



2007

Annual Report



THE ENTOMOLOGICAL FOUNDATION



Stimulate, Sustain, Support

Build a Future for Entomology

by Educating Young People

About Science Through Insects

Exciting & Educating Young People

About Science Through Insects

THE ENTOMOLOGICAL FOUNDATION

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www.entfdn.org

*Photos by David Jordan
and Big Stock Photo.*



Dear Funding and Program Partners:

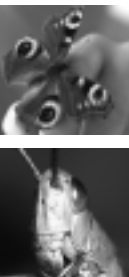
Two thousand seven has been an exciting year for the Entomological Foundation as it continues to expand its efforts to excite and educate young people about science through insects by creating an environment in which young people are exposed early to the natural and biological sciences. We have done this by joining with funding partners to enhance on-going and develop new programs designed to stimulate and sustain interest in insects and insect science, support science education, and recognize and reward excellence in insect science and science education. To ensure that the instructional materials that we provide at no charge to educators are meeting their needs, the Foundation completed a survey of more than 2,000 K-12 science educators in the USA to learn how we can most effectively help them integrate the use of insect-related materials in their science lessons. The results of this survey, which was funded by BASF Corporation, Dow Chemical Company Foundation, DuPont Crop Protection, and Monsanto Company, will guide the development of the Foundation's educational materials and programs.

Generous support provided by the Entomological Society of America allowed the Foundation to expand its Educational Mini-grants Program and award five competitive grants to support the development and implementation of high quality, entomologically focused, educational outreach programs. Support from the Bayer USA Foundation enabled us to greatly expand our program to promote science literacy through insects by providing instructional materials to educators free of charge. During 2007, this program reached over 29,000 young people. Also in 2007, the Foundation began the development of an interactive, educational web site designed to teach and excite young people about insects and science. Development of this web site, which will go on-line in late 2008, is being sponsored by BASF Corporation, Central Life Sciences, Dow Chemical Company Foundation, DuPont Crop Protection, and Monsanto Company. These programs represent just a portion of the Foundation's programs and activities during 2007. More detailed information about the Foundation's programs is presented in the pages that follow.

As a non-profit, educational organization, the Foundation is completely dependent on the generous support of our donors, funding partners, and volunteers to fund its programs. I want to thank the many individuals, businesses, and organizations whose support has enabled the Foundation to implement programs that excite and educate young people about science through insects and help foster the next generation of entomologists.

George G. Kennedy, Ph.D.
President and Chair, Board of Directors

Stimulate & Sustain Interest in Science Through Insects



The Entomological Foundation develops and implements a blend of programs designed to spark interest in science and insects among elementary school children and to sustain that interest through educational programs and outreach activities targeting the K-12 age group. The Foundation also supports science education by providing entomologically related instructional materials and scholarships, and recognizing and rewarding excellence in insect science and education.

Educational Mini-Grants

(Funded by the Entomological Society of America)


Grants are awarded up to \$2,100 for small curriculum development efforts or professional development workshops emphasizing practical and innovative uses of Arthropods in K-12 formal and informal educational settings. The following grants were awarded in 2007 for 2008 implementation:

Elementary Insects

Kimberly Schofield, IPM Program Specialist, Dallas Research and Extension Center, Texas A&M University System, received a mini-grant to expand and distribute curricula within the Dallas area concerning mosquitoes, fleas, spiders, and other insects in the landscape. The curriculum consists of student booklets targeted to grades second through fourth along with exercises to help teach integrated pest management. The booklets will be distributed to schools and learning centers in the Dallas area. As of March 2008, 130 educators participated in the program during its first year. Approximately 3,529 children have been reached as a result of the training during the program's first year. Educators involved in the program will also receive instruction on presenting each lesson within the booklet. In addition, each educator will receive extra materials such as markers, stickers, and puzzles that will help to motivate their students as they complete each lesson within the booklet. Learn more:
<http://elementaryinsects.tamu.edu>

Inquiring with Insects: A Collection of Lessons from Pre-service Teachers

Holly Travis, Indiana University of Pennsylvania, Department of Biology, received a mini-grant to develop a collection of inquiry-based entomology lesson plans, which will be created by pre-service elementary teachers. Holly's goal is to develop a collection of at least 25 lesson plans that focus on insects and meet science, mathematics, and language standards. These lessons will provide a quality resource that incorporates inquiry and higher-order thinking while exposing elementary students to a variety of insects. The final lessons will be distributed to the pre-service elementary teachers who wrote the lessons so they can



incorporate the lessons in their own classrooms and to area school districts for use by elementary teachers in the area. The lessons will also be posted on the university website so they can be accessed by all teachers. During the first year of the program, it is anticipated that 500 students will be involved in the pilot test during the fall of 2008. During the following year, it is estimated that between 1,500-2,000 children will be involved in the program with an estimated 10% increase per year.

Insects in the Classroom: Entomology Teacher Training

Molly Keck, IPM Program Specialist, Texas AgriLife Extension, will use her mini-grant to implement a summer entomology teacher training program. The program will provide teachers with information on how to incorporate insects into their lesson plans, as well as provide information about experiments and hands-on activities, curriculum, and other materials and resources for use in educating children about science through insects. The training will be open to all elementary teachers, but geared for second through fourth grade. The training program will be held during the summer of 2008. The estimated number of children reached during the first year of the training program is 1,125 during the 2008-2009 school year. Teachers will be asked to conduct a training program in their school with an anticipated increase to 25% usage during the 2009-2010 school year. Learn more: <http://elementaryinsects.tamu.edu>

International Bug Club

The Woodland Park Zoo received a mini-grant to implement a teacher workshop for teachers from eight elementary schools in Washington State on the International Bug Club curriculum. The curriculum explores insect themes through hands-on science activities, arts and crafts, outside exploration, discovery, and play. The workshop will provide new International Bug Club educators with the skills and resources needed to establish and instruct a Bug Club at their school. Workshop participants will receive Bug Club kits and curricula. Bug Club leaders will become part of the International Bug Club network, which includes U.S zoos, schools in Washington State and in Papua New Guinea. The Bug Club format is based on multidisciplinary exploration of insect biology and ecology. The project has the potential to reach 1,120 elementary students. Approximately 80,000 students and educators participate in educational programs and activities at the Woodland Park Zoo, many of which will be targeted for Club participation. Learn more: <http://www.zoo.org>

Outdoor Classroom and Community Garden

Marianne Robinette of the Department of Entomology, University of Georgia, received a mini-grant to create an Outdoor Classroom at the Classic City High School Performance Learning Center (PLC). The Outdoor Classroom will provide an area for teaching and learning in any academic subject. Students will collaboratively design and implement an outdoor classroom including installing an aquatic garden, insect gardens, teaching areas, and art gardens. For

example, an insect garden will be created for collecting and observing insects while engaging students in community outreach programs; and an organic garden will provide science instruction while promoting sustainable food products and the study of nutrition. PLC is a non-traditional, voluntary high school, created in 2003 to stem the flow of students dropping out of the Clarke County School System and to recover those who have already dropped out. PLC is a partnership between the Clarke County School District, Communities in Schools, and the Bill and Melinda Gates Foundation.

Educator Survey Reveals Interest in Teaching Entomology

(Funded by BASF Corporation, Dow Chemical Company Foundation, DuPont Crop Protection, and Monsanto Company)

During 2007, the Entomological Foundation implemented a survey of K-12 science educators to identify their needs and wants relating to teaching science through insects. The survey was designed specifically to determine if educators would want and use an insect science education kit and what such a kit should contain to best meet the educators' teaching needs. All of the 2,134 respondents reported an interest in receiving a kit to teach entomology. The survey also revealed that inadequate funding is a barrier to teaching about science through insects. Consistent with this constraint; over 900 educators responding to the survey requested free educational materials from the Foundation to use in teaching entomology.

The majority of the educators who participated in the survey taught grades K-5 in a formal educational setting. The educators indicated a need for materials that teach life cycles, interrelationships of living things, food chains and food webs, and the relationships between organisms and the environment. The survey results will be used by the Foundation to guide the development of future educational programs and materials, including an insect science education kit, so that we can better meet the needs and wants of educators. Learn more about the survey results at <http://www.entfdn.org>

Supporting Entomology Education through On-line Resources

North Carolina State University, Clemson University, Iowa State University, and the Entomological Foundation continue to work together to provide educators and undergraduate and graduate science and non-science students with one-stop, electronic access to quality entomology educational materials through the EntDigital Library. The team's goal is to offer educators and students access to 200 quality entomology educational materials through the library. The EntDigital team would like to thank all of those who nominated materials for the library



during 2007. To learn more, see <http://www.entlibrary.org>. The EntDigital Library is a component of the Biological Sciences Education Network Collaborative Biological Digital Library. Funding is provided by the American Association for the Advancement of Science.



Interactive Web Site Excites Young People about Entomology

(Funded by BASF Corporation, Central Life Sciences, Dow Chemical Company Foundation, DuPont Crop Protection, and Monsanto Company)

The Entomological Foundation created its first interactive, youth web site for children and educators in 2007. Intended as a self-guided educational site for children, the site contains learning activities that are based on the Foundation's educator survey. These activities are designed to help children in grades 3 and 4 understand primary areas of entomology relating to the characteristics of organisms, life cycles, and the relationship of organisms to their environment. The site consists of three main sections, which correspond to the knowledge level of the user. Each section contains a set of activities and objectives with an assessment (in game format) of what the user learned from the activities. The site also contains a section for educators, which lists the names of the activities, their objectives, and the national science standard and entomology benchmark addressed by that activity. Future funding will be sought to include activities for all elementary grades. Check out the interactive web site at <http://www.entfdn.org>

Educating Cubs through Bugs

More than 1,000 Cub Scouts participated in the Greater Washington, D.C. area Cub Scout Jamboree held at Camp William B. Snyder in Haymarket, Virginia. One of the day's events, *Cubs and Bugs Galore*, offered Cub Scouts, ages 7-10, and their leaders the opportunity to discover the exciting world of insects. With the help of the Entomological Foundation's Counselors Dennis Kopp, USDA CSREES, and Rick Meyer, USDA CSREES, PAS, Cub Scouts learned about insects, received fun, educational materials to take home, and much more. This experience was intended to peak the interest of Cub Scouts in their insect collecting projects and to stimulate interest in science.

Promoting Science Literacy through Insects

(Sponsored by Bayer USA Foundation)

The Entomological Foundation's outreach program is designed to encourage teaching of science through insects by providing educational materials to interested educators free of charge. During 2007, the Bayer USA Foundation

provided funding for this program, which enabled the Foundation to increase the number of children reached through this program by 2800%. In total, more than 29,000 young people throughout North America and overseas were impacted by the program during 2007. Approximately 96% of these children were located in the U.S. and 94% were in grades K-5. Forty-five percent of the requests for educational materials came from teachers working in a formal learning environment, while 37% were from educators working in informal learning environments such as 4-H clubs, science/environmental centers, and county libraries. Eighteen percent of the requests were from homeschools. Educators requesting materials learned about the program in numerous ways, including education associations and professional society publications, colleagues and friends, "surfing the web," in-service training, educator list-serves, and a variety of other communication channels. The following are examples of the many comments received by the Foundation from educators who received these materials:

I am done teaching my Insect Week to my first graders and it was awesome! I have to send a huge thank-you for the great lesson book and all of the other items that you sent. It made the week of teaching science a huge and smashing success! – First Grade Teacher, AK

I just wanted to reply and say thank you for the free information that was sent by the Entomological Foundation. We are a home schooling family and I have a 6 year old daughter who is in love with bugs. She was so thrilled to receive the information in the mail and loves it even more now that we have started reading and learning. Thank you so much for supporting educators in the field of Entomology. – Home-school family in Maryland

Thank you so much for the wonderful book, The Insect Appreciation Digest. It is so clever and interesting. Also, thank you for the great Praying Mantis bookmarks. I have already given some away as prizes. As a teacher, I appreciate everything that can help my students. The fact that it doesn't have to come out of my pocket is so nice! Thanks again. – Elementary Science Teacher, TX





Support Education in Insect Science

The Entomological Foundation recognizes excellence and supports continued education of students in entomology and related disciplines.

Stan Beck Fellowship

Wilma V. Aponte-Cordero is a Ph.D. candidate in the Department of Entomology at Pennsylvania State University where she also received her M.S. in Entomology and is currently studying the effects of plant defense elicitors on pest populations and natural enemies in agricultural systems. She received her B.S. in Crop Protection from the University of Puerto Rico, Mayagüez Campus. Wilma is a Sloan Fellow and a recipient of the Asa Fitch Memorial Award and the Outstanding Graduate Student Award in the Commonwealth of Pennsylvania, in recognition of her accomplishments. During 2007, Wilma served on the ESA Program Committee and as the student liaison to ESA's Presidential Committee on Support of Students and Young Professionals, and is currently the Chair of the National Student Affairs Committee. Her volunteer activities include Habitat for Humanity and mission opportunities.

BioQuip Products Undergraduate Scholarship

Charles Mason is a student at Pennsylvania State University majoring in Agroecology with a focus on entomology and plant pathology. He entered the Schreyer Honor's College at Penn State last year. Charles plans to pursue a graduate degree in Insect Chemical Ecology. Currently, under the direction of Drs. Shelby Fleischer and James Frazier, Charles is conducting research to: 1) define community composition of sap beetles in Bt sweet corn, 2) isolate various fungi from sap beetles in an effort to discover the community composition of *Fusarium* spp., 3) learn more about feeding efficacy of the corn earworm on silk tissue of Bt sweet corn plants, and 4) determine the effectiveness of insecticide sprays in managing insect pests in Bt sweet corn. Per Charles:

It is truly an honor to have been chosen as a recipient for the BioQuip scholarship. This award has allowed me to continue focusing on research this fall and spring. I look forward to future pursuits in the field of entomology in graduate school.

Joseph H. Camin Fellowship

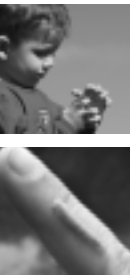
(Sponsored by the Acarological Society of America and the Entomological Foundation)

Rebecca Trout is a doctoral student at the University of Arkansas majoring in Medical and Veterinary Entomology. She received her M.S. in Entomology from the University of Kentucky and her B.A. in Biology/Communications from Transylvania University in Lexington, KY. Rebecca's Ph.D. dissertation titled *Ticks, their hosts, and their pathogens in Arkansas*, focuses on characterizing the prevalence and host interactions of ticks and bacterial pathogens that infest vertebrate hosts in Arkansas.

Pioneer Hi-Bred International Graduate Student Fellowship

(Sponsored by Pioneer Hi-Bred International, a DuPont Company)

Mary Margaret Gardiner's Pioneer Hi-Bred International Graduate Student Fellowship was renewed during 2007, the final year of her award. She is a Ph.D. student in Entomology and a research assistant at Michigan State University. Her research focuses on the impact of landscape structure on biological control of soybean aphid. During 2007, Mary Margaret developed and presented an Extension program titled *Identifying natural enemies in the landscape*, during a Biological Control Workshop held at the Macomb County Extension Center in Michigan, and a program titled *Enhancing beneficial insects with native plants* during Ag Action Days in Michigan. She also served as a teaching assistant at Michigan State University, presenting course material in lecture and laboratory sessions. During 2007, Mary Margaret received the International Organization for Biological Control Outstanding Ph.D. Student Award and the Michigan State University Dr. Gordon Guyer Award for Excellence in Extension Entomology.





Recognize Excellence & Achievement in Education and Insect Science

Award for Excellence in Integrated Pest Management

(Sponsored by Syngenta Corporation)

Marvin Harris is a Professor of Entomology at Texas A&M University. His solutions to pecan insects have addressed economic and environmental concerns by successfully avoiding excessive insecticide use and avoiding the development of pest resistance. Advances in management of the regional pecan nut casebearer, blackmargined aphid and pecan weevil, along with the chemical control of pecan diseases and orchard floor management, are the major factors leading to significant increases in pecan production in the last three decades. His IPM program on pecans has resulted in a 30% reduction in fungicide use and a 35% reduction in insecticide use since 1980 while increasing the yield of native and improved pecan varieties by more than 300 and 600 pounds per acre, respectively. This program has provided overall benefit to pecan producers in Texas of over \$6 million per year. Per Marvin:

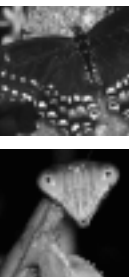
Science in general and Entomology in particular makes a difference in the world. The Entomological Foundation, by recognizing scientists for making a difference, provides a window into this important but little noticed world. I am honored that the Foundation, with Syngenta's support, found my work worthy of such recognition. The public also noticed, judging by positive feedback I have received, and this is especially gratifying to have played a small role in informing the public of the importance of our profession.

Entomological Society of America's President's Prizes for Outstanding Achievement in Primary & Secondary Education

(Sponsored by the Entomological Society of America)

Kathleen Weidenbach, Primary Education Award

Kate is a fifth grade teacher at Pratt Community School in Minneapolis, Minnesota. Her insect unit lasts the whole year and involves every learning discipline, including art, writing, and experimental design. The students raise monarch butterflies, rearing them from larva while collecting data, making observations on the lifecycle, and then learning to pin the adults. The students also choose an insect that they research using field guides. The students, build color models, make detailed drawings, and prepare written reports on their



insects. Kate arranges visits by University of Minnesota science specialists from the Bell Museum of Natural History to teach the students about careers in science, especially entomology. As an awardee, Kate received travel support to attend a peer professional meeting at which she made a presentation on her use of insects as teaching tools in the classroom. She also received funds for her school to purchase teaching materials to expand the use of insects in the curriculum. To learn more about her program go to: <http://www.entfdn.org/presidentsprizes.php> According to Kate:

As a recipient of the ESA teaching award, I want to first express my appreciation for the Society's recognition of elementary and secondary teachers across the nation. Those of us working with children do not often enough get included in the ranks of professionals outside of education. Attending the ESA meeting in San Diego was an honor and privilege for me which reinvigorated my teaching. Being acknowledged has validated my beliefs about science and children and the necessity for connecting them to the natural world. It is also important for classroom teachers to make connections with scientists and researchers. We are the bridge between our students and the real world of science. This award has furthered those connections for me, my students, and my school community.

Janice Hari, Secondary Education Award

Janice is an eighth grade science teacher and science coordinator at Urbana Middle School in Urbana, Illinois. Janice was part of a National Science Foundation program in which she was paired with Ph.D. candidate Matthew Richardson of University of Illinois. The goal was to improve science education in primary and secondary schools and for the Fellows to learn about teaching in the classroom. With Matthew's help, Janice developed her lesson plan using aphids titled: *Teaching Students how to Design an Experiment and Investigate Abiotic and Biotic Factors Affecting Arthropods*. This project provides students with a framework that allows them to design a research project and study modifications of plant-herbivore interactions. A report on the project *Teaching Students about Biodiversity by Studying the Correlation between Plants and Arthropods*, which includes the students' data, was accepted for publication by *The American Biology Teacher*. The activity units that Janice and Matthew will design during the Fall will be expanded to all eighth graders at Urbana Middle School and are expected to impact approximately 350 students. To learn more about the program, see <http://www.entfdn.org/presidentsprizes.php> Janice writes:

Winning the President's Prize for Outstanding Achievement in Secondary Education allowed me the absolute luxury of attending the ESA national meeting to accept the award. The presentations and interactions with the presenters gave me many new ideas for lessons using insects. I returned to my eighth graders renewed, refreshed, and inspired by the knowledge and enthusiasm of so many people who work with

insects. I am very grateful to ESA and Entomological Foundation for the funding that allowed me to attend the meeting; the funding to buy materials for the new insect units; and the funding to share my lessons at a National Science Teachers' meeting. As a teacher in an urban school, we have very few financial resources. The budget for my students for this year for all materials is less than 28 cents a month per student. The funds are greatly appreciated!

Larry Larson Graduate Student Award for Leadership in Applied Entomology

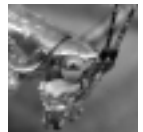
(Sponsored by Dow AgroSciences)

Anna Fiedler is currently studying for her Ph.D. in Entomology at Michigan State University. She received her B.A. in Biology from Lawrence University, Appleton, Wisconsin; and her M.S. in Entomology from Michigan State University. She has developed and implemented a research project using native prairie and savanna plants to increase biological control of arthropods in agricultural landscapes. The project has implications for enhancing the ecosystem services provided by agricultural landscapes, as well as enhancing ecological restoration. To support these studies, Anna co-authored three successful competitive grants. In all these projects, she has sought to link farmers, Extension agents, USDA NRCS conservationists, and native plant producers with researchers to investigate, demonstrate, and extend information about the effects of native plants on beneficial insects. Anna has presented her findings at several scientific meetings including the 2004 International Congress of Entomology in Australia and the 2004-2006 Entomological Society of America national meetings. Anna has also organized and led two award winning field days that were attended by more than 230 people.

Henry and Sylvia Richardson Research Grant

Ksenia Tcheslavskaja Onufrieva is a postdoctoral research associate at Virginia Polytechnic Institute and State University working in gypsy moth control using mating disruption. The gypsy moth feeds on the leaves of over 300 different species of trees in all climate zones in the U.S. It is considered to be a pest primarily of the eastern U.S. forest and shade trees, although it also poses a threat to a number of fruit and nut crops. The goal of Ksenia's proposed research is to study and implement a new method of pheromone application for gypsy moth mating disruption treatments. Ksenia received her Ph.D. in Entomology from Virginia Tech and her M.S. in Zoology from Lomonosov Moscow State University. Per Ksenia:

It has been an honor for me to receive the Henry and Sylvia Richardson Research Grant. This grant was not only a big financial help to our project, it was also a great encouragement for me personally, and I am extremely grateful to the sponsors for this boost of confidence.



International Congress on Insect Neurochemistry and Neurophysiology Student Recognition Award in Insect Physiology, Biochemistry, Toxicology, and Molecular Biology (ICINN) & Lillian and Alex Feir Graduate Student Travel Award

Joshua Benoit, a graduate student at the Department of Entomology, Ohio State University, received both the ICINN Award and the Lillian and Alex Feir Graduate Student Travel Award. Joshua is studying the water requirements of arthropod vectors, specifically mosquitoes, bed bugs, and the seabird tick. He recently described the basic water balance requirement of *C. pipiens*, *C. lectularius*, and *I. uriae*, in articles published in the *American Journal of Tropical Medicine and Hygiene*, *Journal of Experimental Biology*, and the *Journal of Comparative Physiology B*. In the next portion of his project Joshua will determine the roles of aquaporin, a membrane channel protein; late embryogenesis activating proteins (LEA), proteins that prevent unwanted interactions between important proteins; and heat shock proteins during dehydration. His goal is to provide a better understanding of the mechanisms used by blood feeding arthropods during dehydration and rehydration. After graduate school, Joshua would like to take a post-doctoral position where he can focus on molecular questions related to vector biology. A note from Joshua:

Winning the Feir Graduate Student Award and the ICINN Award through the Entomological Foundation was an honor. I had never anticipated receiving these two prestigious awards in the same year. Hopefully, receiving these awards will be the beginning of a long and fruitful relationship that will last many years between myself, the Entomological Foundation, and the Entomological Society of America.

Integrated Pest Management Team Award

(Sponsored by Dow AgroSciences)

The Pacific Northwest Vineyard IPM Team is comprised of nine members from both the public and private sectors. Their work has directly impacted the Pacific Northwest wine grape industry. Through collaborative research on controlling the climbing cutworm caterpillar, they have developed management techniques that are less expensive and more protective of human health and the environment. Their collaboration in solving this cutworm pest control issue has directly resulted in an application technique that has saved Washington State's wine grape growers \$5.5 million per year and reduced the amount of organophosphate insecticide used by 25,000 lbs. annually. The team members are: Len Welch,





Valent USA; Leif Olsen, Olsen Wine Estates; Kevin Corliss, Ste. Michelle Wine Estates; Sandy Halstead, EPA Region 10/American Farmland Trust; Ron Wight, Washington State University; Sally O'Neal Coates, Washington State University; Holly Ferguson, Washington State University; Doug Walsh, Washington State University; and Tim Waters, Washington State University.

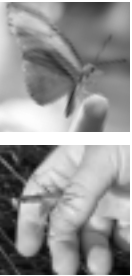
Jeffery P. LaFage Graduate Student Research Award

Alvaro Romero is a Ph.D. student majoring in Entomology at the University of Kentucky. He received a M.S. in Entomology from Kansas State University and a D.V.M. from National University of Colombia, Bogota, where he worked with insecticide resistance in cattle ectoparasites. After receiving his D.V.M. degree, Alvaro worked for six years as a veterinary entomologist for the Colombian Corporation of Agricultural Research. His research at the University of Kentucky focuses on the biology, ecology, and management of bed bugs. The objectives of his research are to 1) characterize the circadian organization of locomotion activity in bed bugs, 2) isolate and identify chemical compounds from volatiles emitted by bed bugs and determine their role in aggregation behavior, 3) detect and characterize insecticide resistance in field bed bug strains, and 4) determine sublethal effects of insecticides on the biology and behavior of bed bugs. According to Alvaro:

I view this award as an honor as well as a responsibility to continue with research in the area of urban entomology. In particular, it is my sincere hope that my colleagues and I will continue to produce more information leading to an increased understanding of the current bed bug problem. This award encourages and supports our efforts to find improved strategies for control of this pest.

Kenneth & Barbara Starks Plant Resistance to Insects Graduate Student Research Award

Philip Morton, a graduate student and research assistant at Purdue University, received his B.S. in Entomology from Oklahoma State University. His research deals with the Hessian fly, a major pest of wheat worldwide. Philip is using microsatellite markers to acquire new, in-depth understanding of current and historical population gene flow. With improved understanding of the Hessian fly population genetics, he is hoping that his research will contribute to improved systems for Hessian fly management and shed light on the origin and dispersal of North American Hessian fly populations. Philip is actively involved in Purdue's



Department of Entomology, where he has served as Graduate Student Organization President, Student Representative of the Teaching and Curriculum Committee, and the Linnaean Team Captain. Per Philip:

Receiving the Kenneth and Barbara Starks Plant Resistance to Insects Graduate Student Research Award has been a great honor. It has been an encouragement and scientifically motivational for me. I am very appreciative that there is an award like this available for graduate students working on plant resistance to insects.

Recognition Award in Urban Entomology

(Sponsored by S.C. Johnson & Son, Inc.)

Arthur Appel is an Alumni Professor and Chair of the Department of Entomology and Plant Pathology at Auburn University. His research focuses on the behavior, physiology, toxicology, and management of urban insects, in particular cockroaches, termites, and ants. Arthur's research combines new information on cockroach population dynamics, harborage selection, inter- and intra-specific interactions, along with examining targeted insecticide applications and trap-catch dynamics into systems that control cockroaches better, faster, longer, and less expensively than standard methods, while reducing insecticide use. He has authored or co-authored more than 100 referred publications and book chapters and over 100 scientific presentations to his name.

Thomas Say Award

David Grimaldi is the Curator of Entomology at the American Museum of Natural History in New York. His book *Evolution of the Insects* (Oxford University Press) co-authored with Dr. Michael Engel, emphasizes current phylogenetic principles as the great organizer of the biology and classification of insects. It presents an evolutionary history of insects, including information on their diversity and relationships. For example, the book covers the living species diversity of insects, methods of reconstructing evolutionary relationships, basic insect structure, and the diverse modes of insect fossilization, and major fossil deposits. The book also explores the relationships and evolution of each order of hexapods as well as the evolutionary history of insects from their beginnings to the impact of mass extinctions and how insects evolved complex societies in nature. This book is in use by more than 20 national and international universities. David has over 150 publications to his name. David writes:

When I was in graduate school in the 1980s, I realized the need for a volume that integrated insect diversity, phylogeny, and the fossil record. After 20 years of research in the field, and 5 years of writing, I was able to publish such a volume – "Evolution of the Insects" – with my wonderful colleague, Michael S. Engel. It is thus tremendously gratifying for me to have recognition of the work by the Entomological Foundation.



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Thank you – without your support our work is not possible.

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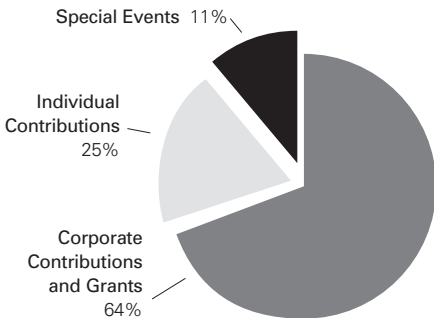
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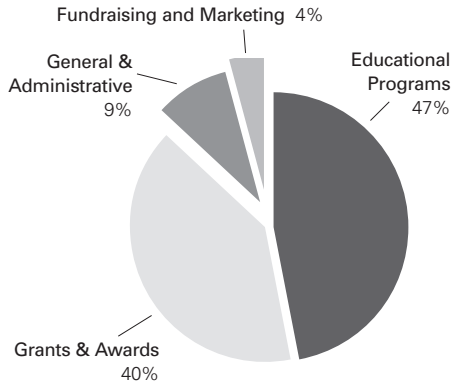
Meetings of the Entomological Foundation Board of Directors occurred June 14 & 15, 2007, Annapolis, MD; and December 10, 2007, San Diego, CA.

The Entomological Foundation, Inc. was established as a 501 (c)(3) not-for-profit organization to excite and educate young people about science through insects. The Foundation receives no membership dues to support its operations. Therefore, contributions and grants are vital to our success in accomplishing our mission. Thank you for your support.

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STATEMENT OF ACTIVITIES

(Year ended December 31, 2007)

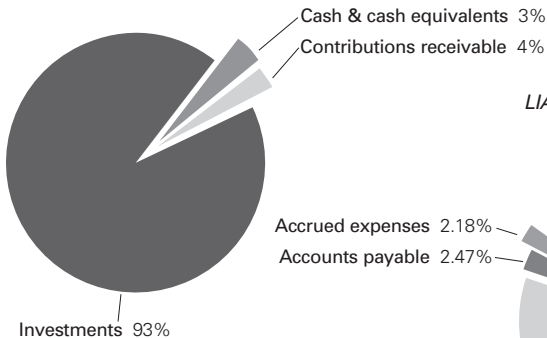
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
SUPPORT & REVENUE:				
Contributions & Grants	\$ 152,404	\$ 34,058	\$ 7,050	\$ 193,512
Special events	18,979	-	-	18,979
Investment income		15,951	319	16,270
Revenues released from restriction	67,150	(67,150)	-	0
Total support & revenue	238,533	(17,141)	7,369	228,761
EXPENSES:				
Educational Programs	118,644			118,644
Grants & Awards	101,283	-	-	101,283
General & Administrative	23,311	-	-	23,311
Fundraising	7,676	-	-	7,676
Total expenses	250,914	-	-	250,914
Change in net assets	(12,381)	(17,141)	7,369	(22,153)
Net assets- beginning of year	10,364	433,986	187,095	631,445
Net assets- end of year	\$ (2,017)	\$ 416,845	\$194,464	\$ 609,292

The financial statements of the Entomological Foundation, Inc. for the year ending December 31, 2007, have been audited by Thompson, Greenspon & Co., PC, independent certified public accountants, on which an unqualified opinion was rendered September 22, 2008. The complete set of financial statements and the unqualified opinion of Thompson, Greenspon & Co., PC, are on file at the Entomological Foundation headquarters.

STATEMENT OF FINANCIAL POSITION

(As of December 31, 2007)

ASSETS



LIABILITIES & NET ASSETS

