. Novak and D. Underwood. Middle row: J.J. Ameel, C.T. Maier, J.T. Kardatzke and Dr. W.R. Horsfall. Front row: Dr. G.P. Waldbauer and Dr. P.W. Price.

NEWS ABOUT THE STAFF MEMBERS

Gary M. Booth

1971 was a productive and exciting year for the Booth family. I completed an appointment on the Training Grant in the department in August and was subsequently hired by the Illinois Natural History Survey to direct a team effort on the fate and effect of pesticides in the aquatic ecosystem. In conjunction with this position I had the opportunity to develop a course in insect control for extension and farm advisors in two areas of the state. In addition, as part of my joint appointment responsibilities I taught half of the insect toxicology course.

During November I was privileged with a generous invitation to testify at the DDT Hearing in Washington on some work which we completed at the University of Illinois and the Survey. Following this experience the Federal Environmental Protection Agency asked me to prepare a report on the Fate of Pesticides in the Aquatic Ecosystem. All of this material is currently being collated with other contributor's manuscripts into an exhaustive report which will be available in a few months. The purpose of this summary will be to serve as a "template" to be used by the legislature in making decisions concerning the use of pesticides. Several exciting seminar invitations brought the year to a close with the thought that 1971 has been one of the highlights of my career.

Perhaps the most recent change in our life has been an invitation to join the staff at the Brigham Young University. This offer was accepted and I will be moving my family to Provo on August 1, 1972. My specific responsibilities there will be to direct the teaching and research programs in pest management and toxicology. While I look forward to this move with great anticipation, we will also be leaving with some mixed feelings. After 4 years we have made many friends in Champaign-Urbana and we will undoubtedly miss them.

We extend our warmest wishes of continued success to the University of Illinois Department of Entomology and the Illinois Natural History Survey. I hope that cooperation in teaching and research between these two organizations will continue in the future. I will always believe that the strength of entomology in the Champaign-Urbana area was and is the result of that interaction.

Please come and visit us if you are in Utah. A nights free lodging will be available.

L.E. Chadwick

Maria and I continue to enjoy our retirement here in K Inc.

During 1971 we have again been visited at fairly regular intervals by Dick Storch, from the Department of Entomology at the University of Maine in Orono, and his wife Kay; also their two children.

Last summer we had besides the great pleasure of separate visits from Jim Krysan and family, and from Bob and Mike Lewis. Both managed to spend a few days here on the lovely Maine coast. We had not seen Bob and Mike for several years, not since they left the US for work in Lebanon, in the course of which Bob developed into one of the world's leading authorities on fleas.

Our few other contacts with the U of I, valued nonetheless, have been by mail.

All I can boast by way of entomological activity has been a moderate amount of translation from German to English; this is fun to do and helps maintain touch with advances in our understanding of insects.

May I conclude with one minor suggestion: for such procrastinators as me, please include in your next such request a deadline; I put the letter aside, thinking to get right at it, and now see what has happened.

With kindest personal regards to all my friends in the department.

Stanley Friedman

The end of last summer was spent camping, collecting, and generally learning about and enjoying the ecosystems of the American West. Since that time there has been work on a number of projects, including a start at re-evaluating the role of carnitine in Tenebrio molitor, the animal in which Fraenkel discovered the importance of vitamin B₇. These past few months physical activity has been limited by a leg broken in a biking accident, but complete recovery is in sight, and with it, hopefully, a summer of research on carnitine, trehalose metabolism in the company of Andrew Chen, and host parasite studies with Jerry Freier.

William R. Horsfall

In the parlance of athletics this has been a year of rebuilding. With the paring of funds available from granting agencies and retrenchment in appropriations from the Legislature, I have changed the course of activity. For over 10 years all in my laboratory have devoted time to studying the morphological effects of thermal stress on aedine mosquitoes. Final papers on that work are in preparation. As a part of this work eggs of many montane and alpine mosquitoes have been obtained and have been depicted by means of scanning electron micrography. Hopefully this work may continue toward completion of an atlas of eggs of this group for Nearctica at least.

The "new look" is in reality an extension of former work on floodwater mosquitoes in a flood-plain ecology. An extensive examination of the changing speciation on flood plains of Central Illinois began last fall. Effort is being directed at distribution of eggs by species in relation to slope, detritus, canopy, soil and moisture. The Sangamon River Valley is the locale for the field work. Long ago we developed the procedure for removing and identifying eggs. Return to emphasis on field work will shorten the gap between observation and application which is a step toward more immediately useful entomology.

Editor's Note:

Since we received Dr. Horsfall's note concerning his activities of the past year, we have learned of a recent honor which has come to Dr. Horsfall which we are delighted to share with you. In a paragraph from a letter from Dr. Don W. Micks of the University of Texas at Galveston: "Dear Bill: It is my most pleasant duty as Chairman of the Awards Committee of the American Mosquito Control Association to inform you that you are one of two members selected to receive the 1972 Harold Farnsworth Gray Memorial Award for distinguished contribution to mosquito control. You were nominated for this award by a rather sizeable number of friends and colleagues. May I also extend to you my own sincere congratulations on this honor."

We in the department would also like to extend our sincere and well deserved congratulations to Dr. Horsfall on receiving the Harold Farnsworth Gray Memorial Award. This was presented to Bill on April 26 at the National Meetings of the American Mosquito Control Association. Dr. Horsfall has had a long and distinguished career and has made great contributions to the problems of mosquito control and an understanding of mosquito bionomics.--JRL

Elbert R. Jaycox

Our research with honey bees becomes more continuous each year as we learn to manage them indoors during the winter. I am working on the role of the endocrine system in adult behavior and expect to complete the first report by late spring 1972. Helping in the work since April, 1971, has been Dr. Wojciech Skowronek of Pulawy, Poland. He is a specialist on honey bee genetics at the Bee Department of the Pomological Institute in Pulawy.

Enrollment in Ent. 361, Bee Behavior, has increased each year and reached 25 in 1971. Last fall I also shared in teaching a new course, Zoology 349, The Ecology and Evolution of the Social Structure. About 18 graduate students and several auditors took part; the course content ranged from insects to primates. Currently, spring 1972, I am teaching an extramural beekeeping class of 35 at La Grange, near Chicago. We have received requests for similar classes from several other groups.

This year I completed a set of publications for children interested in honey bees as a 4-H project. The manual, called "How Bees Live", is the first of three. Others will cover honey bee management for honey production and pollination, and queen rearing.

Wallace E. LaBerge

Professor Wallace E. LaBerge is engaged in systematic and faunistic studies in the Faunistic Section of the Illinois Natural History Survey. Among his major current projects are the following:

1. A revision of the bees of the genus Andrena in North America. Currently being prepared for publication by Dr. LaBerge and Dr. D.W. Ribble of the University of Indiana is Part V of the series treating this genus. Part VI of the series is being completed by Dr. LaBerge. Graduate student John K. Bouseman is studying another section of the genus under the guidance of Dr. LaBerge. Graduate student Adolfo Molina-Pardo is undertaking a computer study of the cladistic and phenetic relationships of the species of a section of the genus under the guidance of Dr. LaBerge and Dr. David Eades. These studies have been supported by N.S.F. grants.

2. A systematic revision of the bees of the genus Xenoglossodes has been started by Dr. LaBerge.

3. Dr. LaBerge is cooperating with Dr. Elbert Jaycox in writing a revision of the bee genus Anthidium in the New World.

4. A faunal study of the bee fauna of the Carlinville, Illinois, vicinity has been undertaken by Dr. LaBerge with the aid of graduate student John C. Marlin. A comparison of the present-day fauna on selected host plants with that of 70 years or more ago as exemplified by the extensive collections and notes at the Survey made by the late Charles Robertson. This may suggest how our modern intensive agriculture and modern means of road maintenance and urban development has affected the bee-fauna. This project is being supported by the Illinois Agricultural Experiment Station.

5. Faunal studies of the Illinois fauna of bees and of ants have been started. Although these are long-term studies, considerable field work is being done presently.

Joseph R. Larsen

This past year has been an eventful one in the Larsen clan. With the arrival of our first grandchild we now enter that glorious realm of the sog pip (silly old grandparents with pictures in pocket). Pam had a baby girl in August. Her husband is currently serving as a 2nd Lieutenant in the marine corps. Our #2 daughter, Deb, is excited with her college experience at Brigham Young University and is looking forward to a summer in London where she will study theater. Jennifer grows by leaps and bounds and wonders why being as tall as her sisters and mother doesn't make her eligible for all their activities. She is still doing beautifully on her piano and we are proud of her efforts. We missed the entomology meetings in Los Angeles much to the dismay of our youngest who had Disneyland in mind. We look forward to attending the meetings in Montreal. A good year was had in that a number of research projects came to fruition and were published. By and large it was a stay at home and look after the shop kind of a year. With the scanning and electron microscopes being available, a continuation of research activities on sensory receptors has taken most of the time and we look forward to more of the same.

William H. Luckmann

Administering the Section of Economic Entomology of the Illinois Natural History Survey takes most of my time. The group was very successful in receiving funding from NSF, EPA, and USDA for large-scale programs in pest management in alfalfa, soybeans, and corn and support for increased effort on the fate and effect of pesticides in aquatic systems. I have spent much time in getting people together from various department on the campus to form a team approach to the solution of problems. We will be moving into a new building in July, 1972, with about 2/3 of the staff assigned to the new complex and 1/3 remaining in the Natural Resources Building.

My third trip to India was interrupted by the war between India and Pakistan. It is exciting to work on foreign assignment, but not in a country at war with its neighbor.

Ellis G. MacLeod

In conjunction with Joe Sheldon, this past year saw the conclusion of a major study dealing with the details of the seasonal reproductive cycle of several species of Chrysopidae and with the environmental signals which are of importance in the staging of this cycle. In addition, research was initiated on a qualitative study of the foods taken by the adults of several groups of chrysopids under natural conditions. The laboratory side of this latter investigation has already indicated rather interesting differences in the abilities of different species to deal enzymatically with different nutrients.

Work on the Tertiary amber and rock fossils of the Neuroptera has continued at a slow pace due to the press of other work, but next year will be devoted very largely to finishing up this piece of research.

Robert L. Metcalf

Much of the year has been spent in directing a research program relating to the Development of Biodegradable Analogues of DDT. A patent application for a number of these compounds has been assigned to the University of Illinois Foundation and the Foundation is seeking sponsors for development of these materials. With various coworkers in the laboratory we are investigating facets of the behavior of these interesting compounds as environmental pollutants, as inducers of microsomal oxidases, as toxicants to fish, as affecting eggshell thickness in birds, their toxicity to a variety of insect species; and their metabolism in various organisms.

Graduate students completing degrees:

Ching-chieh Yu (1971) - "Comparative study of insect cholinesterases with special reference to substituted phenyl N-alkyl monocarbamates and bis-carbamates."

- An-horng Lee (1972) - "Purification, O,O-dimethyl S-aryl phosphorothioates, inhibition, and histochemical localization of house cricket acetylcholinesterase.
- Herbert Nigg (1972) - "Symmetrical and assymetrical analogues of DDT as inducers of microsomal oxidases."
- Bert Clegern (1972) - "Population dynamics and environmental stress studies in house flies in the laboratory."

Vern G. Milum

We are very sorry to learn from Mrs. Milum that Vern has been in the hospital since last August. We express our deep and sincere concern to both Dr. and Mrs. Milum and hope for his recovery and return to activity.--Ed.

Peter W. Price

I have enjoyed my first year in the department immensely. Teaching has proved to be for me the most effective way of learning, and this year has been probably the most educational in my career. I suppose this is the major attraction of working in the university environment. Some puzzles still remain however, such as where does lots of money for research come from, how do you work in a soybean field after a rainstorm without carrying around 10 lbs of good Illinois mud on each boot, and how do you get students to tell you what they really think about your courses. Research involved insect community studies in soybean fields, and the response of insects to structural features of old field vegetation. The 30,000 insects sampled, and now in alcohol, must feel rather neglected as preparing a new course in insect ecology, and giving "The biology of insects" to 160 students for the first time, have occupied much of my time.

Richard B. Selander

Most of the year was devoted to a systematic, behavioral, and physiological study of the Vittata Group of the genus Epicauta. Field work connected with this project took me to south and central Florida in the spring with J.K. Bouseman, to northern Florida and east Texas in the fall, and to northwestern Argentina during the month of December with Juan Mathieu. In Argentina we established a base at a government agricultural experiment station in La Banda, near Santiago de Estero. The whole area was suffering from an unusually hot, dry period. The temperature in Santiago the day we arrived was 114° F. Subsequently it cooled off a little, but the temperature reached 105° F or so every day. By collecting at night in areas artificially supplied with moisture, we were able to obtain adequate live samples of three species of Epicauta belonging to the Vittata Group. On the return trip we visited the "Bernadino Rivadavia" Museum in Buenos Aires, where Dr. M. Viana was a most cordial host.

Lewis J. Stannard

Systematic studies on the Thysanoptera were continued, stressing analysis of the immature forms for a proposed Survey Bulletin on the larval stages. Larvae of many species were associated with adults in the field during the summer, providing means for positive identification. A highlight was the observations of larvae of the predacious thrips Aeolothrips fasciatus making two layer silken cocoons (1.6 mm in length) in our rearing tubes in the Soybean Insect Laboratories. These cocoons were photographed for the first time.

Plans are being made to go to the 14th Congress of Entomology in Australia and to New Guinea for thrips collecting.

James G. Sternburg

In thinking back over the past year, it becomes apparent that it has been one of steady progress along various lines of research. A good part of the summer was spent working with several species of Saturniidae, and maintaining selected strains of cecropia. This work is being done with Gilbert Waldbauer and is part of a long range study of behavior and ecology. Research on the mode of action of DDT has been limited primarily to a study of the effects of DDT and various analogs, with and without synergists on the sensory taste receptors of a number of strains of house fly. This work will continue this summer when Mr. Willard Woodward returns to complete his doctoral research.

Our children are now in sixth, ninth, tenth, and eleventh grades. Time does pass, and while its fun raising a family, the visible evidence of age can't be ignored. We enjoyed several weeks of loafing, fishing, and swimming in northern Wisconsin. The area we go to is still clean and not polluted, and because of local zoning and building codes will hopefully stay that way. For several years we have seen nesting Ospreys, probably one of the few pairs left in eastern United States. We plan to return again this next summer although the stay will have to be short because of teaching obligations.

Judith H. Willis

Dr. Mary Ruh moved to Saint Louis in September after a busy two years spent working in my laboratory, running the labs for the general education course in human physiology and producing Cynthia Ruh a year ago. Last summer was particularly productive when we studied synthesis of cuticular proteins in developing Cecropia moths. Dr. Ruh has an appointment in the Department of Physiology at Saint Louis University Medical School where she is lecturing on respiratory and reproductive physiology and setting up a lab to continue working on Cecropia proteins. Her husband is on the Washington University medical school faculty and Cindy is thriving.

Dr. Denlinger has just moved to The International Centre of Insect Physiology and Ecology in Nairobi, Kenya where he plans to work with tsetse flies and study diapause induction on the equator. His tenacity in awaiting this position has been amazing as he had some excellent job offers which he turned down on the hope that the Nairobi position would materialize. I have been fortunate in having several energetic undergraduates working in my lab on such diverse activities as regeneration in Oncopeltus and multiple molts in Cecropia. A new entomology graduate student Ms. Carolyn Chang clarified the role of juvenile hormone in controlling larval polymorphism during her first month in this country and a Cell Biology graduate student, Ms. Elaine Shepherd, has begun to work on cuticular proteins in Tenebrio so I am looking forward to another interesting year.

Gilbert P. Waldbauer

1971 was a big year for the Waldbauers. I took sabbatical leave and the whole family spent seven months in Colombia. I went to Colombia as a member of the Illinois Natural History Survey's soybean entomology team. The trip was made possible by the heroic efforts of Bill Luckmann who obtained financial support for my research at a time of extreme financial crisis. Most of my time was spent working on soybean insects at the nearby Palmira station of the Instituto Agropecuario Colombiano. My major goals were to make a synoptic collection of the insects associated with soybeans in Colombia, to discover parasites of soybean-feeding insects in soybean fields. I had considerable success with all three projects, but it will be a long time before the data will be completely analyzed because of the poor state of our knowledge of the South American insect fauna. George Godfrey is now busy working on this material and finds that quite a few of the species are undescribed.

The whole family enjoyed Colombia very much. On the way home we also visited Venezuela, Curacao and Jamaica.

PUBLICATIONS FROM THE DEPARTMENT

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- With Ching-chieh Yu
Inhibition of choline acetylase from the house fly (Musca domestica L.)
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- DENLINGER, DAVID L.
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Embryonic determination of pupal diapause in the flesh fly Sarcophaga
crassipalpis. J. insect Physiol. 17:1815-1822.
- FRAENKEL, GOTTFRIED S.
With J. Zdarek
Neurosecretory control of ecdysone release during puparium formation of
flies. Gen. Comp. Endocr. 17:483-489.
With E. Zlotkin, F. Miranda and S. Lissitzky
The effect of scorpion venom on blowfly larvae--A new method for the
evaluation of scorpion venom potency. Toxicon 9:1-8.
- FRIEDMAN, STANLEY
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trehalose-activated glucose 6-phosphate hydrolysis on trehalose
phosphatase isolated from Phormia regina. J. Biol. Chem. 246,
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With S. Alexander
Multiple forms of trehalase in Phormia regina. Biochem. Biophys.
Res. Commun. 42, 5:818-823.
With F. Chang
A developmental analysis of the uptake and release of lipids by the
fat-body of the tobacco hornworm, Manduca sexta. Insect Biochem.
1, 1:63-80.
- HORSFALL, WILLIAM R.
With F.R. Voorhees
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male genitalia. J. Morph. 133:399-407.
- JAYCOX, ELBERT R.
Pollination of legume seeds. p. 32 In Illinois Agronomy Handbook, 1971.
Univ. of Ill. Agr. Ext. Circ. 1027. 59 p.
Apiculture at University of Illinois, 1970-71. Ill. State Bkpr.
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State Bkpr. Ass. Bull. 53(3):2-3.

- The changing role of honey bees in Illinois agriculture: grower needs and pesticide usage. Ill. State Bkpr. Ass. Bull. 53(4):3-4.
- Pollination of legume seed in Illinois. Univ. of Ill. Agr. Ext. Circ. 1039. 6 p.
- How to move bees. Dept. Hort. Publ. H-669. 2 p.
- Managing bees for pollination. Dept. Hort. Publ. H-670. 6 p.
- Rearing wax moth larvae. Dept. Hort. Publ. H-671. 2 p.

LABERGE, WALLACE E.

With H.H. Ross and G.L. Rotramel

- A synopsis of common and economic Illinois ants, with keys to the genera (Hymenoptera, Formicidae). Ill. Nat. Hist. Survey Biol. Notes No. 71, 1-22. January 1971.
- A new subgenus of Andrena found in California and Oregon (Hymenoptera: Apoidea). The Pan-Pacific Entomologist 47(1):47-57. January 1971.
- A revision of the bees of the genus Andrena of the Western Hemisphere. Part IV. Scapteropsis, Xiphandrena and Rhaphandrena. Trans. Amer. Ent. Soc. 97:441-520. September 1971.

LARSEN, JOSEPH R.

A Laboratory Manual in Biology. Stipes Publishing Co., Champaign, Illinois, 306 pp.

With R.F. Ashley

Demonstration of Venezuelan equine encephalomyelitis virus in tissues of Aedes aegypti. Amer. J. Trop. Med. Hyg. 20, 5:754-760.

With S.C. Carlson

- Scanning electron microscopy of the insect eye. Part I. The apposition eye (Sarcophaga bullata). Z. Zellforsch. 126, 4:437-445.
- Scanning electron microscopy of the insect eye. Part II. The superposition eye (Manduca sexta). Z. Zellforsch. 126, 4:446-453.

With P.M. Fox

Glutamic acid decarboxylase and the GABA shunt in the supraoesophageal ganglion of the honey-bee, Apis mellifera. J. Insect Physiol. 18: 439-457.

With W.B. Owen

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LUCKMANN, WILLIAM H.

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With D.B. Broersma and R.L. Bernard

Some effects of soybean pubescence on populations of the potato leafhopper. J. econ. Ent. 65, 1:78-82.

With D.W. Hamilton, M.A. Campbell, W.W. Maines, R.W. Bills and L.B. Matzenbacher

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With M. Kogan

A comprehensive program of research and information on soybean insects. Bull. Entomol. Soc. Amer. 17, 2:92-93.

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With J.K. Sheldon

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METCALF, ROBERT L.

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Pesticides. Jour. of Soil Water Conservation 26(2):57-60.

Structure-activity relationships for insecticidal carbamates.

Bull. W.H.O. 44:43-78.

With I.P. Kapoor and A.S. Hirwe

Biodegradable analogues of DDT. Bull. W.H.O. 44:363-373.

With J.N. Pitts

[Eds.] Advances Environmental Sciences & Technology, eds. Vol. II.

With K.A. Reinbold, I.P. Kapoor, W.F. Childers and W.N. Bruce

Comparative uptake and biodegradability of DDT and methoxychlor in aquatic organism. Bull. Illinois Natural History Survey 30(6):405-415.

With R. Sacker, E.R. Metcalf and T.R. Fukuto

Structure-activity relationships of methylenedroxynaphthyl derivatives as synergists of carbaryl in house flies. J. econ. Ent. 64:1011-1014.

With G.K. Sangha and I.P. Kapoor

Model ecosystem for the evaluation of pesticide biodegradability and ecological magnification. Environmental Science & Technology 5:709-713.

With Ching-chieh Yu, C.W. Kearns and J.D. Davies

Acetylcholinesterase by bis-carbamates. Pesticide Biochem. Physiol. 1:241-246.

PRICE, PETER W.

A comparison of four methods for sampling adult populations of cocoon parasitoids (Hymenoptera: Ichneumonidae). Can. J. Zool. 49, 4:513-521.

Niche breadth and dominance of parasitic insects sharing the same host species. Ecology 52, 4:587-596.

Toward a holistic approach to insect population studies. Ann. ent. Soc. Amer. 64, 6:1399-1406.

STANNARD, LEWIS J. JR.

Harlow Burgess Mills Obituary. Ann. ent. Soc. Amer. 64, 6:1476-1477. November, 1971.

New genera and species of Urothripini (Thysanoptera: Phlaesthripidae).

Proc. Roy. ent. Soc. London (B) 39, 7-8:114-124. February, 1971.

With S.M. Vaishampayan

Ovacarus clivinae, new genus and species (Acarinae: Podapolipidae), an endoparasite of the slender seedcorn beetle. Ann. ent. Soc. Amer. 64, 6:1476-1477. November, 1971.

WALDBAUER, GILBERT P.

With R.D. Morden

The developmental rates of Thyridopteryx ephemeraeformis from four latitudes and notes on its biology (Lepidoptera: Psychidae).

Ent. News 82:151-156.

Embryonic development time and spring hatching of Thyridopteryx ephemeraeformis (Lepidoptera: Psychidae). Ent. News 82:209-217.

Seasonal and daily emergence patterns of adult Thyridopteryx ephemeraeformis (Lepidoptera: Psychidae). Ent. News 82:219-224.

With J.K. Sheldon

Phenological relationships of some aculeate Hymenoptera, their dipteran mimics, and insectivorous birds. Evolution 25, 2:371-82.

ALUMNI NEWS

We are delighted with your response and appreciate once again your willingness to share your activities and accomplishments of the past year with former alumni of the Department of Entomology. We encourage you to continue to share your activities so that we might circulate them. We are justifiably proud of all our alumni and mindful of their accomplishments in the scientific world. We are also happy to share with all of you the accomplishments of our graduate students, those completing their work and looking for positions, as well as the kinds of research and direction the department is taking at the present time. As in years past we have included the perforated information sheet at the end of the newsletter which we would like your filling out and returning to the department. We would like to note at this time that we did not have an Illinois Alumni Breakfast at the Los Angeles meetings. It just so happened that the timing and the distance made it impossible for anyone from the department to travel to Los Angeles during the past year. We feel that this was a meaningful event and do not intend to dispense with it. Hopefully, enough of us will be going to the national meetings in Quebec so that we might gather together as Illinois alumni once again to renew old acquaintances and enjoy some fellowship. If any of you have suggestions for any activity other than an alumni breakfast, I would be very happy to hear from you.

Murray S. Blum

Home address: 425 Ponderosa Drive; Athens, Georgia 30601

Business address: Department of Entomology, University of Georgia,
Athens, Georgia 30601

Current Research and Recent Publications: Insect pheromones, venoms and assorted defensive secretions (finally published a paper on vertebrate defensive secretions). Chemotaxonomy and insect ecology.

Recent travels for business or pleasure: Summer 1970 - Instructor, Organization of Tropical Studies Fundamental Course, Costa Rica. International Congress of Pesticide Chemistry, Tel Aviv, Israel (February, 1971).

Additions to the family: Nada, Jo Creo

Suggestions or comments concerning the newsletter: As always, a delight to read.

Wayne P. Carlisle

Home address: 3157 Davis Avenue, Granite City, Illinois 62040
Business address: Biology Department, Madison Senior High School,
Madison, Illinois 62060
Current research and recent publications: none
nothing else - anyone busy teaching biology in high school is
busy doing a great deal "else".

George B. Craig, Jr.

Business address: Vector Biology Laboratory, Department of Biology,
University of Notre Dame, Notre Dame, Indiana 46556
Current research and recent publications: Research on reproductive
physiology of Aedes, especially: 1) genetic control of
diapause-induction in Aedes atropalpus, 2) characterization of
the male-produced pheromone, matrone, which induces monogamy
in females, 3) discovery of 2 female-produced contact pheromone
which governs sexual specificity. Numerous students working on
genetics of vectorial capacity for malaria, filaria. Seventeen
publications in the past year.
Recent travels for business or pleasure: Four-five trips per year to
Nairobi, Kenya, where I am a Research Director of the new
International Centre for Insect Physiology and Ecology. Lots
of paper-shuffle activity--NIH, study section on Tropical
Medicine and Parasitology; American Academy of Arts and Sciences;
Committee on African Development; Entomological Society of
America; Governing Board, etc., etc.
Suggestions or comments concerning the newsletter: It's great--keep
it coming.

R.M. DeCoursey

Home address: 24 Storrs Heights Road, Storrs, Connecticut 06268
Business address: Prof. Emeritus; Biological Sciences Group;
University of Connecticut, Storrs, Connecticut 06268
Current research and recent publications: Keys to the Families and
Subfamilies of the Nymphs of North American Hemiptera-Heteroptera,
Proc. Ent. Soc. Wash. 73:413-428, Dec. 1971.

J. Harwood Evans

Home address: 327 S. Parker Drive, Janesville, Wisconsin 53545
Retired, June, 1965.
Suggestions or comments concerning the newsletter: It would be nice
to have the degree date after name (so many duplicate names and
one forgets initials).
Editor's Note: A good suggestion. Next time we publish a complete
alumni directory we will include degree dates.

Edwin G. Gemrich II

Home address: 9851 West Gull Lake Drive, Richland, Michigan 40983

Business address: Department 9730-50-1, The Upjohn Company,
Kalamazoo, Michigan 49001

Current research and recent publications: Presently working on
structure-activity relationships of a large series of miticidal
acid chloride phenylhydrazones.

Recent publication: Friedman, A.R. and Gemrich, Edwin G. Pesticidal
Activity of α, α -Bis (Alkylthio) Oxime Carbamates. J. Agr. Food
Chem. 19: scheduled for Sept.-Oct. Issue.

Recent travels for business or pleasure: Built a new home on Miller
Lake. The fishing is excellent (I am presently leading the
small mouth bass contest in Southwestern Michigan) but the
mortgage payments are high.

Additions to the family: Had twin boys on December 3, 1970. No
fertility drugs used, just dumb luck. Names are John Edwin
and Robert Frederic

We have learned with the publishing of this newsletter that John C. Keller,
former entomologist in charge of the Western Cotton Research Laboratory
in Phoenix, Arizona died January 5, 1971 of lymphus arcoma. We extend
our sympathy to Mrs. Jean C. Keller and note with sorrow the passing
of a former alumni of the Department of Entomology and an outstanding
entomologist in insect control.

Keith A. Keyt

Home address: 1106 Forage Road, Fort Sam Houston, Texas 78234

Business address: Commanding Officer, 485th Preventive Medicine
Unit, Fort Sam Houston, Texas 78234

Current research and recent publications: None

Editor's Note: We would say very busy keeping the troops healthy.

Kenneth L. Knight

Home address: 2126 Buckingham Rd., Raleigh, North Carolina 27607

Business address: Department of Entomology, North Carolina State
University, Raleigh, N.C. 27607 (Head of Department)

Current research and recent publications:

a) Conducting research study of habitat management for mosquito
control on coastal salt marshes.

b) Taxonomic study of Aedes (Finlaya) mosquitoes of Southeast
Asia

c) Preparation of a "mosquito Taxonomic Glossary"

Additions to the family: Daughter Karen married to William Auld on
August, 1971. Both attending N.C. State University.

Suggestions or comments concerning the newsletter: Enjoy it, and
appreciate it.

Donald R. Johnson (B.S. 1943)

Home address: 1362 N. Decatur Road, N.E., Atlanta, Georgia 30306

Business address: Malaria Program, Center for Disease Control,
U.S. Public Health Service, Atlanta, Georgia 30333

Current research and recent publications: Administer research activities of the CDC Malaria Program, with field stations in El Salvador (Central America Malaria Research Station, San Salvador) and Thailand (Thailand Malaria Operations Research Unit in Bangkok). Presently making preparations for an Inter-American Malaria Research Symposium to be held in El Salvador, November 1-4, 1971.

Recent travels for business or pleasure: To San Salvador, El Salvador in May, 1971 to review research activities of CDC Central America Malaria Research Station and make arrangement for Symposium (See above). To Quito and Guayaquil, Ecuador, for one month in June, 1970 to serve as member of Strategy Review Team to evaluate Ecuador Malaria Eradication Program.

Additions to the family: None since 1962.

Suggestions or comments concerning the newsletter: Thoroughly enjoy Newsletter (how about return to more descriptive "ILLIENT"!)

Would appreciate comments and views of more alums--also list of names of attendors at Illini breakfast--and visitors to department during past year. Also how about some photos of facilities--new buildings, etc. for those of us who have not been back since the 1940's? Thanks for the excellent work you are doing on the Newsletter.

Editor's note: Thank you for the suggestions.

Dr. Robert Earl Lewis

Home address: 306 21st Street, Ames, Iowa

Business address: Department of Zoology and Entomology, Iowa State University, Ames, Iowa 50010

Current research and recent publications: Still involved in the study of ectoparasitic arthropods, especially fleas, in Nepal, Afghanistan, the Middle East, North Africa, and the United States.

Recent travels for business or pleasure: Nepal (1968), Egypt and Eastern U.S. (1970), Western U.S. (1971)

Additions to the family: None.

Suggestions or comments concerning the newsletter: The Newsletter is great. Keep up the good work.

René Martineau

Business address: Laurentian Forest Research Centre, P.O. Box 3800,
Ste. Foy, Quebec, Canada.

Current research and recent publications: Annual Report of the
Forest Insect and Disease Survey 1970, Canadian Department of
Fisheries and Forestry.

Number of Children: 5, ages 8 to 26.

James F. McAlpine

Home address: 524 Evered Avenue, Ottawa 3, Ontario

Business address: Entomology Research Institute, Central Experimental
Farm, Ottawa, Ontario KIA 0C6

Current research and recent publications: Still working on taxonomy
of flies, also interested in insects in amber. I am head of
the Diptera Section in the Canadian National Insect Collection.
Recent papers: Canadian amber, a paleontological treasure chest.
Canadian Entomologist 101, 1969. First record of Calypterate
flies--the Mesozoic era (Diptera Calliphoridae). Canadian
Entomologist 102, 1970. Identities of conchalid flies described
by Kertesz, with notes on related species. Canadian Entomologist
102, 1970. The identity distribution and biology of Lonchaea
zetterstedte with notes on related species (Diptera, Lonchaeidae).
Canadian Entomologist 102, 1970.

Recent travels for business or pleasure: Did some field work along
the shore of Lake Ontario in 1970. Will be in Alberta for a
while in 1971. Had a very good visit to Washington, D.C. in
March-April, 1971.

Additions to the family: Stopped at six--ages 19-3, 4 boys, 2 girls.

Suggestions or comments concerning the newsletter: You have done a
splendid job, I hope you will continue to bring them out.

Franklin C. Nelson

Home address: Sunland Gardens, Apt. 4-S, 2001 N.E. 38th Street,
Lighthouse Point, Florida 33064. Retired.

Recent travels for business or pleasure: We spent another fine winter
in Fort Lauderdale before coming back to N. Jer. in April.
Busy gardening and finishing the renovation of the old 1876 house.
Making plans for our trip later this summer to Indiana, Ohio,
Mississippi, Arizona and California in time for the Ent. Soc.
meeting in L.A.

Additions to the family: None

Suggestions or comments concerning the newsletter: I really enjoy the
Newsletter and hope it continues. Always nice to know what is
going on and where some of the older alumni are living. Sorry I
apparently forgot to return the report last year.

Steve Parshall

Home address: 228 Myrtle Street, Winnetka, Illinois
Business address: Biology Department, University of Louisville,
Louisville, Kentucky 40208
Recent travels for business or pleasure: Mammoth Cave, May 8, 1971.
Midwest Benthological Society Meeting, Notre Dame University,
March 24-26, 1971. ESA Meeting, Miami Beach, December 1970.
Additions to the family: I lay claim to none.
Suggestions or comments concerning the newsletter: Congratulations
on the hiring of an insect ecologist and on the initiation of
a summer field course-type-Entomology 302. Also, the type of
students you are attracting seems to be changing. More social
consciousness. HOW CAN YOU BE SO SANGUINE WITH THE CURRENT
JOB SITUATION BEING AS IT IS? "Our current crop of Ph.D.
candidates is finding 100-300 applicants for every position."

Glenn L. Pierce*

Home address: 439 Roberts Lane, Batavia, Illinois 60510
Business address: 1506 E. Roosevelt Road, Wheaton, Illinois 60187.
Current research and recent publications: Breeder, originator and
introducer of miniature gladiolus varieties currently grown
throughout this country and many foreign lands. Originator of
several show-type dahlias enjoying the favor of dahlia fanciers.
Recent travels for business or pleasure: Annual Meeting of Central Plant
(regulatory) Protection Board - Minneapolis, Minnesota 1970.
Central Plant Board Meeting, Jefferson City, Missouri 1971.
Additions to the family: Three children and 7 grandchildren.
Suggestions or comments concerning the newsletter: *Successor to
H.F. Seifert as Horticultural Inspection Supervisor Illinois
Department of Agriculture, Division of Plant Industry.
Mr. Seifert retired July 1, 1970 after nearly 50 years in the
employ of the Department of Agriculture. I succeeded him after
field inspection work from the time of my graduation in '32 till
July 1, 1970.

Robert Snetsinger

Home address: 900 Fox Hill Road, State College, Pennsylvania 16801
Business address: Department of Entomology, The Pennsylvania State
University, University Park, Pennsylvania 16802.
Recent travels for business or pleasure: Attended VIII Congress
Science, London, England, September 7-15, 1971. Became
Professor of Entomology July 1, 1971.
Editor's Note: Congratulations!