

ANNUAL NEWSLETTER

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

1973

DEPARTMENTAL ROSTER, 1972-73

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- Ghent, Arthur W. - Professor of Zoology and Entomology
- Horsfall, William R. - Professor of Entomology
- Jaycox, Elbert R. - Professor of Apiculture, Depts. Horticulture and Entomology
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- LaBerge, Wallace E. - Professor of Entomology and Taxonomist
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- Sternburg, James G. - Professor of Entomology and Executive Secretary
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TABLE OF CONTENTS

MESSAGE FROM HEAD OF DEPARTMENT - Joseph R. Larsen -----	1
ACTIVITIES OF THE SCHOOL OF LIFE SCIENCES -----	3
TRIBUTE TO PROFESSOR CLYDE WILSON KEARNS -----	4
BALDUF FUND AWARD -----	6
IN MEMORIUM - Vern G. Milum -----	7
VISITORS TO THE DEPARTMENT, 1972-73 -----	8
ENTOMOLOGY GRADUATE STUDENT ASSOCIATION -----	9
RECENT GRADUATES -----	11
PICTURE SECTION -----	15
STUDENTS AND STAFF -----	20
NEWS ABOUT THE FACULTY -----	26
PUBLICATIONS OF THE DEPARTMENT -----	34
ALUMNI NEWS -----	38
INFORMATION SHEET -----	40

As always the editor would like to take the opportunity to thank Ruth Plymire, Judy Michael and Jean Alexander whose time, patience and willingness make it possible for the Newsletter to come to you each year. We are grateful for all our nonacademic people in the department who give of their time and their talents unselfishly and make it possible for us to carry out meaningful programs in entomology. Also we would like to thank our graduate students, fellow colleagues and all of you alumni who share your activities and interests with us each year.

Ed.-J.R.L.

MESSAGE FROM HEAD OF DEPARTMENT
Joseph R. Larsen

As we come to the close of another school year in entomology at Illinois it is with a great deal of pleasure that I report to you as our distinguished alumni the activities of the department. There have been problems during the past year which will affect future activities in entomology at Illinois. The loss of the training grants was news that we received with a great deal of concern. While we will be able to phase out our program over the next 3 years, this represents the loss of a significant element of student support. In spite of this loss, we still have a very viable research program being carried on by the faculty members of the department who because of their expertise and excellence continue to be funded by granting agencies.

We are saddened this year by the retirement of Dr. Clyde W. Kearns to whom we have dedicated this issue of the Newsletter. Dr. Kearns returned from England to spend his last year at the University actively engaged in teaching of insect control and toxicology, and advising and interacting with the graduate students. We will feel keenly his loss in the department. He has represented for many years a moving force in the area of toxicology and has lent his great strength to the development of one of the most outstanding departments of entomology in the country. Dr. Kearns and Camille will be returning to Sittingbourne in England where he will continue an active research career with the Shell Oil Company with whom he has been consulting and working with for many years. The search for a replacement for Dr. Kearns is in process. While we have looked at a number of candidates we have not yet made a decision. If any of you have any suggestions or recommendations of outstanding toxicologists, we would be more than happy to receive input from you.

We continue to maintain a strong cadre of graduate students. One of the exciting things this spring has been the approval of a new program in insect pest management. This has been under considerable study by the department during the past year. We feel there is a distinct need for individuals trained in pest management primarily with a degree at the master's level to go out and work in this rapidly expanding area of insect pest management and its related problems in environmental control. This program will be initiated in the coming year and in conjunction with the Natural History Survey at the University we will give our Master's candidates in insect pest management not only sound training in entomology, but one or two summers field experience through the Survey. We feel this will be an exciting and viable program and look forward to your support as alumni in sending students to Champaign-Urbana who might be interested in this kind of training.

Without question we feel that entomology continues to be a viable part of the University. The activities being carried out in the department are stimulating and exciting and we look forward to the coming year with a great deal of anticipation for continued growth and maintenance of the excellence of the research and teaching. As always we are proud of our alumni and look forward to your continued support and association. Hopefully we can get together at the National Meetings in Texas for an Illinois Breakfast and renew acquaintances.

ACTIVITIES OF THE SCHOOL OF LIFE SCIENCES

Once again the School of Life Sciences is in a state of flux; a problem we hope will soon be eliminated with a continuum allowing stability within the School. Dr. Leon Campbell, former Director of the School, resigned in May of 1972 to assume a position as Provost at the University of Delaware. Dr. Joseph R. Larsen, Head of the Entomology Department, assumed the responsibilities of Acting Director of the School for the year 1972-1973. While many activities have gone forward in the School and it has continued to carry out its mandates, it has been a difficult period of time without a full-time director.

The School continues to remain a viable, administrative unit in bringing together the diverse interests of the various departments and interdisciplinary programs within Life Sciences. The pressures continue to increase in the Life Sciences from a large number of students interested in medicine and medical-related careers. The total number of undergraduates in the biology programs has doubled in the last 2 years and we are anticipating some 1200-1400 students as biology majors in the fall of 1973. In addition to these pressures are the continuing desire for growth in the various areas of biology. This overlaid with dimensioning financial support makes these difficult times. I am sure many of you are aware that training grants will cease to exist in the next 2-3 years. There are cuts in research monies in many activities and shifts in emphasis to areas other than those normally carried out in classical departments in the Life Sciences. However, we look forward to continued growth in the School and the perpetuation of meaningful programs in all of the departments here at Illinois.

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TRIBUTE TO PROFESSOR CLYDE WILSON KEARNS

The retirement of Prof. Kearns, July 1, 1973 is a most significant milestone in the history of the Department. Clyde came to the University of Illinois as a graduate student in 1932, and completed his graduate work under Prof. C. L. Metcalf in 1935. From 1934 to 1938 he was associated with the Illinois Natural History Survey and directed the research leading to the development of N-amy1-N-benzyl cyclohexylamine the first successful synthetic organic acaricide for greenhouse mite control. He was appointed as Assistant Professor of Entomology in 1938 and began the distinguished teaching and research career, emphasizing insect toxicology, which has produced so many important contributions to American entomology. Dr. Kearns became Professor of Entomology in 1950 and was Head of the Department from 1963 to 1969, resigning to accept a two-year assignment as Director of the Shell Agricultural Research Laboratory, Woodstock, England.

The roll of Clyde Kearns' graduate students and their subsequent contributions to entomology form an important part of the history of U.S. entomology over the past 35 years. During this period he directed the research of 27 doctoral candidates and a substantial number of masters' candidates. Five of these students have subsequently become heads of departments of entomology in U.S. Land Grant Universities. The entire group has been prolific in entomological research in the areas of insect physiology, and biochemistry, insect control, and in the chemistry and toxicology of pesticides; and their graduate students are already assuming leadership in many areas of U.S. entomology.

Professor Kearns' research contributions are many and important. He was a pioneer in the development of synthetic organic insecticides and laid the groundwork for the toxicology of the entire group of cyclodienes - chlordane, heptachlor, aldrin, dieldrin, and endrin. He was one of the very first to appreciate the importance of DDT resistance both as a significant facet of accelerated microevolution and as a serious challenge to the biochemical toxicologist. Beginning in 1948 he and his students made outstanding contributions to the understanding of this phenomenon leading to the identification, characterization, and isolation of the remarkable enzyme DDT - dehydrochlorinase in 1955. With the advent of the organophosphorus insecticides, he turned his attention to basic studies of the mode of action of these compounds as inhibitors of insect cholinesterase. This work has led to many important contributions to knowledge of the detailed structure of this enzyme, to the molecular processes involved in its reaction with toxicants, and to the comparative study of highly purified cholinesterases from several species of insects.

As Head of the Department of Entomology at Illinois, Professor Kearns continued the wise and inspiring traditions of leadership in teaching and research that have kept this department at the very forefront of U.S. entomology over the past several generations. He presided over the activities of the department during the period of its greatest growth in new staff additions and in the move to the excellent facilities now occupied in Morrill Hall.

It is apparent that Professor Kearns' career at the University of Illinois has encompassed the entire period of development of the science of insect toxicology and that he and his students have had the major impetus in the delineation of this subject to its present dimensions. Very few professors can have had the satisfaction of leaving such personalized imprints on the development and growth of a new branch of science.

All of Clyde's students and colleagues will remember with the utmost affection and gratitude his kindly and unassuming leadership, his patience with fumbling efforts, and his continuing production of exciting ideas and discoveries. Truly he will always be an inspiration. We wish him and Mrs. Camille Kearns the very best of everything in their new endeavors.

BALDUF FUND AWARD

We would like to report that the first Balduf Award was made in the spring of 1972 to Dr. David L. Denlinger for an outstanding piece of research carried on while a graduate student under the direction of Drs. Judith Willis and Gottfried Fraenkel. This year there were insufficient contestants who indicated interest in the Balduf Award and the Award was not made in the spring of 1973. When the award was set up it was indicated that it would be made only on receipt of sufficient outstanding manuscripts and competition for any given year. We are grateful for participation of those who have made contributions to the Balduf Award. We still need to raise some \$500 to make this a perpetuating prize. In order for the University Foundation to be able to guarantee us a \$100 per year (which is the cash prize given with the Balduf Award) we must have at least \$2000 in the Foundation to guarantee sufficient interest to make the award on an annual basis. We would be extremely grateful for your continued input and support of this very worthwhile prize which we hope will become a meaningful tradition in the Entomology Department at Illinois.

IN MEMORIUM - VERN G. MILUM

We note with sadness the passing of Dr. Vern G. Milum, former Professor of Horticulture at the University of Illinois from 1925-1962. He died July 21, 1972, in Urbana, Illinois. Dr. Milum was an internationally known authority in relation to honey bees and bee keeping. He was born February 6, 1894, at Viola Wisconsin. Dr. Milum attended school at LaCrosse, Wisconsin State Normal and the University of Wisconsin, from where he also received his doctorate. He served in World War I in the army, being wounded at the Battle of the Marne. He was a member of the Illinois Beekeepers' Association and was on the Board of Directors of the American Honey Institute.

VISITORS TO THE DEPARTMENT, 1972-73

Dr. Moises Agosin
Department of Zoology
University of Georgia
Athens, Georgia

Dr. Frederick W. Plapp
Department of Entomology
Texas A & M University
College Station, Texas

Dr. James Lloyd
Department of Entomology
and Nematology
University of Florida
Gainesville, Florida

Dr. Aleksandra Przelecka
Nencki Institute of Experimental
Biology
Warsaw, Poland

Dr. Charles D. Michener
Department of Entomology
University of Kansas
Lawrence, Kansas

Dr. Dan Shankland
Department of Entomology
Purdue University
Lafayette, Indiana

Dr. Rod Murphy
Department of Zoology
University of Iowa
Ames, Iowa

Dr. Betty J. Wall
Department of Biological Sciences
Northwestern University
Evanston, Illinois

Dr. James Oschman
Department of Biological Sciences
Northwestern University
Evanston, Illinois

ENTOMOLOGY
GRADUATE STUDENT ASSOCIATION

Officers

The first activity of the year for the EGSA has traditionally been the election of new officers, and this year was no exception. Since news teams were not on hand for on-the-spot coverage (they reportedly were covering a more important fall election), the new officers will be mentioned here. Chairman for the year is Charlie Helm, 4th floor; Vice-Chairman, Larry Pappas, either 3rd floor or basement (both of the officers are often also found in high-level conferences at the local coffee shop); Treasurer, Chimanrao Shinde, Natural History Survey; Secretary, Li-chun Li, 2nd floor; and Faculty Representative, Chris Maier, 4th floor or somewhere "on the road" between Champaign-Urbana and Costa Rica, the Arizona deserts, the Rocky Mountains, southern and western Illinois, and Michigan.

Programs

1. Seminar Series

EGSA continued its weekly graduate student seminar series with presentations given by guest speakers from other universities (Dr. James Lloyd, Dr. Charles Michener, Dr. Rod Murphy, Dr. Frederick Plapp, to name but a few), from our own faculty, and from among our own graduate students. This year's seminar was under the direction of Chris Maier fall semester and Mark McClure spring semester. Although bouts of apparent spring fever held down the attendance at a few of the spring meetings, attendance was again generally very good and we owe our thanks to Chris and Mark for organizing another successful series.

2. Course Evaluations

Course and instructor evaluation continued under the leadership of Keith Solomon and he, along with Chris Maier, our faculty representative, have worked toward an increased student-faculty interchange of ideas concerning courses and policies within the department.

Activities

1. Christmas Party

The annual Departmental Christmas Party was again a gala affair with plenty to eat and drink (too much for some folks). The usual practice of having to rent a hall was avoided this year through the kindness of Dr. and Mrs. Waldbauer who offered the use of their home for the party. The greatly improved surroundings apparently contributed to the party atmosphere as vast quantities of liquid refreshment were consumed; however, things evidently stayed under control as no bills for broken lamps or furniture or ruined carpets were received by the Treasurer.

Although Santa himself was not present this year as he had been in the past, (he is reportedly alive and well and acting out of Kelly AFB, Texas, under the alias, Bert Clegern) he did appoint two elves (Chris and Keith, who if you will remember are working on student-faculty relations) to deliver the usual array of tasteless gifts not only to the faculty and staff as always, but also this year to a few particularly deserving students as well. Some of the gifts reported were: Dr. Waldbauer - an appearance in a Cosmopolitan centerfold, the complete works of Gloria Steinham, and a year's subscription to Ms. Dr. Willis - an appearance in a Playboy centerfold, the complete works of Norman

Mailer, and a year's subscription to Men Only. Dr. Larsen - an early warning system for his wheelchair and three life size, animated copies of himself to leave around the department. Dr. Friedman - a set of studded snow tires and a pair of helper wheels for his bicycle. Dr. Stannard - a kangaroo skin fur coat lined with New Guinea 'possum and fitted with gold, thrips encrusted buttons. Dr. Horsfall - Chairmanship of the "Save Allerton Committee" and 50 quarts of blood for next semester's bionomics class. Dr. Kearns - a set of Standard Oil, Gulf Oil and Texaco credit cards and a book on how to play cricket. Entomology Secretaries - Three Mattel talking dolls that say the following phrases at random: "No!", "No, we don't have any money!", "You'll have to ask Dr. Larsen!", and "Pass more pound cake please."

2. Spring Picnic

The spring picnic was held at Kickapoo again this year and, in the hopes of starting a tradition in the department, the hamburgers and ice-cream were supplied by the leaving graduate students (Joel Coats, Jerry Freier, Don Nye and Keith Solomon). Attendance was low due to the cool and cloudy weather and was limited to the faithful hard-core entomologists. Entertainment mainly consisted of quenching thirsts round the fire but a few brave souls played intra departmental volley ball where it is told the Leaf Rollers wilted before the overwhelming force of the Dung Rollers. Spectators were later treated to a fine display of Frisbee throwing with particularly vocal performances by the Drs. Price and Delcomyn. A good time was had by all, but we hope the weather is more suitable next year.

3. Sports

The sports activities in the department the past year have centered around softball with the departmental team, the Fly Catchers hustling to a 3-3 record last spring in the graduate intramural league. The manager, Larry Hansen considered the season a success due to our break-even record and no rainouts.

In May the departmental spring picnic at Kickapoo State Park allowed an opportunity for an intrasquad game involving students, staff, faculty, and families. After the meal there were many games of volleyball and everyone was thoroughly exhausted by mosquito time.

The spring softball season has started for 1973 now, and the team appears to be solid again despite the loss of Bert (the original Fly Catcher) Clegern, Inder Kapoor-Koufax, Dick "Fireball" Lipsey, and Jim "Speedy" Kardatzke. The team has an intramural record of 1-1 at press time, and is aiming for the playoffs, and of course for a big day at Kickapoo this May.

RECENT GRADUATES

Robert (Bert) W. Clegern was born in San Diego, California, on February 28, 1943. He attended grammar and secondary schools in California, Texas, Ohio, and Colorado, graduating from Littleton High School, Littleton, Colorado, in 1960. In the same year he enrolled at the University of Colorado, Boulder; and in 1965 he received a Bachelor's degree in Biology, a commission as second lieutenant in the United States Air Force, and a secondary school teaching certificate. He then attended the University of Illinois, Urbana, and received a Master of Science degree in Entomology in 1966. Later that year he entered active duty with the U.S. Air Force as an Aviation Physiologist at Vance Air Force Base, Oklahoma. In 1969 he was assigned to the Air Force Institute of Technology to pursue a doctorate program in entomology at the University of Illinois. Bert conducted his research under the direction of Dr. Robert L. Metcalf, and the title of his thesis was "Population dynamics and environmental stress studies of house flies in the laboratory." Upon completion of this program in June 1972, Bert returned to the Air Force and was stationed at Kelly Air Force Base in Texas.

Bert is a member of two professional societies, the Entomological Society of America and the Aerospace Medical Association; and three scholastic honoraries, Phi Kappa Phi, Chi Gamma Iota and Sigma Xi.

Jerald R. DeWitt was born May 5, 1945, at Watseka in east-central Illinois. After completing his secondary education in 1963 at Donovan High School, Donovan, Illinois, he entered Eastern Illinois University at Charleston. He earned a Bachelor of Science in Education degree in Zoology with a minor in botany in June 1967, at which time he accepted a research assistantship at the University of Illinois at Urbana-Champaign. While at the University of Illinois, he was employed at the Illinois Natural History Survey in the section of Economic Entomology where he gained research experience under Dr. Edward J. Armbrust in forage crop pests. He received his Master of Science degree in February 1970 and his Ph.D. degree in June 1972. His Ph.D. thesis was entitled "Polymorphic variation of Nezara viridula (L.) the southern green stink bug (Hemiptera: Pentatomidae)." After receiving his Ph.D. degree, Jerry accepted a position in the Entomology Department at Iowa State University in Ames, Iowa.

Jerry is a member of the Entomological Society of America, Gamma Sigma Delta and Sigma Xi.

Francis E. Gardner, Jr. was born December 13, 1938, in Wichita, Kansas. His primary school education in the Wichita school system was completed in 1954 when he entered Clearwater High School in Clearwater, Kansas. He graduated as salutatorian in 1957 and began his undergraduate education at Ottawa University in Ottawa, Kansas. He commenced fulfillment of his active duty obligation as a member of the U.S. Naval Reserve in June 1959, receiving an honorable discharge from active duty in April 1961. He resumed his undergraduate training in September 1962, and he graduated with distinction, receiving his Bachelor's degree in Biology in 1965. He was admitted to Wichita State University in Wichita, Kansas, in February 1966 as a teaching assistant and received a Master of Science degree in Biology in 1968. He was admitted to the University of Illinois at Urbana-Champaign in September 1968 as a Trainee in Cell Biology, and he also served as a teaching assistant. He conducted his research under the direction of Dr. James G. Sternburg, and his thesis was entitled "Descending activation of cockroach giant axons and alterations of their conduction velocity by the local anaesthetic-like activity of nicotine." Francis received his

Ph.D. degree in February 1973, and he will be joining the Department of Entomology, University of Georgia, Athens, in June. He will be doing post-doctoral research with Dr. U. E. Brady.

Francis was a former student member of the American Society of Zoologists and is presently a member of the American Association for the Advancement of Science.

Feng-kuo (Frank) Hsieh was born September 1, 1940, in Taiwan, China. After graduating from Taiwan Provincial Hsin-chu High School in 1959, he attended the National Taiwan University and earned a Bachelor's degree in Agriculture in 1963. Then he did one year of military service (ROTC) as second lieutenant in the Chinese Air Force. He studied in the Research Institute of Plant Pathology and Entomology at NTU during 1964-1965. He accepted a research assistantship and studied at the Virginia Polytechnic Institute and State University in 1965. He completed his Master of Science degree requirements in Entomology in 1968. He worked for one year (1968-1969) as Assistant Chemist at the Illinois State Water Survey. Then he continued his Ph.D. program in entomology at the University of Illinois, and he was employed in the section of Economic Entomology, Illinois Natural History Survey. He completed his Ph.D. requirements under the direction of Dr. William H. Luckmann in February 1973, and he has accepted a position in the Plant Protection Center in Taipei, Taiwan, Republic of China. The title of his thesis was "Bionomics and developmental model of the alfalfa weevil in Illinois."

Frank is a member of the Entomological Society of America.

An-horng Lee was born October 4, 1942, in Kaohsiung Hsien, Taiwan, Republic of China. He attended public primary school in Feng-Shan from 1948-1954, and he graduated from Kaohsiung Provincial High School in 1957 and Kaohsiung Second Municipal High School in 1960. He was admitted into the Department of Plant Pathology and Entomology, National Taiwan University in September 1960 and completed the Bachelor's degree in June 1964. At the end of 1964, he passed the Civil Service Examinations for entomologist held in Taiwan with the highest honor of the year. He enlisted to serve in the Chinese Army as an executive second lieutenant in September 1964. After an honorary discharge from the Army in September 1965, he enrolled in the Research Institute of Plant Pathology and Entomology, National Taiwan University and graduated with a Master of Science degree in June 1967. After graduation, he was admitted into the Department of Entomology, University of Illinois at Urbana-Champaign where he was a teaching and research assistant. His research advisor was Dr. Robert L. Metcalf, and the title of his thesis was "Purification, O, O-dimethyl S-aryl phosphorothioate inhibition, and histochemical localization of house cricket acetylcholinesterase." After receiving the Ph.D. degree in June 1972, An-horng was employed as a research associate in Dr. Metcalf's laboratory here at Illinois.

An-horng is a member of the Entomological Society of America and American Chemical Society.

Richard L. Lipsey was born in North Little Rock, Arkansas, on April 18, 1938. He graduated from Clarkston High School, Clarkston, Michigan, in 1956, served four years in the U.S. Air Force and attended night school at Columbia College, Columbia, South Carolina, during his last two years in the service. He received the Bachelor of Science degree in Biology-education from Eastern Michigan University in 1963, at which time he entered the Peace Corps. He served as a science teacher, coach and newspaper reporter for two years in Borneo. He received the Master of Science degree in Entomology from the

University of Arkansas in 1968, and he enrolled at the University of Illinois in January 1968. He worked as a half-time research assistant for two years at the University of Arkansas and a half-time teaching assistant for four years at the University of Illinois. Richard's research advisor was Dr. Haney from the Botany Department and his thesis was entitled "Accumulation and effects of methyl mercury hydroxide in a terrestrial food chain." After completing his Ph.D. requirements in June 1972, Richard accepted a position in the Chemagro Corporation in Omaha, Nebraska.

Richard is a member of the Entomological Society of America, the American Association for the Advancement of Science, Pi Kappa Delta, Chi Gamma Iota, Kappa Delta Pi, and he has served as chapter president or vice president in the last three organizations.

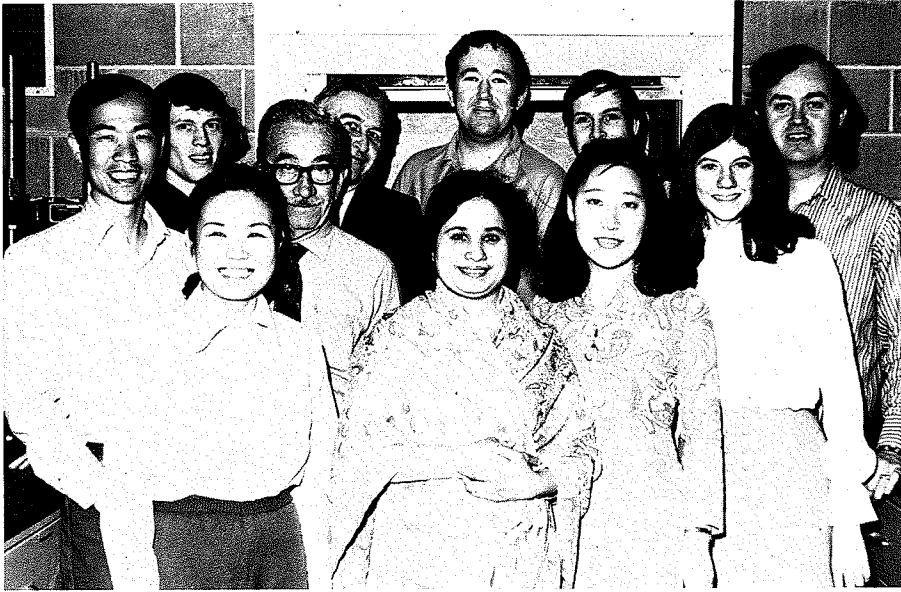
Herbert N. Nigg was born in Detroit, Michigan, on July 9, 1941. He attended grammar and secondary schools in Caro, Michigan, graduating from Caro Public High School in 1959. He attended the University of Michigan, Ann Arbor, from September 1959 to June 1961. He then spent three years as a U.S. Paratrooper both in the U.S. and overseas. In 1964 he was released from service, and in 1967 he received a Bachelor's degree in Biological Sciences from Michigan State University, East Lansing. In 1968, he entered the University of Illinois at Urbana-Champaign to pursue a doctorate program in entomology under the direction of Dr. Robert L. Metcalf. He received his degree in June 1972, and the title of his thesis was "Microsomal enzyme induction by DDT and its analogs in the mouse and chicken." Herb is now working at the U.S.D.A. in Beltsville, Maryland.

Herb is a member of two professional societies, the Entomological Society of America and the American Association for the Advancement of Science.

Nalini Perera Ratnasiri was born on September 21, 1939, in Ratnapura, Ceylon. After completing her primary and secondary education in the Convent of the Child Jesus, Ratnapura, and CMS Ladies College, Colombo, she entered the University of Ceylon, Colombo, and received the Bachelor of Science degree in Zoology in 1964. She served the University of Ceylon, Peradeniya, in the capacity of an assistant lecturer in zoology from 1964-1966, and as a research officer in entomology at the Central Agricultural Research Institute, Peradeniya, Ceylon, from 1966-1969. In the fall of 1969, she entered the Graduate College of the University of Illinois at Urbana-Champaign to continue her studies under the direction of Professor Gottfried S. Fraenkel. During the first year of her graduate study she held a Fulbright scholarship. During the next two and a half years, she was supported by a scholarship from the International Rice Research Institute, Manila, Philippines. She received her Master of Science degree in Entomology in September 1970. She completed the requirements for the Ph.D. degree in February 1973, and she has returned to Ceylon (now called Sri-lanka) where she accepted a position in the Division of Entomology at the Central Agricultural Research Institute in Gannoruwa, Peradeniya. The title of her thesis was "Anterior inhibition of pupariation in post-critically ligated Sarcophaga bullata larvae."

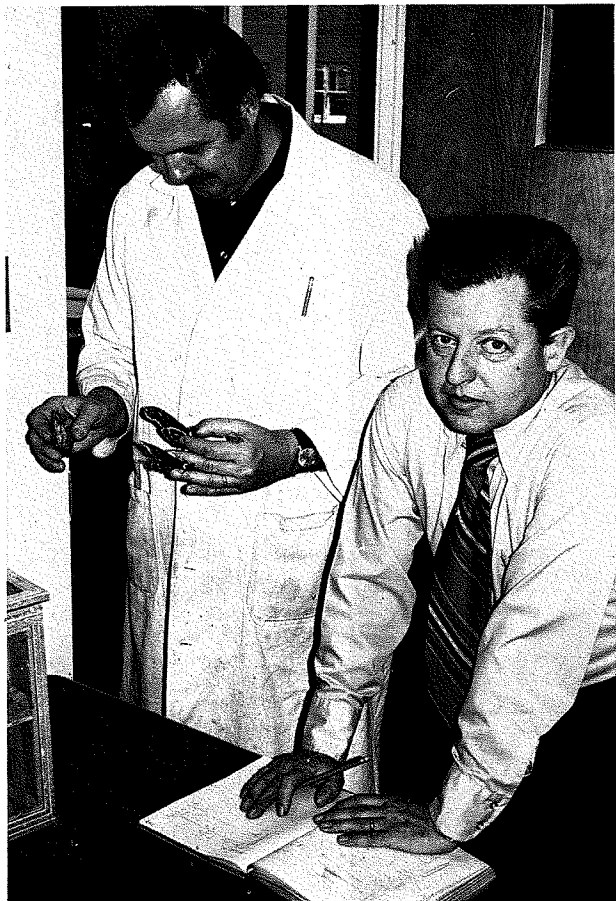
Sharad M. Vaishampayan was born on September 1, 1939, at Gwalior (M.P.), India. He received his primary high school and college education in the same town. He attended the Government Agriculture College, Gwalior, from 1955-1961 where he completed the Bachelor of Science degree in Agriculture in 1959 and the Master of Science degree in Agricultural Entomology and Zoology in 1961. On sponsorship by Jawaharlal Nehru Agricultural University, Jabalpur, India, and USAID he initiated work for the Ph.D. degree as a graduate student in the Department of Entomology at the University of Illinois at Urbana-Champaign in the summer of 1969 working under the direction of Dr. William H. Luckmann. The title of his thesis was "The spectral sensitivity of the greenhouse whitefly Trialeurodes vaporariorum Westwood and its biological significance in host selection." After completing his Ph.D. requirements in February 1973, he returned to India to resume his position as Assistant Entomologist at the J. N. Agricultural University.

Sharad is a Fellow of the Entomological Society of India and a member of the Entomological Society of America.



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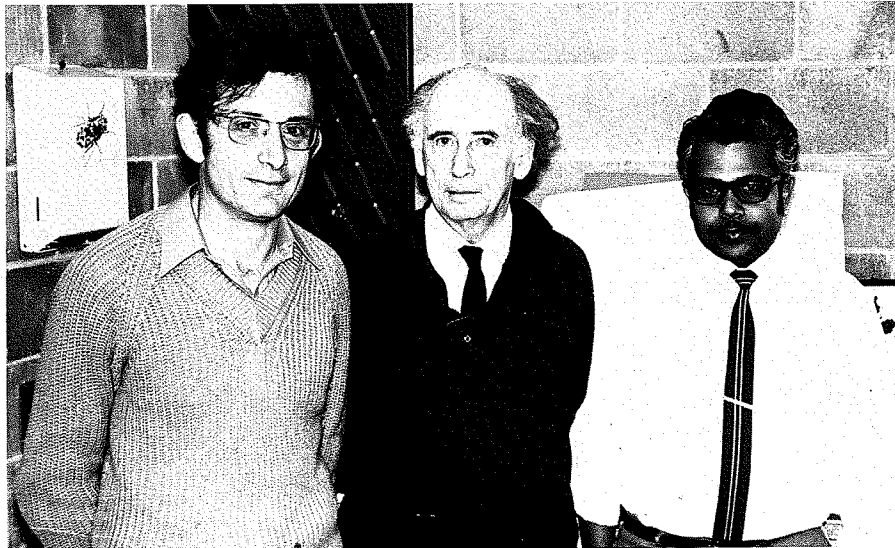
Dr. Metcalf's Lab: Left to right, 1st row. Li-chun Li, Asha Hirwe. 2nd row. An-horng Lee, Clyde Kearns, Caroline Chang, Barbara Walton. 3rd row. Joel Coats, Robert Metcalf, Keith Solomon, Don Nye, John Williams.



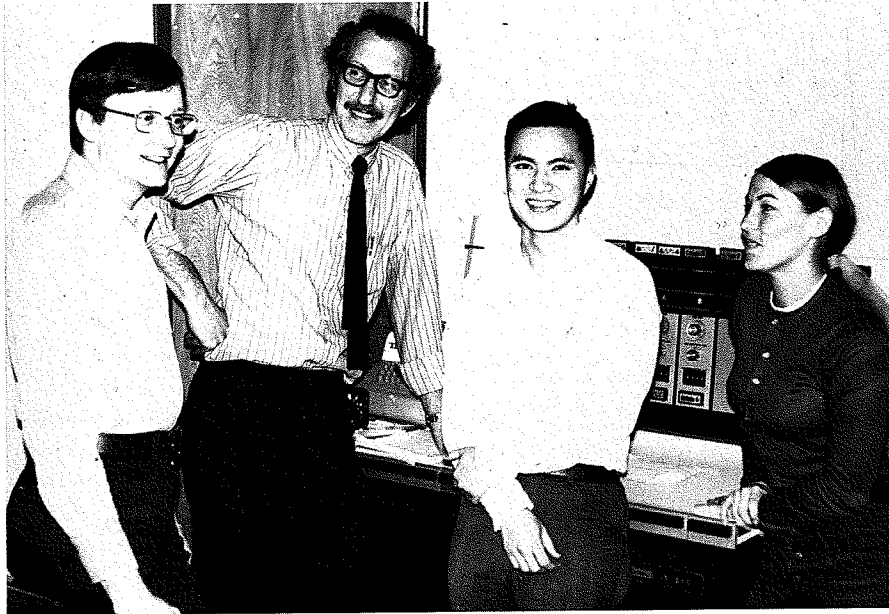
Drs. Gilbert Waldbauer and James Sternburg busy with their research. →



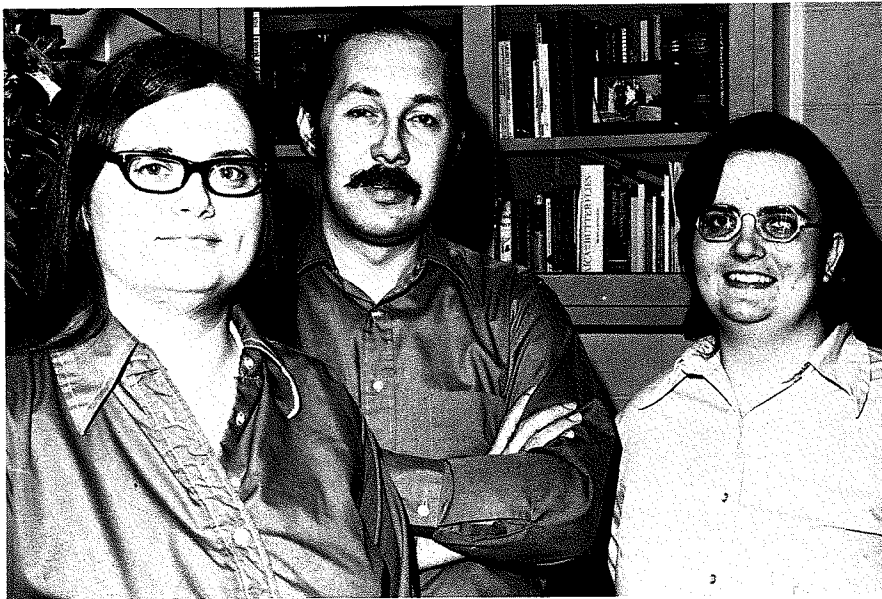
Dr. Willis' Lab: Left to right, front. Margaret Hollowell and Elaine Shepherd. Back. Lee Friedman, Les Wiemerslage, John Burkart and Kevin Spencer.



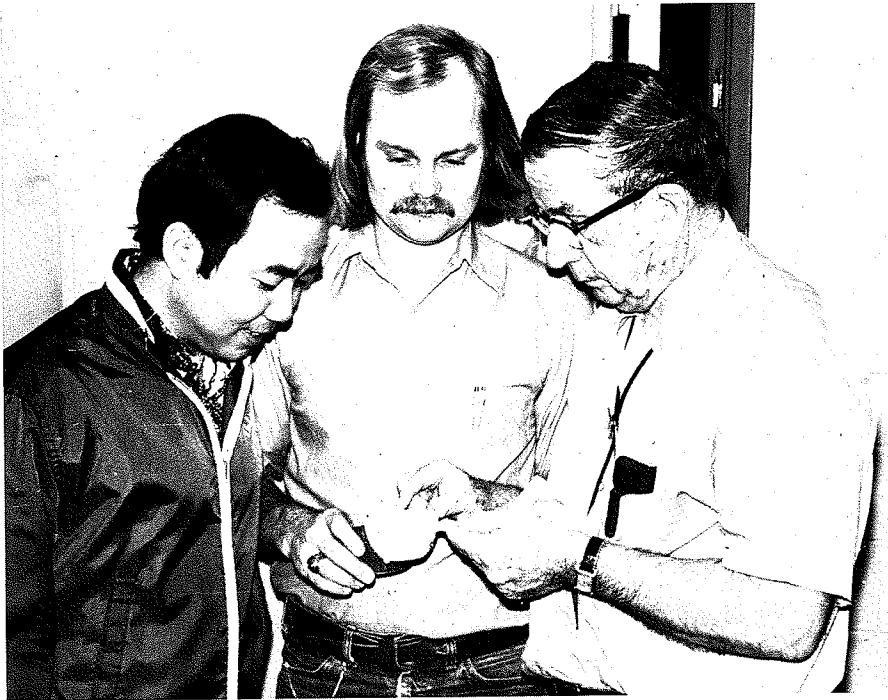
Dr. Fraenkel's Lab: Morris Seligman, Gottfried Fraenkel and P. Sivasubramanian.



Dr. Friedman's Lab: Left to right. Jerry Freier, Stanley Friedman, Andy Chen and Louise Shively.



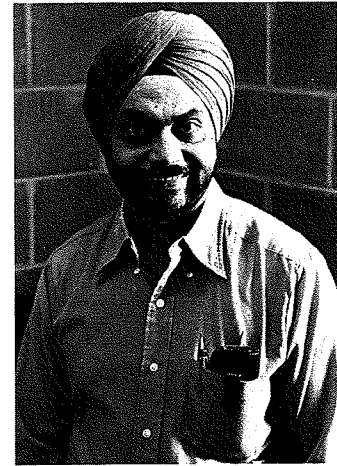
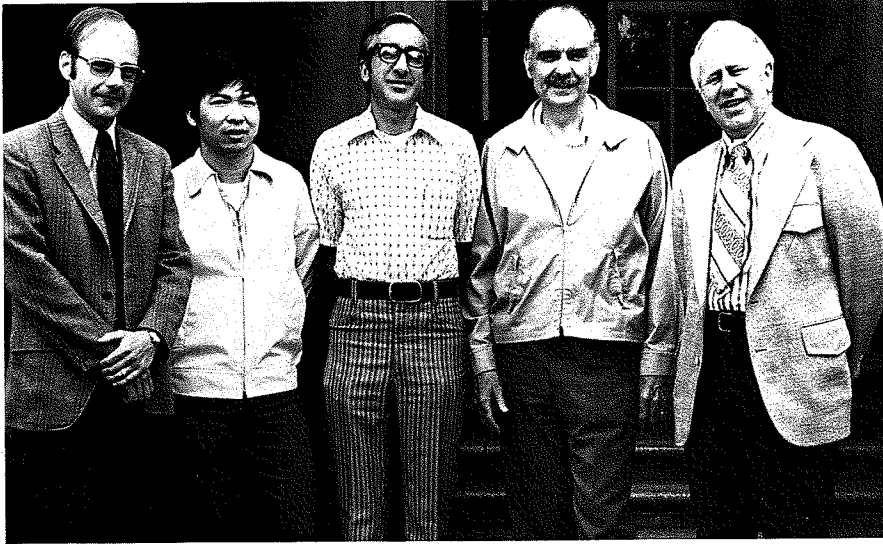
Dr. Selander's Lab: Left to right. Cheryl Adams, Angel Berrios-Ortiz and Nancy Edmunds.



Dr. Horsfall's Lab: Left to right. Nono Liem, Jeff Tucker and William Horsfall.



Dr. Price's Lab: Left to right. Dave Gentry, Mark McClure, Charlie Helm and Peter Price.



Mohinder Khalsa

Left to right. Doug Sell, Sathorn Sirisingh, Wallace LaBerge, Elbert Jaycox and William Luckmann.



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Left to right. Chimanrao Shinde, Bill Walker, Lee Anne Turner, Chris Maier and Marie Monkman.

← Left to right. Ralph Harbach and Dr. Fred Delcomyn.

STUDENTS AND STAFF

ADAMS, Cheryl. My research interests are taxonomy and the ecology of Epicauta vittata group of Meloidae. My advisor is Dr. R.B. Selander.

BERRIOS-ORTIZ, Angel. I have continued work on my thesis research, and I have published a short paper with my advisor, Dr. R.B. Selander, on sexing of immature blister beetles. I also went to Mexico during September with Dr. Selander to collect blister beetles of the genus Epicauta.

CHANG, Caroline. I have been here for one year. It has been a wonderful year, and everything is more familiar to me now. I love it here so much that it has become my second hometown. I'm working with Dr. R.L. Metcalf, my advisor, to test the degradability of DDT analogues.

CHEN, Andrew C. Last summer was a travelling one. With the Entomology 302 class we went to western and southern Illinois where it is much more scenic than the Champaign-Urbana area. The class also took us to Texas, where I saw a rattlesnake for the first time. We visited Carlsbad Caverns in New Mexico on the last trip. Of course, those trips were not just for pleasure. We all worked hard and I alone collected about 140 families representing 18 orders of insects.

Pat's sister came to the States last summer. We drove her down to Athens, Georgia, where she is studying biology. We passed through the Great Smoky Mountains and visited a friend at Clemson, South Carolina, where it is so beautiful that Urbana is no comparison.

Research is going slowly. There is so much preliminary work that has to be done in order to really get our hands on the question of the control of trehalose metabolism in Phormia. We do find some interesting correlations between the environmental humidity and the blood trehalose levels in these little beasts. If anybody is interested in giving blood to the blowfly, please see me. Maybe we'll have some success in the perfusion experiment. My advisor is Dr. S. Friedman.

CHEN, Chiou-nan. Since I passed my prelim last November, I've been working hard on my thesis: "Bionomics of Cypress leaflet gall midge." I've recently been appointed as a research entomologist in the Economic Entomology Section of the Plant Protection Center in Taiwan, and as soon as I complete my graduate studies under the direction of Dr. W.H. Luckmann, I will start working there. My wife, Grace, is very busy in her graduate study in the Department of Accountancy.

COATS, Joel. My work is progressing on the study of toxicity and biodegradability in methoxychlor analogs which possess various aliphatic substituents. I hope to finish my thesis by the end of summer. My advisor is Dr. R.L. Metcalf.

This past year we visited parents in Ohio (mine) and Florida (Susan's) and took a vacation to Arizona.

EDMUNDS, Nancy. I received my M.S. in August, and have since completed the necessary course work for the Ph.D. I am currently working on the taxonomy of the genus Epicauta (Meloidae), particularly with the first instar (triungulin) larvae. My advisor is Dr. R.B. Selander.

FREIER, Jerry. During this past year, I have continued to study the factors establishing the physiological relationship between Aedes aegypti and Plasmodium gallinaceum with hopes of completing my thesis work by this fall. My advisor is Dr. S. Friedman.

Travel during 1972 consisted of an April fishing trip to southern Arkansas and a summer camping trip to the Sawtooth Mountains of Idaho. I also attended the 12th annual meeting of the American Society for Cell Biology held in St. Louis, Missouri.

HAASE, Linda M. My current research is a morphological study on mouthparts of the mydas fly, and I hope to incorporate some physiological aspects into this study later on. My advisor is Dr. J.R. Larsen.

HARBACH, Ralph E. The description of a new Neotropical Syrphid fly, resulting from my M.S. thesis, "The Mesograpta (Diptera: Syrphidae) of Belem, Brazil," completed at Western Illinois University in August, 1972, has been accepted for publication by the Entomological Society of Washington. My current research interests are the morphology of insect hygrometers and the neural and muscular structure of scale insects. My advisor is Dr. J.R. Larsen.

HSU, Err-lieh. I am from Taiwan, Republic of China, where I received a Master's degree from the National Taiwan University. My thesis topic was "Biological studies of Oriental Fruit Fly (Dacus dorsalis Hendel)." I have also done some research on asparagus insect pests and the effects of the fluctuating temperature on Myzus persicae (Aphidiidae).

Dr. R.L. Metcalf is my advisor, and my thesis research is the study of the fate and interaction of pesticides and herbicides in the rice-paddy ecosystem. I hope this work will have some practical application in Taiwan.

As this is my first year in the United States, I have not seen much of this country; but I have signed up for Insect Taxonomy and hope to see more this summer.

KHALSA, Mohinder S. My current research is the feeding and host selection of Autographa precationis. My advisor is Dr. W.H. Luckmann.

LI, Li-chun. This is my third year at the University of Illinois. With so many newcomers, I feel rather old.

I received my Master's degree last summer. Now, I'm working on my Ph.D. degree. It might take me another two years to finish. My thesis problem deals with the comparison of the metabolic product of several DDT-analogs to different kinds of insects. This research is under the guidance of Dr. R.L. Metcalf. Like most foreign students, I wish I could finish my thesis as soon as possible and go back to Taiwan to do more research.

Last summer, I took Entomology 302 (Taxonomy). We spent four weeks in the field, and I really liked it. We were proud of our cooking technique, slides, etc.

I have Chinese recipes to share with anyone who is interested in learning Chinese cooking.

LIEM, Khian K. (Nono). This past year saw the completion of course work and a start on my thesis research on the influence of composition of larval medium on the reproductive potential of Aedes vexans Meigen (Diptera: Culicidae). My advisor is Dr. W.R. Horsfall.

I enjoyed a summer field trip through Mason State Forest; Fyrne Cliff State Park; Guadalupe Mountains, Texas; Palo Duro Canyon, Texas; and Carlsbad Caverns in New Mexico.

MAIER, Chris. Completing much essential course work and familiarizing myself with state fauna and flora occupied most of my time the past year. Several trips within and out of Illinois enlightened me as to the great wonders which can and do lie outside of corn and soybean fields. I spent two weeks of June at Sand Ridge (Mason) State Forest gathering data on the daily activity patterns of mimetic syrphid flies. The area is certainly a paradise for any naturalist because of its unusual plants, numerous birds, and rich entomofauna highlighted by the Hymenoptera, their mimics, and their parasites. A recent trip to Southern Illinois yielded Boreus, the snow scorpionfly, and unforgettable views of the beautiful terrain, blackgum-bald cypress swamps, and overwintering bald eagles.

In my journeys outside the state, I backpacked into the undisturbed wilderness of the Rocky Mountains in Colorado. The trip served as an excellent introduction to montane flowers, syrphids, and many unusual station-taking Diptera. A visit to Michigan produced some spectacular mimetic syrphid flies.

Presently, I'm working out the bionomics of Spilomyia longicornis, a mimic of the worker yellow jacket. Hopefully, my research on mimetic syrphids, hymenopteran models, and the effectiveness of insectivorous birds as selective agents can take great strides forward this coming summer. Also, I look forward to expanding the Maier Insect Collection housed in Morrill Hall. My advisor is Dr. G.P. Waldbauer.

MARLIN, John. The three-year project on bee faunal changes at Carlinville, Illinois, is rapidly drawing to a close. Thousands of specimens have been identified and the data obtained is being tabulated. My two most popular recent publications are "The Dam Illinois Plan" which outlines Corps of Engineer plans for Illinois, and an article on how to fight the Corps, which is being reprinted all over the country. This semester I have accepted a part-time position as executive director of the Coalition on American Rivers which will be active in trying to preserve some of the remaining natural values along rivers. This job will keep me moving about the midwest in constant pursuit of the ever-increasing Corps bureaucracy. My research advisor is Dr. W.E. LaBerge.

MCCLURE, Mark. The past year has been a busy and enjoyable one here at the University. Last spring I initiated research on a problem dealing with the coexistence of leafhoppers (Homoptera: Cicadellidae) on sycamore trees in Illinois. In studying the biology and feeding behavior of several insect species throughout the summer, I have discovered interesting differences in the way each species utilizes the sycamore leaf. I am currently completing a thesis from this study to be submitted for a Master's degree. My advisor is Dr. P.W. Price.

Even with a busy schedule of courses and research I have managed to do some travelling in the past year. Much of the summer was spent collecting insects throughout Illinois and Texas with Entomology 302. In November I was able to attend the joint Entomological Society meetings in Montreal. More recently my wife, Laura, and I returned home to Massachusetts for our annual visit.

MEDLER, Bill. As a new graduate student my face and name are, no doubt, unfamiliar to many in the department. After completing my undergraduate studies at Eastern Illinois University in the spring of '72, I spent most of my summer doing field work for the FAO of the United Nations. I worked with Dr. Donald L. Huss of Texas A & M, the regional director of the Mexican beef production program. The bulk of the studies, taxonomic research of the grasses of Eastern Mexico, is soon to be published as a booklet in Spanish as part of the FAO extension program. The distribution ranges of wild and naturalized grasses will be distributed to local ranchers to aid in identification of their flora so that it may be applied in beef management. My advisor is Dr. S. Friedman.

MILLHOLIN, Ruth. (Principal Lab Tech in Dr. Metcalf's laboratory) 1972 has been a very productive year. With the hiring of a new, efficient insect rearer, Alan Tegen, the World Health Organization Insecticide Screening Program has moved forward at a rapid pace. Some new studies on Juvenile Hormones have been undertaken and, with the help of some space allotted by the Survey, an actual hut testing situation has been set up. (All I really did was wield the paint brush.)

On the personal side, my young son has suddenly grown 6 feet tall, is driving the car whenever possible and knows everything while I know nothing. I took two quickie-type "If this is Tuesday, It Must Be Belgium" trips -- one to Spain in October and one just completed to the Caribbean. They have helped me a great deal to survive this situation.

MOLINA-PARDO, Adolfo. As thesis research I have undertaken a numerical taxonomic study of over 1200 specimens from over 80 species of 5 subgenera of the bee genus Andrena. This work will be based on two sets of characters; one of them consists of 38 measurements on the head of each specimen, the other set consists of over 60 characters of diverse parts of the body of each sex of each species. A general analysis of the numerical techniques is being carried out and is leading to a combination of old, modified and new techniques to be used in this study. My advisor is Dr. W.E. LaBerge.

Last October my wife Teresita and I were blessed with the arrival of our first child, Ana Maria. By September of 1973 the three of us will be back to our country, Colombia, South America. There Teresita will continue her studies toward a B.S. in biology that she started at the U. of I., and I will be teaching entomology at the Colombian National University.

SHINDE, C.B. I am from Jawaharlal Nehru Agricultural University, Jabalpur, M.P., India. I am working on the morphology of mouthparts of the final instar larvae of Pseudoplusia includens (Walker) (Lepidoptera: Noctuidae). My advisor is Dr. L.J. Stannard.

SHIVELY, Louise. (Research Assistant in Dr. Friedman's laboratory) The Shively's are back at the U. of I. (left in '69) after a fantastic three-year sojourn in the Peace Corps. My husband, Jack, and I both served in Malaysia as science teachers in secondary schools, and spent two delightful years enjoying the people, the food, and the exotic atmosphere. On the way home, we travelled through Asia (Indonesia, Burma, Thailand, Singapore) on the "backpack" route, and through Europe by car, which we bought in Amsterdam (after the dollar was devalued -- groan!). I joined Dr. Friedman's group as a research assistant in July of '72, and I am working with a phosphatase system in Leucophaea and a synthetase system in Phormia. Jack is with Conrad's group in biochemistry grappling with heparin and dreaming of his doctorate.

SIRISINGH, Sathorn. I am doing my research on insect pests of soybean, and the insect that I am working with is the almond moth. I will be studying their life history and natural foods. My advisor is Dr. W.H. Luckmann.

Last semester (in November) I went to the Entomological Meetings in Montreal, Canada.

My family is still in Bangkok, Thailand.

SITCHAWAT, Tawatchai. I am the eighth and youngest of my family. I graduated from Kasetsart University in 1969. I worked at North East Agricultural Research Center as a researcher. Most of the work I dealt with was insect pests of legume crops. There are soybean, peanut, mungbean and others northeast of Thailand. Now I am studying economic entomology for my Master's degree, and my advisor is Dr. W.H. Luckmann.

I have been to Montreal for the 1972 Entomological Society Meetings.

SOLOMON, Keith. Now that prelims are out of the way I am fully involved in research except for being the TA in Insect Toxicology. In my research work on the effect of synergists on juvenile hormones I have found some rather interesting activation reactions in the sulphur isosteres of farnesyl methyl ether. I am now in the process of looking at the effect of synergists on the activity of certain commercially available juvenile hormone analogues. My advisor is Dr. R.L. Metcalf.

We managed a trip to the Rockies last spring and I had a very informative trip to Montreal for the November Entomological Society Meetings. In the line of family news, and for those who are interested, we had our second child, a son, on April 30.

SPRENKEL, Richard K. As I am preparing this paragraph for the Newsletter, I am in the process of putting the final touches on my thesis. I hope that my brevity will be excused for this reason.

As I look back on this past year, two events stand out. The first of these was a vacation that Ellie and I took to New England. The second was the long-awaited move into the Natural Resources Studies Annex located on

Griffith Drive. I would like to invite those in the department who have not seen this building to drop by for a visit.

My research advisor is Dr. W.H. Luckmann.

TUCKER, Jeffrey B. This is my first year at the University of Illinois. Formerly, I resided in College Station, Texas, where I received my B.S. from Texas A & M University. My entomological interests lie in the area of medical entomology, in particular, the arthropod-borne viruses. At the present time I am involved in course work and assisting in an analysis of the distribution of eggs of aedine mosquitoes on a river floodplain. My advisor is Dr. W.R. Horsfall.

WALTON, Barbara. In the year preceding our move to Champaign-Urgana, I graduated from Ohio State University (B.A., Zoology), did graduate work in entomology at O.S.U., and assisted in an introductory biology course. Currently my time is occupied with course work, assisting in Entomology 103, and beginning work on a thesis topic in toxicology. My advisor is Dr. R.L. Metcalf.

WALKER, Bill. In the near future, several publications should appear concerning my work on the pathological effects of juvenile hormone mimics and ecdysone analogues on several Coleoptera. I gave a presentation on this topic at the national ESA meetings at Montreal. Also, a publication on the comparison of methods of determining resistance levels in spider mites will soon appear. In the near future I hope to begin a research project under Dr. J.H. Willis, my advisor, concerning hormonal regulation of insect development.

NEWS ABOUT THE FACULTY

L.E. Chadwick (Emeritus)

After much delay my translation from the German of Walter Linsenmaier's INSECTS OF THE WORLD has been published, by the McGraw-Hill Book Company. My work on this was begun at Illinois about a dozen years ago. I recommend this book to all with the slightest interest in entomology, and even to those who as yet have none. Such has been my view ever since I first saw the manuscript, and there is now abundant firsthand evidence from other readers. The text is fascinating, and many of the author's paintings are unsurpassed in the field of biological illustration.

During the past year I have also translated an occasional German research paper on behalf of Jim Krysan, of the USDA lab at Brookings, South Dakota, and for Dick Storch, of the Department of Entomology at the University of Maine in Orono.

Maria and I continue to get along happily in our retirement here. Apart from my being impeded by arthritis, we are in reasonable health; and enjoy greatly hearing from our friends at Illinois and even seeing a few of them occasionally.

George C. Decker (Emeritus)

The years roll on and times change for some, but the Decker's just keep rolling along. Life of the retired, properly controlled, is not too exciting, but is wonderful, enjoyable and rewarding.

We have no deadlines to meet, no classes to meet, no speeches to prepare and no reports to write. With all time at our disposal we just live a life of leisure: get up when we like, go where and when we please, eat what, when and where we choose, then retire when we are so inclined.

Highlights: A 50th Wedding Anniversary, September 5, 1972. Visits with friends and relatives in Michigan, New York and Florida. An appearance on the program for Dr. Petty's Custom Sprayers School in January and attendance at Entomological meetings in Montreal, Canada; Savannah, Georgia; and Gainesville, Florida.

Fred Delcomyn

Arriving in Champaign-Urbana after spending three years in Scotland naturally necessitated adjustments on the part of myself and my wife, Nancy. Most of our spare time here has been spent becoming acquainted with the area as well as its flora and fauna (academic as well as entomological).

I have found that completing work done overseas, setting up a new laboratory and teaching Insect Physiology, as well as Entomology 103, has precluded the

execution of any significant new work, but I look forward to a fruitful summer of research. If succeeding years here are as pleasant as my first one has been, my voice will be added to those who extoll the virtues of the members of this department, for they are the ones who give it its special character.

G.S. Fraenkel (Emeritus)

Highpoint of the year was the attendance at the International Congress of Entomology at Canberra, Australia, where I gave an invited lecture on the "Mechanism of puparium formation in flies and its hormonal control" in a symposium on Regulation of Insect Development. Other highlights of this trip were stops of longer and shorter duration on the way out and back on some of the fabulous islands of the Southern Pacific, New Caledonia, Fiji, Samoa, and Tahiti.

Research is still concentrated around pupariation (not pupation!) in flies (see article with Bhaskaran in the March 1973 issue of the Annals); the nature of the X-factors which accelerate pupariation and may be the compounds through which ecdysone works (Fraenkel, Zdarek and Sivasubramanian, Biol. Bull. 143:127-139, 1972); the effects of drugs and venoms on pupariation (which might occupy me for many years); "final" solution of the problem of why fly larvae ligated after the critical period of ecdysone release often fail to pupariate in the anterior parts (Ph.D. thesis of Nalini Ratnasiri, report "in press" in Nature).

Stanley Friedman

This past year has been spent retooling for further work on the control of trehalose metabolism, and starting a new investigation into the function of carnitine (Fraenkel's Vitamin B_T) in Tenebrio. The Entomology 424 class (all six of us) also completed a study on the enzymatic basis for feeding behavior in Sarcophaga which was begun last year and is important enough to be published in a Festschrift issue of the Israel Journal of Entomology dedicated to Dr. Fraenkel on his 70th birthday.

One month of the summer was used for a camping trip through eastern Canada, doing some collecting and generally trying to learn something about the flora and fauna of northeastern North America.

William R. Horsfall

The last of the publications on the 10-year project on effects of thermal stress on mosquitoes are in the mill. The students who participated in this work, now scattered to the four winds, are herby thanked for their efforts. Currently I am engaged in studying distribution of eggs of floodwater mosquitoes on flood plains. A book authored by Horsfall, Fowler, Larsen and Moretti

on bionomics and embryology of Aedes vexans is to be published by the University Press late this spring. A reissue of the book on bionomics of mosquitoes was published by Hafner Publishing Co., New York, in September 1972. In the main life as a teacher goes along in the usual way.

Elbert R. Jaycox

Our work has continued on the changes in behavior of honey bees induced by a mimic of juvenile hormone. I reported on the subject at the Montreal meetings of the Entomological Society in November, and it will be published this year. Last season we also made observations on the pollination of sunflowers and collected a considerable crop of tasty sunflower honey. As usual, we sold it in conjunction with the sale of University apples, but set a new record: 3 tons in one day.

Enrollment in Entomology 361, Behavior of Honey Bees, is still rising, and again this spring I am teaching an extra-mural beekeeping class in the Chicago area. In May I expect to leave for Switzerland to spend a year working with Dr. Martin Lüscher at the University of Bern.

C.W. Kearns

After spending two and one half years as Research Director of Shell's Woodstock laboratories in England, Camille and I returned to the University June 1, 1972. I have decided that after spending 41 years at the University that I should retire at the end of this school year. This was not an easy decision for me to make, but I believe it is for the best interests of the department and myself. The department has been authorized to replace me with a person of recognized research and teaching ability. I view this as an opportunity to strengthen the department and perhaps add to the diversity of interests represented by the staff.

Camille and I will return to England about July 1, 1973. I will be retained as a consultant by Shell and provided with facilities for research. We own a home in England called "High Elms" which is located in the village of Harrietsham in Kent.

May I take this opportunity to thank my colleagues and former graduate students for providing me with over forty years of stimulating experience at the University of Illinois.

Wallace E. LaBerge

The past year has been spent continuing studies on the systematics of bees. A paper, Part V of the revision of the genus Andrena, coauthored with Dr. D.W. Ribble of Indiana University at Kokomo, was published in September and Part VI is ready for press. Part VII, a rather large paper on one of the major subgenera is under preparation. Adolfo Molina-Pardo

is in the last stages of preparing a computer study of phenetic and cladistic relationships of over 100 species of Andrena belonging in subgenera which have been revised. These studies continue to be supported by NSF grants.

John Marlin received his MS in February and is preparing for publication data gathered in our studies of faunal changes of bees of the Carlinville, Illinois, area. Our data are being compared with those of Charles Robertson who collected his data mostly over 70 years ago. This project has been supported by the Illinois Agricultural Experiment Station.

Faunal studies of Illinois ants and bees are progressing at a fairly slow rate. These are long-term studies, to be completed only after several years of field work.

Last summer our vacation was spent canoeing and camping in the North Woods of Wisconsin, Minnesota and Ontario. The LaBerge family is sorely tempted to acquire a retreat in that area. We found that rubber-tire-rafting down a rocky, fast stream is a good way to reduce (especially hip-girth), if one can put up with the black and blue marks and the frigid bottom.

Joseph R. Larsen

This has been an extremely busy year for myself and the Larsen family as a whole. In addition to my responsibilities as Head of the Department I have served during this past year as the Acting Director of the School of Life Sciences. I have really been relegated full time to the chore of shuffling papers and trying to maintain the programs in the School as well as look after departmental needs. I am sorry to say this has indeed limited the amount of time I have been able to spend with the department during the past year, and I appreciate very much the patience and support of all of my colleagues and staff in entomology. In spite of a heavy administrative burden, I still found a little time to maintain some research in insect sensory receptors and have a few publications out this year and one or two in preparation.

The family continues to increase, both in numbers and in activities and make us realize that the years are going by at a rapid rate. We are now the proud grandparents of two lovely granddaughters. Pam and her husband, Dave--who is currently serving as a Lieutenant in the Marine Corps, are stationed in North Carolina. Our second daughter, Deb, is a junior at Brigham Young University where she is majoring in drama and speech and is a very busy gal being in university productions and earning her secondary teaching certificate. Jennifer has now entered junior high and we find ourselves going through high school for the last time. We are proud of Jennifer and her musical accomplishments.

We hope this year to find some time for a short vacation to visit with our grandchildren and get the family together for some sort of a reunion.

William H. Luckmann

A portion of the staff of the Section of Economic Entomology, Illinois Natural History Survey, moved into new quarters in December, 1972. We now have people in a three-building complex located on the South Farm in addition to some staff and the administrative office in the Natural Resources Building. Communication has suffered and travel time increased but the staff is doing an excellent job.

I have been very active in a pest-management program on corn; I spent much of July and August in the field and this was enjoyable. A working trip to British Honduras in early January, 1973, was one of the highlights of the year. International work and travel is very educational. The Luckmann family is getting delightfully smaller with only two teenagers still at home.

Ellis G. MacLeod

The first term of this past year was spent on sabbatical leave, with the time divided between field work in the western United States and studies at Harvard University in the laboratory of F.M. Carpenter. Field studies were carried out at the classic Tertiary deposits of Florissant, Colorado, and the Green River shales of southwestern Wyoming. Since portions of both of these areas have recently been conserved as national monuments, a side purpose of my visits was to discuss with the U.S. Park Service the possible role which these monuments might play in university teaching and research in insect paleontology.

The spring term has been employed in the process of readaptation to the day-to-day teaching environment of a large university and in relearning the dangers and pitfalls of the dragons of biopolitics.

Robert L. Metcalf

1972 was a busy year with teaching Insect Toxicology and Insect Control, directing the Rockefeller Grant Program on the Development of Novel, Non-Persistent Insecticides and the World Health Organization International Reference Centre for Insecticides. Other new projects include cooperative new programs on pest management and pollution research with the Natural History Survey and a new part-time appointment to the Institute of Environmental Studies. Graduate students Bert Clegern, An-horng Lee and Herbert Nigg completed their Ph.D. degrees in June. The highlight of 1972 for us was a trip to Canberra, Australia, for the International Congress of Entomology with five days in Taiwan surveying pesticide problems.

Peter W. Price

My main effort in research has continued in the study of community organization of sucking insects in an old field, and parasitoid ecology. The latter project has been the more rewarding since, not being involved so much in data gathering, I have gained perspective and a view of general patterns more easily, and reanalysis of data has led to forthcoming papers on reproductive strategies and successional trends in parasitoids. Nevertheless, I have enjoyed my field work on sucking insects tremendously and hope to find more time for data analysis in the near future. I also gained some insight into the community organization in a soybean field by studying characteristics of arthropod colonization and started a project on lead in insects as part of the interdisciplinary program on campus studying lead in local ecosystems. It appears that close to major highways insect food chains concentrate lead to levels dangerous for insectivorous birds. Attendance at the Montreal meetings of the A.E.S. and C.E.S. were most rewarding as many old friends were there, particularly from Fredericton, N.B., Quebec, P.Q. and Ithaca, N.Y. Also, having organized a symposium with Richard Root on "The organization of plant-arthropod associations" for the meeting, we found the attendance good and the response very favorable. A three-week visit to friends and relatives in England provided a relaxing break for Maureen and me.

R.B. Selander

I spent a very productive two weeks in the field in Mexico last fall, part of the time with Juan Mathieu, who is now heading a new School of Agriculture in Ciudad Obregon, Sonora. I also had the opportunity of renewing contact with Francisco Pacheco, who has been working for the federal government of Mexico in Ciudad Obregon for several years.

On the Mexican trip Angel Berrios and I worked south along the West Coast from Ciudad Obregon to Culiacan, collecting mainly striped blister beetles for behavioral and ontogenetic studies. We then flew to Veracruz and worked out of the Cotaxtla Experiment Station near that city.

Aside from the long range project on striped blister beetles, I have devoted a great deal of time to computer programming and particularly to the matter of developing statistical and other programs and systems for use on our interactive terminal facility.

Lewis J. Stannard

As the delegate from the Illinois Natural History Survey, I attended the 14th International Congress of Entomology at Canberra, Australia, in August, 1972, where everyone seemed enthusiastic about the newly revived theory of Continental Drift (Plate Tectonics) to explain the distribution of the insect fauna of the Australian region. To enable me to make my own interpretations, I took about two months extra time to collect specimens in New Guinea

(on a tour to the interior with Dr. J. Linsley Gressitt), New Zealand, and Queensland. On the way home I made additional collecting excursions or type study stop-offs at Singapore, India, Teheran, and London. Currently, I am revising the genus Oedaleothrips, ant-mimicing thrips, which has representatives over the world.

James G. Sternburg

My work continues with the study of the mode of action of DDT-type compounds. One of my students, Willard Woodward, is now completing his work on the effect of DDT and related insecticides with and without synergist on the labellar sensory receptors of susceptible and resistant house flies. Another student, Francis Gardner, recently completed his doctoral work with a study of the effects of nicotine on central nervous transmission in the cockroach. In addition to this toxicological work, I have continued with Prof. Gilbert Waldbauer in a long-term study of the behavior and life history of cecropia and other saturniid moths, including the effects of environmental conditions on the onset and termination of diapause, on latitudinal adaptations of the diapause mechanisms, and on interspecific pheromone recognition.

We now have one daughter through high school, a niece who lives with us is a junior, our son is a sophomore, and the youngest daughter is in seventh grade. It's unbelievable how time can fly. All of us spent several weeks in northern Wisconsin last year, but we have no plans as yet for this year.

G.P. Waldbauer

My research interests continue to be diverse. As a member of the Illinois Natural History Survey Soybean Team I am involved with Marcos Kogan in a project which seeks to determine the role of the bean leaf beetle in the soybean ecosystem. Last summer, Marcos Kogan and I adapted Dr. Horsfall's Illinois Egg Separator for the separation of bean leaf beetle eggs from soil samples. During the coming summer we will use the technique to look at the ovipositional preferences of this insect. Jim Sternburg and I continue our work on the behavior and ecology of saturniids--especially on the dimorphic nature of diapause termination by cecropia and on the interspecific recognition of sex attractant pheromones. During the past summer a small grant from the National Geographic Society enabled me to study the phenological relationships of stinging Hymenoptera, their dipteran mimics and insectivorous birds at Mason State Forest near Havana. Happily, this study confirmed the results of a similar study which Joe Sheldon and I made at Allerton Park a couple of years back--that the mimics tend not to be present during a critical period in mid-summer when fledgling birds which have not yet learned to avoid the models are leaving their nests. I have done very little with quantitative nutrition lately, but did organize a

section on that subject for the First International Conference on Insect and Mite Nutrition which was held in Lexington, Kentucky, last April. The North Holland Publishing Co. now has in press a volume containing the papers given at the conference.

The big family event of the year was a camping trip to the Grand Canyon by me and my younger daughter, Susan.

Judith H. Willis

This has been a busy year. It was initiated by the First Zoecon Insect Hormone Conference in April, 1972, which combined the beauties of the Monterey Peninsula with an excellent array of speakers. Over the summer I completed work on the amino acid composition of Tenebrio cuticles which I had begun on sabbatical leave. I was aided by my student, Elaine Shepherd, who's working on their cuticular proteins for her thesis. Last October, Dr. Leslie Wiemerslage joined my laboratory and is busy establishing an organ culture system in which we hope to be able to study the hormonal control of cuticular protein synthesis in vitro. In the fall I taught Developmental Biology for the first time as well as coordinating the departmental seminar on insect hormones. We managed to go to St. Louis for the Cell Biology meetings in November, and I had a delicious visit with Dr. Mary Ruh who is continuing her work with Cecropia in the Physiology Department of Saint Louis University Medical School. This semester my teaching has become more manageable and I succeeded in completing a review for next year's Annual Review of Entomology. My research assistant, Margaret Hollowell, and assorted undergraduates have managed to keep things moving with our analyses of cuticular proteins and the action of juvenile hormone mimics. Somehow in between all of this and mainly as a result of my husband's organizing abilities, we managed to harvest a large crop of apples and fifty pounds of honey and to take two short but extremely refreshing vacations.

PUBLICATIONS OF THE DEPARTMENT

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With S. Friedman

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With D.L. Denlinger and J.H. Willis

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With J. Zdarek

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With J. Zdarek and P. Sivasubramanian

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FRIEDMAN, STANLEY

With G.S. Fraenkel

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With K.C. Capps, J.E. Freier, J.R. Larsen, H.N. Nigg, and N.B. Ratnasiri

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With D.W. Ribble

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With P. Cho, R. Davenport, G.S. Whitt, and G.M. Booth

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With S. Friedman, K.C. Capps, J.E. Freier, H.N. Nigg and N.B. Ratnasiri

Diet dependent cycling of protease activity in the midgut of the fleshfly, Sarcophaga bullata. Israel J. Ent., 7:99-109.

LUCKMANN, WILLIAM H.

With K.N. Kapoor, R.R. Rawat and M.L. Purohit

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

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

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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.

MURRAY S. BLUM (M.S. 1953; Ph.D. 1955) is conducting his current research at the University of Georgia on pheromones and defensive secretions. He tells us that chemosystematics is appealing, but frustrating. Murray is currently writing a book ("or at least trying!").

His recent travels took him to Costa Rica as an instructor for the Organization for Tropical Studies.

As far as the "additions to the family" section -- he says, "Status quo."

ROBERT W. (Bert) CLEGERN (M.S. 1966; Ph.D. 1972) tells us that his current position entails field and laboratory consultations in the biological aspects of water pollution and pesticide usage. Little in the way of pure research is done at this lab, and the consultations appear in print in the form of "technical reports."

He finished his doctorate work in June of '72, and he plans to soon be publishing papers derived from his thesis work, "Population Dynamics and Environmental Stress Studies of House Flies in the Laboratory."

His recent travels have included trips with the family in April to see friends and relatives in St. Louis and Albany, Missouri, and a leisurely trip to San Antonio and present position in July via St. Louis; Mountain Home, Arkansas; Tulsa, Enid, and Oklahoma City, Oklahoma; and Arlington, Texas. For business he has been to McGuire AFB and Ft. Dix in the "pine barrens" of New Jersey in September and has made two trips to Vandenberg AFB on the central California coast in October and November.

HERBERT LIPKE (Ph.D. 1954) of the University of Massachusetts, Department of Biology, is currently doing research on the X-ray diffraction and chemical modification of cuticle protein, molecular weight and polarized infrared spectroscopy of chitin, effect of ozone on pollen, and antigenic determinants of schistosomes. His recent publications are included in *Biochem. J.* 125:702 (72); *Environmental Sci. and Tech.* 3:411 (72); *Israel J. Ent.*, (Festschrift for G.S. Fraenkel) 1972.

Herb's recent travels included Australia, New Zealand, Montreal, New Orleans, San Francisco, and Montana.

Herb has added a Swedish Exchange Scholar, Bengt Edqvist, to his family.

RICHARD LYNN LIPSEY (Ph.D. 1972) is keeping busy with the Chemagro Corporation in Omaha, Nebraska. He has been working on the control of house flies and stable flies in dairy barns with BAYGON with Dr. Jerry DeWitt of Iowa State University. The study was conducted at the USDA Dairy Barn, Ankeny, Iowa. Also, he has been working on the control of greenbugs in winter wheat with BAYGON, DISYSTON, MSR & BAY HOX 1901. This study was conducted at the Ray Horn farm, Weeping Water, Nebraska. He has three publications that are pending from research carried out on the effects of methyl mercury hydroxide on a food chain (Ph.D., University of Illinois).

His recent travels include the Chemagro National Convention in Chicago; the Annual Researchers Convention in Vero Beach, Florida; the Nebraska Weed Control Association Annual Meeting, Fremont, Nebraska; and visits to Iowa State University, the University of Missouri, Kansas State University and the University of Nebraska about once every other month to coordinate the evaluation of new Chemagro products.

There has been no additions to the family since 1968. Their daughter, Cheryl Ann, is 4 years old now.

JUAN MATHIEU (M.S. 1960; Ph.D. 1967) is currently working on catfish farming in Mexico. He keeps collecting Meloid beetles and May beetles. Currently he is also engaged in building a new School of Agriculture in Ciudad Obregón, the home of the Green Revolution, where Dr. Norman Borlaug and his colleagues have achieved so much for the world.

He hopes to visit his Alma Mater shortly to initiate talks for a possible cooperation between Illinois and the School of Agriculture in Ciudad Obregón.

JOSEPH K. SHELDON (Ph.D. 1972) is currently in the Department of Biology at Eastern College in St. Davids, Pennsylvania. He now has a joint appointment with the Philadelphia Academy of Natural Sciences as a research associate in Entomology. His research is being conducted on the biology of the Chrysopidae -- aspects of the diapause problem, activity rhythms, adult feeding behavior. He is also investigating the phenology of a model-mimicry complex of western Diptera and Hymenoptera. His most recent publication is with Dr. E.G. MacLeod (1972) "A dominant mutation modifying the structural eye color in Chrysopa carnea" in the Journal of Heredity, Vol. 63, pages 63-68.

Joe and his family spent the summer of 1972 in the western United States between Oregon and Arizona. Their activities included a good deal of productive research as well as some excellent fishing and backpacking into the wilderness areas.