ANNUAL NEWSLETTER

Department of Entomology

University of Illinois
at Urbana-Champaign

Urbana, Illinois

APRIL, 1971

TABLE OF CONTENTS

We thank our ever-faithful gals in the office, Ruth Plymire, Judy Michael and Barb Hanner for their effort and willingness to make it possible for the Newsletter to come to fruition one more time. We would also like to thank Alice Prickett, staff artist for the School of Life Sciences, for her cover design for the Newsletter this year. We would also like to thank our graduate students, fellow colleagues and alumni who share their activities and interests of the past year.

J.R. Larsen
Editor

MESSAGE FROM HEAD OF DEPARTMENT

Joseph R. Larsen

As the first complete year of my stewardship in this position comes to a close, I would like to make a brief accounting of the activities of the past year.

As indicated in the Newsletter last year change seems to be the rule rather than the exception at the University. You are probably aware that Dr. Henry, President of the University of Illinois for the past 16 years has tendered his resignation and Dr. John Corbally, Jr., from Syracuse will serve as the 13th President of the University. Dr. Herb Carter who has served as Vice-Chancellor for Academic Affairs at this university for a number of years has recently resigned. Dr. Reino Kallio, Director of the School of Life Sciences, has also recently resigned.

This past year we were saddened by the passing of Dr. Hayes, a long-time faculty member, researcher, fellow colleague and Head of the Department of Entomology from 1947 to 1955. We respectfully honor Dr. Hayes in this issue of the Newsletter and pay homage to his many years of faithful service which he gave to this department and the university.

Dr. Gary Booth, who has been filling in in toxicology and insect control during Dr. Kearns' absence, has recently accepted a position at the State Natural History Survey in Dr. William Luckmann's section.

This year has seen stronger ties between the Natural History Survey and the department. An indication of this is the recent joint appointment of Dr. Wally LaBerge. We are very delighted to welcome Dr. LaBerge in the department and know that his expertise will enhance the graduate programs for our students.

This year we have added a new full-time staff member to the department. Dr. Peter Price, a recent graduate from Cornell University, joined the staff in December. He brings with him expertise in ecology and we are delighted to add his background to the department.

I am sure that many of you are experiencing similar difficulties in cutback in research funds, fewer graduate students and a shortage of positions for those students who have completed their training. While these are trying times, we feel that we have continued to maintain the tradition of excellence perpetuated by this department over the years. The graduate students we are turning out have superb training and are in a position to make a significant contribution to entomology. Any help you can be to the students looking for positions for the coming year will be greatly appreciated. While there may be fewer students graduating in the next few years, the quality will in no way diminish and the reputation of the department will be maintained at the same high level.

We are pleased to note that the department was ranked 2nd in the nation this year. We are proud of the reputation and feel it is justified.

We look forward to a successful year and continued association with all of you.

ACTIVITIES OF THE SCHOOL OF LIFE SCIENCES

The School of Life Sciences, of which the Department of Entomology is an integral part, is in a state of significant change. Dr. Reino Kallio, Director of the School for the past six years, has recently tendered his resignation effective August 1971. During his tenure of office a number of accomplishments have taken place in the School of Life Sciences. The whole biology program has developed under Dr. Kallio's guidance. The enrollees in general biology have grown from approximately 100 to over 800 students during this period of time. A number of interdisciplinary programs have been developed in neurobiology, cell biology, genetics and environmental biology. The School has become a viable organization in the affairs of the biological sciences on this campus. In addition to the increasing enrollment in the various biology programs, there has been a strengthening of the faculty in all departments. We are grateful as a department to Dr. Kallio for his efforts, his untiring service, his constant cheerful countenance and willingness to help overcome the obstacles and stumbling blocks in the development of the biological sciences at Illinois.

Members of the faculty of the Department continue to be heavily involved in teaching responsibilities of the School. Dr. Willis has a major responsibility in managing the entire honors program in biology. Drs. MacLeod and Selander are also teaching in the interdisciplinary programs of the School.

The Executive Committee of the School will be faced with a serious responsibility in choosing a new director and filling the position left vacant by Dr. Kallio. These are times of change and we hope growth for both the Department of Entomology and the School of Life Sciences. We would like to express our appreciation to Dr. Kallio for his astute leadership and effort to weld together the diverse departmental interests into a unified concept of biological sciences under the egis of the School of Life Sciences. His strength, organizational ability, and desire for excellence at this University will be missed.

Dr. Kallio will return to the Department of Microbiology to assume his responsibilities as a professor and be active in teaching and research.

IN MEMORIUM

Dr. William Patrick Hayes

The Department of Entomology expresses its sorrow at the death of Professor Emeritus William Patrick Hayes on August 1, 1970. Professor Hayes joined the Department as Assistant Professor in 1924 and served as teacher, investigator, and adminstrator until his retirement in 1959. Dr. Hayes was Head of the Department of Entomology from 1949 to 1955. We dedicate this issue of the Entomology Newsletter to his memory and in recognition of the many contributions he made to the Department and to Entomology.

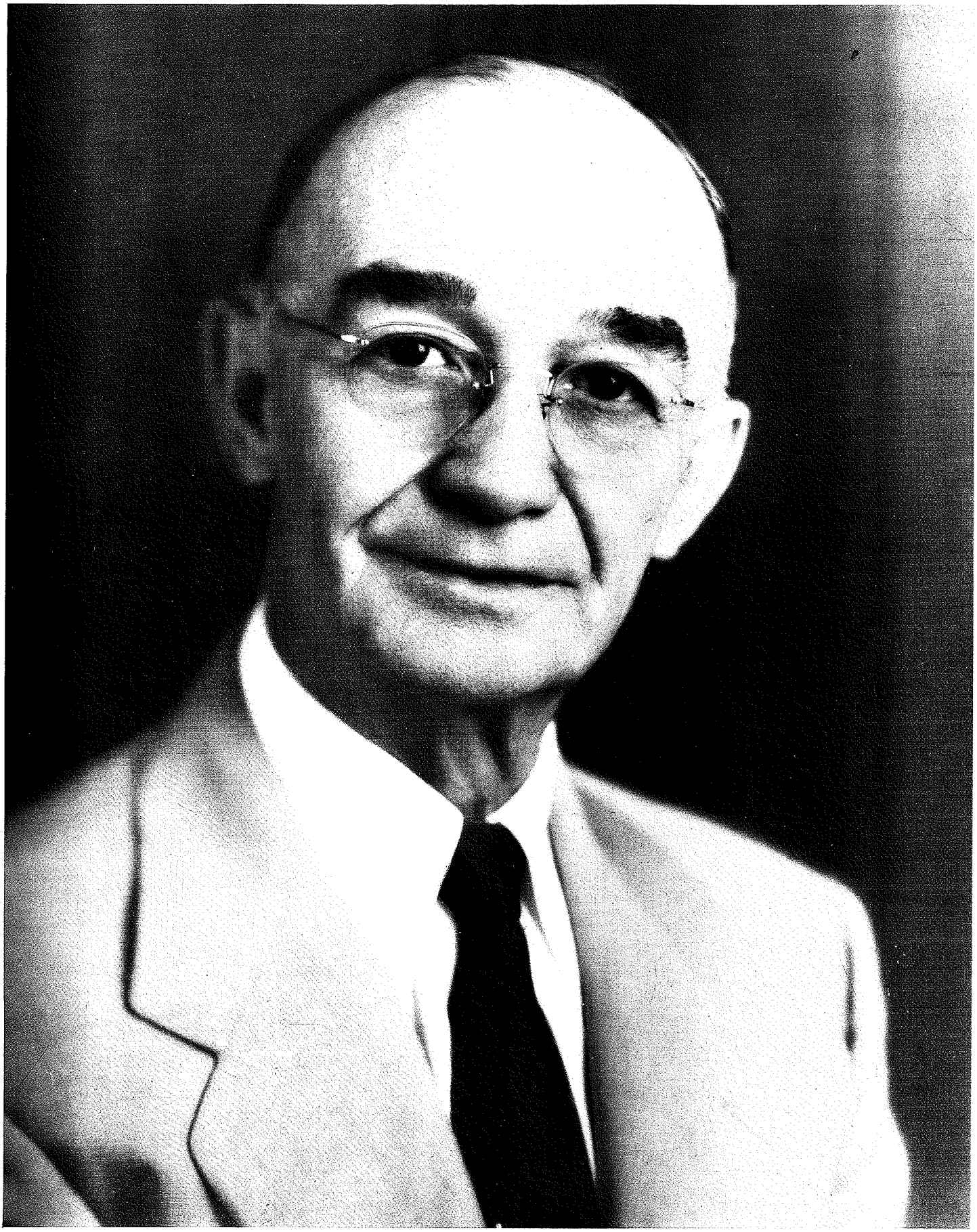
Professor Hayes was born in Leadville, Colorado, on June 26, 1887. He obtained his bachelor's and master's degrees at Kansas State University where he taught in the Department of Entomology from 1912 to 1921. He received his Ph.D. from Cornell University in 1923 and taught there for one year before joining the faculty of the University of Illinois. He became full professor of Entomology in 1939. Professor Hayes was married to Louise Jacobs on November 13, 1914. She preceded him in death, January, 1959. He is survived by a son, John C., of Urbana, and by daughters Mrs. Mary Lou Mills of Canoga Park, California; and Mrs. Jean M. Warkins of Rancho Cordova, California; by a sister, Mrs. Mary Stipe of Denver, Colorado; and by six grandchildren.

Professor Hayes will be remembered with affection by the hundreds of students whom he taught and advised during his 35 years of active service with the University. He possessed a dry wit agreeably associated with a modest and unassuming mein. His special skills and research interests lay in the systematic entomology of immature insects and his course in the "Taxonomy of Immature Insects" became one of the very few devoted to this difficult area. His students acquired a foundation in the identification and understanding of immature insects which was of life-long value. Professor Hayes also taught the "Morphology of Insects" and many reading this Newsletter will recall with both poignancy and pride the arduous hours spent in producing exacting pen and ink drawings of the Insecta. He built one of the nation's outstanding collections of immature insects which will long be in use at the University of Illinois.

Professor Hayes contributed extensively to our understanding of the immature stages of the Scaraboidea. Perhaps his most important research contributions was the Illinois Biological Monograph "Morphology, Taxonomy, and Biology of Larval Scarabaeoidea", XII, 1930. Dr. Hayes was the last President of the original Entomological Society of America and was long an elder statesman of U.S. Entomology.

Apart from his professional interests, Dr. Hayes was a devoted member of the Urbana Rotary Club and an enthusiastic golfer at the Urbana Country Club. He spent his retirement years as an indefatigable global traveler and was on a world tour when overcome by his terminal illnesses.

We will always remember "Bill" Hayes with affection and esteem.



WALTER V. BALDUF MEMORIAL FUND INITIATED

During the past year, a number of alumni and former graduate students of the department have indicated the desire to honor Dr. Walter V. Balduf in some fashion and to set up a memorial fund in his name. As a result of this interest we present the following proposal to all of the former graduates of the Department of Entomology at Illinois. We have 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. All interested graduating Ph.D. candidates will have their research evaluated by a panel of distinguished alumni who will choose the recipient of the award.

As former members of the department, we would like to encourage you to participate in the Walter V. Balduf Memorial Prize fund. Those of you who have indicated an interest to participate in such a memorial fund 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 at Urbana-Champaign, Urbana, Illinois 61801. You should indicate with your check that it is being sent to the Walter V. Balduf Memorial Prize fund. If we have sufficient contributions, the prize can become a perpetuating award available for the graduate student being chosen each year. The amount of the award is to be a cash prize of $100 with some sort of certificate or medallion indicating that the student has been the recipient of the Balduf Prize as a result of his outstanding research.

I am sure that many of you will want to participate in this Memorial Fund to pay honor to Dr. Balduf who gave so unstintingly of his time and talents to the development of excellence in entomology at the University of Illinois.

SUMMER COURSE IN SYSTEMATIC ENTOMOLOGY

This year an important innovation in the curriculum of the Department of Entomology was made as a result of the decision to move the course, Entomology 302 (Classification of Insects), which is required of all undergraduates and graduates, to the summer. This move was made on the basis of the general conviction that a reversal of the trend of several decade's duration in which biology has progressively withdrawn from the natural environment has long been overdue. Specifically, the move was dictated by a desire to present systematics as an integration of taxonomy, anatomy, behavior, and ecology.

The course was presented during the 8-week summer session. It entailed four weeks of intensive work in the laboratory, alternating with three major field trips. Use of museum specimens was abandoned in favor of a system whereby students collected, prepared, and labeled their own material. As it turned out, they were able to obtain and examine as many, if not more, taxa as they would normally have been exposed to in a traditional laboratory course. All of the insect material was pinned and labeled in the field. During the course the material formed a common collection, available to all students; at the end it was divided among them.

The department provided the camping equipment necessary for the course as well as a very complete set of collecting equipment for each student and such accessory items as an electric generator, ultraviolet collecting lights, field cases, and microscopes.

The first field trip was to southern Illinois. An initial camp was made at Ferne Clyffe State Park, near Goreville, from June 27 to June 30. Following this the group moved to the Pine Hills Field Station of Southern Illinois University, near Wolf Lake, where work continued until July 3. On the second trip the group camped at Mason State Forest, near Havannah, Illinois, from July 11 to July 13 and then moved to Mississippi Palisades State Park, near Savannah, Illinois, where camp was established until July 17. During the stay at Mississippi Palisades the group witnessed and studied the massive emergence of adults of mayflies Hexagenia lineata and H. limbata. The third trip, from July 25 through August 7, took the group first to the Davis Mountains of western Texas, where camp was made at Davis Mountains State Park, and then to Big Bend National Park, Texas. On August 3 a hurricane from the Gulf Coast blowing itself out against the mountains of west Texas forced a hasty withdrawal from the Big Bend area, as the group moved to Sand Hill State Park, near Monahans, Texas. The Texas trip was highly productive. It provided a first exposure to arid environments for many of the students as well as an opportunity for all to compare the insect fauna of the Chihuahuan Desert with that of the Eastern Deciduous Forest and the Illinois prairie. In addition, some members of one group were able to make use of the time in the field to pursue research projects.

The group was heterogeneous with respect to national origin (India, Ceylon, United States), age (late teens to mid-forties), areas of interest (taxonomy, behavior, physiology, economic entomology), academic level (junior to second year graduate), and sex (5 women, 9 men). Despite this, however, the group functioned admirably well as a whole. Everyone concerned seemed to enjoy the experience, and the group developed a refreshing espirit de corps that is all to rare in our modern academic environment.

Students enrolled in the course were Cheryl Adams, Angelo Casaburri, Jerry Freier, Anne Heger, Mary Henderson, Feng-kuo Hsieh, Hsiao-mei (Grace) Keh, Mohinder Khalsa, John Marlin, Nalini Perera, Kurt Redborg, and Tom Vance. Joe Sheldon served as graduate assistant. The course was under the direction of Richard Selander.

DEPARTMENTAL ROSTER, 1970-71

Faculty

Booth, Gary M. - Assistant Professor of Entomology

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. - Associate Professor of Entomology

Horsfall, William R. - Professor of Entomology

**Jaycox, Elbert R. - Professor of Apiculture

Kearns, Clyde W. - Professor of Entomology

***Larsen, Joseph R. - Professor of Entomology and Head of Department

Luckmann, William H. - Professor of Entomology and Head of Economic Entomology Section

MacLeod, Ellis G. - Associate Professor of Entomology

Metcalf, Robert L. - Professor of Entomology and Head of Zoology Department

Milum, Vern G. - Professor of Entomology, Emeritus

Price, Peter W. - Assistant Professor of Entomology

Selander, Richard B. - Professor of Entomology

Stannard, Lewis J., Jr. - Professor of Agricultural Entomology

Sternburg, James G. - Professor of Entomology

Waldbauer, Gilbert P. - Associate Professor of Entomology

Willis, Judith H. - Associate Professor of Entomology

*Joint appointment with Zoology
**Joint appointment with Horticulture
***Joint appointment with Physiology and Biophysics

Academic Appointments

Bhattacharya, Anoop K. - Res. Assoc.
Carlson, Stanley D. - PHS Post Doc. Fellow
Hansen, Larry - Res. Assoc.
Hansen, Penny M. - Res. Asst.
Hirwe, Ashalata - Res. Assoc.
Hollowell, Margaret - Res. Asst.
Kapoor, Inder P. - Res. Assoc.
Ruh, Mary F. - Res. Assoc.
Yu, Ching-chieh - Res. Assoc.

Research Assistants

Bouseman, John K.
Brattsten, Lena B.
Chen, Chiou-nan
Coats, Joel R.
DeWitt, Jerry
Dunwoody, John E.
Hilfiker, Carol
Hsieh, Feng-kuo
Lee, An-horng
McNurney, John
Moretti, Louis J.
Nordin, Gerald L.
Sanburg, Larry L.
Sangha, Gucharan
Sell, Douglas (Professional Scientist)
Sprenkel, Richard K.
Vance, Thomas C.
Wilson, Thomas H.
Woodward, Willard E.

Teaching Assistants

Adams, Cheryl L.
Ameel, John J.
Chen, Andrew
Churns, Nora K.
Denlinger, David L.
Harris, Howard R.
Hess, Rosanne
Hilfiker, Carol D.
Kardatzke, James T.
Keh, Hsiao-mei
Li, Li-chun
Liem, Khian K. (Nono)
Lipsey, Richard L.
Rivers, Mary H.
Sheldon, Joseph K.

Trainees and Fellows

Edmunds, Nancy J. - Univ. Fellow
Freier, Jerry E. - USPH Trainee
Gardner, Francis E., Jr. - USPH Trainee/Cell Biology
Khalsa, Mohinder S. - AID Fellow
Krone, Lawrence J. - NSF Trainee
Molina-Pardo, Adolfo - Wright Fellow
Morden, Robert D. - USPH Trainee
Nigg, Herbert N. - USPH Trainee
Nye, Donald E. - USPH Trainee
Olson, Jimmy K. - USPH Trainee
Ratnasiri, Nalini B. - Ford Fdn Fellow
Seymour, Allison J. - USPH Trainee
Thakur, Gandharva S. - AID Trainee

Students Not on Staff

Berrios-Ortiz, Angel
Clegern, Robert W.
Mitri, Talaat
Solomon, Keith R.
Vaishampayan, Sharad M.

Nonacademic Employees

Belsø, Myrna J.
Duvall, Eloise
Fisher, Mary E.
Fitzsimmons, James P.
Hanner, Barbara K.
Michael, Judy M.
Millholin, E. Ruth
Plymire, Ruth A.
Sergent, Linda M.
Wash, Harriett M.

VISITORS TO THE DEPARTMENT

JANUARY

Ronald M. Weseloh
Division of Biological Control
Department of Entomology
University of California
Riverside, California

FEBRUARY

T. Roy Fukuto
Division of Toxicology and
Physiology
University of California
Riverside, California

Lonne L. Sower
Department of Entomology
University of California
Riverside, California

MARCH

R.D. O'Brien
Division of Biological Sciences
Cornell University
Ithaca, New York

APRIL

John E. Casida
Department of Entomology
University of California
Berkeley, California

Suzel Fuzeau-Braesch
Laboratoire de Zoologie
Faculté des Sciences
University of Paris
Orsay, France

Ronald Prokopy
Department of Zoology
University of Texas
Austin, Texas

Lynn M. Riddiford
The Biological Laboratories
Harvard University
Cambridge, Massachusetts

MAY

William A. Brindley
Department of Zoology
Utah State University
Logan, Utah

JULY

Barry Filshie
CSIRO
Canberra, Australia

SEPTEMBER

Peter W. Price
Forest Research Station
Lac Normand, Riviere
Mattawin, P.Q. Canada

Ronald E. Stinner
Department of Entomology
University of California
Berkeley, California

OCTOBER

L.M. Schoonhoven
Landbouwhogeschool
Laboratorium Voor Entomologie
Binnenhaven 7 - Postbus 62
Wageningen, Netherlands

NOVEMBER

Franz Englemann
Department of Zoology
University of California
Los Angeles, California

SPORTS REVIEW

"Cooperation" was the key word in Entomology softball victories this year. The Natural History Survey teamed up with the Geological Survey to play in one league, and they also played with the Entomology Department in another league. The "Flycatchers" had a successful, but not championship-caliber team. Since this sport was our only one in which a zero did not appear in the "win" column, the team challenged the Purdue University Entmen to the first annual Summer Softball Slugout. When the dust (but not the beer) had settled, Illinois emerged the victor.

Our hearty football team, the "Mosquitoes" failed to emerge this fall due to a dry season last year. Since our first attempt to field a team in 1967, the Department's wins can be plotted in a perfect, negative linear regression: two wins, one win, no wins and finally no team. It must have something to do with the ever increasing size and "nastiness" of our opponents. We tried to recruit Illini coach, Jim Valek, but the honor of building a team from nothing didn't appeal to him.

"It's not whether you win or lose, it's how you play the game that counts." With that as our motto, the Entomology Department's basketball team, the "Dung Beetles", continued to amuse their opponents by rolling the ball down the court with their hind legs. Next year we will definitely have to learn to dribble. Our flawless record was upheld by not winning a single game in spite of fine playing by Ken Capps, Larry Hansen and Tim Cooley in particular. Word has it that the team captain and coach, Richard Lipsey, who coached a Chinese high school team to a national championship in Borneo, got one shot off in the two minutes he played during the entire season and missed the backboard completely. Winning only one game in three years really isn't bad, at least it leaves room for improvement.

Undaunted by these minor set-backs, the "Flycatchers" take field on April 15 against Noyes Lab's "Doc's Dummies". Now there is a team that might be more our speed. With the return of Bert Clegern pitching and Inder Kapoor hitting, and new blood in the form of big Jim Kardatzke and Terry Ransom's replacement, Jim Fitzsimmons, the "Flycatchers" will make a valiant effort to stay out of the cellar. Bert is the captain (Reg. AF).

Interest has been expressed in a faculty-staff bowling team next fall. The "Gutter-flies" anchor man will be the queen of the ten-pins, Myrna Belso, whose motto is: "Nice guys finish last."

CHRISTMAS PARTY 1970

This year's Christmas party was truly a gala affair, held at the University Club on December 17. This year's annual happening took on an international flair with Mrs. Larsen and Mrs. Carol Clegern organizing the faculty and student wives respectively. The result was a sumptuous array of international dishes representing Scandanavia, India, China, Latin America and Hawaii. There was a general air of congeniality as never seen before in the department and one can safely say that a good time was had by all. Special thanks should again be extended to Alice Prickett who, with her usual imagination, did an excellent job preparing the invitations and other decorating ideas.

ENTOMOLOGY GRADUATE STUDENT ASSOCIATION

September, 1970, marked the first birthday of the Entomology Graduate Student Association (EGSA). The occasion was celebrated by a change in officers, thus allowing the retiree's some moments of solitude to continue their research. The newly elected champions for the cause were: Jim Kardatzke, representing the fourth floor constituency; Jerry Freier, third floor; Don Nye, second floor; and, Sharad Vaishampayan, Natural History Survey. Each of us was faced with the same challenge that besought our predecessors, which was not a conflict with Dr. Larsen or the rest of the staff, but rather where would be a good central location for the coffee urn. Unfortunately, we are still trying to resolve this issue.

The September changing of the guard also brought with it some different attitudes and ideas as to what should be the effective emphasis of our organization. We then outlined four major areas: 1) communication, 2) professionalism, 3) employment, and 4) curriculum guidance. Our stress on communication is at two levels. First, we would like to improve the student-to-student interactions by bringing people from the various disciplines in entomology together on both an academic and social level. We attempted to improve communication by shortening the time barrior between publications of our newsletter. This meant going to a bi-weekly printing of our mimeographed sheet of facts, editorials, and current events. In February, we requested and received from the department the use of a bulletin board for the purpose of keeping people updated on current happenings within the span of the newsletter.

Our second major communication need was recognized as the necessity to communicate our ideas to the faculty members and vice-versa. To this end we have established the policy of trying to include faculty members on our planning committees and periodically requesting one of them to his or her opinion in the form of an editorial. It is hoped that these editorials will serve as topics for informal discussions among students in their respective laboratories. Also, we have elected Jerry DeWitt to officially represent us at faculty meetings. His function is to communicate our ideas and interests to them.

Our main purpose behind stressing professionalism was to get more students to realize that entomologists are scientists and biologists as well as entomologists. Therefore, it is our hope that students will take a more active role in attending lectures and seminars in areas outside of the department. We are stressing that students who are in the process of finishing their thesis give seminars regarding their accomplishments. Also, we are inaugurating a cooperative venture with the faculty in the establishment of a departmental seminar program that will bring together students and faculty along with distinguished researchers in various fields of endeavor associated with entomology.

The employment problem needs no explanation from the EGSA; however, we are trying to encourage students to plan ahead and prepare for the job pinch. Our major accomplishments were: 1) subscription to the Educational Employment Service (funded by the department), 2) sponsorship of a seminar

with Dr. Larsen regarding early preparation for employment, and 3) trying to encourage faculty members to make knowledge of particular job openings available to all students.

Finally, we hope to be able to offer some suggestions as to how courses within the department can be made more meaningful and relevant for present and future needs. We have been participating in this area through our curriculum guidance representative, Herb Nigg. His main responsibility has been to relay student curriculum concerns to a faculty committee established to evaluate the structure of departmental courses and policies.

The EGSA has enjoyed the sincere cooperation and support from Dr. Larsen and the faculty and staff of this department. We believed from the beginning that many progressive accomplishments can be made when enthusiasm and initiative are coupled with leadership and responsibility. The EGSA steering committee has tried to provide the latter, but we are most thankful to the other students for their overwhelming enthusiasm and desire to make meaningful and constructive changes. Without their constant help and support our accomplishments would have been very meager.

Jerry Freier
Chairman, EGSA

RECENT GRADUATES

Tobias Franklin Dirks - February, 1971

Tobias Franklin Dirks was born on a farm near Elmo, Kansas on March 23, 1939. He lived on a farm near Tampa, Kansas until the summer of 1946, having entered a rural elementary school in 1944. In 1946 he moved to Durham, Kansas as his father relocated his livestock and poultry feed processing business. He completed grades 3-12 in Durham, graduating from Durham Rural High School in 1956.

In September of 1956 he entered Tabor College, Hillsboro, Kansas and completed seven semesters there before transferring to Kansas State Teachers College in the fall of 1960. There he received the B.S. degree in 1961.

From 1961-1964 he was employed as a science teacher by Emporia Public Schools, Emporia, Kansas. During this time work was completed on the M.S. degree in biology at Kansas State Teachers College. This degree was conferred in 1964.

During the 1964-1965 school year he attended an NSF Academic Year Institute for Teachers of High School Biology at Kansas State Teachers College.

Beginning in 1965 he attended the University of Illinois as a Ph.D. candidate in entomology. He was a teaching assistant in DGS biology during the 1965-1966 school year and held a USPH Traineeship from 1966-1970.

Presently he is a research associate in the Department of Entomology, University of Georgia, Athens, Georgia. He is married to the former Judy Ediger and has four children.

While Toby was a student here at Illinois he did his graduate work under the direction of Dr. James Sternburg where he worked on wasp venom. A number of people using second floor insectories were delighted to see Toby's work come to an end knowing they would no longer be threatened by escaped wasps. Toby's thesis title was "An immunochemical analysis of vespid wasp venoms with emphasis on low-molecular-weight, basic polypeptides." Toby returned in December of 1970 to take his final oral examination and complete the requirements for the Ph.D. and he is going to continue his research career at the University of Georgia in Athens.

Philip Michael Fox - June, 1970

Michael Fox was born October 30, 1941 in Madisonville, Kentucky where he attended primary and secondary schools. Mike graduated with distinction from the University of Kentucky in June 1963 with a B.S. degree in zoology. He continued his preliminary graduate studies at the University of Kentucky where he received a M.S. degree in 1965 in Entomology. Mike entered the University of Illinois in September 1965. While here at Illinois he majored in insect physiology with minors in physiology and biochemistry.

While at Kentucky Mike did a master's thesis on host parasite relationships in the general area of physiological ecology. At Illinois he did

considerable work in electron microscopy and ended up doing his thesis on the "Glutamic acid decarboxylase and the γ-aminobutyric acid pathway in the supraesophageal ganglion of the honey bee, Apis mellifera (Hymenoptera, Apidae)." Mike did his research under the direction of Dr. Joseph R. Larsen and completed his thesis in the summer of 1970. Currently Mike is living in Eugene, Oregon where his wife is completing some of her graduate training. Mike is in the same plight as many of our recent graduates in that he is actively searching for a position for the coming year where he might continue his research in neurophysiology.

Inder P. Kapoor - April, 1970

Inder Prakash Kapoor was born in Pakistan (India) in 1937. He carried out his primary education at B.I.R.L.A. higher secondary school in Delhi and received his bachelor of science degree in honors at the Central College of Agriculture, New Delhi in 1957. While he was an undergraduate student in India he was awarded first prize for standing first in order of merit in the honors program in Agriculture and also the special prize for agricultural operations. After he graduated from the Central College of Agriculture in New Delhi he obtained a position with the Federal Government and in 1957 conducted control measures for stored food grains against insects and other pests. In June 1960 he worked with the research organization of the government conducting research and teaching laboratories for training programs. Inder came to the United States first at the University of California at Riverside where he entered the Department of Entomology as a Ph.D. candidate under the direction of Dr. Robert Metcalf. When Dr. Metcalf joined the staff at the University of Illinois in 1968 Inder transferred from Riverside and entered the graduate department in entomology at Illinois. While at Riverside and here at the University of Illinois Inder did his research primarily in the areas of comparative metabolism of insecticides on insects and their biodegradability in miniature ecosystems. Inder completed his Ph.D. work in April 1970. He did his research under the direction of Dr. Metcalf. The title of his thesis was: "Competitive metabolism of DDT, methoxychlor and methiochlor in mammals, insects and in a model ecosystem."

On the completion of his degree Dr. Kapoor accepted a position under the direction of Drs. Metcalf and Booth with a Rockefeller Foundation Development grant on Novel Selective non-persistent pesticides.

Donald Edward Kuhlman - June, 1970

Donald Edward Kuhlman was born September 24, 1933 in Quincy, Illinois. He received his primary and high school education in the public schools of Community Unit District Number I of Adams County, Illinois. He attended Carthage College for one year, then transferred to the University of Illinois where he received the Bachelor of Science degree in 1955.

He entered the Graduate College of the University of Illinois in June of 1955 with an assistantship in Dairy Science. He was inducted into the U.S. Army in March of 1956. After completion of his military service in 1958, he was employed as an Assistant Farm Adviser and Farm Adviser from 1958 to 1965 by the Cooperative Extension Service.

In September 1965, he returned to the University and received the Master of Science degree in 1966. He then commenced work on the Ph.D. in entomology.

He is a member of Gamma Sigma Delta, Episilon Sigma Phi, and Chi Gamma Iota.

Don has had an extremely varied background in agriculture having spent some years as a farm adviser in the extension service of the University. Upon completion of his degree Don will continue to work in extension entomology and will make a very valuable contribution to the State in extension work. While as a graduate student at Illinois, Don did his graduate research under the direction of Dr. Luckmann. The title of his thesis was "Bionomics of Diabrotica Longicornis (say) and Diabrotica Virgifera LeConte (Coleoptera: Chrysomelidae).

Jimmy Karl Olson - February, 1971

Jimmy Karl Olson, son of Mr. and Mrs. James F. Olson, was born on February 18, 1942 in Twin Falls, Idaho. After graduation from Buhl High School in Buhl, Idaho, he entered the University of Idaho where he majored in entomology. He received the Bachelor of Science degree in Agriculture in 1965.

He entered the U.S. Army as an officer in the spring of 1965 and served his two years of active duty as the Program Coordinator for the Ecology and Epidemiology Branch, Biological Division, Dugway Proving Ground, Dugway, Utah. Upon his release from active duty in the fall of 1967, he entered the Graduate College of the University of Illinois to continue his studies in entomology under Dr. William R. Horsfall. During his tenure as a graduate student, he held an NDEA Title IV Fellowship and a U.S. Public Health Service Traineeship.

He is a member of Phi Kappa Phi, Phi Sigma, and Sigma Xi. Membership in professional organizations includes the Entomological Society of America, the American Mosquito Control Association, and the American Society of Tropical Medicine and Hygiene.

He married Joanne Heller on September 7, 1964. They have two children Teresa Ann and Kristine Renae.

While Jim was a graduate student here at the University of Illinois he was very active in graduate student affairs and was responsible for helping to organize the Department of Entomology Graduate Student Association and served as its first president. Jim was instrumental in building better rapport between the staff and students. Jim's research with Dr. Horsfall was in the field of insect bionomics. The title of his thesis was "Imaginal organogenesis in mosquitoes as affected by sequential temperatures: gonadal development." Jim completed the degree requirements in December, 1970 and has accepted a position at Texas A&M, College Station, Texas, where he will be actively engaged in teaching entomology and continuing his research programs. Jim did an excellent job at Illinois and we are proud of him.

Robert Floyd Randall - June, 1970

Robert Randall was born April 12, 1940 in Belleview, Michigan. Bob did his early schooling at Belleville Community School where he was elected to the National Honor Society graduating in 1958 with honors in

mathematics and English. In the fall of 1958 Bob enrolled at Kalamazoo College where he majored in biology receiving the A.B. degree in the spring of 1962. In the fall of 1962 Bob enrolled at Illinois in the Department of Entomology. He was first employed as a research assistant working with Dr. Leigh Chadwick, former Head of the Department, on acetylcholine. Later Bob was awarded a USPHS traineeship and continued his studies in insect physiology and toxicology. With the retirement of Dr. Chadwick, Bob finished his work under the direction of Dr. Clyde Kearns. Bob is a member of Phi Sigma Phi Kappa Phi and also the Entomological Society of America.

Bob married Carlene Jones in 1965 while a graduate student at Illinois and they are the proud parents of Nicole born July, 1969. Bob completed his graduate studies in the summer of 1970. At the time he accepted a position with the Illinois State Natural History Survey. Bib is now looking for a permanent position where he might continue his research in toxicology and have an opportunity to do some teaching. The title of Bob's thesis was "House fly head (Musca Domestica L.) acetylcholinesterase activation by n-butanol."

Aubrey Glen Scarbrough - October, 1970

Aubrey Glen Scarbrough was born in Monette, Arkansas on August 19, 1941. He received his primary and secondary education in the public schools of Monette, graduating from Central High School in May of 1959. Shortly after graduation, he entered Arkansas State University where he received the degree of Bachelor of Science in the biological sciences in August of 1963.

In September of 1963 he was accepted by the Graduate College at Arkansas State University. He did research on the Asilidae of Northeast Arkansas under the direction of Earl Hanebrink and received the degree of Master of Science in biology and entomology in August of 1964. During this period, he was a teaching assistant in biological science classes for non-biology majors. In September of 1964, he accepted a teaching position in the public school system of Fredericktown, Missouri.

In September of 1965, he entered the University of Illinois as an NDEA Title IV Fellow in the Department of Entomology. He was a teaching assistant in agricultural entomology for two years. He did his research under the direction of Dr. G.P. Waldbauer.

He is a member of Tri Bets, Phi Sigma, the Entomological Club of the University of Illinois, the American Institute of Biological Sciences, the American Association of University Professors and the Entomological Society of America.

He married the former Mary Carr in 1964.

Aubrey completed his thesis research in the summer of 1970. The title of his thesis was "The occurrence of Hyalophora Cecropia (L.) as related to urbanization." and completed under the direction of Dr. Gilbert Waldbauer. Aubrey accepted a position at Towson State Teachers College in Baltimore, Maryland where he is currently teaching in their basic biology programs and continuing his research program started here at Illinois. We wish Aubrey every success in his new position.

PRESENT ENTOMOLOGY STUDENTS

Cheryl Adams

Activities: Sorting and identifying spiders for Dr. Unzicker (State Natural History Survey).

Research: Taxonomy and ecology of striped Epicauta (Coleoptera: Meloidae).

Advisor: R.B. Selander.

John Ameel

Advisor: G.P. Waldbauer.

Angel Berrios-Ortiz

Research: Continued research work on internal anatomy of immature stages of the blister beetle, Epicauta segmenta.

Advisor: R.B. Selander.

John Bouseman

Advisor: L.J. Stannard.

Lena Brattsten

Advisor: R.L. Metcalf.

Andrew Chen

Advisor: S. Friedman.

Chiou-nan Chen

Advisor: W.H. Luckmann.

Nora Churns

Before finally arriving in the glorious cities of Champaign-Urbana to start graduate school, I spent the summer months traveling in the western part of the United States. Starting in Seattle, Washington, in early June, I spent the next 2 1/2 months seeing a good part of western Washington, Oregon, California and Nevada. When not camping and hiking, I visited friends in Seattle, Tacoma, San Francisco and Las Vegas. The vistas of the west hardly prepared me for the vistas of Illinois, but it is comforting to think back now and remember that there are types of topography other than flat, flat cornfields.

I am now completing my first year of course work, and have not yet decided on a research problem. I find myself interested in a number of areas, but not yet willing to make that "ultimate" decision.

Advisor: E.G. MacLeod.

Bert Clegern

Research: Population dynamics and a lift table under optimum conditions for the housefly.

The research is getting well under way while I am wading through the masses of literature on my insect of choice. Prelims will come up this spring, and course work is hopefull out of the way. A fine Christmas was spent in Arlington, Texas, this year with the wife's family. A new addition to the family is expected to arrive in late July.

Advisor: R. L. Metcalf.

Joel Coats

Advisor: R.L. Metcalf.

Dave Denlinger

I'm in the process of completing my thesis research on physiological and ecological aspects of diapause in Sarcophaga. Travel was restricted to visits home to Pennsylvania, a short trip to the AIBS meetings at Indiana University, and a longer journey to Miami Beach for the ESA meetings. Judy is continuing to teach first grade in the Champaign school system.

Publications:

Embryonic determination of pupal diapause induction in the flesh fly Sarcophaga crassipalpis Macquart. Am. Zool. 10(3):320-321.

Rhythms of B_2 consumption in diapausing Sarcophaga pupae. Bull. Entomol. Soc. Amer. 16(3):53-54.

Autogeny in the flesh fly Sarcophaga argyrostoma. Ann. Ent. Soc. Amer. (in press).

Advisors: J.H. Willis and G.S. Fraenkel.

Jerry DeWitt

This past year saw the completion of course work and the passing of prelims. Research has switched from studies on the alfalfa weevil to comparative laboratory studies between color varieties of the southern green stinkbug from India and the United States. New office space has been assigned in the Bio-Control Laboratory where I am now working with Drs. E.J. Armbrust and Marcos Kogan.

The summer months were spent enjoyably on the road with the extension entomologists from the "survey" which enabled me to witness entomology "on the front line" plus many long days and short nights.

Vacations were spent with my wife in sunny St. Pete, Florida, and later dunking minnows in northern Minnesota waters.

My main extracurricular activities still include fishing, hunting, and stamp collecting. I anticipate completion of my Ph.D. by late Fall, 1971, and am seeking a position as an extension entomologist.

Publications:

With L.J. Stannard and T.C. Vance. 1970. The marijuana thrips, Oxythrips cannabensis, a new record for Illinois and North America. Transactions of the Illinois State Academy of Science, 63(2):152-156.

Advisor: W.H. Luckmann.

Ernie Dunwoody

Advisor: S. Friedman.

Nancy Edmunds

I graduated in May from Wartburg College, Waverly, Iowa, and began course work at the University of Illinois in the fall, 1970.

I spent the month of May at Big Bend National Park in Texas taking a field biology course.

Advisor: E.G. MacLeod.

Jerry Freier

Advisor: S. Friedman.

Francis Gardner

I successfully completed my Preliminary-Qualifying Examination last spring in the Cell Biology Training Program. This is an inter-disciplinary program which allows one to pursue course work in any of the departments of the School of Life Sciences with an emphasis on cellular and biochemical aspects of cell biology. I am now completing course work and attempting to carry on research. My research is focusing presently on the effects of nicotine on electrical activities of the cockroach ventral nerve cord in situ, especially low level effects on excitability and conduction velocity. I am also attempting to use the technique of pharmacological treatment to elucidate non-nicotinic neural pathways in the ventral nerve cord.

Advisor: J.G. Sternburg.

Howard Harris

Advisor: R.L. Metcalf.

Rosanne Hess

I was born on August 28, 1948, in Camden, New Jersey, and lived there until I was thirteen. Since then, I have lived in Towson, Maryland, which is about ten miles north of Baltimore.

In June, 1970, I graduated from Towson State College with a B.A. degree in Biology.

I am presently teaching Entomology 103 for my assistantship. I am working towards my master's degree and am most interested in insect ecology, environmental biology, and behavior.

My outside interests include horseback riding, tennis, swimming, spectator sports, especially football and baseball, movies, and music. One of the things I enjoy the most is just being out-of-doors, and I like to go on long walks and hikes. I am also active in S.E.C.S., and am working on several environmental-improvement projects.

Advisor: R.B. Selander.

Carol Hilfiker

When I left the Georgia-Florida corner of the country my interests were in anthropology. However, I am now studying the tympanal organ of Chrysopa carnea with the transmission and scanning electron microscopes. Electro-physiological studies are included in future plans.

This spring I'll leave the northern Minnesota canoe country to the black flies and head south for some camping and canoeing.

In June, 1970, my family was increased by one, but since I'm located in Dr. Larsen's lab I can't keep a picture of the addition on my desk--it was a cat.

Advisor: J.R. Larsen.

Feng-kuo (Frank) Hsieh

I came to Illinois in 1968 after finishing my M.S. degree at V.P.I. Like many foreign students I have been fortunate to continue my graduate work at the U. of I. I have completed my course work and finally passed prelims in February, 1971. Now I can devote more time on my research. My thesis problem deals with the population dynamics of the alfalfa weevil and its mortality factors in Illinois. This study is under the guidance of Dr. Edward J. Armbrust.

My wife, Linda, and I have a 6-month-old boy, Timothy Wen. Tim has been very happy and has added immeasurable joy to our lives. We love music, sports, and photography. Linda also enjoys cooking (especially American food), and I retain the potential as a "valuable" table tennis player.

Advisor: W.H. Luckmann.

James Kardatzke

I am a new student; I received an M.S. degree in entomology from Iowa State University.

Publications:

Larval populations and abundance of the genus Culicoides (Diptera: Ceratopogonidae) in central Iowa. M.S. thesis, Iowa State University.

With W.A. Rowley. 1971. Comparison of Culicoides larval habitats and populations in central Iowa. Ann. Ent. Soc. Amer. 64(1):215-218.

Advisor: W.R. Horsfall.

Grace Hsiao-mei Keh

Last summer, the taxonomy course gave me a chance to see some fantastic things of nature--the Mayfly swarms over the Mississippi River, a lot of interesting behavior of various insects plus the desert, the Rio Grande--all things I've never dreamed before and a lot of knowledge which is not found in books. That was really an adventure for me!

Advisor: J.H. Willis.

Mohinder Khalsa

I was born December 11, 1925. My wife's name is Surjit.

I am currently an AID Fellow and am on sabbatical leave from U.P. Agricultural University Pant Nagar, India. My thesis research is on pest management problems in soybean crop systems.

Advisor: W.H. Luckmann.

Lawrence Krone

Most of this past year was spent collecting engorged mosquitoes, Culex pipiens pipiens, in the scenic south farms area. In addition, the sewage treatment facilities of the twin cities were visited regularly. Yes indeed, 1970 proved to be "a very aromatic encounter with nature".

Bird Sera had to be obtained for immunization and eventual use in serological tests. Therefore, many hours were devoted to trapping various avian hosts, but at U. of I.'s "picturesque swine farm".

The new year brought forth the arrival of our daughter, Michelle Jeanine, and a post doctorate at U.C.L.A. with Dr. A.R. Barr. Hopefully this September, the Krone's will be "enjoying the polluted air of that earthquake-torn town of L.A.".

Advisor: R.L. Metcalf.

An-horng Lee

Research: Last year, I was busy in the kinetic study of the inhibition of house cricket head, housefly head and bovine erythrocyte AChE by O,O-dimethyl S-aryl phosphorothiolates. I also studied the distribution of cholinesterases in housefly and cricket. One interesting result found

was that in cricket head and thoracic muscle there was eserine and OP sensitive esterase activity. This esterase hydrolyses acetylthiocholine but not butyrylthiocholine.

Advisor: R.L. Metcalf.

Li-chun Li

I received my B.S. degree from the National Taiwan University in June, 1970. I came to the University of Illinois in September, 1970, with great interest in entomology. I hope I can learn more and find a research problem.

Advisor: J.G. Sternburg.

Nono Khian-kioe Liem

The past year had been a very enjoyable year for me. I was working on my M.S. degree in Zoology under Dr. Joan F. White at Eastern Illinois University. My M.S. thesis was entitled, "A histochemical study of the ovary of the milkweed bug, Oncopeltus fasciatus (Dallas) with special reference to the intermediate cell". I came to the Department of Entomology last fall and am being supported by a teaching assistantship. I am currently teaching Entomology 101, Agricultural Entomology, under Dr. Peter W. Price and I enjoy teaching this course very much.

Course work is foreseen for still a few semesters and I plan to work in the field of economic entomology.

During the past Thanksgiving holidays, I got the opportunity to fly over to Berkeley, California, to meet my mother and brother, who came from Indonesia to visit my sister and her family. I had a wonderful time in California.

Advisor: J.G. Sternburg.

Richard Lipsey

Research: The movement of methyl mercury thorugh tomato, aphids and green lacewing food chain: cone sublethal effects primary and secondary accumulation.

Travel: Mexico, California and the summer as a Ranger-Naturalist at Grand Teton National Park, Wyoming.

Publications:

Host of Neurocolpus nubilus, the clouded plant bug and Life history of Neurocolpus nubilus, clouded plant bug (Master's thesis from the University of Arkansas) published in Entomology News.

My wife's name is Mary Ann and we have a daughter, Cheryl Ann, age 2.

I passed prelims in December, 1970. In the fall, 1970, I was teaching assistant in morphology and advanced physiology and presently I am T.A. in environmental biology for spring, 1971.

Advisor: R.L. Metcalf.

John McNurney

Advisor: J.G. Sternburg.

Talaat Mitri

Advisor: L.J. Stannard.

Adolfo Molina-Pardo

Advisor: L.J. Stannard.

Bob Morden

This past year has been good to the Morden's. The highlight of the year happened December 14 when Shanna Suzanne was born. She has been very cooperative by sleeping through the night. Since this is my final year in graduate school, the whole family is looking forward to starting a new life of gainful employment and enjoying many activities that we have financially been unable to experience for the past few years.

My research involves the phenology of the evergreen bagworm, Thyridopterx ephemeraeformis. This has involved ecological studies of adult emergence, embryonic development, spring hatching, developmental rates of its active stages, diapause conditioning during the cold season, photoperiodic effects on diapause induction and responses of different geographical populations to different degrees of chilling throughout the winter.

In November I attended the ESA meetings at Miami Beach, Florida, where I took part in a symposium on graduate studies.

During the last few years I have been supported by a USPH traineeship.

May the best of everything come to each of you who have made my stay at Illinois a profitable one and if any of you are in the area in which we settle, please stop by and see us.

Advisor: G.P. Waldbauer.

Lou Moretti

Advisor: J.R. Larsen.

Herb Nigg

Publications:

Protease cycles in the midgut of Sarcophaga bullata (in preparation).

Research: The effect of DDT and some DDT analogues on the multi-function oxidase system of mice, chickens and fish.

Advisor: R.L. Metcalf.

Jerry Nordin

I am now in the final stages of my research involving several infectious diseases of the fall webworm, Hyphantria cunea, in Illinois. I anticipate receiving a Ph.D. in June, 1971. Like several other graduate students in the department, I have been actively seeking employment. However, I have had little success to date. I traveled to College Park, Maryland, in August, 1970, with Dr. Maddox and Richard Sprenkel to attend the meetings of the Society for Invertebrate Pathology. This international meeting was well organized and highly significant in content. Many new acquaintances were made throughout the United States. I also saw a few familiar faces too, including those of Dr. Ed Cupp and Dr. James Harper, formerly students at the University of Illinois.

Advisor: W.H. Luckmann.

Don Nye

Advisor: R.L. Metcalf.

Nalini Ratnasiri

Course work has occupied most of my time this past year, and it will continue to do so until the end of spring semester. While learning to classify insects, I had the opportunity to camp out in southern Illinois and Big Bend National Park in Texas.

Advisor: G.S. Fraenkel.

Larry Sanburg

Another fascinating year has passed in Champaign-Urbana! Research activities have continued--and, thankfully, increased--on the effects of photoperiod and temperature on the adult female mosquito, Culex pipiens pipiens. I'm not really in competition with Larry Krone since my work revolves around the effects on ovarian development, lipid metabolism and hormonal involvement. Of course when we finish, no (?) further work will be needed on C. pipiens pipiens populations from Illinois!

Travel the past year was very restricted with two exceptions. At the start of the fall semester I went up to the University of Notre Dame to look at the excellent facilities of Dr. George Craig's Vector Biology Loaboratory. While there I was pleased to talk with Drs. Robert Goodfellow and Morton Fuchs. Along with other near-future graduates I journeyed to Miami Beach for the annual ESA meetings. It was mainly a job hunting expedition and hopefully it was successful. Only time will tell!!! Other activities of import have been absolutely nonexistant. No publications for 1970.

Advisor: J.R. Larsen.

Gurcharan Kaur Sangha

Most of the year was spent doing research for my thesis and the writing of it.

Advisor: R.L. Metcalf.

Doug Sell

Advisor: W.H. Luckmann.

Al Seymour

Advisor: G.P. Waldbauer.

Joe Sheldon

1970 has been an eventful year in the life of the Sheldons. A new daughter was added to our clan on January 10, 1970, and has been a delightful joy ever since. I assisted Dr. Selander in the new summer taxonomy course during which we traveled extensively in Illinois plus making a two-week trip to the Davis Mountains and Big Bend National Park in Texas. After summer school Donna, Jodi and I flew out to Oregon where we enjoyed a quiet four weeks of fishing, hiking, and visiting with our parents. After returning to Illinois, Donna had back surgery which has slowed her up considerably but since the operation was a complete success, we are anticipating big things for the future.

Research: My thesis, which is an examination of the reproductive biology of Chrysopa carnea (Chrysopidae), is progressing quite well and should be completed in time for June, 1971. I have examined in detail the parameters influencing the induction and termination of the diapause in three geographically distinct populations (43°N; 40°N; and 37°N) in an attempt to determine how this species modifies its response to the environment in order to remain adapted to a specific locale. The study has also involved an examination of the photoperiodic and temperature effect on the developmental rates and the rate of reproductive maturation; the adult feeding habits; and a detailed field study of the seasonal cycle under natural conditions in the 40°N population.

In addition to the work on my thesis, I have also been involved in a number of other projects. Dr. Waldbauer and I finished a paper on mimicry which will be published shortly in Evolution. We found a striking relationship between the seasonal occurrence of the mimics, their models, and the fledging time of the insectivorous birds nesting in this area. Apparently the seasonal occurrence of the mimics is strongly affected by the predation pressure of the birds and there has been strong selection for the mimics only to fly when educated birds are on the wing. When the young birds come off the nest there are no mimics around--only models which are well protected by their powerful stings. Dr. MacLeod and I have also been working on a number of things some of which are: Determining the genetic mechanism behind the first eye color mutant found in the Neuroptera; describing a new genus of Berothidae which I collected in Costa Rica in 1969; describing the larvae of a species of Chrysopidae from southern Florida which we found to be associated with ants; and continuing our investigation of the reproductive behavior in the Chrysopidae.

Teaching: This is the third year in which I have been involved with Dr. MacLeod's course, Life of Insects. I am currently directing the lab sections of the course, which have now expanded to 220 students and 10 labs, plus teaching one lab. In addition to my work in this course, I also assisted Dr. Selander in his new course, which I mentioned above.

Publications:

Sexual dimorphism in the head structure of Mutillidae Hymenoptera; a possible behavioral explanation. Ent. News. 81:57-61.

Advisor: E.G. MacLeod.

Keith Solomon

I was born in Cape Town, South Africa, in 1944. I was educated in South Africa and am a graduate of Rhodes University, Grahamstown. Past research has been on the effects of exposure to low temperatures on the serum proteins of Tilapia mosambica and on the mode of action of the acyl-diethylamide molluscicides in schistosomiasis vector snails. I have been sent to the U.of I. by my employers, the S.A. Council for Scientific and Industrial Research to gain experience, and a Ph.D. in insect biochemistry. My research field here is the synergism of various juvenile hormones and later I hope to study their inactivation and breakdown in the insect.

My wife, Sandra, and daughter, Fiona, joined me here at the end of February (babies are much cheaper in South Africa than in the USA) so we are all one happy family again.

Advisor: R.L. Metcalf.

Richard Sprenkel

In 1970 I continued working in the field of insect pathology. In particular, I am studying a microsporidiosis of the Indian meal moth. In August, I attended the IVth International Colloquium on Invertebrate Pathology in College Park, Maryland.

Advisor: W.H. Luckmann.

Gandharia Thakur

Advisor: W.H. Luckmann.

Sharad Vaishampayan

Advisor: W.H. Luckmann.

Tom Vance

Advisor: L.J. Stannard.

Thomas H. Wilson

My research is concerned with a monograph of the Heliothripinae (Thysanoptera: Thripidae). This is a subfamily of tropical thrips which provided good reason for my wife, Doris, and me to spend the past year in India. This project was made possible through a graduate student internship awarded by the Midwest Universities Consortium of International Activities. The return trip through Europe allowed an opportunity for study in several museums such as the British Museum (NH).

Upon completion of my degree I shall report to the Medical Service Corps, USAR, with an MOS of Entomologist. I have applied for a tour in Africa which has a healthy population of thrips unblessed by taxonomy.

Publications:

With F.D. Miner. 1969. Invluence of temperature on development of the lesser mealworm, Alphitobius diaperinus (Coleoptera: Tenebrionidae). J. Kansas Ent. Soc. 42(3):294-303.

With L.J. Stannard. 1970. Thysanoptera of South Georgia. Pacific Insects Monograp. 23:221-226.

Apollothrips, a new genus and species of thrips from Central India (Thysanoptera: Thripidae) with a synopsis of related genera. Ann. Ent. Soc. Amer. (submitted).

Advisor: L.J. Stannard.

Willard Woodward

Advisor: J.G. Sternburg.

PRESENT POST DOCS AND ACADEMIC EMPLOYEES

Stanley D. Carlson

Unlike his idol, President Millard Fillmore, Stanley D. Carlson was not born in a log cabin but in a hospital in St. Paul, Minnesota, many years ago. Without failing a single course he advanced through the public school system and capped this success by graduating from the University of Minnesota in 1956 with a biology major. Our cheerful hero then worked his way south cleverly avoiding Minnesota winters. Soon he had an M.S. from the University of Nebraska and a Ph.D. from Kansas State University—accomplishing research in toxicology and respiratory physiology. During the latter five years he was also a full-time researcher for the U.S.D.A. making plenty of money—that is, compared to an assistantship.

Not content to be a civil servant, this modest but diligent scientist sprang into the academic world by virtue of being appointed Assistant Professor at Virginia Polytechnic Institute, Department of Entomology. (Actually virtue had nothing to do with it.) Here his love for sensory physiology erupted and he taught comparative physiology and general zoology for the Biology Department while nurturing a graduate student to the Ph.D. (Carlson was not amused when his graduate student soon made more money than his mentor.)

Forsaking money and materialistic goals for pure intellectual joys, Carlson journeyed to Sweden and spent two years at the Department of Physiology, Karolinska Institute, Stockholm. The trip and salary were paid for by a Special Fellowship from the N.I.H. During these years considerable European travel (including Russia) occurred and many post-cards were sent to his provincial pals in the States. Research concerned the ultrastructure, electrophysiology and microspectrophotometry of moth (Manduca sexta) photoreceptor cells. This study continued at Yale for over a year at which time Carlson's grant was approved but not funded. This semi-triumph resulted in his gratefully accepting a position at the University of Illinois as a U.S.P.H. Fellow. Dr. Larsen and Mary Fisher have continued his education in electron microscopy. While here Carlson has given some bewildering lectures to the Advanced Insect Physiology class in photoreception and olfaction. For the second consecutive Christmas season he was reinvited back to Sweden and in these 5-6 week periods he has continued to determine the bleaching kinetics of the moth visual pigments by microspectrophotometry.

Dr. Carlson is married to a Swedish flicka who is a major in political science and languages at Stockholm University. Dr. Carlson is weak in these two academic areas but his wife, Agneta, is patiently helping him. The ZPG notwithstanding, he has fathered three fine sons: Eric 8, Kirk 7 and Jon 4,—several of whom look like him.

Penny Hansen

This past year we bought a house and immediately filled it up with books and pets (3 cats, 1 parakeet, 2 aquaria, 5 snakes and 70 mice to feed the snakes). Filling the house took up last summer and fall so we are very glad to start hiking again.

Mary Ruh

This year I've continued working with Physiology 103, both as a lecturer and coordinator of the teaching assistants. My research on cuticular protein synthesis with Dr. Judy Willis is progressing with much to do before I leave in September. Biggest news is the pending arrival of a "little Ruh" in April.

Ching-chieh Yu

My current research is on the comparative studies of insect and mammalian choline acetylase inhibitors.

I attended the E.S.A. meetings in Miami Beach, Florida, and enjoyed the scenery and sub-tropical weather there very much.

Our first son was born on June 15, 1970.

Publication: Inhibition of choline acetylase from housefly (Musca domestica) and mouse. Life Sciences. 1971 (in press).

NEWS ABOUT THE STAFF MEMBERS

Gary M. Booth

Activities:

For the past two years I have been involved in the development of several courses and research programs in entomology and related areas. Specifically insect toxicology and control have been a major portion of that responsibility. A lab manual has been written and made a part of the course in toxicology and we feel this has improved the quality of entomology's teaching program considerably. Good interaction with the Survey and a lab manual have also increased the quality of our pest management program. We presently have a well equipped lab on a semi-permanent basis which may be used for both of the above topics of study. It has also been a pleasure to have helped develop a new program and course offering in Environmental Toxicology and Pharmacology which was launched this summer (Spring, 1971), and which had a meager start as a seminar series just one year ago. This is cross-listed in the catalogue over several disciplines and has been favorably received by students in many areas. In addition I teach a seminar course in the ecology of pesticides in the life sciences program. The acquisition of several research grants for the department has aided my own research program considerably, and hopefully the acquisition of equipment has helped the department at the same time.

Therefore it is with mixed feelings that I leave the Department of Entomology in September to join the environmental biology team at the State Natural History Survey. I hope, however, that good interaction with the Department of Entomology and the Survey will continue in the future and that both institutes will profit by this joint effort.

Travel:

Attended and presented a paper at ESA meetings in Florida. Attended Pest Management conference in North Carolina.

George C. Decker

I am a member of the Executive Committee, Florida Entomological Society, and president of the Sub-tropical Branch of the Florida Entomological Society. Next September I will be the invitation speaker at the Florida Entomological Society meeting in Jacksonville.

G. S. Fraenkel

Travel:

Beginning of July attended Silver Jubilee Conference of Anti-Locust Research Center at London. Most of July research at Marine Laboratory at Villefranche, S. France.

Stanley Friedman

Research this past year has been interesting in that old lines have proven fruitful and new lines have been undertaken. Ernie Dunwoody is working on synthetic processes involved with the induction of resistance in houseflies, Jerry Freier with the nutrition and biochemistry of host parasite relationships, using Aedes aegypti-Plasmodium gallinaceum as a model system, Ken Capps (a student in the Zoology Department) with "stuttering" in protein synthesis during aging in adult Phormia regina, and I with the control of active sites on enzymes concerned with the maintenance of carbohydrate levels in Phormia.

Arthur Ghent

Dr. Ghent holds a joint appointment in the Department of Entomology and is currently on sabbatical leave in London. Dr. Ghent has been active in teaching in the honors biology programs this past year particularly in population biology and has been helpful to members of the department in evaluation of statistical analysis of data.

William R. Horsfall

Research:

Completed publication of six papers based on earlier work; completed study of thermal stress as seen in Alaskan mosquitoes.

Travel:

To Colorado and Wyoming for material to complete study of thermal stress on montane mosquitoes.

Elbert R. Jaycox

During the year we improved our bee research facilities and our personnel. We built a cage-headhouse building that will have 12 attached cages in which we can study bee behavior. Mr. Godfrey Guynn was appointed assistant horticulturist to work full time with the honey bee projects. It was a year of contrast: the friendly Illinois beekeepers gave me an award as Beekeeper of the Year, and the National Science Foundation gave me a new two-year grant to study honey bee foraging behavior. The family vacationed in western Virginia where everyone has a corn patch and at least one hive of bees. The interest in natural foods seems to be gaining ground, to the benefit of honey consumption. We sold three tons of University honey in just three days.

Clyde W. Kearns

Dr. Kearns is continuing the second year of his leave from the University to serve as Director of the Shell Research Laboratories at Sittingbourne, England. Clyde has had an enjoyable stay in England. We

had an opportunity to visit with him when he returned to this country on consulting matters for Shell Oil. Clyde is looking forward to his return to the Department in January of 1972 and we are anxiously looking forward to having him back on the staff where he will continue his research and teaching in insect toxicology and physiology.

Joseph R. Larsen

This past year has been very rewarding though it's had frustrations with less time for research. I have found it very satisfying to work with the faculty and staff of the department. In addition to my duties as Head I am still involved in the preprofessional and teacher training programs in biology. This past year family-wise was a rather exciting one with the marriage of our oldest daughter, Pam, to Mr. Dave McClure. Time was spent traveling to and from Utah, a pair of wedding receptions and getting the department off to a fresh start this fall. We enjoyed very much having the entire department in our backyard for a pork chop barbecue and look forward to future activities of the same kind. Pam and her new husband, Dave, will graduate from Brigham Young University this summer when Dave will enter the Naval Air Corps program. Our #2 daughter, Deb, graduates from high school and has been accepted into Brigham Young University Honors Program in September 1971. We still have Jennifer to keep us humble and are looking forward to another exciting year.

William H. Luckmann

This was another year of much activity and satisfaction in the development of programs and staff. Construction was completed on the Flint Entomology Laboratory, a 3,600 sq. ft. facility located adjacent to the Insect Biocontrol Laboratory. The laboratory was named after Prof. Wesley P. Flint, who served the Illinois Natural History Survey from 1907 to 1943. The Section of Economic Entomology emerged during his tenure. Approximately one-half of the new laboratory is devoted to studies on the fate of organic and inorganic pesticides in model ecosystems. Dr. Gary Booth, who will join the Economic Entomology staff on September 1, 1971, will direct this research.

A second visit to India from August 21 to October 26 was very enjoyable, and many specimens of soybean pests, predators, and parasites were returned to the campus.

The five Luckmann children are all teen-agers ranging in age from 13 to 19 years, a marked accomplishment of questionable benefit. Two attend the U. of I.

Ellis G. MacLeod

Research during the year comprised continuing studies on the biology of the Chrysopidae and the fossil history of the Neuroptera. The first

of these projects involved additional field work in Colorado, Idaho, Utah and Wyoming during the summer along with laboratory studies of the basic diapause phenology, adult feeding habits and mating behavior, and chromosome cytology on laboratory cultures of a number of the western species during the remainder of the year.

R. L. Metcalf

Research:

Inauguration of Rockefellar Grant on "Development of Selective and Biodegradable Insecticides" - a collaborative effort with Cornell University, University of California at Berkeley and Riverside, and University of Illinois.

Travel:

Attended NATO conference on livestock insect pest control, Lethbridge, Alberta, July, 1970.

Peter W. Price

We are very pleased to introduce a new faculty member in the Department of Entomology at the University of Illinois: Peter Wilford Price.

Peter was born April 17, 1938, in Carshalton Beaches, Surrey, England. His early education was in primary and secondary schools in Wellington Surrey. He graduated from the University College of North Wales, Bangor with honors in forestry in July of 1962. He received a master's of science degree in forest entomology from the University of New Brunswick in Frederickton, N.B., in 1964. He completed his Ph.D. training at Cornell University at Ithaca, New York in 1970 where he did his work in ecology and evolutionary biology. Peter was an outstanding student having been the recipient of the Surrey Agricultural Scholarship in 1952-62; Beaverbrook Foundation Forestry Fellowship, 62-63; and a Natural Research Council Grant from Canada in 1963-64. He has held positions as a research scientist in the Canadian Department of Fisheries and Forestry at Quebec from which position he came to Entomology at Illinois. Prior to that time he served as a teaching assistant at Cornell University while a graduate student. He was a research officer for the Canadian Department of Fisheries and Forestry in Quebec from 1964-70. During this period of time he did research on the ecology of coexistence among parasitic hymenoptera as part of a cooperative project on the population dynamics of the swain jackpine sawfly. Peter has also served as a technical officer in the Canadian Department of Fisheries and Forestry, assisting in the spruce budworm population sampling program in assaying insecticide spray results and studying genetic variations between populations. His master's research was on the study of fecundity and survival of Polygraphis rufipenis (Kirby) in black, red and white spruce. His Ph.D. research was on the ecological niche relationships of coexisting parasitoids that utilize the same host. Peter has already published a number of papers and has distinguished himself as an ecologist and has great promise of making a significant contribution to the Department

as an outstanding entomologist. He is a member of the following professional societies:

AAAS, International Association of Ecology, Ecological Society of America, British Ecological Society, Canadian Society of Zoologists and the Entomological Societies of Quebec, Canada and America.

He will continue to carry on research in population ecology and community characteristics of insects involving new approaches to sampling populations and interpretation of field observations by use of detailed behavioral studies. Also, he will continue his research on the development of hypothesis on niche exploitations strategy of insects with emphasis on adaptations of parasitic insects. Peter is currently teaching Entomology 101 during Dr. Waldbauer's leave of absence and will continue to be involved in the teaching programs in our undergraduate courses. He will also teach an advanced course in insect ecology. His presence on the staff will greatly enhance the training of our graduate students and we are delighted to welcome him to the Department.

Peter adds the following statement for the Newsletter this year:

Activities:

Graduated from Cornell University with Ph.D. in ecology and evolutionary biology in June, while on educational leave from Canada Department of Fisheries and Forestry. Rejoined department and continued working on the ecology of ichneumonid parasitoids in the boreal forest, about 100 miles north of Montreal. Appointed as Assistant Professor in Department of Entomology, January, 1971.

Richard B. Selander

During the past year I completed (with R.C. Weddle) a major study of diapause termination by thermal stimulation in coarctate larvae of Epicauta. In addition, we made considerable progress on a new long-range project, which is a study of the systematics and ecology of a complex of striped blister beetles (Epicauta vittata and allies). In the course of several trips to southern Illinois, Tennessee, and Mississippi we obtained samples of adults, part of which were forwarded to the University of Texas for genetic analysis. The remainder were used to establish stocks for experimental work. An initial experiment, performed by Cheryl Adams, compared patterns and rates of larval growth in the two species on the basis of parallel samples of two states, reared at three different temperature cycles. Under the direction of John Bouseman we are now receiving and processing museum material of the complex from more than 50 museums in this country.

L. J. Stannard

During January, February, March, leave was taken from the Survey to work with Thomas Wilson in India and to arrange cooperative projects on

soybean insect research with entomologists in Malaysia, Indonesia, and the Philippines. Many thrips were collected from these places as well as from Guam.

Besides thrips, mites were also included in the taxonomic research done during the past year, particularly in the families Zerconidae and Podapolipidae.

James G. Sternburg

Research:

Biology of Hyalophora species, including behavior. Mode of action of DDT and related compounds. Mimicry complexes in Lepidoptera.

Travel:

Collecting trip along the northern shores of Lake Superior in August for ten days. Attended the Miami Beach meetings of The Entomological Society of America in December. Collecting trip to Everglades National Park.

Visitors:

Visitors to toxicology (not necessarily to me alone) include: Dr. Richard O'Brien, Dr. A.W.A. Brown, Dr. Byron Lovell.

Family Information:

Vacationed for several weeks in July in northern Wisconsin. Perfect weather. Excellent bass fishing. Disappointing year for gardening. More weed killer damage during mid-summer than in past year. Source unknown, suspect agricultural use. Family growing fast. Now have in 10, 9, 8, and 5th grades. Unbelievable!

Gilbert P. Waldbauer

Dr. Waldbauer is currently on sabbatical leave in Colombia, South America. Gil and Stephie and the entire family have gone to Palmira, Colombia, to work on an AID soybean project under the direction of Dr. William Luckmann at the State Natural History Survey. Gil will stay in South America through the summer months and return to his normal responsibilities in the department in September. In a recent communique from Gil he writes the following:

"Stephie and the kids and I are settled in and things are going well with my work.

Facilities are primitive here, and I can't do much more than collect insects, rear a few things and try to set up a few field experiments. It's fun and I'm learning a lot about the tropics and also about field work in economic entomology. My most interesting work is rearing parasites from soybean pests. I have box [?] reared several. More about this at some later date."

Judith H. Willis

Research, travel, etc., activities during the past year: Texas in June, Manned Spacecraft Center in Houston; H. Roaller in College Station; G.L. Bush in Austin; fun in San Antonio, AIBS-APS meetings in Bloomington, (gave paper on cuticular proteins), Indiana.

Persons who visited here last year: Prof. Lynn Riddiford.

Gave seminars at St. Louis University and Eastern Illinois University last fall. Received additional laboratory space in form of former classroom on another floor which necessitated duplicating a considerable quantity of equipment, but has enhanced the research potential.

NONACADEMIC EMPLOYEES

James P. Fitzsimmons

I started working for the Entomology Department September 28, 1970, as storekeeper. I am married and have two children, Steven, age 5, and Jackqueline, age 2. My wife's name is Sherry and we live in Urbana.

Judy Michael

I have been employed in the department for over three years now and enjoy being part of the office staff. My husband, Don, is just starting at the U of I this spring in outdoor recreation (transferring from Parkland Jr. College). Our son, Jeff, will be 5 in May and is looking forward to going to kindergarten this fall.

Ruth Millholin

The WHO Insecticide Evaluation Program moved along in pretty good shape this past year with the screening completed on many new compounds—many of these compounds being made by the toxicology group right here in Entomology. It is also very reassuring to know that some of your insects probably helped some of the graduate students along the road to their degrees—in this case Inder Kapoor and Lena Brattsten.

A remembered highlight of this past year was watching the Illinois Entomology Department baseball team literally clean up—a new feeling I'm sure—on the Purdue Entomology Baseball Team that delightful day last June when Patty Plymire was the heroine of the day.

A drive to California with my son in August to visit 2 sets of grandparents was a long awaited for delight.

Having my son elected to the National Junior Honor Society was another highlight.

Ruth Plymire

This year found Bill and I fulfilling a life-time dream—a trip to the beautiful state of Hawaii. It was everything we thought it would be and we had a marvelous 10 days. We just hated to come back to the cold, winter of Illinois.

The family is doing just great. Deanna was elected cheerleader for the 7th grade; Patty was once again appointed to the President's Physical Fitness Team; and Teresa was advanced to an accelerated grade. They all have plenty of activities and keep mom and dad busy following after them.

And Bill has plenty of his own activities going too—cross country coaching in the fall; basketball in the winter and baseball in the spring. Besides he has taken 3 graduate courses and will receive his Master's degree in June. Thank heaven! No more school for some time.

Ruth has only to keep up with Dr. Larsen and the rest of the crew in the Department of Entomology. But as long as she can keep taking those nice winter vacations, she will be able to cope with anything.

Linda Sergent

I am a recent addition to the Entomology Department and am responsible for the bookkeeping of all federal monies. I am married and have one 8 year old son. My husband, Jim, is head of the Natural History Survey's greenhouses and is responsible for the many flowers that now appear in the office. We are area residents and currently live in Urbana. I've been an employee of the University for 8 years.

PUBLICATIONS FROM THE DEPARTMENT OF ENTOMOLOGY, 1970

BHATTACHARYA, ANOOP, Research Associate

Bhattacharya, A.K., J.J. Ameel and G.P. Waldbauer. A method for sexing living pupal and adult yellow mealworms. Ann. ent. Soc. Amer. 63:1783.

Bhattacharya, A.K. and N.C. Pant. Bioassay of trypsin inhibitor from lentil (Lens esculenta) and French bean (Phaseolus vulgaris) on khapra beetle, Trogoderma granarium. Indian J. ent. 32:58-67.

Bhattacharya, A.K. and G.P. Waldbauer. Use of fecal uric acid method in measuring the utilization of food by Tribolium confusum larvae. J. Insect Physiol. 16:1983-1990.

BOOTH, GARY M., Assistant Professor

Booth, G.M. and R.L. Metcalf. Histochemical evidence for localized inhibition of cholinesterase in the housefly. Ann. ent. Soc. Amer. 63, 1:197-204.

Booth, G.M. and R.L. Metcalf. Phenylthioacetate: A useful substrate for the histochemical and colorimetric detection of cholinesterase. Science, 170, 3956:455-457.

Booth G.M. and G.S. Whitt. Localization of lactate dehydrogenase activity in the cells of the fish (Xiphophorus helleri) eye. J. exp. Zool. 174, 2:215-224.

CARLSON, STANLEY D., Postdoctoral Fellow

Carlson, S.D., J.S. Smith, Jr., J.M. Stanley and U.F. Earp. Electrophysiologically investigating the optic tract of the tobacco hornworm moth. Trans. Agric. Eng. Soc. Amer. 13, 2: 214-215.

FRAENKEL, GOTTFRIED S., Professor

Fraenkel, G.S. Evaluation of our thoughts on secondary plant substances. Entomologia: Experimentalis et Applicata, 12: 473-486.

Fraenkel, G.S. and W. Fogal. Histogenesis of the cuticle of adult flies, Sarcophaga bullata and S. argyrostoma. J. Morph. 130:137-150.

Fraenkel, G.S. and J. Zdarek. The evaluation of the "Calliphora test" as an assay for ecdysone. Biol. Bull. 139:138-150.

Fraenkel, G.S. and J. Zdarek. Overt and covert effects of endogenous and exogenous ecdysone in puparium formation of flies. Proc. Nat. Acad. Sci. 67:331-337.

Fraenkel, G.S. and E. Zlotkin. Acceleration of puparium formation in Sarcophaga argyrostoma by electrical stimulation or scorpion venom. J. Insect Physiol. 19:1549-1554.

FRIEDMAN, STANLEY, Professor

Friedman, S. Metabolism of carbohydrates in insects. In Chemical Zoology, ed. by Florkin and Scheer, Academic Press, New York, pp. 167-198.

Friedman, S. and R.L. Benson. Allosteric control of glucosamine phosphate isomerase from the adult housefly and its role in the synthesis of glucosamine-6-phosphate. J. Biol. Chem. 245, 9:2219-2228.

HORSFALL, WILLIAM R., Professor

Horsfall, W.R. and E.W. Cupp. Thermal stress and anomalous development of mosquitoes (Diptera: Culicidae) VI. Effect of temperature on embryogeny of Aedes sierrensis. Ann. Zool. Fenn. 7:358-365.

Horsfall, W.R. and E.W. Cupp. Thermal stress and anomalous development of mosquitoes (Diptera: Culicidae) VII. Effect of temperature on embryogeny of Aedes aegypti. Ann. Zool. Fenn. 7:370-374.

Horsfall, W.R. and M.C. Ronquillo. Genesis of the reproductive system of mosquitoes. II. Male. J. Morph. 131:329-357.

Horsfall, W.R., F.R. Voorhees and E.W. Cupp. Eggs of floodwater mosquitoes. XIII. Chorionic sculpturing. Ann. ent. Soc. Amer. 63:1709-1716.

Horsfall, W.R. and G.R. Wilson. Eggs of floodwater mosquitoes. XII. Installment hatching of Aedes vexans (Diptera: Culicidae). Ann. ent. Soc. Amer. 63:1644-1647.

JAYCOX, ELBERT R., Professor

Jaycox, E.R. Honey bee queen pheromones and worker foraging behavior. Ann. ent. Soc. Amer. 63, 1:222-228.

Jaycox, E.R. Collecting and counting honey bees with a vacuum cleaner. J. econ. Ent. 63, 1:327-328.

Jaycox, E.R. Pollination of strawberries. Amer. Bee J. 110, 5: 176-177.

Jaycox, E.R. Ecological relationships between honey bees and soybeans. I. Introduction. Amer. Bee J. 110, 8:306-307.

Jaycox, E.R. Ecological relationships between honey bees and soybeans. II. The plant factors. Amer. Bee J. 110, 9:343-345.

Jaycox, E.R. Ecological relationships between honey bees and soybeans. III. The honey-bee factors. Amer. Bee J. 110, 10:383-385.

Jaycox, E.R. Honey bee foraging behavior: responses to queens, larvae, and extracts of larvae. Ann. ent. Soc. Amer. 63, 6: 1689-1694.

KAPOOR, INDER P., Research Associate

Kapoor, I.P., R.L. Metcalf, R.F. Nystrom and G.K. Sangha. Comparative metabolism of methoxychlor, methiochlor, and DDT in mouse, insects, and in a model ecosystem. J. Agric. Food Chem. 18, 6:1145-1152.

LIPSEY, RICHARD L., Teaching Assistant

Lipsey, R.L. The hosts of Neurocolpus nubilus (Say), the clouded plant bug (Hemiptera, Miridae). Ent. News, 81:213-219.

Lipsey, R.L. The life history of Neurocolpus nubilus (Say), the clouded plant bug (Hemiptera, Miridae). Ent. News, 82:

LUCKMANN, WILLIAM H., Professor

Broersma, D.B. and W.H. Luckmann. Effects of tarnished plant bug feeding on the soybean. J. econ. Ent. 63, 1:253-256.

Kuhlman, D.E., W.L. Howe and W.H. Luckmann. Development of immature stages of the western corn rootworm at varied temperatures. Proc. N. Cent. Br. Ent. Soc. Amer. 25, 2:93-95.

MACLEOD, ELLIS G., Associate Professor

MacLeod, E.G. The Neuroptera of the Baltic amber. Part I. The families Ascalaphidae, Nymphidae, and Psychopsidae. Psyche, 77:147-180.

METCALF, ROBERT L., Professor

Metcalf, R.L., G. Quistad and T.R. Fukuto. Insecticidal, anti-cholinesterase, and hydrolytic properties of phosphoramido-thiolates. J. Agric. Food Chem. 18:189-195.

Metcalf, R.L., S.P. Shristava, G.P. Georghiou and T.R. Fukuto. Carbamate resistance in mosquitoes. Bull. Wld Hlth Org. 42:931-942.

Metcalf, R.L. Role of pesticides in the integrated control of disease vectors. Amer. Zool. 10:583-593.

Metcalf, R.L. and G.M. Booth. Phenylthioacetate: A useful substrate for the histochemical and colorimetric detection of cholinesterase. Science, 170:455-457.

Metcalf, R.L. and L. Brattsten. The synergistic ratio of carbaryl with piperonyl butoxide as an indicator of the distribution of multifunction oxidases in the Insecta. J. econ. Ent. 63:101-104.

Metcalf, R.L. and R.A. Metcalf. Effects of isosteres of 2-heptanone on the alarm behavior of the ant Conomyama pyramica. Ann. ent. Soc. Amer. 63:34-35.

Metcalf, R.L. and G.M. Booth. Histochemical evidence for the localized inhibition of cholinesterase in the housefly. Ann. ent. Soc. Amer. 63:197-204.

Metcalf, R.L., I.P. Kapoor, R.F. Nystrom and G.K. Sangha. Comparative metabolism of methoxychlor, methiochlor, and DDT in mouse, insects, and in a model ecosystem. J. Agric. Food Chem. 18:1145-1152.

PRICE, PETER W., Assistant Professor

Price, P.W. A loosestrife sawfly, Monostegia abdominalis (Fabricius) (Hymenoptera: Tenthredinidae). Can. Ent. 102:491-495.

Price, P.W. Dispersal and establishment of Pleolophus basizonus (Gravenhorst) (Hymenoptera: Ichneumonidae). Can. Ent. 102:1102-1111.

Price, P.W. Characteristics permitting coexistence among parasitoids of a sawfly in Quebec. Ecology, 51:445-454.

Price, P.W. Trail odors recognition by insects parasitic on cocoons. Science, 170:546-547.

Price, P.W. Biology of and host exploitation by Pleolophus indistinctus (Provancher) (Hymenoptera: Ichneumonidae). Ann. ent. Soc. Amer. 63:1502-1509.

SELANDER, RICHARD B., Professor

Selander, R.B. The bionomics of blister beetles of the genus Meloe and a classification of the New World species. Univ. Ill. Press, Urbana, Ill., 222 pp.

SHELDON, JOSEPH K., Teaching Assistant

Sheldon, J.K. Sexual dimorphism in the head structure of Mutillidae Hymenoptera: a possible behavioral explanation. Ent. News, 81:57-61.

STANNARD, LEWIS J., Professor

Stannard, L.J. Book review: Indian Thysanoptera by T.N. Ananthakrishnan. Ann. ent. Soc. Amer. 63, 3:916.

Stannard, L.J., J.R. DeWitt and T.C. Vance. The marijuana thrips, Oxythrips cannabensis, a new record for the Illinois and North America. Trans. Ill. State Acad. of Sci. 63, 2:152-156.

Wilson, T.H. and L.J. Stannard. Thysanoptera of South Georgia. Pacific Insects Monog. 23:221-226.

STERNBURG, JAMES G., Professor

Sternburg, J.G. and R.F. Flattum. Action of nicotine on neural synaptic transmission in the American cockroach. J. econ. Ent. 63:62-67.

Sternburg, J.G. and R.F. Flattum. Release of synaptically active material by nicotine in the central nervous system of the American cockroach. J. econ. Ent. 63:67-70.

Sternburg, A.G. Scarbrough and G.P. Waldbauer. A method for associating cocoons and marked last-stage larvae. Ann. ent. Soc. Amer. 63:1481.

Sternburg, A.G., G.P. Waldbauer, W.G. George and A.G. Scarbrough. Hairy and downy woodpecker attacks on cocoons of urban Hyalophora cecropia and other saturniids (Lepidoptera). Ann. ent. Soc. Amer. 63:1366-1369.

WALDBAUER, GILBERT P., Associate Professor

Waldbauer, G.P. Mimicry of hymenopteran antennae by Syrphidae. Psyche, 77:45-49.

Waldbauer, G.P. and A.K. Bhattacharya. Use of the fecal uric acid method in measuring the utilization of food by Tribolium confusum. J. Insect Physiol. 10:1983-1990.

Waldbauer, G.P., J.G. Sternburg, W.G. George and A.G. Scarbrough. Hairy and downy woodpecker attacks on cocoons of urban Hyalophora cecropia and other saturniids (Lepidoptera). Ann. ent. Soc. Amer. 63:1366-1369.

Waldbauer, G.P., J.G. Sternburg and A.G. Scarbrough. A method of associating cocoons and marked last-stage larvae. Ann. ent. Soc. Amer. 63:1481.

WILLIS, JUDITH H., Associate Professor

Willis, J.H. and P.A. Lawrence. Deferred action of juvenile hormone. Nature, 255:81-83.

WILSON, GARY R., Graduate Student (M.S. 1970)

Wilson, G.R. A chamber for management of circadian rhythms of light and for small insects. J. econ. Ent. 63:1676-1677.

ALUMNI NEWS

We have received a number of responses from you and are happy to share your activities, publications and family news with the readers of the Newsletter. We appreciate your willingness to share with us your activities and accomplishments of the past year. We urge all of the alumni to share with us from time to time their activities so that we might circulate them. We are proud of our alumni and mindful of their accomplishments in the scientific world and would like to share these things with all former graduates of the department. We appreciate your words of encouragement and will endeavor to keep the Newsletter coming each year. We continue to include a perforated information sheet which we would appreciate your filling out and returning to the department.

We would like to report on the success of the Illinois Alumni Breakfast at the Miami Meetings. This activity has come about directly as a result of alumni support. We had about fifty people at Miami and look forward to continuing this type of activity in the future where we might renew old acquaintances and enjoy some fellowship. If any of you have suggestions for activity other than the breakfast, we would be happy to hear from you.

Robert L. Benson

I have a paper (co-authored by Stan Friedman) on glucosamine 6-phosphate synthesis to be published in J. Biol. Chem. I have also terminated some research on hamster intestinal disaccharidases, and I am returning to the enzymatic synthesis of amino sugars and chitin in insects and the hormonal control of chitin synthesis.

I attended the Federation Meetings in Atlantic City and the Entomological Society Meetings in Chicago. I also traveled from Baltimore, Maryland, to Pullman, Washington, in the DEAD of January—I suggest that long auto trips be done in the summer.

Murray S. Blum

Recent publications: 1. Chemistry of pheromones and defensive secretions. 2. Role of phermones in insect behavior. Papers on same—heading for Ecology!

Recent travels for business or pleasure: Brazil and Uruguay, 1969—ants and stingless bees; Ottawa, Canada, summer 1969—honey bee pheromones; Eastern Canada and New England, 1969—vacation.

Concerning the Newsletter: "Very enjoyable and well done."

B.D. Burks

In case you can use some news about your wandering alumni, I am just now spending a month (October) in London, studying types at the British Museum. Types of Chalicidoidea, of course. After that I go on to Tel Aviv (barring hijacking) for a few days, then on to Bombay, India. From there I go to New Delhi, Bangalore, Agra, and Calicut—I will be in India a month. Then I go to Rawalpindi and Peshawar, Pakistan. Then I return home by Athens, spending a week in Greece. I will be back in the U.S. in mid-December. My mission in the Orient is to review PL 480 projects in entomology; my mission in Greece is to look at the antiquities.

Eddie W. Cupp

I have been associated with Gulf South Research Institute, a private organization, since July 1, 1970. Since most of my research time as a postdoctoral fellow at Tulane Medical School was spent at GSRI in collaborative research, the company invited me to stay on instead of renewing my postdoctoral for another year. It's quite nice to be employed and the surroundings are fine. The Head of the Department of Parasitology at Tulane Medical School invited me to be an adjunct Assistant Professor of Parasitology so I've somehow managed to maintain my touch with academe also. At the moment, I have spent time unofficially advising several students on research projects and will probably give several lectures in medical entomology in the medical entomology course and also in the parasitology course.

The primary reason I took this job was to continue the research that had been started. Currently, a great deal of time (50%) is spent in virology (arboviruses, particularly the 4 dengue types). We are especially interested in the immunologic characterization of arboviruses and I am particularly excited about propagating arboviruses in continuous mosquito cell lines (Ae. albopictus) for use in immunologic work. Having been instructed to develop several research areas in my speciality, my latest endeavors have included characterization of the C. p. pipiens by immunodiffusion and immunoelectrophoresis (success), in vitro screening of anti-cholinergic insecticides for use as filaricidal agents (some success), and continued attempts in invertebrate tissue cultures (mixed success). The research is challenging and really keeps me jumping.

Mary is finishing her last year's requirement for a B.A. in chemistry at the New Orleans branch of the Louisiana State University. Our daughter, Eleanor, age 2 years, goes to Nursery School and seems to be picking up a trace of a Southern drawl! We spend a great deal of time outdoors and I have taken up fishing as a hobby.

While my job is really quite interesting and stimulating, I find that I miss the academic situation very much. Somehow, it always seemed that those of us at Illinois were being prepared to eventually teach at an institution of higher learning so it seems rather odd doing nothing but research! However, I think that I'll grow to like it, especially if some of the projects continue to develop the way they are. The weekly contact with Tulane has a very stabilizing effect, also.

John D. DeCoursey

I retired from the Navy as a Captain in February, 1970, after 28 years of service. I visited the Department on October 29 and am residing at 6104 Greentree Road, Bethesda, Maryland 20034.

Toshio Ito

It was very nice that I was able to visit the campus again on the way to New Orleans. It was only a short visit, but I saw Drs. Fraenkel, Friedman, Waldbauer, and a few other people. I stayed at the Illini Union from April 24-26, 1970. Exactly 13 years have passed since I left Urbana and I noticed several changes in the campus including people.

I have attended the AOCS sterol symposium in New Orleans, where I read a paper: Utilization and metabolism of sterols in the silkworm, Bombyx mori.

When we left Urbana in 1957, my older son was going to kindergarten there, but he is now a freshman in the University in Japan.

Kenneth L. Knight

Mosquito taxonomy, morphology and biology are my current research interests.

Recent publications are: I. Pao, B. and K.L. Knight. 1970. Morphology of the fourth stage larval mouthparts of Aedes (Aedimorphus) vexans (Diptera: Culicidae). J. Ga. Ent. Soc. 5(3):115-137.

I have five children, ages 16 to 26. Two are in college, one is in the Marine Corps, and one is in high school.

Comments concerning the Newsletter: "Excellent. Keep up the good work."

H. Elliott McClure

I have just received and read your latest issue of Illient (now adulterated to "Entomological Newsletter") with the greatest of interest. In view of recent news releases about University of Illinois I was especially interested in student comments, the report of the E.G.S.A. and comments by faculty.

Research projects seem to still be in much the same veins as when I was in the department. Being the renegade and interested in the faunistic ecology of insects I gradually drifted away into ecology, wildlife management, and have spent most of my professional career in Asia working on avian ecology and its relationship to zoonoses epizoology. I still have a hand in entomology since much of our work relates to ectoparasites of birds.

It is fun to look back over the years and see what has developed. In my day as an undergraduate the students included Bob Traub, Carl Mohr, Harry Hoogstraal, B.D. Burks, Eugene Ray, Arni Arnason, Elizabeth Arnason, George Bijani, Bill MacCauley, John DeCoursey, John Karlovich, Garland Riegel, and a few others. Kearns was an assistant, Herb Ross was working on his Ph.D. and Bob Metcalf and his brother were nuisance little kids we used to see when his father had the students and faculty out for supper or a picnic.

I worked as a student assistant for W.P. Flint out in the little Entomology Annex which was still there when I visited the campus in 1962. I was a lucky one for I got paid $125 a month during the summer vacation. I had my Ph.D. and was 33 before I made more than this, $170 a month in Nebraska in 1943. But this was the depression and only us old folks (the ones beyond the generation gap) remember it. Hamburger 5¢ a pound, Milk 5¢ a quart, Bread 5¢ a loaf, a T-bone steak dinner at Walgreen's Drug Store every Wednesday for 35¢. A $5 meal ticket at the restaurants around the campus lasted all week. I skipped breakfast and lived on 70¢ a day, 35¢ each for lunch and supper. In summer and fall I worked in Took's Orchard out behind the Vet. building (on codling moth studies) and filled in with apples the hollows left on a 70¢ diet.

Our teachers were wonderful and the coterie between prof. and student was more family than faculty: Metcalf, Balduf, Hayes, Milum. Horsfall didn't come in until later and I can remember him bawling me out for spelling his name Horsefall and pronouncing it that way.

It's been a wonderful life for all of us and I can wish no better for the graduates and undergraduates than that they enjoy, participate in, and retain the enthusiasms of being involved both professionally and non-professionally with nature.

C.C. Roan

My current research is on the effects of pesticides on human health. As an experimental animal, man offers several advantages over insects—generally more cooperative and almost as abundant.

Milton E. Tinker

I am in charge of the Jamaica Insecticide Testing Unit and am testing new insecticides for Aedes aegypti eradication and new improvements in technique.

Additions to the family: Edita - 9 August 1965; Laurie - 6 November 1968.

As the Newsletter goes to press we have just learned that H.B. Mills passed away April 5, 1971.

NEWSLETTER MAILING LIST - 1971

Mohammed Abdullah
8 Abinger Road
Cheswick, London, W.4
ENGLAND

Aly Aboualy
Department of Entomology
Ein Shans University
Abbassia, Cairo
U.A.R.

Robert T. Allen
Department of Entomology
University of Arkansas
Fayetteville, Arkansas 72701

Robert W. Alrutz, Director
Institute in Ecological Research
Denison University
Granville, Ohio 43023

Harry E. Anderson
[Deceased 5-21-70]

John F. Anderson
Connecticut Agriculture Experiment Station
123 Huntington - Box 1106
New Haven, Connecticut 06504

James W. Apple
Department of Entomology
University of Wisconsin
Madison, Wisconsin 53706

Elizabeth Heiss Arnason
Biology Department
Carlton University
Ottawa, Ontario
CANADA

Edward L. Atkins, Jr.
Department of Entomology
Citrus Experiment Station
Riverside, California 92502

Amal C. Banerjee
State Natural History Survey
74 Natural Resources Building
University of Illinois
Urbana, Illinois 61801
PRESENTLY at 34A Taltolla Ln.
Calcutta, INDIA

Roy Barker
Bee Research Lab
2000 East Allen Road
Tucson, Arizona 85719

Edward C. Becker
Entomology Research Institute
K.W. Neatby Building
Ottawa, Ontario
CANADA

Ross T. Bell
Department of Zoology
University of Vermont
Burlington, Vermont 05401

Gordon L. Bender
Department of Biological Sciences
Arizona State University
Tempe, Arizona 85281

Robert L. Benson
Department of Entomology
Washington State University
Pullman, Washington 99163

Curtis Benton
201 Fulwood Blvd, Box 1096
Tifton, Georgia 31794

Bernard Berger
Able Pest Control Co.
406 W. McCreight Avenue
Springfield, Ohio 45504

Angel Berrios-Ortiz
Biology Department
College of Agriculture and Mechanical Arts
Mayaguez, Puerto Rico 00709
PRESENTLY at U of Illinois

Rama K. Bharadwaj
IARI (Pusa Institute)
New Delhi - 12
INDIA

John H. Bigger
1018 W. John Street
Champaign, Illinois 61820

Clarence W. Bills
419 Walnut
Elmhurst, Illinois 60126

Wilbur K. Bingman
R.R. #2
Montgomery City, Missouri 63361

George H. Blake, Jr.
Department of Zoology - Entomology
Auburn University
Auburn, Alabama 36830

Lusettie Blevins
Atwater, Illinois 62511

Murray S. Blum
Department of Entomology
University of Georgia
Athens, Georgia 30601

Milton T. Bodman
1931 St. Clair
St. Louis, Missouri 63100

U. Eugene Brady
Department of Entomology
Bio. Sci. Building
University of Georgia
Athens, Georgia 30601

Lt. E.M. Bravi, MSC
[Address Unknown]

Victor Brookes
School of Science
Science Research Institute
Oregon State University
Corvallis, Oregon 97331

Brian E. Brown
Pesticide Research Institute
University Sub-Post Office
London, Ontario
CANADA

Willis N. Bruce
Natural History Survey
167 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Reinhart A. Brust
Department of Entomology
University of Manitoba
Winnipeg, Manitoba
CANADA

Barnard D. Burks
Division of Insects
U.S. National Museum
Washington, D.C. 20560

James E. Bussart
[Deceased 10-65]

John M. Campbell
Entomology Research Institute
Central Experiment Farm
Ottawa, Ontario
CANADA

William R. Campbell
Department of Entomology
Purdue University
Lafayette, Indiana 47901

Wayne P. Carlisle
Madison Senior High School
6th and Farrish Streets
Madison, Illinois 62060

Angelo Casaburri
C/o Peace Corps Director
American Embassy
Mbabane, Swaziland

Satish R. Chandran
Department of Biological Sciences
University of Illinois
Chicago Circle
Chicago, Illinois 60600

Franklin Chang
Department of Entomology
College of Tropical Agriculture
University of Hawaii
Honolulu, Hawaii 96822

Peh-I Chang
[Address Unknown]

Hung Fu Chu
[Address Unknown]

Mrs. Hung Fu Chu (Yu-Su Liu)
[Address Unknown]

Robert W. Ciegern
Department of Entomology
University of Illinois
Urbana, Illinois 61801

Charles C. Compton
Parktown House Apts. A-2
11 Raritan Avenue
Highland Park, New Jersey 08904

Murray I. Cooper
2641 Mt. Carmel Avenue
Glenside, Pennsylvania 19038

Glenna Joan Corley
77th and Park Avenue
Lenox Hill Hosp.
New York, New York 10021

John J. Corrigan
Assoc. Dean of Arts & Sciences
Indiana State University
Terre Haute, Indiana 47809

Max D. Couch
209 Coleus Drive
Orlando, Florida 32807

George B. Craig, Jr.
Department of Biology
University of Notre Dame
Notre Dame, Indiana 46556

Sister Mary Bertha Cregan
St. Xavier College
103rd and Central Park Avenue
Chicago, Illinois 60643

Hugh Cunningham
Department of Zoology and Entomology
Auburn University
Auburn, Alabama 36830

Eddie W. Cupp
Gulf South Research
Box 26500
New Orleans, Louisiana 70126

William B. Cutts
315 Olney Street
Providence, Rhode Island 02906

Paul A. Dahm
Department of Zoology and Entomology
Iowa State University
Insectory Building
Ames, Iowa 50010

Theodore Dashman
163 Pinewood Place
Teanick, New Jersey 07666

Leroy F. Davison
[Address Unknown]

Capt. John D. DeCoursey
6100 Greentree Road
Bethesda, Maryland 20034

Russell M. DeCoursey
Department of Zoology
University of Connecticut
Storrs, Connecticut 06268

William K. Delaplane
155 Delhi, Apt. D
Columbus, Ohio 43202

Manfred D. Englemann
121 Natural Science Building
Michigan State University
East Lansing, Michigan 48823

John H. Evans
327 S. Parker
Janesville, Wisconsin 53545

Richard William Fay
101 Virginia Avenue
Savannah, Georgia 31404

William C. Ferguson
68 Windermere Road
Lockport, New York 14904

Henry E. Fernando
Division of Entomology
Department of Agriculture
Peradeniva
CEYLON

Roger Flattum
Shell Development Co.
Modesto, California 95350

Willard Fogal
Forest Insect Laboratory
Department of Forestry and
Rural Development
P.O. Box 490
Sault Ste. Marie, Ontario
CANADA

LTC Harland W. Fowler, Jr.
12637 Billington Road
Silver Spring, Maryland 20904

P. Michael Fox
2041 Olive Street
Eugene, Oregon 97405

Josephine B. Glasgow
137 Fairlawn Avenue
Albany, New York 12203

Perry A. Glick
134 Highland Drive
Brownsville, Texas 78520

Henry E. Gray
2812 Scott Street
Midland, Michigan 48640

Alfred G. Grosche
306 North Jackson
Waukegan, Illinois 60085

Robert E. Grossman
902 Hanlin Court
Normal, Illinois 61761

Frank E. Guthrie
Department of Entomology
North Carolina State
Raleigh, North Carolina 27607

George W. Hahn
Department of Biol. Sciences
Newton Junior College
Newtonville, Massachusetts 02160

Robert Hamman
Great Hill Road
Ridgefield, Connecticut 06877

Todd Harris
Department of Entomology
University of Georgia
Athens, Georgia 30601

Michael Diem
209-10 86th Drive
Queens Village, New York 11427

Tobias F. Dirks
Department of Entomology
University of Georgia
Athens, Georgia 30601

Carl K. Dorsey
2066 Agriculture Science Building
West Virginia University
Evandale Campus
Morgantown, West Virginia 26505

Richard J. Dysart
[Address Unknown]

Norman W. Earle
Cotton Insects Research Branch
4115 Gourrier Avenue
Baton Rouge, Louisiana 70808

John L. Eaton
Department of Entomology
Virginia Polytechnic Institute
Blacksburg, Virginia 24060

William G. Eden
Department of Entomology
McCarty Hall
University of Florida
Gainesville, Florida 32601

Gary E. Eertmoed
2655 Western Avenue
Park Forest, Illinois 60466

Abdel-Latif Amin El-Deeb
Faculty of Agriculture
University of Alexandria
Alexandria, Egypt
U.A.R.

Stanley Fracker
[Address Unknown]

John E. Fraley
[Address Unknown]

Justus C. Frankenfeld
133 E. Washington
Lake Bluff, Illinois 60044

Ellery W. French
Chairman, Department of Biology
Delaware Valley College
Doylestown, Pennsylvania 18901

Jay Howard Gage
[Address Unknown]

Rachel Galun
National Biology Laboratory
Ness-Ziona
ISRAEL

Norman Gannon
[Address Unknown]

Philip Garman
165 Thornton Street
Hamden, Connecticut 06517

Lucian P. Garrett, Jr.
5234 Wabada
St. Louis, Missouri 63113

Edwin G. Gemrich
The Upjohn Company
301 Henrietta Street
Kalamazoo, Michigan 49001

Robert L. Gerhart
26 Woody Creek
Conroe, Texas 77301

Robert F. Harwood
Department of Entomology
Washington State University
Pullman, Washington 99163

Frank F. Hasbrouck
Department of Zoology
Life Science Center
Arizona State University
Tempe, Arizona 85281

William Brown Hawkins
Florence State College
P.O. Box 597
Florence, Alabama 35630

Peter H. Hewitt
[Address Unknown]

David Hoffman
Biological Control of Insects Lab
P.O. Box A
Columbia, Missouri 65201

Gladys Hoke
[Address Unknown]

Harry Hoogstraal
US Naval Mid. Res.
American Embassy
Cairo,
EGYPT EG 104

Catherine Hsaio
Department of Zoology
Utah State University
Logan, Utah 84321

Ting H. Hsiao
Department of Zoology
Utah State University
Logan, Utah 84321

George Earl Huff
P.O. Box 56
North Salem, Indiana 46165

Richard L. Hurley
Division of Biological Science
Humboldt State College
Arcata, California 95521

Chi-ling Hwang
National Central University
College of Agriculture
Nanking
CHINA

James Janicke
720 S. Oakley Blvd
Chicago, Illinois 60612

Louis A. Jansky
3305 S.W. 87th Avenue
Portland, Oregon 97200

Abdul H. Junaid
Amin Manzil
Nazimabad
Karachi
PAKISTAN Paidi

Lu-ping Kan
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Inder P. Kapoor
Department of Entomology
320 Morrill Hall
University of Illinois
Urbana, Illinois 61801

John P. Kramer
Department of Entomology
and Limnology
Comstock Hall
Cornell University
Ithaca, New York 14850

Sol Kramer
College of Medicine
University of Florida
Gainesville, Florida 32601

James L. Krysan
2132 Derdall Drive
Brookings, South Dakota 57006

Donald E. Kuhlman
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

David R. Lauck
Division of Biological Sciences
Humboldt State College
Arcata, California 95521

Charles D. LeSar
1014 Marshall
Morton, Illinois 61550

Robert E. Lewis
Department of Zoology and Entomology
Iowa State University
Ames, Iowa 50010

Peter Tsing-Han Li
Animal Husbandry Department
Kiangsu Provincial College
Wusih, Kiangsu
CHINA

Patrick T.M. Lum
USDA, ARS
Stored Products Insect Lab
3401 Edwin Avenue
Savannah, Georgia 31405

Bruce C. MacDonald
Central Chemical Corp.
49 N. Jonathan Street
Hagerstown, Maryland 21740

Joseph V. Maddox
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Ronald B. Madge
1637 16th Street E.
Calgary, Alberta
CANADA

Richard Malcomson
[Address Unknown]

Ralph B. March
Department of Entomology
University of California
Riverside, California 92502

Rene Paul Martineau
[Address Unknown]

Juan Mathieu
Instituto Tecnologico de Monterrey
Escuela de Agricultura
Departamento de Parasitologia y
Botanica
Sucursal de Correos "J"
Monterrey, Nuevo Leon
MEXICO

Clyde W. Kearns
SABBATICAL LEAVE
Shell Research Lab
Sittingbourne, Kent
ENGLAND

John C. Keller
321 E. Manhattan
Tempe, Arizona 85281

Keith Keyt
1100 Forage Road
Fort Sam Houston, Texas 78234

Edwin W. King, Jr.
Department of Entomology - Zoology
Clemson College
Clemson, South Carolina 29631

George E. King
[Address Unknown]

John M. Kingsolver
Systematic Entomology Lab, USDA
C/o U.S. National Museum
Washington, D.C. 20560

Kenneth L. Knight
Department of Entomology
North Carolina State University
Raleigh, North Carolina 27607

Costas Kouskolekas
Department of Zoology
Auburn University
Auburn, Alabama 36830

James P. Kramer
Division of Insects
U.S. National Museum
Washington, D.C. 20025

Siegfried E. Lienk
Department of Entomology
New York Agricultural
Experiment Station
Geneva, New York 14456

Herbert Lipke
Department of Biology
University of Massachusetts
100 Arlington Street
Boston, Massachusetts 02116

Paul C. Lippold
C/o Ford Foundation
P.O. Box 98
Ramma Dacca-2
EAST PAKISTAN

James B. Lovell
347-B
R.R. 1
Woosamonsa Road
Pennington, New Jersey 08534

John Lowe
IRRI, Manila Hotel
Manila
PHILIPPINES

William H. Luckmann
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

George F. Ludvik
Monsanto Chemical Co.
800 N. Lindbergh Blvd
St. Louis, Missouri 63166

John W. Matteson
2501 Hudson
3M Company
St. Paul, Minnesota 55100

James McAlpine
Taxonomy Section
Canada Department of Agriculture
Research Branch
Entomology Research Institute
Central Experimental Farm
Ottawa, Ontario
CANADA

William E. McCauley
[Address Unknown]

Howe E. McClure, Director
Migratory Animals
Pathology Survey
APO, San Francisco 96346

Ivan N. McDaniel
Agricultural Experiment Station
303 Deering Hall
University of Maine
Orono, Maine 04473

John E. McFarlane
Faculty of Agriculture
MacDonald College
Montreal, Quebec
CANADA

Roy E. McLaughlin
USDA, ARS
Entomology Research Division
P.O. Box 5367
Highway 12
State College, Mississippi 39762

Robert L. Metcalf, Head
Department of Zoology
University of Illinois
Urbana, Illinois 61801

Ronald Meyer
Rural Route 1
Sidney, Illinois 61877

James L. Miller
Biology Department
Wichita State University
Wichita, Kansas 67208

Stanley S. Miyake
1040 Lunaai Street
Kailua Oahu, Hawaii 96734

Edward Mockford
Department of Biological Science
Illinois State University
Normal, Illinois 61761

Carl O. Mohr
1760 Claremont D6-3
Decatur, Georgia 30033

Adolfo Molina-Pardo
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Thomas E. Moore
Museum of Zoology
University of Michigan
Ann Arbor, Michigan 48104

Herbert H. Moorefield
Union Carbide Corp.
P.O. Box 2144
Salinas, California 93901

Carol Ann Morgan
[Address Unknown]

Arthur P. Morris
51934 Lily Road
South Bend, Indiana 46637

Maj. Moufied Moussa (MSC)
Chief, Entom. Branch
Department of Preventive Medicine
U.S. Army Medical Field Service
School
Fort Sam Houston, Texas 78234

William C. Moye
Shell Chemical Company
235 Peachtree Street N.E.
Atlanta, Georgia 30303

Claud V. Myers
Rural Route
Fithian, Illinois 61844

Jai Krishen Nayar
Department of Entomology
Entomological Research Center
P.O. Box 520
Vero Beach, Florida 32960

Franklin C. Nelson
38 Samara Drive
P.O. Box 37
Shrewsbury, New Jersey 07701

David Newton
Department of Biological Sciences
Central Connecticut State College
New Britain, Connecticut 06050

Guy J. Noerdinger
3835 Mumford
Palo Alto, California 94306

Willis J. Nolan
[Address Unknown]

Zenas Barnard Noon, Jr.
[Address Unknown]

Gerald Nordin
1601 N. Kiler
Champaign, Illinois 61820

J.K. Olson
Department of Entomology
College of Agriculture
Texas A & M University
College Station, Texas 77840

Herbert T. Osborn
P.O. Box 207
Nevada City, California 95959

John V. Osmun
Department of Entomology
Purdue University
Lafayette, Indiana 47907

Faustine Q. Otanes
2004 A Delas Alas
Santa Ana
Manila
PHILIPPINES

Francisco Pacheco
Centro de Investigacion
Agricola del Noroeste
Secretaria de Agricultura
y Ganaderia
Apdo. Postal 515
Ciudad, Obregon
Sonora
MEXICO

Boyd B. Palmer
[Address Unknown]

Gerard Paquet, Director
Bureau of Entomology
Department of Lands and Forests
Parliament Building
Quebec City, Quebec
CANADA

Thaddeus H. Parks
1501 Doone Road
Columbus, Ohio 43221

Steve Parshall
228 Myrtle Street
Winnetka, Illinois 60093

LTC William J. Patterson (MSC)
Chief, Department of Entomology
Third Army Medical Lab
Fort McPherson, Georgia 30330

Robert D. Pausch
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Norman Penny
Department of Entomology
University of Kansas
Lawrence, Kansas 66044

Alvah Peterson
Botany and Zoology Building
Ohio State University
Columbus, Ohio 43210

Lance Peterson
Eli Lilly and Company
Greenfield, Indiana 46140

Howard B. Petty
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Jean Paul Picard
[Address Unknown]

Henry Pierce
Shell Chemical Co.
6901 W. 63rd Street
Overland Park, Kansas 66202

John D. Pinto
Department of Entomology
University of California
Riverside, California 92502

John E. Porter
PHS Quarantine Station
Miami International Airport
P.O. Box 2335
Miami, Florida 33159

Dwight Powell
Department of Plant Pathology
Horticulture Field Laboratory
University of Illinois
Urbana, Illinois 61801

Glenn E. Printy
Department of Entomology
University of California
Riverside, California 92502

Edmund C. Puddicombe
1719 W. Acre
Joliet, Illinois 60435

Robert Randall
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Roscoe Randell
State Natural History Survey
163 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

A. Mohan Rao
P.O. Box 108
Kathmanda
NEPAL

Janet Cooper Rapp
430 Ivy Avenue
Crete, Nebraska 68333

William F. Rapp
430 Ivy Avenue
Crete, Nebraska 68333

Arnold C. Rasso
17 Southern Blvd
East Patchoque
Long Island, New York 11100

Eugene Ray
8808 Osceola
Morton Grove, Illinois 60053

Robert C. Rendtorff
62 S. Dunlap Street
Memphis, Tennessee 38100

Judith Reynolds
118 Homer Street
Earlwood
Sydney NSW 2296
AUSTRALIA

William R. Richards
Taxonomy Section
Research Branch
Entomology Research Institute
Ottawa, Ontario
CANADA

Garland T. Riegel
Department of Zoology
Eastern Illinois University
Charleston, Illinois 61920

Paul W. Riegert
Department of Biology
University of Saskatchewan
Regina, Saskatchewan
CANADA

Lewis B. Ripley
Cedara School of Agriculture
Pictermaritzburg
Natal,
SOUTH AFRICA

Arthur E. Ritcher
821 16th Street
Peru, Illinois 61354

Paul O. Ritcher
Department of Entomology
Oregon State University
Corvallis, Oregon 97331

Mary Rivers
[Address Unknown]

Clifford C. Roan
223 Rojen Court
Tucson, Arizona 85721

Selwyn S. Roback
Academy of Natural Science
19th and Parkway
Philadelphia, Pennsylvania 19103

Reginald Roberts
Division of Entomology
CSIRO
C/o Pastoral Research Lab
Armidale 5N

NSW, AUSTRALIA

Maria C. Ronquillo
Department of Zoology
University of Illinois
Urbana, Illinois 61801

Herbert H. Ross
Department of Entomology
University of Georgia
Athens, Georgia 30601

George Rotramel
Department of Entomology
University of California
Berkeley, California 94720

Albert Salako
[Address Unknown]

Murl B. Salisbury
[Address Unknown]

Isabel L. Sanabria [Mrs. de Arevalo]
Centro Nacional de Investigaciones
Agropecuarias "Tibaitata"
Instituto Columbiano Agropecuario
Apartado Postal No. 3493
Bogata, D.E., Colombia
SOUTH AMERICA

James W. Sanford
U.S. Entomology Research Branch
Sugarcane Field Station
P.O. Box 387
Houma, Louisiana 70360

Sono Sastrodihardjo
Department Kimia-Biologi
Institut Teknologi Bandung
Ganeca 10 Bandung, Java
INDONESIA

Aubrey Scarbrough
Biology Department
Towson State College
Towson, Maryland 21204

John W. Schaffnit
415 Kipling Street
Wheaton, Illinois 60187

Robert H. Schiffman
1412 Bradford Drive
Columbia, Missouri 65201

Herbert F. Schoof
Technical Development Lab
Communicable Disease Center (USPH)
P.O. Box 769
Savannah, Georgia 31406

George K. Schumaker
279 Bay Avenue
Glen Ridge, New Jersey 07028

Herbert F. Seiffert
1506 East Roosevelt Road
Wheaton, Illinois 60187

Richard B. Selander
Department of Entomology
University of Illinois
Urbana, Illinois 61801

Isaac (Morris) Seligman
CSIRO Division of Entomology
Canberra ACT
AUSTRALIA

Abdel Shalaby
Entomology Department
Faculty of Science
University of Alexandria
Alexandria, Egypt
U.A.R.

Daniel L. Shankland
Department of Entomology
Purdue University
Lafayette, Indiana 47907

Zile Singh
Research Entomologist
J. Nehru Agricultural University
Jabalpur-4, M.P. INDIA
PRESENTLY at U of Illinois

Ruth Evelyn Slabaugh
[Mrs. Philip C. Stone]
2706 Oakland Road
Columbia, Missouri 65201

James A. Slater
Department of Zoology and Entomology
Univeristy of Connecticut
Storrs, Connecticut 06268

Edgar Henry Smith
12 Renwich
London, Ontario
CANADA

Marion Estelle Smith
Department of Entomology
University of Massachusetts
Amherst, Massachusetts 01002

Marion Russell Smith
[Address Unknown]

Robert Snetsinger
Department of Entomology
Armsby Building
Pennsylvania State University
University Park, Pennsylvania 16802

Lee A. Somers
[Deceased-8-63]

Kathryn M. Sommerman
U.S. Public Health Service
Arctic Health Research Lab
College, Alaska 99701

Calvin Soo Hoo
USDA, ARS
Entomology Research Division
Insects Investigation
P.O. Box 858
Mesa, Arizona 85201

George J. Spencer
[Deceased 11-23-70]

Earl A. Stadelbacher
USDA, ARS
Entomology Research Division
Cotton Insects Research Branch
Delta Branch Experiment Branch
Stoneville, Mississippi 38776

Lewis J. Stannard, Jr.
State Natural History Survey
287 Natural Resources Building
University of Illinois
Urbana, Illinois 61801

Shirley S. Statler
Box 82
West Chester, Iowa 52359

James G. Sternburg
Department of Entomology
University of Illinois
Urbana, Illinois 61801

Philip C. Stone
[Deceased 11-7-68]

Richard H. Storch
Department of Entomology
University of Maine
Orono, Maine 04473

Elmer D. Sweeney
[Address Unknown]

Capt. Martin L. Taylor
Entomology Section
10th Medical Lab
APO New York 09180

Milton Tinker
Box 37
Jones Town P.O.
Kingston 12, Jamaica,
BRITISH WEST INDIES

Lee Hill Townsend
Entomology Department
Kentucky Agricultural
Experiment Station
Lexington, Kentucky 40506

Robert Traub
Department of Microbiology
University of Maryland
School of Medicine
660 W. Redwood Street
Baltimore, Maryland 21201

Ying-Hsuan Hsuwen Tsou
5 Chi Ysi Street
Soochew, Kang Su
CHINA

Donald M. Tuttle
University of Arizona
Experimental Station
Rt. 1, Box 587
Yuma, Arizona 85364

Glenn A. Ulrich
[Address Unknown]

John D. Unzicker
Faunistic Survey Section
State Natural History Survey
University of Illinois
Urbana, Illinois 61801

Massoud Varzandeh
[Address Unknown]

Eddie B. Vinson
1406 Clarmont
Birmingham, Alabama 35209

F. Ray Voorhees
Department of Biology
Knox College
Galesburg, Illinois 61401

Shyam Wadhwani
Imperial Chemical Industries, Ltd.
P.O. Box 310
Bombay
INDIA

Gilbert P. Waldbauer
Department of Entomology
University of Illinois
Urbana, Illinois 61801

Hubert J. Walters
Plant Pathology Department
University of Arkansas
Fayetteville, Arkansas 72701

Margaret Washington
[Deceased]

Victor T. Williams
20030 Camha
Compton, California 90220

Warren Williamson
[Deceased 6-66]

Gary R. Wilson
18415 Fielding
Detroit, Michigan 48219

George R. Wilson
1205 Lynview
Urbana, Illinois 61801

Margaret Windsor
Catalog Division
Stanford University Libraries
Stanford, California 94300

Janina Wojciechowska
[Mrs. Janina Morgalla]
108 South 5th Street
Champaign, Illinois 61820

Horne Wong
Forest Entomology Laboratory
5320-122 Street
Edmonton 70, Alberta
CANADA

Fo-ching Woo
Peyeechow, Pennu
Kiangsu
CHINA

Robert T. Yamamoto
Department of Entomology
North Carolina State University
Raleigh, North Carolina 27607

Richard C. Weddle
Stoker Co.
P.O. Box 1179
El Central, California 92243

Miriam U. Welles
[Mrs. G.I. Reeves]
1466 Edison Street
Salt Lake City, Utah 84115

Perry Homer Welley
[Address Unknown]

Clifford Wester
911 N. Ninth Street
Stroudsburg, Pennsylvania 18360

Robert F. Whitcomb
ERD, USDA Plant Industry Station
201 West Building
Beltsville, Maryland 20705

Carlos A. White
1130 State Avenue
Shafter, California 93263

Nallini D. Wickramasinghe
Division of Entomology
Department of Agriculture
Paradeniya
CEYLON

Roger W. Williams
School of Public Health
and Administrative Medicine
Columbia University
630 W. 168th Street
New York, New York 10032

Richard J. Yero
Libby, McNeill and Libby
200 S. Michigan Avenue
Chicago, Illinois 60604

Ching-chieh Yu
Department of Entomology
University of Illinois
Urbana, Illinois 61801

Hachiro Yuasa
International Christian University
Tokyo
JAPAN

NEWSLETTER INFORMATION FOR 1971

Name:

Home Address:

Business Address:

Current Research and Recent Publications:

Recent Travels for Business or Pleasure:

Additions to the family (names, dates):

Suggestions or comments concerning the "Newsletter":

Return to: Newsletter Committee
Department of Entomology
320 Morrill Hall
University of Illinois
Urbana, Illinois 61801