

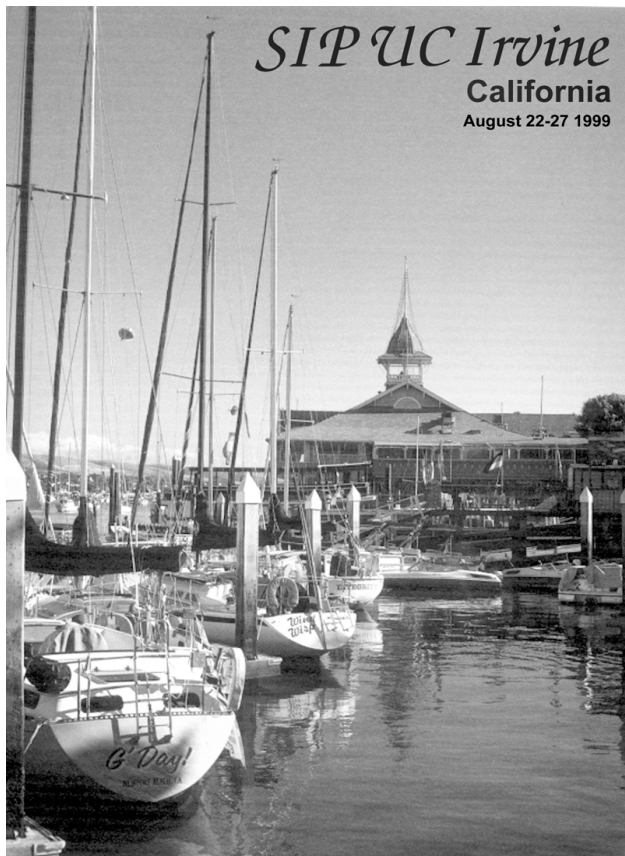


NEWSLETTER

society for invertebrate pathology

VOLUME 31, NUMBER 2

July 1999



**32nd Annual Meeting of the
Society for Invertebrate Pathology
University of California, Irvine
August 22-27, 1999**

Venue and Format. The 1999 Annual Meeting of the Society will be held on the campus of the University of California at Irvine. The meeting will officially begin on Sunday evening, August 22, with a mixer at the Beckman Center of the National Academy of Sciences, and will end after lunch on Friday, 27

August. All scientific sessions will be held at the Beckman Center. The format will follow that of previous SIP meetings, with scientific paper and poster sessions on Monday, Tuesday, Wednesday morning, Thursday, and Friday morning. Divisional meetings will be held Monday and Tuesday evenings or on Thursday. The 5K race will take place mid-Wednesday morning, and will be followed by an excursion (Wine Tour) to the Temecula Valley, a visit to the famous Mission at San Juan Capistrano (one of the original missions founded by the Spanish), and a Beach Barbecue. The Awards Banquet will take place on Thursday evening.

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Deadline for the next Newsletter is October 15, 1999

SIP Office

Please send all correspondence, inquiries, membership applications and changes of address to our Executive Secretary, Margaret (Peg) Johnson at:

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Fax: 352-374-5966
E-mail: sip@sipweb.org
Homepage: "http://www.sipweb.org"

Note: Toll Free numbers for Canada & U.S.A. only

The Mixer, Beach Barbecue, and Awards Banquet are included in the Registration Fee. However, the Wednesday Wine Tour and Mission Excursion are not. Therefore, those who have not signed up for the Excursion but want to participate, should sign up as soon as possible by contacting our Executive Secretary, Margaret "Peg" Johnson by email at sip@sipweb.org. The fee for this excursion is \$42, and includes transportation, lunch, wine and the visit to the Mission. So far, over 120 people have signed up for the Excursion. Due to limited capacity at the wineries, the Excursion will be limited to 150.

Presentations. To date, over 250 people have registered for the meeting, and 240 abstracts have been received for oral and poster presentations.

Late submissions. Papers will be accepted for presentation as a poster until August 15.

Posters. Posters should be made to fit an area of 4 x 4 ft, a little more than 1-meter square.

Getting to the campus. For those arriving at John Wayne Airport (Orange County Airport), the UC Irvine campus is about a 10-minute taxi drive from the campus (about \$10), and taxis will deliver participants

SIP NEWSLETTER

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Submissions to the following sections are solicited:

Forum: More substantial articles on current issues of concern, limited to approximately five pages.

Letters to the Editor: Issues of concern can be brought to light here.

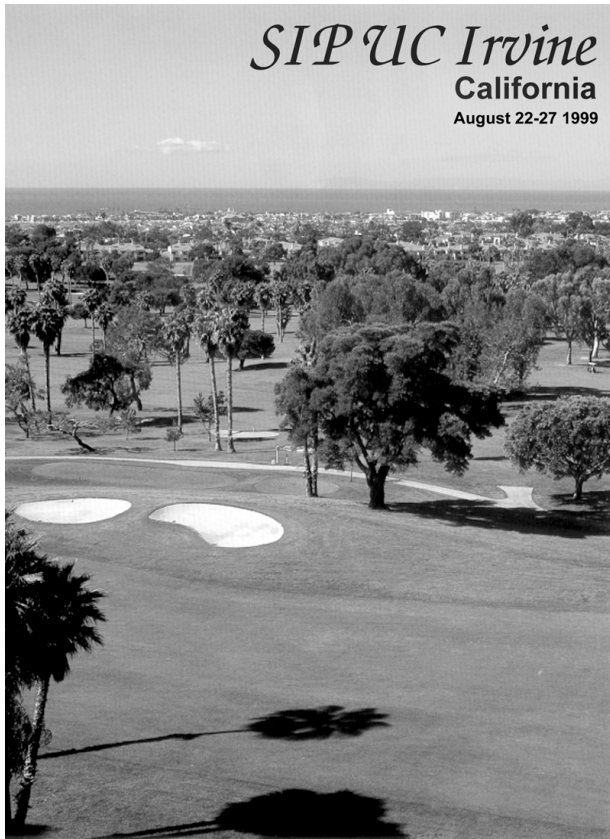
Microbial Control News: Information on new discoveries, "News Releases", formation of companies etc. pertaining to microbial control.

We also depend on our members to supply us with information for the following sections: **Obituaries**, **Member News** (Retirements, Awards, Promotions), **Members on the Move** (New addresses), **Positions Available/Wanted**, **Meeting and Workshop Announcements**, and other **News Items**.

Send all submissions directly to the Editor. Submissions via e-mail or on computer disk (WP, MSWORD or ASCII) make our lives much easier and save on costs. Please include a hard copy of any text sent via computer disk.

Deadline for next Newsletter is Oct. 15, 1999.

Disclaimer: The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her risk.



View from the Newport Marriott Hotel

directly to the Middle Earth Dormitories. For participants staying in the hotels, the Marriott picks up at the airport every hour on the half-hour. Participants staying at the Hyatt Newporter can call the hotel for pick-up. Both hotels are within 10 minutes of the airport, and those unwilling to wait can take a taxi. Rental cars are also available at the airport. Rates are cheaper if these are booked in advance.

For those **driving** to UC Irvine from Los Angeles Airport or elsewhere, please see the map on page 4 for the locations of the dormitories and hotels. You can also check locations through the meeting links on the SIP website (www.sipweb.org).

Registration. Registration materials can be picked up on Sunday afternoon from 1-6 p.m. at the main lobby in the Beckman Center, and on Monday and Tuesday morning at the same site. Please note that the T-shirt cost and Late Fee charges were reversed on the original registration form. The T-shirt is \$15, and the

late fee \$50. Owing to this error, we will not impose the \$50 late fee until July 1.

On-campus housing. On-campus housing will be at the Middle Earth dormitories. Participants wishing to obtain a lower airfare by spending a Saturday night in California will be able to stay in the dorms either on Saturday, August 21 or 28. Dorm room assignments and keys will be available on Saturday, August 21, from 2 p.m. until Midnight, and on Sunday, August 22, from Noon onward. The dormitory accommodations are inexpensive and accordingly modest. There are no TVs (not much to watch on California television anyhow), and no telephones in the rooms (though there are public telephones). If you like big fluffy towels and plenty of fragrant shampoo, bring your own. The dormitories are not air-conditioned, but this should not be a concern. The weather in August is generally sunny and warm, and clear and dry. Though it may get quite hot during the day, it is typically cool at night. The ocean is only about 3 miles from the campus, and evening ocean breezes cool the rooms quite quickly after the sun sets. In fact, it can be quite chilly in the evenings, so be sure to bring a sweater or jacket, especially to the Beach Barbecue.

Transportation will be provided from the dormitories to the Beckman Center in the mornings and evenings. The Beckman Center is a pleasant 25-minute walk from the dormitories, so those wishing to get some exercise should take the opportunity to walk.

Since the original program announcement was circulated, there have been some changes in the management of the Beckman Center, which for dormitory residents have resulted in a trade off of an increase in the cost of lunch for greater convenience. Basically, dormitory residents will have breakfast and dinner at the dormitory cafeteria, and lunch at the Beckman Center. There will be a charge of \$10/day for lunch at the Beckman Center (four days; Monday, Tuesday, Thursday, Friday). We are required to pay this amount for the registrants attending the sessions as part of the meeting room rates we have negotiated. The cost of lunch at the dormitory cafeteria is approximately \$5/day. For participants staying in the dorms, we are reducing the daily cost by this amount. Lunch tickets can be purchased for companions or

participants wishing to return to the dormitory cafeteria (but the Society will still have to pay the Beckman Center for lunches not taken there). Because we anticipate that the overwhelming majority of the participants will take lunch at the Beckman Center, there will be no transportation back to the dorms at lunch time. The Beckman Center offers a better lunch than the dormitory cafeteria, and it is more convenient as it is right at site of the meetings.

Parking. Parking at the dormitories is available at a cost of \$4/day or \$15 for the week. Parking at the Beckman Center is Free.

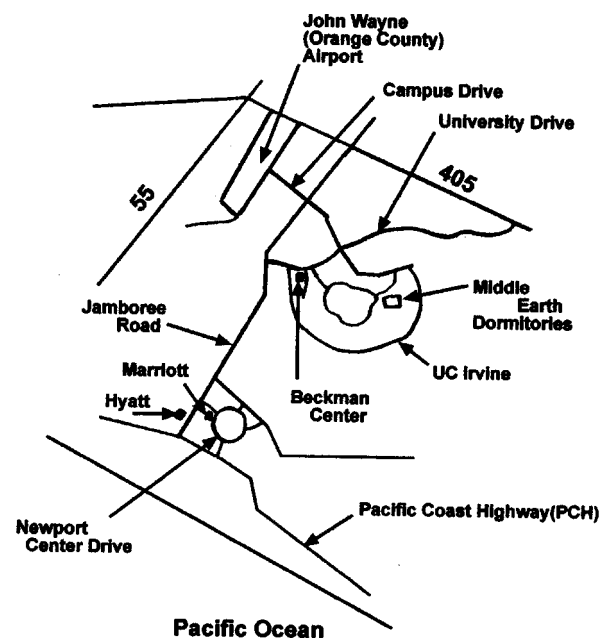
Beach Barbecue. The beach barbecue will take place oceanside near Laguna Beach, about 14 miles from the UCI campus. People on the Excursion will be dropped off at the site. There will also be bus transportation from the dormitories to the barbecue and back. The barbecue is scheduled from about 5 p.m. until a little after sunset, with the food serving beginning around 6 p.m. For those wishing to drive to the barbecue, directions will be provided with the registration materials. It can be quite chilly at the beach, especially, after the sun sets. So, though it is mentioned elsewhere, be sure to bring a sweater or jacket to the barbecue.

Athletic facilities. Weekly passes for on-campus athletic and recreational facilities will be available for \$20.

Tourist information. For participants before or after the meetings (hopefully, not during), and for companions at any time, there are numerous things to do in southern California. A list of these will be provided in the registration package, and a few examples are provided here. Several art festivals will be in progress at Laguna Beach during all of August. Two of the best are the Festival of the Arts and the Sawdust Festival. For a moderate admission fee (\$5), one can view (and purchase) a wide variety of art (paintings, sculpture, ceramics, hand-blown glass, jewelry, etc.) by local artists. There are also many art galleries and restaurants in Laguna Beach and Newport Beach (the latter just a few miles from the UCI campus), and there are of course many beautiful beaches and golf courses. In addition, the Long Beach Aquarium (an excellent aquarium) and the Queen Mary (adjacent to the aquarium) are about a 30-minute

drive from the campus, as are major theme parks such as Disneyland and Knotts Berry Farm (though these are very crowded in the summer). It is also possible to arrange half-day fishing trips out of Newport Beach or Dana Point. Local hotels can also suggest and book a variety of other attractions for participants or their companions.

Directions and Map. The map provided here is to help people get oriented upon arrival. More detailed campus and local maps will be provided in the registration package and on campus.



From John Wayne/Orange County Airport. As you are leaving the airport, follow the signs to 405/MacArthur. MacArthur Boulevard is the main road that runs right in front of the airport. Go right at MacArthur, and then left onto Campus Drive. Stay on Campus Drive until you arrive at the campus (major roads you will cross will be Jamboree and University Drive). Just after you cross University Drive look for West Peltason. Go right on W. Peltason. Shortly after turning you will see a kiosk on the right. Stop there to get directions to the Middle Earth dormitories.

From Interstate Highway 405. Exit at Jamboree. If coming from the North (e.g., Los Angeles) go right. If coming from the south (e.g., San Diego), go left.

Continue on Jamboree to Campus Drive. Go left at Campus Drive and follow the directions above.

Directions to the Beckman Center. Whether coming from the airport or 405 (as described above), at the intersection of Campus Drive and University Drive, go right. Continue to California Avenue and go left. Go one block to Academy Way and go right. The Beckman Center will be on your right. Parking is at the back of the Center.

Directions to the Newport Marriott and Hyatt Newporter.

From John Wayne/Orange County Airport. Take either MacArthur Boulevard (make a right turn as you exit the airport) or Campus Drive (as described above) to Jamboree Road. Go right on Jamboree. For the Marriott Newport Beach, go left on Santa Barbara to Newport Center Drive, and then turn right. The Marriott will be obvious on your right. For the Hyatt Newporter, continue on Jamboree almost until you reach Pacific Coast Highway. There will be a sign on your right indicating the entrance to the hotel grounds.

From 405. Exit at Jamboree, proceed West, and follow the directions immediately above.

Further Information. Anyone wishing further information about any aspect of the meeting should contact either Brian Federici (brian.federici@ucr.edu) or Margaret "Peg" Johnson (sip@sipweb.org).

Useful Telephone Numbers:

Beckman Center. 949-721-2200
 UC Irvine Conference Center. 949-824-4601
 Newport Marriott: 949-640-4000
 Hyatt Newporter: 949-729-1234

On behalf of the Organizing Committee, we look forward to seeing you all at UC Irvine in August.

Brian Federici

The Division on Microsporidia Symposium

The Symposium, organized by Andreas Linde and Leellen Solter, is entitled "Microsporidia in Forest Insects: Biological Control Issues". Speakers will address several topics including pathogen-pathogen interactions, pathogen-parasitoid interactions, a survey of potentially important microsporidia and other Protozoa in bark beetles, and provide updated information about gypsy moth microsporidia. All are welcome to attend. For additional information, please contact:

Andreas Linde
 Chair, Division on Microsporidia
 E-mail: alinde@fh-egerswalde.de
 or
 Leellen (Lee) Solter
 E-mail: l-solter@uiuc.edu

Attention Dutch Delegates to SIP Irvine

VVAA reisbureau bv, would like to handle the travel arrangements for Dutch participants to the 1999 SIP meeting at UC Irvine. They can be reached at:
 VVAA reisbureau bv, Atoomweg 130, NL-3542 AB UTRECHT, The Netherlands
 Fax: 31-30-2411530 ; Tel: 31-30-2411311.

FROM THE PRESIDENT

It is only a few weeks time to the greatest highlight in the activities of our Society, the SIP Annual Meeting, which will be held on the campus of the University of California, Irvine. As usual, it will be a very exciting and stimulating meeting. There are already more than 220 registrants and we are expecting many more still to come. It's never too late for late registration. I particularly appeal to our US members. Pack your students in a car and drive them to Irvine! It is always possible to submit late posters. As you can see in the Programme and Abstracts, distributed together with this Newsletter, we will, once again, have a very strong scientific program. The local organizers, under the able leadership of Brian Federici and Harry Kaya, have also planned numerous complementary social events, which alone will make the trip to sunny California worth while.

As in every year, at the start of the Annual Meeting on Sunday, the Council of SIP shall have its business meeting. If you have any suggestions, or comments about the management of SIP, or proposals for future activities, please write to me before the meeting (e-mail: j.huber.biocontrol.bba@online.de), so that we can discuss your points at the Council Meeting. Of course, there is also the possibility for you to express your opinion directly at the General Membership Meeting, which will take place during the SIP Annual Meeting at Irvine.

One of the things I plan to bring to an end during the 1999 Annual Meeting will be the amendments of our constitution and bylaws. The changes to the constitution have been accepted unanimously by written ballot with 127 votes, so that the revised constitution is now effective and we can proceed to the voting about changes in the bylaws. This will take place at the General Membership Meeting. The amendments in the bylaws are related to the adopted changes in the constitution. The final version of the amended bylaws is published in this issue of the Newsletter. Please read it carefully and attend the General Membership Meeting for voting. The proposed changes in the bylaws will be adopted when, and if approved by a 3/5th vote of members present and voting at the meeting.

I look forward to seeing most of you at (hopefully) sunny Irvine.

Juerg Huber, President

LETTER TO THE EDITOR

Lack of information on diseases of aquatic invertebrates

Again, I am surprised – no, disappointed – that there is only a minor mention of invertebrates (diseases of aquatic invertebrates) with no mention of mollusca. Is there anyone in the Society interested in molluscan pathology? Am I alone? Those interested may respond to me at (562) 693-5936 or (626) 795-5774.

John A. Aracadi, M.D.
Coordinator, Prostate Cancer Research
Huntington Medical Research Institutes

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Pasadena, CA
91101-1830, USA

1999 FOUNDER'S LECTURE

This year, the Society will sponsor its 18th Founder's Lecture. Since 1982, the Society has recognized individuals who have contributed to the genesis and development of scientific effort and accomplishments identified as invertebrate pathology. In 1999, the Founder's Lecture Committee has chosen to honor Dr. Yoshinori ("Joe") Tanada as Honoree and Dr. Harry Kaya as the Founder's Lecturer.



Dr. Yoshinori ("Joe") Tanada

1999 Founder's Lecture Honoree

Yoshinori ("Joe") Tanada, professor emeritus of entomology and insect pathologist at the University of California, Berkeley, is our 1999 Founders' Lecture honoree. Dr. Tanada has had a distinguished career in insect pathology and has conducted research with all pathogen groups with particular emphasis on insect viruses. His pioneering research in insect pathology,

especially in virology, has demonstrated how pathogens interact with each other and has added significantly to our basic understanding of the infectious mechanisms. Moreover, his studies on the biotic factors that regulate insect populations expanded our knowledge of disease dynamics in the field and his early work on microbial control showed that pathogens could be used against pests on high value crops. His research has molded the discipline of insect pathology through an in-depth study of characterizing viral infection processes and the factors that influence epizootics.

Dr. Tanada was born in Puuloa on the island of Oahu, Hawaii in 1917. After high school, he majored in entomology in the Department of Zoology at the University of Hawaii, obtaining his Bachelor of Science degree in 1940. He worked at the Department of Chemistry as a stockroom clerk (1941-43) and then entered graduate school as an Assistant in Zoology in the Department of Zoology in 1943. It was at this time that he got his nickname. This was during WW II, and a close faculty friend gave him the nickname "Joe" after GI Joe.

In 1945, he received his Master of Science degree, after which he was offered a position as a Junior Entomologist in the Agricultural Experiment Station at the University of Hawaii. Showing a strong interest in academic activities through research and publications between 1943 and 1950, he was encouraged by Dr. F. G. Holdaway of the Department of Entomology (Dr. Holdaway, a faculty member and former chair of the Department, left in 1949 for a position in Minnesota) to take a study leave for the Ph.D. degree.

In 1950, he entered the graduate program in entomology at the University of California, Berkeley where he specialized in insect pathology under the guidance of Professor E. A. Steinhaus. His 1953 Ph.D. thesis was entitled "Infectious diseases of *Pieris rapae*." The research involved four pathogen groups (viruses, bacteria, fungi, and protozoa) because Dr. Steinhaus wanted "Joe" to be a well-rounded insect pathologist in Hawaii. The most significant result of his study showed that the nucleopolyhedrovirus was not as host specific as believed at that time.

In 1952, he returned to the University of Hawaii where he was appointed as an Assistant Entomologist. In 1954, he was appointed to the professorial series and in 1956, was promoted to Associate Professor and Associate Entomologist. His research foci were on the insect pests of orchids, the interactions of a microsporidian parasite on a developing gregarious parasitoid species in an infected cabbageworm host, and pathogens of insects in Hawaii, with emphasis on the cabbageworm and insect viruses of the armyworm.

In 1956, his Ph.D. thesis advisor, Professor Steinhaus, recruited "Joe" as an Assistant Insect Pathologist in the Agricultural Experiment Station at UC Berkeley. He accepted the position, was tenured in 1959 to Associate Insect Pathologist and rose to the rank of Insect Pathologist in 1964. In 1965, he became Professor of Entomology and Insect Pathologist in the Experiment Station, and after a 28-year career at Berkeley, he "retired" in 1987. In total, he spent 34 years as an insect pathologist at the University of Hawaii and the University of California, Berkeley, plus another 8 years (includes 2 years in graduate school at Berkeley) working as an entomologist at the University of Hawaii.

Although officially "retired," he continued his daily routine of going into the office, reviewing manuscripts for journals, rewriting and editing manuscripts for foreign colleagues whose primary language was not English, writing up his own research, and culminating with the "Insect Pathology" text that was published in 1993. In addition, "Joe" published over 200 papers that included 97 of them in refereed scientific journals, a number of book chapters and review articles, and co-edited two books.

During his career, "Joe" made significant contributions to our understanding of the interactions of insect viruses. He showed that there was a synergistic factor associated with a granulovirus of the armyworm and has demonstrated that this factor enhances the infectivity of the nucleopolyhedrovirus of the armyworm. He made this initial observation in 1959 and subsequently studied this phenomenon for most of his career. After his retirement, others worked on the synergistic factor, isolating and cloning the gene that was responsible for enhancing the infectivity of the nucleopolyhedrovirus. In addition, he studied

the role of insect pathogens on field populations of the armyworm and alfalfa caterpillar that contributed significantly to our understanding of epizootiology. In microbial control, he was among the first to demonstrate that insect pathogens were capable of controlling insect pests of low economic threshold.

Dr. Tanada has been and continues to be a strong advocate of invertebrate pathology. For many years, he taught the insect pathology course at the University of Hawaii and then at UC Berkeley, providing the basic foundation for graduate students to understand and study in this subdiscipline of entomology. He served as major professor and thesis chair for 2 M.S. and 7 Ph.D. students and was always generous with his time encouraging and assisting them with their scientific problems.

He was most instrumental in the development of insect pathology in Japan. He received an award from the Japan Society for the Promotion of Science in 1980 and spent 3 months at the University of Tokyo working with his Japanese colleagues in insect pathology. In 1962-1963, he obtained a Fulbright Fellowship to conduct research at the University of Tokyo that furthered his relationship with Japanese insect pathologists. Subsequently, many young Japanese scientists worked in his laboratory, learned the fundamentals of insect pathology, and returned to their respective laboratory to become leaders in the field. Besides Japan, he also served as a consultant to a number of other countries and agencies including the U.S. Army (1950), South Pacific Commission (1959), FAO, United Nations to Thailand (1971), Azorean Government (1972), and FAO, United Nations to Western Samoa and Tonga (1972).

One of the founding members of SIP, Dr. Tanada has been an active member, serving in a number of different capacities. He served as Treasurer (1972-74) and a Trustee (1976-1980). Before the Society was formed, he served as an Acting Editor for the *Journal of Insect Pathology* (1960) and a member of the Editorial Board for the *Journal of Insect Pathology* (1961-64) and later the *Journal of Invertebrate Pathology* (1970-72, 1977-1982).

A former colleague and officer of the Society stated that "Dr. Tanada assumed the post as Treasurer when the Society was literally operating to the limit of its income. As a result of the initiative taken by Dr.

Tanada the Society has been on a course of financial growth since his service." Another former officer of the Society stated that "he has served the Society in some capacity, either as committee chair, proxy for Japanese members of the council, member of the editorial board, or elected officer, for most of almost 20 years in which I have been associated with the Society." He has been honored by the Society as the Founder's Lecturer in 1984 honoring Professor Steinhaus. In 1988, he was elected as an Honorary Member of the Society; in 1989, he received a Japanese Government Research Award for Foreign Specialists. In addition to these honors and those mentioned previously, "Joe" was elected an AAAS Fellow in 1964 and received the Lifetime Achievement Award from the Hawaiian Entomological Society in 1997.

"Joe" maintains an active lifestyle by fishing, gardening and traveling, attends scientific meetings that are "close" to home, and goes to the office weekly (when he isn't traveling) checking his mail and maintaining contact with some of his former Berkeley colleagues. This past May, his two daughters, Karen and Ruth, invited a number of friends and family to help celebrate "Joe" and Edna's 50th wedding anniversary in Las Vegas. It was a three-day affair where everyone had a wonderful, memorable time.

In closing, Dr. Tanada has been a pioneer in Invertebrate Pathology. He has provided enlightened leadership in insect virology and epizootiology and laid the foundation of knowledge upon which others have been able to use as building blocks. He has been a role model for students and faculty as the result of his scholarship, productivity, and active international contributions. Through his quiet but effective manner, he has served the Society and helped it grow during the early years and was a strong impetus in making it an international organization.



Dr. Harry Kaya

1999 Founder's Lecturer

The Society's 1999 Founder's Lecture in honor of Professor Yoshinori ("Joe") Tanada will be presented by one of his outstanding former students, Professor Harry Kaya of the University of California at Davis.

Harry's scientific career began at the University of Hawaii, where he held an NSF Undergraduate Fellowship in Entomology and graduated with a B.S. degree in entomology in 1962. After two year of military service in the US Army Signal Corps, he returned to the University of Hawaii as a Research Assistant in Entomology and was awarded the M.S. degree in 1966. His research topic was in insect ecology dealing with the phenomenon of superparasitism of tephritid fly eggs under field conditions. Harry continued his studies at the University of California at Berkeley, under the guidance of Professor Tanada as a Public Health Predoctoral Fellow. He was also a teaching assistant for the insect pathology course taught by Professor Tanada. In 1970 Harry received the Ph.D. degree in entomology with specialization in insect pathology from the University of California. His research focused on the same virus-host (armyworm) system that was the major research program in Professor Tanada's laboratory. He demonstrated that a factor

from a granulovirus was antagonistic to the development of a gregarious parasitoid of the armyworm that resulted in a series of scientific papers on parasitoid-host virus interactions. One granulovirus strain that cross-infected other noctuid species was antagonistic to parasitoid development, whereas another that was host specific to the armyworm allowed for parasitoid development.

From 1971 to 1976, Harry worked at the Connecticut Agricultural Experiment Station, first as an Assistant Entomologist and then as an Associate Entomologist, where he conducted research on the biology and the biological and microbial control of forest defoliators, notably the elm spanworm and gypsy moth. A significant part of the research was evaluating entomopathogens, especially bacteria, viruses and microsporidia, against forest defoliators. Significant aspects from his tenure at Connecticut included evaluating aerial and ground application of *Bacillus thuringiensis* against forest defoliators, studying the effects of microsporidia in cankerworm and oakworm and viruses in tussock moth population dynamics, and assessing nucleopolyhedroviruses against forest defoliators.

In 1976, Harry was appointed Assistant Professor of Entomology and Assistant Nematologist at the University of California at Davis. He was promoted to Associate Professor in 1979 and Professor in 1984. Harry is currently Professor of Entomology and Nematology and has been Chair of the Department of Nematology at UCD since 1994. At UCD, he has been called upon to serve on the Gypsy Moth Scientific Panel for the State of California and serves or has served on various University Statewide committees including the Mosquito Technical Research Committee and IPM Committee.

During his highly productive professional career, Harry has conducted original, pure and applied research on a wide variety of insect pathogens and their hosts. He has built on the broad training in insect pathology that he received at Berkeley as well as his field pest management experience in Connecticut and California. Harry's more recent research has focused on the ecology, behavior and diversity of entomopathogenic nematodes leading to their development as biological control agents, either alone

or in combination with other factors that may enhance pest control. Research from his laboratory has shown that stressing pest insects, a concept pioneered by Professor Steinhaus, can be a significant factor in insect pest management. In the laboratory or field, insect pests can be stressed with certain biological or chemical agents making them more susceptible to nematode infections. The mechanisms that increase the susceptibility of stressed insects to nematode infections are related to weakened morphological (peritrophic membrane) or behavioral defenses. Other research activities include the role of arthropod scavengers on entomopathogen persistence and competitive displacement of entomopathogens within a host or in a particular habitat.

In teaching, Harry has taught university courses in entomology, insect pathology, nematology and biological control. He teaches an undergraduate entomology course called "Natural History of Insects" to nonmajors and a freshman seminar on symbiosis as well as courses in his area of specialization. He has trained a number of graduate students who have established their own careers as professors at US or foreign universities or as USDA scientists or researchers with foreign government agencies. His students have conducted research on different pathogens depending upon their interests; students have worked on bacterial, fungal, viral or nematode pathogens for their Ph.D. research projects. A number of scientists from other countries have received nematological training in his laboratory. In addition, he has given numerous presentations on insects to elementary and junior high students to provide a stimulus for them to enter the scientific world.

In communicating his research and expertise, Harry has given numerous invited lectures to both professional and lay audiences in the United States, China, Japan, Mexico, the European Union, and Argentina. He has authored or co-authored over 200 papers in scientific journals and numerous articles in a variety of print media and served as Associate Editor of the *Journal of Nematology* and on the Editorial Board of the *Journal of Invertebrate Pathology*. He is one of the founding editors of *Biological Control*. In recognition of his excellent record, in 1990 Harry was awarded the Outstanding Graduate Alumni Award from the University of Hawaii, College of Tropical Agriculture and Human Resources. In 1993 he

received a JSPS Fellowship for Research in Japan and in 1998, he was the recipient of the C. W. Woodworth Award of the Pacific Branch of the Entomological Society of America.

Harry has been active in the affairs of the Society for Invertebrate Pathology throughout his career. He chaired the Local Arrangements Committee for the Society's annual meeting at UC Davis in 1984, was a member of the Local Arrangements Committee for the 1988 meeting at La Jolla, and a member of the Local Arrangements Committee for the forthcoming 1999 meeting at Irvine. He has organized several of the Society's workshops and symposia at various annual meetings and at two of the Society's international colloquia. He has chaired or served on several of the Society's committees and was Treasurer from 1992 to 1996, recommending and implementing a major shift in the Society's financial structure.

It is especially fitting that Harry, with his strong links to the Society and as one of Joe's outstanding former students, research collaborator and co-author, deliver the Society's 1999 Founder's Lecture to honor the distinguished contributions in teaching and research in insect pathology of Professor "Joe" Tanada.

MICROBIAL CONTROL NEWS

Fungus Spore Production

During LUBILOS A phase 2 and 3, production facilities for the mass production of the aerial conidia of mitosporic fungi were installed at IITA Benin. The facility is fully described in Jenkins *et al.*, 1998 and Cherry *et al.*, 1999. The facility is not required in LUBILOS A phase 4 as commercial producers are expected to produce the LUBILOS A *Metarhizium* isolate.

The facility is now available for production of other isolates; we use a solid state production system suitable for the production of aerial conidia of any deuteromycete fungus. Essentially we have the capacity to produce about 200kg of dry spores per annum (about 10^{16} spores) to a high purity specification, packaged in moisture-proof sachets with temperature indicators. The cost is \$200 per kg plus

shipping. Discounts are available when spores are for use in research projects in which IITA participates or for members of CAB International's IBDS. These figures are derived from experience producing *Metarhizium anisopliae* var. *acridum* IMI330189; for contracts involving production of other fungi, we can either carry out a trial production run and adjust the cost accordingly, or contract to produce a fixed number of runs. Production capacity is booked from now until end of April; normally at least two months notice is needed.

Contact c.lomer@cgiar.org, a.cherry@cgiar.org or n.jenkins@cabi.org for details.

The LUBILOSA web site is at:
<http://www.cgiar.org/iita/research/lubilosa/index.htm>

References:

- Cherry, A., Jenkins, N., Hevief, G., Bateman, R.P. and Lomer, C. (1999) Operational and economic analysis of a West African pilot scale production plant for aerial conidia of *Metarhizium* spp. for use as a mycoinsecticide against locusts and grasshoppers. *Biocontrol Science and Technology* 9, 35-51.
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Bt Patent Wars Yield New Casualties

(Extracted from ISB News Report, March 1999)

Bacillus thuringiensis (Bt) continues to breed controversy. Outside the United States, January was a turbulent time for transgenic plants engineered to express Bt toxins. Monsanto literally drew fire in India for its tests of transgenic cotton when annoyed farmers torched test plots. In Ireland, protesters reportedly sabotaged fields of genetically engineered potatoes, while French farmers staged a raid on a cache of genetically modified seeds. On a more positive note, the House of Lords European Communities Committee gave a green light for large-scale trials of genetically engineered crops, providing that proper regulatory safeguards were in place. Despite this announcement, there is still some

resistance to the farming of herbicide tolerant and insect resistant crops in the United Kingdom.

Meanwhile, the U.S. saw a number of skirmishes in the Bt patent wars in 1998. Surprisingly, three courts decided that patents assigned to Mycogen Corporation, Monsanto Company, and Novartis Seeds, Inc. are invalid.

The first of these disarming decisions occurred in February 1998, when a jury in a Delaware U.S. District Court decided that two Bt patents assigned to Mycogen Plant Science, Inc. are not valid. The suit began in October 1996 when Mycogen claimed that Monsanto, Delta & Pine Land Co., and DeKalb Genetics Corp. infringed Mycogen's patents by marketing genetically engineered cotton, potatoes, and corn. The Mycogen patents claim methods for making synthetic Bt genes and using them to develop insect resistant plants and seeds.

A June trial concerned Monsanto's patent infringement claims against the former Agrigenetics (now Mycogen) and the former Ciba-Geigy Seeds (now Novartis Seeds). The patent in dispute, U.S. Patent No. 5,550,365, contains claims to methods of modifying Bt toxin genes to achieve higher levels of expression in transgenic plants. The jury of a U.S. District Court in Delaware decided that, although Agrigenetics and Ciba-Geigy Seeds had infringed Monsanto's method for making the synthetic Bt genes, the infringement was excused, which effectively neutralized the patent.

Finally, in November, a Delaware federal jury decided that a Novartis Seeds patent (U.S. Patent No. 5,595,733) was invalid and not infringed by Monsanto and DeKalb Genetics, Inc. Novartis had charged that its patent covered all insect-resistant corn produced with Bt technology.

A contract dispute concerning Bt toxin technology was also the subject of a trial last year. In March, a San Diego Superior Court jury awarded \$174.9 million in damages to Mycogen in a breach of contract suit against Monsanto. This case began in 1989 when Monsanto granted options to license technology, including Bt insect-resistance technology, to Lubrizol Genetics, which was subsequently acquired by

Mycogen. When Mycogen tried to exercise the options in 1993, Monsanto refused and Mycogen sued. A year later, a San Diego Superior Court judge granted Monsanto's motion for summary judgment, which effectively upheld Monsanto's refusal. Mycogen obtained a reversal of the ruling on appeal, and filed the damage suit that led to the \$174.9 million award for lost profits due to the lack of access to Monsanto's technology.

Both the February and June trials raised the issue of the identity of the first party to express a Bt toxin gene in plants or to modify a Bt toxin gene for increased expression in plants. During the past year, Monsanto representatives have alluded to an ongoing interference procedure at the U.S. Patent and Trademark Office (PTO) that would determine the first inventor of the "basic Bt technology."

Although the details of an ongoing interference are not open to the public, an issue arose in a Bt toxin interference, which was appealed to the Court of Appeals for the Federal Circuit. The published decision on this one issue sheds some light on the nature of the Bt toxin interference (1). In a nutshell, interference No. 103,781 began in November 1996 when the PTO declared a three-party interference between the following two patent applications and issued patent: 1) U.S. Serial No. 07/827,906, entitled "Improved Expression of Genes in Plants," assigned to Agracetus; 2) U.S. Serial No. 08/434,105, entitled "Synthetic Plant Genes and Method for Preparation," assigned to Monsanto; and 3) U.S. Patent No. 5,380,831, entitled "Synthetic Insecticidal Crystal Protein Gene," assigned to Mycogen.

The PTO devised a single count in the interference, which relates to a method for enhancing the expression of modified Bt toxin genes in plant host cells. That count read "A method of designing a synthetic *Bacillus thuringiensis* gene to be more highly expressed in plants, comprising the steps of: a) analyzing the coding sequence of a gene derived from a *Bacillus thuringiensis* which encodes an insecticidal protein toxin, and modifying a portion of said coding sequence to yield a modified sequence which contains a greater number of codons preferred by the intended plant host than did said coding sequence, or b) analyzing the coding sequence of a gene derived from

a *Bacillus thuringiensis* which encodes an insecticidal protein toxin, and modifying a portion of said coding sequence to yield a modified sequence which contains a greater number of codons preferred by the intended plant host than did said coding sequence and fewer plant polyadenylation signals than said coding sequence."

Shortly after the declaration of the interference, Monsanto bought the plant biotechnology assets and related intellectual property of Agracetus. Monsanto wanted to continue the interference with both patent applications because it was not possible, at least at that time, for Monsanto to choose the best application for establishing priority of inventorship. This was because discovery had not yet been completed, and it was not clear what the final language of the count would be, or what evidence Mycogen would marshal to establish the date of invention. That is, Monsanto's dilemma was that the final count might be supported by one of its applications and not the other. Not surprisingly, Mycogen argued that Monsanto had sufficient information to pick one of the two commonly owned applications. The PTO agreed with Mycogen, but the Federal Circuit reversed the decision, explaining that the "three party" interference should continue until the PTO determines the final count and discovery is complete. The victor of this interference contest should have a dominating patent in its arsenal.

Even before the dust of the Bt patent wars has settled, a new contender has entered the fray. Researchers at the University of Wisconsin-Madison have announced the discovery of insecticidal toxins produced by *Photobacterium luminescens* (2). Although a U.S. patent has not been issued on these new bioinsecticides, the UW group does have several international patent publications. An international patent publication from Bio Integrated Technology S.R.I (Italy) also concerns *P. luminescens* toxins and their use as insecticides. Is this the beginning of insect toxin wars: the next generation?

Sources

1. Barton v. Adang, 49 USPQ2d 1128 (Fed. Cir. 1998). A copy of this decision (No. 97-1491) is also available from the Federal Circuit web site (<http://www.fedcir.gov>).

2. See Bowen D et al. 1998. Insecticidal toxins from the bacterium *Photorhabdus luminescens*. Science 280:2129-2132; and Bowen DJ and Ensign JC. 1998. Purification and characterization of a high-molecular-weight insecticidal protein complex produced by the entomopathogenic bacterium *Photorhabdus luminescens*. Applied and Environmental Microbiology 64:3029-3035.

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Overcoming Insect Resistance to Bt

(Extracted from the ISB News Report, May 1999)

A report describing what could be a significant breakthrough in the efforts to combat insect resistance to transgenic *Bacillus thuringiensis* (Bt)-expressing crops, has just been published. Kota *et al.* (1999) show that a combination of very high transgene expression due to insertion in the chloroplast genome, coupled with protein stability can result in mortality of even Bt-resistant insects.

A general consensus has been reached on the need to maintain non-Bt refuges to thwart the emergence of insect resistance; however, some aspects of this insect resistance management (IRM) approach continue to be challenged. The rationale behind leaving Bt-free refuge communities is to provide a source of susceptible mates for any resistant insects that survive exposure to the Bt toxin. The strategy, though, is based on the assumption that resistance is a recessive trait, therefore the offspring of such a mating will be susceptible. This assumption has been questioned in some quarters but as yet there is little evidence that resistance is dominant.

After considering some of the difficulties inherent in maintaining a Bt-free refuge, it becomes clear that continued advancements in Bt technology would be welcomed. One recommended strategy is to genetically alter crops to express multiple protein toxins, including non-Bt toxins. The availability of such "stacked" products could eventually permit a reduction in refuge size. Other suggestions include increasing the level of Bt expression, and targeting expression to tissues particularly sensitive to damage.

Kota *et al.* have outlined an approach for overcoming Bt resistance in insects that combines high levels of Bt gene expression with tissue specificity. Most commercial transgenic plants that target lepidopteran pests contain either the cry1Ab or cry1Ac genes. However, the proteins expressed by these genes share more than 90% homology, which increases the risk of cross-resistance. The authors chose Cry2Aa2 because it has limited homology to 1Ab and 1Ac and because its protoxin is only 65 kDa, compared with the 130-135 kDa proteins of 1Ab and 1Ac. As gene size can be a limiting factor for optimal expression in plants, this small size enabled them to introduce a gene encoding the entire protoxin, which is considered to be more environmentally stable.

They targeted the gene to the tobacco chloroplast which, due to its prokaryotic origin, could express the native DNA sequence without the necessity of codon optimization. The cry2Aa2 gene was cloned downstream of the spectinomycin-streptomycin resistance gene and driven by the chloroplast constitutive promoter Prn. The chimeric gene was then integrated between the rbcL and accD genes, a region that is highly conserved among plants and can even be used to integrate genes into monocot chloroplasts.

Sixteen putative transformants were obtained of which two were shown to have a single insert in all the 5,000 to 10,000 chloroplasts. This high level of integration resulted in Cry2Aa2 representing 2% to 3% of total leaf protein, some 20- to 30-fold higher than current commercial nuclear transgenic plants. The importance of this high level of expression was clear when they tested the mortality of Bt-susceptible, Cry1Ac-resistant and Cry2A-resistant tobacco budworm (*Heliothis virescens*) by feeding them Bt-transgenic leaf material. They achieved 100% mortality, even though tobacco budworm is less sensitive to Cry2A than to Cry1Ac. They also obtained 100% mortality when leaves were fed to corn earworm and beet armyworm (*Spodoptera exigua*), despite the latter having a high tolerance to Cry2Aa2.

The authors state that the high levels of expression did not affect tobacco plant growth rates, photosynthesis, chlorophyll content, flowering, or seed setting in the laboratory. However, long-term tests under field

conditions are needed before the full potential of this new technology can be determined. It should also be noted that a significant additional benefit of the introduction of the Bt gene into the chloroplast, rather than into the nuclear genome, is that the chloroplast genome is maternally inherited. This should help alleviate the fears of transgene spread via pollen to non-target plants.

This paper will be greeted enthusiastically by researchers involved in the development of Bt-expressing plants. It could well prove to be a watershed in the fight against insect resistance to Bt in transgenic crops.

Source

Kota M *et al.* 1999. Overexpression of the *Bacillus thuringiensis* (Bt) CryA2Aa2 protein in chloroplasts confers resistance to plants against susceptible and Bt-resistant insects. Proceedings of the National Academy of Science USA 96:1840-1845.

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Gene-Altered Corn Pollen Threatens Monarchs

(P A N U P S: Pesticide Action Network Updates Service)

May 28, 1999, Entomologists at Cornell University in the U.S. have found significant adverse effects in monarch butterfly caterpillars that were fed pollen from genetically engineered corn. Since about half of the summer monarch population migrates through the U.S. Corn Belt, where millions of acres of genetically engineered insect-resistant Bt corn now grow, the monarch butterfly may be imperiled.

In many Bt-corn varieties, the Bt toxin is produced in most of the plant's tissues, including its pollen. Toxic corn pollen is then blown by the wind onto milkweed and other plants in the vicinity of Bt-corn fields. The Cornell laboratory study, published this week in the journal *Nature*, found that monarch caterpillars eating Bt-corn pollen had significantly higher death rates and stunted growth compared with those eating normal pollen. Nearly half the caterpillars that consumed the

toxic pollen died after four days; none of those eating normal pollen died.

In one field study, Iowa State University scientists have confirmed the toxicity of Bt corn pollen to monarch caterpillars. Nearly 20% of the caterpillars fed milkweed leaves taken from Bt corn fields and adjacent areas died, compared to no deaths of those exposed to normal corn pollen. In addition to monarchs, some of the 19 species of butterflies and moths on the U.S. Endangered Species List may also be at risk from the toxic pollen if they eat plants near Bt-corn fields.

Monsanto has stated that an important advantage of the crop is reduction or elimination of spraying of broad-spectrum insecticides to control the European corn borer. However, according to the Union of Concerned Scientists and other experts, based on figures from the National Agricultural Statistics Service, U.S. field corn is not often sprayed for European corn borer or any other insect, especially in the heart of the corn belt. Therefore, little if any reduction in insecticide use can be expected as a result of planting Bt-corn.

The Cornell study is not the only one to suggest that Bt crops are far from benign. Swiss scientists last year showed detrimental effects on beneficial insects that ate corn pests that had been fed Bt corn. Other scientists have shown that Bt toxins accumulate in the soil and may adversely affect soil ecosystems. And there is near universal scientific consensus that widespread use of Bt corn and other Bt crops will accelerate the evolution of resistance to Bt toxins in insect pests. Once pests are resistant to Bt, organic growers and everyone else who relies on Bt to control pests will lose an effective, natural biocontrol agent.

PANNA is advocating that EPA deny any further approvals and renewals of Bt corn and institute a moratorium on further planting of Bt crops until independent and comprehensive studies can be conducted on the short and long-term ecological effects of large scale release of organisms engineered to contain Bt toxins.

Sources:

Union of Concerned Scientists press release, May 20, 1999;
UCS Fact Sheet: Monarch Butterflies, Bt Corn and
Toxic Pollen, May 19, 1999

Monsanto Statement on Bt Corn: Environment and a Recent
Report on the Monarch Butterfly, May 20, 1999

L. Hansen and J. Obrycki, "Non-target effects of Bt corn
pollen on the Monarch butterfly (Lepidoptera:
Danaidae)," abstract of a poster presented at the North
Central Branch meeting of the Entomological Society
of America, March 29, 1999, available at [http://
www.ent.iastate.edu/entsoc/ncb99/prog/abs/d81.html](http://www.ent.iastate.edu/entsoc/ncb99/prog/abs/d81.html)

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found on page 2.

Joel Funk has moved and taken a new job. He was
previously a postdoc in George Rohrmann's lab at
Oregon State University (from 1992-1998) working on
late transcription of AcMNPV and baculovirus
genomics. In August 1998, he started a position
working at the USDA-ARS Western Cotton Research
Laboratory in Phoenix, Arizona as a Research
Entomologist. His primary research interest is on the
nutritional physiology of the silverleaf whitefly,
including the role of the symbiotic bacteria in host

physiology. He's also interested in the discovery and
characterization of novel pathogens of cotton insects.

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Dr. Tariq Butt left IACR-Rothamsted in February
1999 to take up a lectureship at the University of
Wales Swansea. Tariq will be lecturing and
continuing his research on entomogenous fungi, and
the development of novel IPM strategies. His first
major task at Swansea is organizing the International
Symposium on Biological Control Agents in Crop and
Animal Protection (24-28 August, 1999).

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Techniques in Insect Immunology, A. Wiesner, G. B. Dunphy, V. J. Marmaras, I. Morishima, M. Sugumaran & M. Yamakawa (Eds) 1998, SOS-Publications, Fair Haven, New York, USA
 ISBN 1-88-7052-05-4,
 LCC 97-062347, 304 pp.
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This laboratory manual summarizes a number of key methods used by insect immunologists. It should be helpful for those already working in this field and, especially, for scientists with general interest in this research topic as a methodical guide for the first steps. The experiments are described in detail, with step-by-step directions. Basic procedures for activation, detection, quantification and characterization of cellular and humoral defense reactions are given, along with protocols for more detailed investigations of cell differentiation and isolation of insect immune factors. Population genetic aspects, viral pathology and comparative studies revealing similarities with the vertebrate immune system are also included.

The results described in the chapters show remarkable progress in our understanding of insect immunology. Simultaneously, the large number of still-unanswered questions make us realize that we have a lot left to learn about these fascinating animals.

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Nematode Video

A 30 minute video entitled "**Insect Parasitic Nematodes: Tools for Pest Management**" is now available. It is primarily intended for use by extension agents, but it will also be useful to industry and for classroom purposes. The Video was primarily funded by a grant to Dr. Randy Gaugler and Rutgers University from the USDA Northeast Sustainable Agriculture Research and Extension Program. Additional financial help was supplied by SIP's Microbial Control Division and others. Both standard VHS and European (PAL) versions are available. Copies of the video may be obtained free of charge by sending an e-mail to:

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Principles of Insect Pathology by Drion G. Boucias and Jacquelyn C. Pendland, Dept. of Entomology and Nematology, University of Florida, Gainesville, USA

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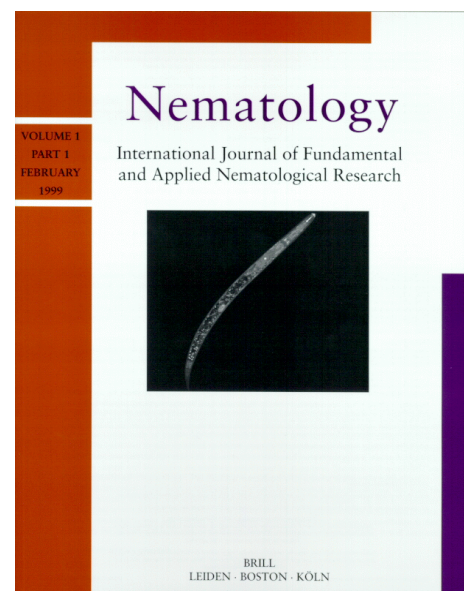
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POSITIONS WANTED

Post-Doctoral Position Wanted

I will graduate in early 2000 as Doctor in Biological Sciences (UNC; Argentina) and am presently seeking a post-doctoral position. My thesis title is "Epizootiology of entomopathogenic fungi on defoliating lepidopteran larvae in soybean crops", and my research is being supervised by R.E. Lecuona (Dr.) (IMYZA, INTA) & E.V. Trumper (Dr.) (EEA Manfredi, INTA).

I have conducted research in Invertebrate Pathology since 1995, including field monitoring, fungus isolation on artificial media, culture media design and epizootic mathematical modeling. I also have expertise in Entomology and Insect Integrated Pest Management, including a minor in Entomology.

Publications: I have three papers published in international refereed journals, and I will be shortly submitting four more. I also have two extension papers in IPM.

Scientific Meetings: Nine presentations at national and international congresses and meetings. Experience in teaching and advising at undergraduate and high school levels.

Languages: Spanish, English and Portuguese.

Julio D. Edelstein

Nicanor Carranza St. N° 3861

Postal Code: 5009.

Cordoba, Argentina.

Tel: 54-351-481-1397

E-mail: edelstein@arnet.com.ar

Post-doctoral Position Wanted in Canada

Ph.D with experience in the field of insect pathogens, lepidopterous insects, mites and parasitoids. Work has included biological and microbial control, ecology, policy for their release. Experience relative to commercial development of entomopathogens, and parasitoids for insect pest control as well as their introduction, risk assessment and evaluation for classical biological control. Field and biotron work has been on vegetable, arable and tree row crops.

Work has included field plot techniques and sampling, many bioassay techniques, probit and statistical analyses, detection of virus and other entomopathogens in soil, restriction enzyme of viral DNA, molecular cloning, PCR and sequencing training, insect rearing, disease diagnosis and histology.

I have the ability to conduct multidisciplinary research projects. I have a broad experience and interest microbial and biological control, molecular biology, biotechnology and field research. Willing to relocate.

George Kwaku KYEI-POKU
Department of Biology
Utah State University
Logan, Utah 84322-5305
Tel: (435) 797 6603
Fax: (435) 797 6603
E-mail: gkyei@biology.usu.edu

Expert in Fungal Mass Production Seeks Post-doctoral Position in Microbial Control

I am a Chinese PhD in Microbiology, aged 35, presently pursuing a post-doc or visiting scholar position in the field of Bio-control of Insects, Microbiology and/or Biotechnology at CINVESTAV in Mexico. My main experience and achievements include the development of methods for submerged production of conidia of *Paecilomyces fumosoroseus* and *Trichoderma harzianum*; eight years of research on gibberellin A4/7 fermentation with the fungus *Fusarium moniliforme*, from flask level to 30 ton fermentor level, building up skills for industrial production of GA4/7 in China; ten years teaching of General Microbiology and Industrial Microbiology in China Agricultural University.

Dr. Zengguo He
Department of Biotechnology and Bioengineering,
CINVESTAV I. P. N., Av.
IPN 2508, Col. San Pedro Zacatenco,
Mexico D F, C P 07360, Mexico.
Tel: 52-5-57477000 Ext. 4357
Fax: 52-5-57477002
E-mail: zengguo@mail.cinvestav.mx.

POSITIONS AVAILABLE**Research Entomologist**

USDA-ARS (Southeastern Fruit & Tree Nut Research Laboratory, Byron, Georgia) invites applicants for a permanent research position in entomology that focuses on arthropod pathology. The incumbent will be responsible for planning, conducting, and reporting research in the area of nonchemical alternatives with emphasis on use of microbial agents, to the use of chemical pesticides, to control fruit and foliar pests of pecan. Specific objectives of the research include development and implementation of practical strategies using arthropod pathogens to control pecan weevil, black pecan aphid, and pecan leaf scorch mite without application of chemical pesticides to the canopy. The research is expected to result in the stability and availability of high quality nut meats and fruit while maintaining or enhancing profitability to growers as environmental harm is minimized.

Qualifications are a MS or PhD degree in entomology or a related discipline of the biological or physical sciences that included at least 16 semester hours in entomology. Knowledge of field /orchard/forest management strategies, potential biological control agents and their actions and interactions, and an ability to identify and culture arthropod pathogens are desirable. Selective placement factors include knowledge of arthropods, arthropod pathogens, and use of pathogens in agricultural settings; ability to plan, conduct, and report research related to biological control, insect pathology, and integrated pest management. The position is open until July 19, 1999, to all U.S. Citizens and is available at the GS-11 (\$39,960 - \$51,946), GS-12 (\$47,891 - \$62,260), or GS-13 (\$56,951 - \$74,035 per annum) level. For more

information and for application contact the following internet address:

www.ars.usda.gov
or call 301-604-1482 or 1484.

Note that the announcement number is ARS-X9S-9260.

Postdoctoral Position, Insect midgut biochemistry and microbial pathogenesis

Position available to study the biochemical and molecular structure of Insect peritrophic membranes. Studies will include the cloning and sequencing of midgut genes encoding pm structural proteins. The role of mucins and other pm chitin binding proteins as components of the intestinal mucosal immune system against baculoviruses and other pathogens will be examined. The successful candidate should have a background in microbiology, biochemistry, molecular biology or a related discipline. Experience in cloning and sequencing, protein purification, expression, and immunology is desirable. One to two year appointment available. Salary commensurate with experience. Send curriculum vitae, names and addresses of 3 references, and a brief description of research interest.

Dr. Robert R. Granados
Boyce Thompson Institute for Plant Research
Cornell University
Ithaca, New York 14853
Tel: (607) 254-1265; Fax: (607) 254-1242
E-mail: rg28@cornell.edu

MS Graduate Research Assistantship: Transmission and persistence of *Beauveria bassiana* in Colorado potato beetle populations, University of Maine.

Available Fall 1999 - I have a graduate research assistantship available for a student to work on a project focused on the persistence and cycling potential of the insect pathogenic fungus, *Beauveria bassiana*, in Colorado potato beetle populations.

Please contact:
Ellie Groden,
E-mail: groden@umit.maine.edu

Tel: (207) 581-2984
306 Deering Hall,
Dept. of Biological Sciences,
University of Maine,
Orono, ME, 04469

USDA Postdoctoral Position in Baculoviruses

United States Department of Agriculture, Agricultural Research Service is recruiting for a postdoctoral position, #RA-99-45H, for the development of a baculovirus viral attachment protein (VAP) as a vector of insecticidal toxins. Recombinant VAPs will be expressed in plant systems to provide resistance to insect pests. Candidates should have experience in molecular biology.

For more information, consult
“<http://www.ars.usda.gov/afm/hrd/hrdhomepage/vacancy/99-45H.HTM>”

Please submit an application along with names and telephone numbers of three references to:

Dr. Edward M. Dougherty,
Insect Biocontrol Laboratory,
Bldg. 011A, Room 214,
BARC-West, Beltsville, MD 20705,
Tel: (301)-504-5689
Fax: (301)-504-5104

USDA is an equal opportunity provider and employer.

Technical Assistant, Insect Pathology, Illinois Natural History Survey (pending position)

Assistant in taxonomy, biology, epizootiology and physiology of insect pathogens within context of basic biology and biocontrol projects. Maintain insect colonies, assist with experiments, diagnostics, processing tissues for TEM. Maintain lab, equipment and pathogen collection., supervise hourly employees, some data entry. Potential for related graduate work (within the scope of research goals for the lab) in one of several Univ. of Ill. departments.

Qualifications: BSc in Entomology, Biology, Zoology, or related field. Some experience with

organismal microbiology required (undergrad. course ok). Contact:

Dr. Lee Solter
Illinois Natural History Survey
607 E. Peabody Dr.
Champaign, IL 61820
Tel: (217)-244-5047
Fax: 217-333-6784
E-mail: l-solter@uiuc.edu

Postdoctoral Associate to work on entomophthoralean production

A position is available to work on development of methodology for in vitro production of entomophthoralean resting spores. Ph.D. (or possibly M.S.) required. Responsibilities include conducting research, and summarization, analysis and written description of findings. This position is for 1.5 years. Send letter of application, curriculum vitae, and names addresses and phone numbers (or e-mail addresses) for 2-3 references to:

Dr. Ann E. Hajek
Dept. Entomology
Cornell University
Ithaca, NY 14853-0901
E-Mail: aeh4@cornell.edu

Doctoral/Masters Graduate Research Assistantship. Entomology Research Laboratory University of Vermont, Burlington, VT

A research assistantship (tuition waived plus a stipend) is available beginning in the spring semester, 2000. The student will work with a multi-disciplinary group of scientists and will be integrated into funded research programs on various aspects related to the use of entomopathogenic fungi. These include investigations on factors affecting the insect-infection process in greenhouse crops, such as how plant-mediated processes influence the development of mycoses, or assessing practical ways of promoting the infection process in key pests of ornamentals, or integrating fungal use with other crop management practices. Opportunities also exist to participate in international collaborative projects.

The Entomology Lab hosts an eclectic, international group of scientists and graduate students, with expertise in insect pathology, microbiology, entomology and IPM. This provides a challenging and supportive research environment and access to excellent lab facilities and research greenhouses. The Lab maintains strong links to the grower community and seeks to address issues related to the practical implementation of biologically-based IPM strategies.

Situated in the heart of the Green Mountains and only an hour from New York's Adirondack Mountains, the area boasts breathtaking scenery and opportunities for a range of year-round outdoor activities, coupled with all the conveniences and amenities of the State's largest city.

Applicants should ideally have a background in insect pathology, entomology or microbiology, although those with relevant experience in other disciplines will also be considered.

Closing date for applications: Sept 15, 1999

UVM is an equal opportunity employer.

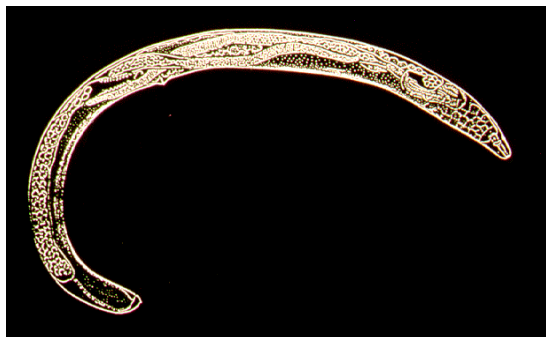
Candidates should send a letter of application and resume, complete with a list of three independent referees and a statement of research interests, or contact:

Dr. Michael Brownbridge
Entomology Research Laboratory
University of Vermont
P.O. Box 53400
Burlington, VT 05405-3400
USA

Tel: (802) 656-5440; Fax: (802) 658-7710
E-mail: mbrownbr@zoo.uvm.edu

FUTURE MEETINGS

National Workshop on Optimal Use of Insecticidal Nematodes in Pest Management, Rutgers University, Cook College Continuing Professional



Education Programs (In cooperation with Rutgers Cooperative Extension), New Brunswick, NJ, USA, August 29-30, 1999

Scope and Purpose Insecticidal nematodes are increasingly being used in IPM programs for managing a wide array of pest species in diverse cropping systems. Field efficacy of these nematodes is often inconsistent and is affected by parameters such as nematode choice, temperature, application method, storage and handling, formulation quality, irrigation frequency, and soil type. In short, insecticidal nematodes like other biocontrol agents require a knowledgeable user to achieve optimal results.

The purpose of this two-day workshop is to provide comprehensive information on insecticidal nematode biology and life history, appropriate choice of nematode species, factors affecting field efficacy, storage and handling, and field application methods etc. to individuals who are in an advisory capacity to end-users. The workshop will include a classroom session, a hands-on laboratory session, and a field demonstration session. Speakers for this workshop will include leading research and extension faculty from land-grant universities, USDA, and private industry.

Who Should Attend? This workshop is designed for anyone who is in an advisory capacity to end-users. We are specifically targeting Extension Specialists, County Agricultural Agents and staff, Golf Course Superintendents, pesticide suppliers, field development representatives, greenhouse and home garden suppliers, private IPM consultants, etc. Growers who use insecticidal nematodes on a regular basis are also encouraged to attend. Field

demonstration session will focus on insecticidal nematode use in turf and ornamental, cranberry, strawberry, and citrus cropping systems. Therefore, professionals serving these industries are especially encouraged to attend.

Workshop Location The workshop will be held on Rutgers' Cook College campus in New Brunswick, NJ. The lecture and laboratory sessions on August 29 will be held in Foran Hall, Cook College campus, New Brunswick. The field demonstration session on August 30 will be held at Snyder Research and Extension Farm, NJ Agricultural Experiment Station, Pittstown, NJ. Directions will be provided to you with your confirmation of registration.

Visit us online at:

www-rci.rutgers.edu/~insects/nemawork.htm

Registration Information This workshop is limited to 75 participants. Registration is on a first-come, first-served basis. **The deadline for registration is August 10, 1999.** After this date, you must call our Registration Desk to check space availability. The registration fee is \$150 and covers lunch, dinner, and breaks during the workshop. Transportation to Snyder Research and Extension Farm is also included. In addition, participants will receive a copy of the instructional video, slide set, fact sheets, educational wall poster, and other workshop materials. To register:

By Phone: (732) 932-9271 ext. 628, Monday to Friday, 8:30 a.m. to 4:00 p.m. Please have your MasterCard or VISA number ready.

By FAX: (732) 932-1187, 24 hours. Please fax a copy of your check, money order or purchase order.

By Mail: Mail the enclosed Registration Form (back panel) to Registration Desk, Cook College Office of Continuing Professional Education, Rutgers University, 102 Ryders Lane, New Brunswick, NJ 08901-8519.

For Further Information contact:

Dr. Sridhar Polavarapu,
Workshop Coordinator,

Rutgers Blueberry and Cranberry Research and Extension Center

Tel: (609) 726-1590 Ext. 12

E-mail at polavarapu@aesop.rutgers.edu.

You may also call Keith Wilson at the Office of Continuing Professional Education,

Tel: (732) 932-9271.

The Second International Workshop on the Molecular Biology of *Bacillus cereus*, *Bacillus anthracis* and *Bacillus thuringiensis*, Taos, New Mexico, USA, August 11 - 13, 1999

Talks and posters will address the molecular biology of these three closely related species and its relationship to the biochemistry, physiology and phenotypic characteristics of these species. Tentative session topics are:

- *Bacillus thuringiensis*: Genetics, toxins and interactions with host organisms.

- *Bacillus* species genomics including characterization and sequencing of plasmids and their genes.

- The molecular biology of *Bacillus anthracis* and *B. anthracis* virulence genes.

- *Bacillus cereus* genetics, molecular biology and their physical manifestations.

- Phylogenetic relationships among *B. cereus*, *B. anthracis* and *B. thuringiensis*.

Speakers will be selected primarily on a review of their abstracts by a committee composed of contributors to the previous workshop and experts on the molecular biology of these microbes. There will also be a poster session. Please indicate whether you prefer to present a talk or poster when you submit an abstract. Those not chosen to speak will automatically be provided an opportunity to present a poster.

Please refer to the conference web site (<http://www.losalamos.com/bacillus>) for more information. If you do not have access to the Internet, please contact me by telephone, FAX or at this e-mail address.

Paul J. Jackson,

Technical Workshop Host Group Leader
Environmental Molecular Biology Group, LS-7
Mail Stop M888

Los Alamos National Laboratory

Los Alamos, NM 87545

Tel: (505) 667-2775 (office); (505) 667-2790 (lab)

Fax: (505) 665-6894

EDITOR'S NOTES

Thank you to everyone who contributed to this issue. Karen Toohey did the typing and initial layout while Peg Johnson arranged for the printing and distribution.

We apologize that the quality of the photos in the last issue was substandard. We are working with the printer to ensure that this does not happen again.

If you receive this issue after July 25, 1999, we'd like to hear from you!

Deadline for the next issue. Please submit all material by **October 15, 1999**, for publication in the November, 1999 issue.

PROPOSED CHANGES TO THE CONSTITUTION AND BYLAWS

The proposed changes to the Constitution were published in the last Newsletter and were ratified by membership ballot. Proposed changes in the SIP Bylaws are printed below and will be decided upon at the business meeting in Irvine on August 26, 1999.

Every attempt was made to publish the present and proposed Bylaws side by side. However, due to the extent of the changes, a certain point is reached where this is no longer possible.

BYLAWS

BYLAWS (with proposed changes)

NB: Articles concerning Branches and Boards (formerly Articles V and VII) have been deleted and other Articles renumbered.

ARTICLE I MEMBERS
 ARTICLE II ELECTIVE OFFICERS
 ARTICLE III EXECUTIVE OFFICERS
 ARTICLE IV COUNCIL
 ARTICLE V BRANCHES
 ARTICLE VI DIVISIONS
 ARTICLE VII BOARDS
 ARTICLE VIII COMMITTEES
 ARTICLE IX REPRESENTATIVES
 ARTICLE X ARCHIVES
 ARTICLE XI MEETINGS
 ARTICLE XII FINANCES
 ARTICLE XIII PUBLICATIONS AND COMMUNICATIONS
 ARTICLE XIV PARLIAMENTARY PRACTICES
 ARTICLE XV LANGUAGE AND INTERPRETATION

ARTICLE I MEMBERS
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 ARTICLE IX MEETINGS
 ARTICLE X FINANCES
 ARTICLE XI PUBLICATIONS AND COMMUNICATIONS
 ARTICLE XII PARLIAMENTARY PRACTICES
 ARTICLE XIII LANGUAGE AND INTERPRETATION
 ARTICLE XIV AMENDMENTS

ARTICLE XVI AMENDMENTS

ARTICLE I. MEMBERS

ARTICLE I. MEMBERS

Section 1. Full Members. A person who qualifies under the Constitution (CONSTIT. ART. III, Sec. 2), who has been approved by a majority of the Membership Committee, and who has been certified by the Treasurer of the SOCIETY, shall become a Full Member upon payment of dues for the first year of membership. Each Full Member in good standing shall be entitled to the privileges so listed in the Constitution and in the Bylaws of the SOCIETY, and as further specified by the Council.

Section 1. Full Members. A person who qualifies under the Constitution (CONSTIT. ART. III, Sec. 2), **[wording deleted]** who has been certified by the Treasurer of the SOCIETY, shall become a Full Member upon payment of dues for the first year of membership. Each Full Member in good standing shall be entitled to the privileges so listed in the Constitution and in the Bylaws of the SOCIETY, and as further specified by the Council.

Section 2. Student Members. A student who qualifies under the Constitution (CONSTIT. ART. III, Sec. 3), whose bona fide status as a student has been certified by the Chairperson or equivalent of the student's major department in the college or university in which such student is enrolled, who has been approved by a majority of the Membership Committee, and who has been certified by the Treasurer of the SOCIETY, shall

Section 2. Student Members. A student who qualifies under the Constitution (CONSTIT. ART. III, Sec. 3), whose bona fide status as a student has been certified by the Chairperson or equivalent of the student's major department in the college or university in which such student is enrolled, **[wording deleted]** and who has been certified by the Treasurer of the SOCIETY,

become a Student Member upon payment of dues. Student membership must be renewed annually, and student status certification must be submitted annually to the Treasurer along with dues payment.

Section 3. Emeritus Members. A Full Member who qualifies under the Constitution (CONSTIT. ART. III, Sec. 4), who has made application to the Treasurer of the SOCIETY, and whose qualifications for Emeritus status shall have been certified by the Treasurer, shall be considered so nominated. If the nomination is approved by a majority of the Membership Committee, such Full Member shall be declared elected an Emeritus Member of the SOCIETY.

Section 4. Honorary Members. The nomination of a person who qualifies for Honorary Membership under the Constitution (CONSTIT. ART. III, Sec. 5) may be proposed in writing to the Secretary of the SOCIETY. The following information shall be included in the nomination proposal: (a) A letter signed by at least ten Full Members; (b) A curriculum vitae of the nominee; (c) A list of the nominee's scientific publications; (d) A statement summarizing the nominee's superior contributions to invertebrate pathology and/or the nominee's distinguished service to the SOCIETY. The Secretary shall review the information and transmit it to the Council. Duly proposed candidates shall be considered by the Council and shall be declared nominated upon receiving the endorsement of four-fifths of the Council members voting. If more than three names have been proposed, they shall be ranked in priority by the Council. The names of three nominees shall be placed on the biennial ballot along with nominations for Officers and for Trustees. A nominee for Honorary Membership shall be declared elected if affirmed by two-thirds of the votes cast.

Section 5. Sustaining Members. A person, commercial company, or organization eligible under the Constitution (CONSTIT. ART. III, Sec. 6), who has applied in due form, who has paid the first year's sustaining dues (as stipulated by the Council), who has been approved by a majority of the Membership Committee, and who has been certified by the Treasurer, shall be declared elected a sustaining Member of the SOCIETY.

shall become a Student Member upon payment of dues. Student membership must be renewed annually, and student status certification must be submitted annually to the Treasurer along with dues payment.

Section 3. Emeritus Members. A Full Member who qualifies under the Constitution (CONSTIT. ART. III, Sec. 4), who has made application to the Treasurer of the SOCIETY, and whose qualifications for Emeritus status shall have been certified by the Treasurer, shall be considered so nominated. If the nomination is approved by a majority of the Membership Committee, such Full Member shall be declared elected an Emeritus Member of the SOCIETY.

Section 4. Honorary Members. The nomination of a person who qualifies for Honorary Membership under the Constitution (CONSTIT. ART. III, Sec. 5) may be proposed in writing to the Secretary of the SOCIETY. The following information shall be included in the nomination proposal: (a) A letter signed by at least ten Full Members; (b) A curriculum vitae of the nominee; (c) A list of the nominee's scientific publications; (d) A statement summarizing the nominee's superior contributions to invertebrate pathology and/or the nominee's distinguished service to the SOCIETY. The Secretary shall review the information and transmit it to the Council. Duly proposed candidates shall be considered by the Council and shall be declared nominated upon receiving the endorsement of four-fifths of the Council members voting. If more than three names have been proposed, they shall be ranked in priority by the Council. **The names of up to three nominees** shall be placed on the biennial ballot along with nominations for Officers and for Trustees. A nominee for Honorary Membership shall be declared elected if **affirmed by at least two-thirds of the votes cast.**

Section 5. Sustaining Members. A person, commercial company, or organization eligible under the Constitution (CONSTIT. ART. III, Sec. 6), who has applied in due form, who has paid the first year's sustaining dues (as stipulated by the Council), **[wording deleted]** and who has been certified by the Treasurer, shall be declared elected a sustaining Member of the SOCIETY.

Section 6. Resignation. Members in good financial standing have the right to resign.

Section 7. Members in Arrears for Dues. A member shall become delinquent upon failure to pay dues within the calendar year. A written notice shall be sent to a person in arrears for dues at least two months before any further action in the matter is taken. No member in arrears for dues shall receive the publications of the SOCIETY or benefit from special subscription rates to journals arranged by the SOCIETY until all arrears shall have been paid. Having failed to pay dues for two successive calendar years, delinquent members shall be dropped from the membership list and shall be so notified by the Treasurer, in writing. Reinstatement shall be by the procedure for election of new members (this Article, Sec. 1).

Section 8. Removal from Membership. The SOCIETY has the right to terminate the membership of any member for due cause, but except for nonpayment of dues (this Article, Sec. 7), the accused shall be entitled to answer the charges in writing. Charges may be considered only as to conduct which in any wise tends to injure the SOCIETY, affects its reputation adversely, or is inimical to, or destructive of, the objects of the SOCIETY. Charges must be presented in writing to the President by five or more Full Members with a full statement of the evidence on which the charges are based. The President shall ask the accused to answer the charges in writing. The charges and the answer by the accused shall be reviewed by the Council. The Council shall decide whether the accusations shall be dropped without further action; whether additional information is needed; whether the accused shall be allowed to resign from membership; or whether the accused shall be removed from membership. Removal from membership requires approval by two-thirds of the Council Members voting. The Secretary shall notify the accused of the Council's decision in writing.

ARTICLE II. ELECTIVE OFFICERS

Section 1. Nominations. The Nominating Committee shall make one nomination for President (the Vice President then in office), and one or more nominations

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Section 8. Removal from Membership. The SOCIETY has the right to terminate the membership of any member for due cause, but except for nonpayment of dues (this Article, Sec. 7), the accused shall be entitled to answer the charges in writing. Charges may be considered only as to conduct which in any wise tends to injure the SOCIETY, affects its reputation adversely, or is inimical to, or destructive of, the **objectives** of the SOCIETY. Charges must be presented in writing to the President by five or more Full Members with a full statement of the evidence on which the charges are based. The President shall ask the accused to answer the charges in writing. The charges and the answer by the accused shall be reviewed by the Council. The Council shall decide whether the accusations shall be dropped without further action; whether additional information is needed; whether the accused shall be allowed to resign from membership; or whether the accused shall be removed from membership. Removal from membership requires approval by two-thirds of the Council Members voting. The Secretary shall notify the accused of the Council's decision in writing.

ARTICLE II. ELECTIVE OFFICERS

Section 1. Nominations. The Nominating Committee shall make one nomination for President (the Vice President then in office), and one or more nominations

each for Vice President, Secretary, and Treasurer. To facilitate operation of the SOCIETY as a corporation exempted from Federal income tax under United States Internal Revenue laws (CONSTIT. ART. VII, Sec. 3, and Articles of Incorporation, State of Maryland, United States of America), nominees for Treasurer shall be citizens of the United States of America. On or before the first day of January of the year in which officers are to be elected, the Nominating Committee shall certify these Nominations to the Secretary, who shall announce them in SIP Newsletter along with brief biographical sketches, on or before the next succeeding first day of February. Additional nominations for office may be made, but such nominations shall be valid only if presented in a petition form over the signatures of at least ten members in good standing, and if received by the Secretary on or about the fifteenth day of March.

Section 2. Elections. The Secretary shall send, no later than the first day of April, a ballot bearing all valid nominations for office (whether made by the Nominating Committee or by petition) to all members of the SOCIETY. The ballot shall also include nominations for Trustees (ART. IV, Sec. 1) and, if any, for Honorary Membership (ART. 1, Sec. 4).

Each member shall vote for or against each of the candidates on the ballot and shall transmit it properly sealed for secrecy to the Secretary. To be counted, the sealed unmarked ballot envelope must be placed in an outer envelope, marked with the name and address of the voting member. Ballots must be received by the Secretary on or before the next succeeding first day of June.

The Secretary shall reject ballots from members who are in arrears one year or more in payment of dues, shall deliver all valid sealed ballots to Tellers appointed by the President to take charge of the election, and shall report to the Council upon ballots rejected. The Tellers shall count the ballots and report the results to the Secretary, who shall first notify each

each for Vice President, Secretary, and Treasurer. To facilitate operation of the SOCIETY as a corporation exempted from Federal income tax under United States Internal Revenue laws (CONSTIT. ART. VII, Sec. 3, and Articles of Incorporation, State of Maryland, United States of America), nominees for Treasurer shall be citizens of the United States of America. On or before the first day of **October of the year preceding that** in which officers are to be elected, the Nominating Committee shall certify these Nominations to the Secretary. **On or before the first day of January of the year in which officers are to be elected, the Nominating Committee shall provide a brief biographical sketch of each nominee to the Secretary.** Additional nominations for office may be made, but such nominations shall be valid only if presented **to the Secretary on or before the first day of January of the year in which officers are to be elected. Such nominations must be** in a petition form over the signatures of at least ten members in good standing, **accompanied by a brief biographical sketch of the nominee. All nominations will be announced, with biographical sketches, in the SIP Newsletter.**

Section 2. Elections. The Secretary shall send, no later than the first day of **March**, a ballot bearing all valid nominations for office (whether made by the Nominating Committee or by petition) to all members of the SOCIETY. The ballot shall also include nominations for Trustees (ART. IV, Sec. 1) and, if any, for Honorary Membership (ART. 1, Sec. 4).

Each member shall vote for or against each of the candidates on the ballot and shall transmit it properly sealed for secrecy to the Secretary. To be counted, the sealed unmarked ballot envelope must be placed in an outer envelope, marked with the name and address of the voting member. Ballots must be received by the Secretary on or before the **date announced by the Secretary in the SIP Newsletter.**

The Secretary shall reject ballots from members who are in arrears one year or more in payment of dues, shall deliver all valid sealed ballots to Tellers appointed by the President to take charge of the election, and shall report to the Council upon ballots rejected. The Tellers shall count the ballots and report the results to the Secretary, who shall first notify each

nominee and then announce the results in the next available issue of SIP Newsletter.

The candidates who receive the highest number of votes for the offices of Vice President, Secretary, and Treasurer, respectively, shall be declared elected. In case of a tie vote, a majority of the Council shall decide which nominee is elected.

Section 3. Terms of office. Each officer shall serve for a term of two years, said term of office to take effect at the close of the General Membership Meeting which immediately follows the election. The term of the Secretary or the Treasurer may be renewed, but no person shall serve for more than four consecutive years in one office. The term of the President or Vice President may not be renewed. Any member who has completed one or more terms as an Elective Officer of the SOCIETY can be nominated again for additional non-consecutive terms of office (this Article, Sec. 1).

Section 4. Vacancies. In the event the office of the President is vacated between elections, it shall be filled by the Vice President (CONSTIT. ART. IV, Sec. 3). At the next election, the President pro tempore shall appear on the ballot as the sole nominee for President. Vacancies occurring in other elective offices shall be filled by appointment by the President, with confirmation by a majority of the Council voting. Successors shall be duly nominated and chosen at the next election.

ARTICLE III. EXECUTIVE OFFICERS

The Executive Officers (CONSTIT. ART. IV, Sec. 4) shall carry out duties as prescribed in written Job descriptions and at a salary agreed to by each of these persons and the Secretary, as approved by the Council of the SOCIETY.

ARTICLE IV. COUNCIL

Section 1. Nominations. The Nominating Committee shall make two or more nominations for two Trustees (CONSTIT. ART. V, Sec.1). On or before the first day of January of the year in which Trustees are to be elected, the Nominating Committee shall certify these

nominee and then announce the results in the next available issue of SIP Newsletter.

The candidates who receive the highest number of votes for the offices of Vice President, Secretary, and Treasurer, respectively, shall be declared elected. In case of a tie vote, a majority of the Council shall decide which nominee is elected.

Section 3. Terms of office. Each officer shall serve for a term of two years, said term of office to take effect at the close of the General Membership Meeting which immediately follows the election. The term of the Secretary or the Treasurer may be renewed, but no person shall serve for more than four consecutive years in one office. The term of the President or Vice President may not be renewed. Any member who has completed one or more terms as an Elective Officer of the SOCIETY can be nominated again for additional non-consecutive terms of office (this Article, Sec. 1).

Section 4. Vacancies. In the event the office of the President is vacated between elections, it shall be filled by the Vice President (CONSTIT. ART. IV, Sec. 3). At the next election, the President pro tempore shall appear on the ballot as the sole nominee for President. Vacancies occurring in other elective offices shall be filled by appointment by the President, with confirmation by a majority of the Council voting. Successors shall be duly nominated and chosen at the next election.

ARTICLE III. EXECUTIVE OFFICERS

The Executive Officers (CONSTIT. ART. IV, Sec. 4) shall carry out duties as prescribed in written Job descriptions and at a salary agreed to by each of these persons and the Secretary, as approved by the Council of the SOCIETY.

ARTICLE IV. COUNCIL

Section 1. Nominations. The Nominating Committee (**Art. VIII, Sec. 4a**) shall make two or more **nominations for the two available Trustee positions** (CONSTIT. ART. V, Sec.1). On or before the first day of **October of the year preceding that** in which

nominations to the Secretary, who shall announce them in SIP Newsletter along with brief biographical sketches, on or before the next succeeding first day of February. Additional nominations for Trustees may be made, but such nominations shall be valid only if presented in a petition signed by at least ten members in good standing, and if received by the Secretary on or about the fifteenth day of March.

Section 2. Elections. The names of the nominees for Trustees shall appear on the same ballot with nominees for Elective Officers. The balloting shall be by the same procedure as described in ART. II, Sec. 2. The two candidates for Trustees who receive the highest number of votes shall be declared elected. In case of a tie vote, a majority of the Council shall decide which nominee is elected.

Section 3. Terms of Office. The term of a Trustee shall be four years, two such Trustees to be elected each two years. The term of a Trustee may be renewed, but no Trustee shall serve for more than two consecutive terms. Trustees shall assume office at the same time as Elective Officers (ART. II, Sec. 3).

Section 4. Vacancies. Vacancies between Elections occurring among the Trustees shall be filled by appointment by the President, with confirmation by a majority of the Council voting. Successors shall be duly nominated and chosen at the next election.

If the Past President is unable to continue to serve as an ex officio member of the Council, the office shall be filled for the remainder of the term by the most recent available former President.

Section 5. Transaction of Business. The Council shall hold at least one meeting annually. Two-thirds of the total voting membership of the Council shall constitute a quorum of the Council for the transaction of business in assembly. The President may invite additional persons to attend a Council Meeting, as needed, but without the privilege of voting. When, at

officers are to be elected, the Nominating Committee shall certify these Nominations to the Secretary. **On or before the first day of January of the year in which officers are to be elected, the Nominating Committee shall provide a brief biographical sketch of each nominee to the Secretary.** Additional nominations for Trustee may be made, but such nominations shall be valid only if presented to the Secretary on or before the first day of January of the year in which officers are to be elected. **Such nominations must be** in a petition form over the signatures of at least ten members in good standing, **accompanied by a brief biographical sketch of the nominee. All nominations will be announced, with biographical sketches, in the SIP Newsletter.**

Section 2. Elections. The names of the nominees for Trustees shall appear on the same ballot with nominees for Elective Officers. The balloting shall be by the same procedure as described in ART. II, Sec. 2. The two candidates for Trustees who receive the highest number of votes shall be declared elected. In case of a tie vote, a majority of the Council shall decide which nominee is elected.

Section 3. Terms of Office. The term of a Trustee shall be four years, two such Trustees to be elected each two years. The term of a Trustee may be renewed, but no Trustee shall serve for more than two consecutive terms. Trustees shall assume office at the same time as Elective Officers (ART. II, Sec. 3).

Section 4. Vacancies. Vacancies between Elections occurring among the Trustees shall be filled by appointment by the President, with confirmation by a majority of the Council voting. Successors shall be duly nominated and chosen at the next election.

If the Past President is unable to continue to serve as an ex officio member of the Council, the office shall be filled for the remainder of the term by the most recent available former President.

Section 5. Transaction of Business. The Council shall hold at least one meeting annually. Two-thirds of the total voting membership of the Council shall constitute a quorum of the Council for the transaction of business in assembly. The President may invite additional persons to attend a Council Meeting, as needed, but without the privilege of voting. When, at

the discretion of the President, the Council transacts business by mail two-thirds of the total voting membership of the Council shall constitute a quorum, provided that a reasonable time is allowed for the participation of the Councilors in the business under consideration. Any member of the Council who finds it impossible to attend Council Meetings shall be authorized to appoint a proxy to represent him or her with full voting privileges.

In the event of grave emergency, the President may suspend the annual meeting of the Council and the Council shall transact the necessary business by mail, as provided above.

Section 6. Indemnity. The Officers and Members of the Council, individually and collectively, shall be indemnified and held harmless by the SOCIETY in any action alleging injury or damage, direct or consequential, arising out of the performance of their duties, whether or not they are an Officer or Council Member at the time the allegation or allegations are brought forward; except in such cases wherein the Officers or Council Members are adjudged guilty of willful misfeasance or malfeasance in the performance of their duties.

ARTICLE V. BRANCHES

Section 1. Supervision. The Council shall exercise supervision of the Branches (CONSTIT. ART. VI, Sec. 2) through the Secretary.

Section 2. Establishment. Branches may be established by the Council in response to a request signed by at least 20 members of the SOCIETY in good standing and residing within the territory to be benefited. The Secretary shall prepare a report upon said request and submit it to the Council, along with the request.

Section 3. Geographical Limits. The territorial limits of each Branch shall be arranged with the Secretary and approved by the Council. There shall not be territorial overlapping of Branches.

the discretion of the President, the Council transacts **business by mail, telephone or electronic means**, two-thirds of the total voting membership of the Council shall constitute a quorum, provided that a reasonable time is allowed for the participation of the Councilors in the business under consideration. **The President may require hard copy signature by Council members by mail as a follow-up to items of business conducted by telephone or electronic means.** Any member of the Council who finds it impossible to attend Council Meetings shall be authorized to appoint a proxy to represent him or her with full voting privileges.

In the event of grave emergency, the President may suspend the annual meeting of the Council and the Council shall transact the necessary business by mail, as provided above.

Section 6. Indemnity. The Officers and Members of the Council, individually and collectively, shall be indemnified and held harmless by the SOCIETY in any action alleging injury or damage, direct or consequential, arising out of the performance of their duties, whether or not they are an Officer or Council Member at the time the allegation or allegations are brought forward; except in such cases wherein the Officers or Council Members are adjudged guilty of willful misfeasance or malfeasance in the performance of their duties.

NB: The article concerning Branches (formerly Article V) has been deleted and subsequent articles renumbered.

Section 4. Membership. Membership in a Branch shall be restricted to members of the SOCIETY residing within the territorial limits of that Branch.

Section 5. Administration. Branches shall elect their own officers and committees, may assess dues additional to the normal dues of the SOCIETY, may collect and manage their additional funds, and may make rules for their government, provided that all their acts and rules shall not be inconsistent with the Constitution and Bylaws of the SOCIETY. The Bylaws of each Branch shall be subject to the approval of the Council of the SOCIETY.

Section 6. Reports to the Secretary. The Chairperson of each Branch shall transmit to the Secretary of the SOCIETY the names of all its officers and members of standing committees within three weeks of their election, or appointment, and shall also promptly notify the Secretary of any changes that may have taken place among the said officials. (Each year the Secretary of each Branch must certify the number of members of the Branch to the Secretary of the SOCIETY.)

Section 7. Termination. A Branch failing to maintain for two successive years a minimum of 20 members in good standing shall automatically forfeit its title and rights as a Branch of the SOCIETY. The Council may dissolve a Branch for good and sufficient reason.

ARTICLE VI. DIVISIONS

Section 1. Supervision. The Council shall exercise supervision of the Divisions (CONSTIT. ART. VI, Sec. 3) through the Secretary.

Section 2. Establishment. Divisions may be established by the Council in response to a request signed by at least 20 members of the SOCIETY in good standing and with common scientific interests. The petitioners shall show that no less than 50 members of the SOCIETY would choose to become divisional members as soon as the Council approves the establishment of the Division. The Secretary shall prepare a report upon said request and submit it to the Council, along with the request.

ARTICLE V. DIVISIONS

Section 1. Supervision. The Council shall exercise supervision of the Divisions (CONSTIT. ART. VI, Sec. 3) through the Secretary.

Section 2. Establishment. Divisions may be established by the Council in response to a request signed by at least 20 members of the SOCIETY in good standing and with common scientific interests. The petitioners shall show that no less than **20** members of the SOCIETY would choose to become divisional members as soon as the Council approves the establishment of the Division. The Secretary shall prepare a report upon said request and submit it to the Council, along with the request.

Section 3. Membership. Membership in a Division shall be restricted to Members of the SOCIETY. A member may indicate annually one or more preferred divisional affiliations on an appropriate form included with the annual dues notice, and thereby may vote for the officers of the Division or Divisions specified. Membership in a Division shall remain effective until the member fails to pay or chooses not to pay annual dues for that Division. A member cannot be an officer and cannot hold appointive positions in more than one Division simultaneously.

A Division shall consist of at least 50 members.

Section 4. Administration. Divisions shall elect their own officers and committees, may assess dues additional to the normal dues of the SOCIETY, may collect and manage their additional funds, and may make rules for their government, provided that all their acts and rules shall not be inconsistent with the Constitution and Bylaws of the SOCIETY. The Bylaws of each Division shall be subject to the approval of the Council.

Section 5. Annual Meeting Program Committee Membership. The Chairperson of each Division or a duly appointed divisional Representative, shall be an ex officio Member of the Program Committee (ART. VIII, Sec. 4, c).

Section 6. Reports to the Secretary. The Chairperson of each Division shall transmit to the Secretary of the SOCIETY the names of all its officers and members of standing committees within three weeks of their election or appointment, and shall also promptly notify the Secretary of any changes that may have taken place among said officials. Each year the Secretary of each Division must certify the number of members of the Division to the Secretary of the SOCIETY.

Section 7. Termination. A Division failing to maintain for two successive years a minimum of 50 members in good standing shall automatically forfeit its title and rights as a Division of the SOCIETY.

The Council may dissolve a Division when said Division shall fail to be supported by the interests of its members in the subject or subjects for the

Section 3. Membership. Membership in a Division shall be restricted to Members of the SOCIETY. A member may indicate annually one or more preferred divisional affiliations on an appropriate form included with the annual dues notice, and thereby may vote for the officers of the Division or Divisions specified. Membership in a Division shall remain effective until the member fails to pay or chooses not to pay annual dues for that Division. A member cannot be an officer and cannot hold appointive positions in more than one Division simultaneously.

A Division shall consist of at least **20 members**.

Section 4. Administration. Divisions shall elect their own officers and committees, may assess dues additional to the normal dues of the SOCIETY, may collect and manage their additional funds, and may make rules for their government, provided that all their acts and rules shall not be inconsistent with the Constitution and Bylaws of the SOCIETY. The Bylaws of each Division shall be subject to the approval of the Council.

Section 5. Annual Meeting Program Committee Membership. The Chairperson of each Division or a duly appointed divisional Representative, shall be a Member of the Program Committee (ART. VIII, Sec. 4, c).

Section 6. Reports to the Secretary. The Chairperson of each Division shall transmit to the Secretary of the SOCIETY a report which contains the names of all its officers and members of standing committees within three weeks of their election or appointment, and shall also promptly notify the Secretary of any changes that may have taken place among said officials. **[wording deleted]**

Section 7. Termination. A Division failing to maintain for two successive years a minimum of **20 members** in good standing shall automatically forfeit its title and rights as a Division of the SOCIETY.

The Council may dissolve a Division when said Division shall fail to be supported by the interests of its members in the subject or subjects for the

consideration of which it was organized, or when the developments of science and the interests of the SOCIETY require the reapportionment of subjects.

ARTICLE VII. BOARDS

Section I. Appointment. Chairpersons and Members of Boards shall be appointed by the President, with approval by the Council. Executive Officers of the SOCIETY may serve as Board Members ex officio without vote (CONSTIT. ART. IV, Sec. 4).

Section 2. Terms of Office. Chairpersons of Boards will serve for a term of five years. Appointment of Members to Boards shall be made for terms to provide for new membership and yet maintain continuity. No person shall hold the Chair more than two terms on the same Board, and no Member shall serve for more than ten consecutive years on the same Board, unless he or she is appointed to the Chair, in which case the total term of consecutive service on the same Board shall be no more than fifteen years.

Section 3. Concurrent Position. An Elective Officer (CONSTIT. ART. IV, Sec. 1) or a Trustee may not hold concurrently a Board Chair. A Board Chairperson shall not serve concurrently as Chairperson or voting member of a constituent Committee under his or her jurisdiction.

Section 4. Reports to the Council. Chairpersons shall report on the activities of the Boards in writing, in advance of the General Membership Meeting. The reports shall be addressed annually to the Council through the Secretary of the SOCIETY, unless specifically excused by the President.

Section 5. Functions. The functions of each Board shall be as specified in the following sections. Charges to and responsibilities of Boards additional to those stated in the Constitution and Bylaws shall be clearly defined in writing by the President, subject to approval by the Council.

Section 6. Publications Board.

(a) The SOCIETY may publish scientific communications as monographs or as periodicals when necessary or desirable to further the objectives of the SOCIETY (CONSTIT. ART. II). The planning,

consideration of which it was organized, or when the developments of science and the interests of the SOCIETY require the reapportionment of subjects.

Section 8. Publications. A Division may sponsor publication of scientific communications. The Division Chairperson must notify the President of the Society and the Chairperson of the Publications Committee of the Division's intent to publish such communication. Such publications shall then be coordinated with the Publications Committee of the Society.

Section 9. By-Laws for Divisions. Divisions shall adhere to the By-Laws of the Society and shall adhere to the SIP BY-LAWS FOR DIVISIONS (hereinafter referred to as the Division By-Laws).

NB: The article concerning Boards (formerly Article VII) has been deleted and subsequent articles renumbered. Portions of the former article have been moved to newly-numbered Article VI, Committees.

ARTICLE VI. COMMITTEES

Section 1. Appointment and Terms of Office. The President shall appoint Standing Committees as delineated in this Article. In addition, Special Committees may be appointed or reappointed at any time by the President, with or without approval by the Council, as the occasion arises. **[wording deleted]** All committee appointments shall be made for a term coincident with that of the President unless otherwise provided in this Article. No individual may serve on the same Standing Committee for more than four consecutive years.

Section 2. Functions. Standing Committees aid in the management of the SOCIETY. Specific functions of the Standing Committees are given in Section 4 of this Article. Special Committees may be ad hoc or continuous. They perform special functions that aid in conducting SOCIETY business or in reaching the objectives of the SOCIETY as defined in CONSTIT. ART. II.

Section 3. Reports to Council. Chairpersons of the Standing and Special Committees shall report in

organization, and administration of publications shall be governed by the Publications Board. The Publications Board shall coordinate the editorial policies of all publications of the SOCIETY, and shall advise the Council on all matters relating to publication.

(b) Voting Members of the Publications Board shall be the Board Chairperson, the President of the SOCIETY and the Editor or Editor-in-Chief of each SOCIETY publication.

(c) Nonvoting Members of the Board shall include the Vice President and the Treasurer of the SOCIETY.

(d) The Publications Board shall advise the Council on the prices to members and to nonmembers of all books, monographs, and periodicals published or sponsored by the SOCIETY.

Section 7. Meetings Board.

(a) The promotion of scientific knowledge of pathology of invertebrates and of related subjects through discussions and reports (CONSTIT. ART. II) is a primary objective of the SOCIETY and it shall be governed by the Meetings Board.

(b) Specific duties of the Meetings Board shall be to generate suggestions for sites for the SOCIETY's Annual Meetings; to investigate the feasibility and desirability of holding Meetings at these sites; to recommend to the Council preferred Meeting sites three to four years in advance; to suggest timely themes for the Annual Meeting in balance with the strengths and interests of the host Branch or host Institution. The Board shall strive to maintain an international balance in choosing sites for the SOCIETY's Annual Meetings.

(c) The Meetings Board shall consist of a Board Chairperson, appointed by the President, with approval by the Council, and two Members, nominated by the Board Chairperson and appointed by the President, with approval by the Council. One of the two Members shall have been Chairperson of one of the most recent three past Program Committees (ART. VIII, Sec. 4, c).

writing to the Council through the Secretary in advance of the Annual Meeting unless specifically excused by the President.

Section 4. Standing Committees.

(a) A Nominating Committee shall be appointed by the President during the first month of office. The Committee shall consist of a Chairperson, appointed by the President (with information to but without approval by the Council), two or more Members appointed by the President and not Officers as defined in CONSTIT. ART. IV, Sec. 1, and the immediate Past President. The Nominating Committee shall make the nominations specified in ART. II, Sec. 1, and ART. IV, Sec. 1 of the Bylaws, and such other nominations as shall be ordered by the President or the Council.

(b) A Membership Committee shall consist of the Treasurer of the SOCIETY and two or more additional Members to be appointed by the President. The Committee Chairperson shall be appointed by the President (with information to but without approval by the Council). This Committee shall pass on the eligibility of candidates for election as Full Members, Student Members, Emeritus Members, and sustaining Members of the SOCIETY (ART. 1). The Membership Committee shall also aid in recruitment of new Members and advise the Council on Membership matters.

(c) An Annual Meeting Program Committee (hereinafter referred to as the Program Committee) shall consist of one or more members resident in the area where the specific Annual Meeting is to be held, and the Chairperson (or a duly appointed Representative) of each Division of the SOCIETY (ART. VI, Sec. 5). The Chairperson of the Program Committee shall be selected by the President from a list of nominees submitted by the Meetings Committee (ART. VII, Sec. 7,d), and shall be appointed by the President, subject to approval by the Council, at least one year prior to the Annual Meeting for which the Committee will serve. The Program Committee shall have the ultimate responsibility for the organization and details of the pertinent Annual Meeting. It shall accept submitted papers according to **rules established by the Program Committee, subject to**

(d) For each approved Annual Meeting site, the Meetings Board shall submit to the President a list of nominees for the Chair of the Program Committee. The Board shall work closely with each appointed Program Committee in planning particular aspects of the Annual Meeting. The ultimate responsibility for the organization and details of each Annual Meeting rests with the respective Program Committee.

(e) Conferences and Symposia other than those at Annual Meetings shall be coordinated by the Meetings Board and ad hoc committees appointed for these particular events.

ARTICLE VIII. COMMITTEES

Section 1. Appointment and Terms of Office. The President shall appoint Standing Committees as delineated in this Article. In addition, Special Committees may be appointed or reappointed at any time by the President, with or without approval by the Council, as the occasion arises. Committee members other than the Chairperson shall be appointed by the respective committee Chairperson subject to approval by the President, unless otherwise stipulated in this Article. All committee appointments shall be made for a term coincident with that of the President unless otherwise provided in this Article. No individual may serve on the same Standing Committee for more than four consecutive years.

Section 2. Functions. Standing Committees aid in the management of the SOCIETY. Specific functions of the Standing Committees are given in Section 4 of this Article. Special Committees may be ad hoc or continuous. They perform special functions that aid in conducting SOCIETY business or in reaching the objectives of the SOCIETY as defined in CONSTIT. ART. II.

Section 3. Reports to Council. Chairpersons of the Standing and Special Committees shall report in writing to the Council through the Secretary in advance of the Annual Meeting unless specifically excused by the President.

Section 4. Standing Committees.

(a) A Nominating Committee shall be appointed by the President during the first month of office. The

review by the President, it shall develop a program, and shall make the necessary physical arrangements. It shall cooperate with the Meetings Committee, if possible prior to one year before, in determining the content of scientific sessions of that Annual Meeting. The Program Committee shall serve until the conclusion of business generated by the specific Annual Meeting for which it was appointed.

(d) A Publications Committee shall be appointed by the President during the first month in office. The committee shall consist of the Committee Chairperson, the President, Vice-President and Treasurer of the SOCIETY and the Editor of each SOCIETY publication. The SOCIETY may publish scientific communications as monographs or as periodicals when necessary or desirable to further the objectives of the SOCIETY (CONSTIT. ART. II). The planning, organization, and administration of publications shall be governed by the Publications Committee. The Publications Committee shall coordinate the editorial policies of all publications of the SOCIETY, and shall advise the Council on all matters relating to publication.

(e) A Meetings Committee shall consist of a Committee Chairperson, appointed by the President, with approval by the Council, and two Members, nominated by the Committee Chairperson and appointed by the President, with approval by the Council. One of the two Members shall have been Chairperson of one of the most recent three past Program Committees (ART. VIII, Sec.4, c].

The promotion of scientific knowledge of pathology of invertebrates and of related subjects through discussions and reports (CONSTIT. ART. II) is a primary objective of the SOCIETY and it shall be governed by the Meetings Committee. Specific duties of the Meetings Committee shall be to generate suggestions for sites for the SOCIETY's Annual Meetings; to investigate the feasibility and desirability of holding Meetings at these sites; to recommend to the Council preferred Meeting sites three to four years in advance; to suggest timely themes for the Annual Meeting in balance with the strengths and interests of the host Institution. The Committee shall strive to maintain an international

Committee shall consist of a Chairperson, appointed by the President (with information to but without approval by the Council), two or more Members appointed by the President and not Officers as defined in CONSTIT. ART. IV, Sec. 1, and the immediate Past President. The Nominating Committee shall make the nominations specified in ART. II, Sec. 1, and ART. IV, Sec. 1 of the Bylaws, and such other nominations as shall be ordered by the President or the Council.

(b) A Membership Committee shall consist of the Treasurer of the SOCIETY and two or more additional Members to be appointed by the President. The Committee Chairperson shall be appointed by the President (with information to but without approval by the Council). This Committee shall pass on the eligibility of candidates for election as Full Members, Student Members, Emeritus Members, and sustaining Members of the SOCIETY (ART. 1). The Membership Committee shall also aid in recruitment of new Members and advise the Council on Membership matters.

(c) An Annual Meeting Program Committee (hereinafter referred to as the Program Committee) shall consist of one or more members resident in the area where the specific Annual Meeting is to be held, and the Chairperson (or a duly appointed Representative) of each Division of the SOCIETY (ART. VI, Sec. 5). The Chairperson of the Program Committee shall be selected by the President from a list of nominees submitted by the Meetings Board (ART. VII, Sec. 7,d), and shall be appointed by the President, subject to approval by the Council, at least one year prior to the Annual Meeting for which the Committee will serve. The Program Committee shall have the ultimate responsibility for the organization and details of the pertinent Annual Meeting. It shall accept submitted papers according to established rules, it shall develop a program, and shall make the necessary physical arrangements. It shall cooperate with the Meetings Board, if possible prior to one year before, in determining the content of scientific sessions of that Annual Meeting. The Program Committee shall serve until the conclusion of business generated by the specific Annual Meeting for which it was appointed.

balance in choosing sites for the SOCIETY's Annual Meetings.

For each approved Annual Meeting site, the Meetings Committee shall submit to the President a list of one or more nominees for the Chair of the Program Committee. The Committee shall work closely with each appointed Program Committee in planning particular aspects of the Annual Meeting. The ultimate responsibility for the organization and details of each Annual Meeting rests with the respective Program Committee. Conferences and Symposia other than those at Annual Meetings shall be coordinated by the Meetings Committee and ad hoc committees appointed for these particular events.

Section 5. Special Committees. Special Committees serve for finite or indefinite periods. A Committee whose period of service can reasonably be expected to extend through more than one presidential term shall be appointed by the President, with approval by the Council, and need for its continuance shall be reviewed by the Council at least every fourth year following its appointment. Chairpersons and other Members of Special Committees shall serve at the pleasure of the Council and there is no limit to the length of time each may serve.

(a) A Tellers Committee shall be an ad hoc committee consisting of **two or more Members, but not the Society Secretary**, appointed by the President to take charge of elections. The Tellers Committee shall receive, rule on, count, and report on the balloting in the biennial Elections and in such other elections as the Council may direct (ART. I, Sec. 4; ART. II, Sec. 2).

(b) An Auditors Committee shall be an ad hoc committee consisting of two Members, **but not the Society Treasurer**, appointed by the President prior to each Annual Meeting. The Committee shall perform an annual audit of the Treasurer's accounts and certify their accuracy to the Council.

(c) Other Special Committees shall be appointed as necessary and their charges and responsibilities shall be clearly defined in writing by the President, subject to approval by the Council.

Section 5. Special Committees. Special Committees serve for finite or indefinite periods. A Committee whose period of service can reasonably be expected to extend through more than one presidential term shall be appointed by the President, with approval by the Council, and need for its continuance shall be reviewed by the Council at least every fourth year following its appointment. Chairpersons and other Members of Special Committees shall serve at the pleasure of the Council and there is no limit to the length of time each may serve.

(a) A Tellers Committee shall be an ad hoc committee consisting of two or more Members appointed by the President to take charge of elections. The Tellers Committee shall receive, rule on, count, and report on the balloting in the biennial Elections and in such other elections as the Council may direct (ART. I, Sec. 4; ART. II, Sec. 2).

(b) An Auditors Committee shall be an ad hoc committee consisting of two Members appointed by the President prior to each Annual Meeting. The Committee shall perform an annual audit of the Treasurer's accounts and certify their accuracy to the Council.

(c) Other Special Committees shall be appointed as necessary and their charges and responsibilities shall be clearly defined in writing by the President, subject to approval by the Council.

ARTICLE IX. REPRESENTATIVES

Section 1. Appointment and Terms of Office. Representatives shall be appointed or reappointed by the President (with information to but without approval by the Council). All appointments of Representatives who act as liaison between the SOCIETY and another organization shall be made for a term coincident with that of the President, except that when expedient or necessary, a Representative for a special event may be appointed by a President whose term expires before the event is to take place. During the first month of office the President shall review the need for continuance of the Representatives appointed by the previous President and shall reappoint or appoint anew those necessary for conduct of SOCIETY business. No member shall serve as the

ARTICLE VII. REPRESENTATIVES

Section 1. Appointment and Terms of Office. Representatives shall be appointed or reappointed by the President (with information to but without approval by the Council). All appointments of Representatives who act as liaison between the SOCIETY and another organization shall be made for a term coincident with that of the President, except that when expedient or necessary, a Representative for a special event may be appointed by a President whose term expires before the event is to take place. During the first month of office the President shall review the need for continuance of the Representatives appointed by the previous President and shall reappoint, **appoint anew or terminate** those necessary for conduct of SOCIETY business. No member shall serve as the same Representative for more than ten consecutive years.

Section 2. Functions. The charges to and responsibilities of Representatives (CONSTIT. ART. VI, Sec. 6) shall be clearly defined in writing at the time of appointment. These documents shall be placed in the permanent files of the SOCIETY, for future reference and use.

ARTICLE VIII. ARCHIVES

Section 1. Purposes. The Archives (CONSTIT. ART. VI, Sec. 7) shall be maintained at appropriate locations for the collection, preservation, and display of historical materials relating to the SOCIETY. The Archives shall serve as repository of documents pertinent to the founding and governance of the SOCIETY, including **presidential correspondence, meeting reports and minutes**. Books, reprints, photographs, films, disks, and tapes pertaining to the SOCIETY's activities shall be included in the archival collection.

Section 2. Archivist. An Archivist shall be appointed by the President, subject to approval by the Council, and shall serve for an indefinite term of office, at the pleasure of the Council. The Archivist's performance shall be reviewed by the Council at least every fourth year.

same Representative for more than ten consecutive years.

Section 2. Functions. The charges to and responsibilities of Representatives (CONSTIT. ART. VI, Sec. 6) shall be clearly defined in writing at the time of appointment. These documents shall be placed in the permanent files of the SOCIETY, for future reference and use.

ARTICLE X. ARCHIVES

Section 1. Purposes. The Archives (CONSTIT. ART. VI, Sec. 7) shall be maintained at appropriate locations for the collection, preservation, and display of historical materials relating to the SOCIETY. The Archives shall serve as repository of documents pertinent to the founding and governance of the SOCIETY, including presidential correspondence. Books, reprints, photographs, films, disks, and tapes pertaining to the SOCIETY's activities shall be included in the archival collection.

Section 2. Archivist. An Archivist shall be appointed by the President, subject to approval by the Council, and shall serve for an indefinite term of office, at the pleasure of the Council. The Archivist's performance shall be reviewed by the Council at least every fourth year.

The Archivist shall be responsible for the proper preservation and safety of the historical materials; shall appropriately catalog the documents, books, and other items in the repository; and shall make these items available to qualified individuals for scholarly research.

ARTICLE XI. MEETINGS

Section 1. Annual Meeting.

(a) Once each year there shall be a general meeting of the SOCIETY for the presentation and discussion of scientific advances, for exhibits, and for the transaction of the SOCIETY's business. This shall be known as the Annual Meeting. At approximately four-year intervals the Annual Meeting will be held in conjunction with the International Colloquium on Invertebrate Pathology. In the event of grave

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(b) The place and time for an Annual Meeting shall be studied a sufficient number of years in advance by the Meetings Committee (ART. VII, Sec. 7), and a recommendation shall be wade by the Committee Chairperson to the Council.

(c) The Program Committee (ART. VIII, Sec. 4,c) shall have the ultimate responsibility for the organization, and details of the pertinent Annual Meeting

(d) Submission of papers for the Annual Meeting is governed by rules established by the Program Committee. **[wording deleted]**

(e) The Council shall **approve** registration fees for Annual Meetings. There shall be a fee for members, **a fee for student members**, and a fee for nonmembers. **[wording deleted]**

(f) Commercial exhibits may be accepted at Annual Meetings if consistent with the objectives of the SOCIETY and subject to regulation by the Meetings Committee and Program Committee.

emergency, the Council may suspend an Annual Meeting and the SOCIETY may transact the necessary business by mail, as hereinafter provided.

(b) The place and time for an Annual Meeting shall be studied a sufficient number of years in advance by the Meetings Board (ART. VII, Sec. 7), and a recommendation shall be wade by the Board Chairperson to the Council.

(c) The Program Committee (ART. VIII, Sec. 4,c) shall have the ultimate responsibility for the organization, and details of the pertinent Annual Meeting

(d) Submission of papers for the Annual Meeting is governed by rules established by the Program Committee. Only members in good standing can submit papers. Delinquent members (ART. I, Sec. 7) are prohibited from submitting papers or having their names appear in authorship of papers for the Annual Meeting of that particular year. Distinguished nonmembers may be invited by the Program Committee or by other bodies of the SOCIETY to present special (invitational) lectures.

(e) The Council shall determine registration fees, if any, for Annual Meetings. There shall be a fee for members and a fee for nonmembers. Nonmembers invited to present special lectures (see preceding Subsec. d) shall not be required to pay the registration fee.

(f) Commercial exhibits may be accepted at Annual Meetings if consistent with the objectives of the SOCIETY and subject to regulation by the Meetings Board and Program Committee.

Section 2. General Membership Meeting.

(a) During each Annual Meeting there shall be a General Membership Meeting presided over by the President of the SOCIETY, to provide members an opportunity to hear reports, to discuss governance of the SOCIETY, and to participate in any other aspect of SOCIETY affairs.

(b) At any General Membership Meeting, five percent of the members in good financial standing shall constitute a quorum for the consideration of business.

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(b) At any General Membership Meeting, five percent of the members in good financial standing shall constitute a quorum for the consideration of business. Business of exceptional importance, as determined by a majority of the members present and voting or by a majority of the Council, shall be subject to the final decision of the SOCIETY at large, by mail vote.

(c) In the transaction of business by mail (other than elections of Officers, Trustees, and Honorary Members, and ratification of constitutional amendments, which are provided for separately elsewhere in the Constitution and Bylaws), thirty percent of the membership shall constitute a quorum, provided that a reasonable time is allowed for the participation of the members in the business under consideration.

Section 3. Special Meetings. Special meetings may be called at the discretion of the Council. Special meetings (such as Conferences and Symposia other than those at Annual Meetings) shall be coordinated as specified in ART. VII, Sec. 7,e, or as directed by Council.

ARTICLE X. FINANCES

Section 1. Annual Budget. The Treasurer shall prepare annually an operations budget, in two parts: the present fiscal year (ending **March 31**), and the coming fiscal year (**from April 1 to March 31 of the following year**). The Treasurer shall submit the budget to the Council, for approval, 30 days prior to the Council's annual meeting.

Section 2. Annual Audit. The accounts of the SOCIETY shall be audited annually (or more frequently if so directed by the Council) by an Auditing Committee (ART. VIII, Sec. 5,b). This audit shall be reviewed and approved by the Council.

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ARTICLE XII. FINANCES

Section 1. Annual Budget. The Treasurer shall prepare annually an operations budget, in two parts: the present fiscal year (ending August 31), and the coming fiscal year (from September 1 to August 31 of the following year). The Treasurer shall submit the budget to the Council, for approval, 30 days prior to the Council's annual meeting.

Section 2. Annual Audit. The accounts of the SOCIETY shall be audited annually (or more frequently if so directed by the Council) by an Auditing Committee (ART. VIII, Sec. 5,b). This audit shall be reviewed and approved by the Council.

Section 3. Annual Membership Dues. Annual dues for Full Members and Student Members shall be reviewed periodically by the Treasurer and by the Council. A recommendation to change annual dues for one or both classes of members is subject to approval by majority vote of the Council. If the recommendation is approved, the Council shall submit to the SOCIETY for approval by letter ballot the proposed annual dues for Full Members and Student Members.

Section 3. Annual Membership Dues. Annual dues for Full Members and Student Members shall be reviewed periodically by the Treasurer and by the Council. A recommendation to change annual dues for one or both classes of members is subject to approval by majority vote of the Council. **If the recommendation is approved, the Council shall submit to the SOCIETY for approval at the annual business meeting, by simple majority vote, the proposed annual dues for Full Members and Student Members.**

Section 4. Sustaining Dues. The amount of the annual donation by Sustaining Members shall be specified by the Council.

Section 5. Registration Fees. The Council, in consultation with the Program Committee and the Treasurer, shall **approve** Registration fees for Annual Meetings (ART. XI, Sec. 1,e).

Section 6. Salaries. The salaries to be paid to Executive officers, if any, shall be determined by the Council (ART. III).

Section 7. Nonpayment of Dues. **The Treasurer shall ensure that a written notice is sent to persons** in arrears for dues at least two months before any further action is taken. Having failed to pay dues within 40 days from the date of mailing of such notice, delinquent members shall cease to benefit from the privileges of SOCIETY membership. Further actions are specified in ART. 1, Sec. 7, and ART. XI, Sec. 1,d.

Section 8. Contracts. The Council shall contract for fulfilment of any purpose determined by the SOCIETY, if consistent with the Articles of Incorporation of the SOCIETY, the Constitution, and Bylaws.

ARTICLE XI. PUBLICATIONS AND COMMUNICATIONS

Section 1. Types of Publications and Communications. The SOCIETY may publish scientific Communications. as monographs or periodicals when necessary or desirable to further the objectives of the

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ARTICLE XIII. PUBLICATIONS AND COMMUNICATIONS

Section 1. Types of Publications and Communications. The SOCIETY may publish scientific Communications, as monographs or periodicals when necessary or desirable to further the objectives of the SOCIETY. It may publish books or sponsor their publication.

Any Branch, Division, Board, or Committee of the SOCIETY may publish or produce a report or series of reports, provided that such publication or communication shall have been approved as directed in Sec. 5 of this Article.

Any Branch or Division of the SOCIETY may produce a periodical newsletter or like communication for its membership subject to approval as directed in Sec. 5 of this Article.

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Any Branch or Division of the SOCIETY may produce a periodical newsletter or like communication for its membership subject to approval as directed in Sec. 5 of this Article.

Each publication of the SOCIETY shall be organized with an Editor or with an Editorial Board consisting of several editors and an Editor-in Chief. The Editor or Editor-in-Chief of each SOCIETY publication shall be a voting member of the Publications Committee (ART. VII, Sec. 6,b).

Section 2. Methods of Publication. The SOCIETY may engage commercial publishers or may itself act as the publisher and separately undertake copyright, preparation, manufacture, and distribution of its publications.

Section 3. Distribution of Publications and Communications. Publications and reports of the SOCIETY shall be made available to members of the SOCIETY and to the public and at such prices as provided in the Bylaws and/or as approved by the Council.

Section 4. Responsibilities for Statements. No member of the SOCIETY shall publish or otherwise release any SOCIETY-related report or recommendation or make any public statement purporting to express the opinion of any Committee of the SOCIETY on any issue within the jurisdiction of the SOCIETY without the prior approval of the Council. The SOCIETY shall not be responsible for statements or opinions made by groups or individual persons nor for statements in the SOCIETY's publications unless such statements or opinions have the specific approval of the Council.

Section 5. Publications Committee Functions. The Publications Committee (ART. VI, Sec. 4d) shall coordinate the editorial policies of all the publications of the SOCIETY. Any books, reports, or proceedings

Each publication of the SOCIETY shall be organized with an Editor or with an Editorial Board consisting of several editors and an Editor-in Chief. The Editor or Editor-in-Chief of each SOCIETY publication shall be a voting member of the Publications Board (ART. VII, Sec. 6,b).

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Section 5. Publications Board Functions. The Publications Board (ART. VII, Sec. 6) shall coordinate the editorial policies of all the publications of the SOCIETY. Any books, reports, or proceedings based on material presented at any Meeting, Colloquium, or Workshop sponsored or cosponsored by the SOCIETY shall be approved by the Publications Board and authorized by the Council before their publication. The Publications Board shall determine that proper credit is given to the SOCIETY in such books and reports.

Newsletters and like forms of communication written and distributed within a Branch or Division are subject to prior approval by the Publications Board. The undertaking of a new publication or the substantial

based on material presented at any Meeting, Colloquium, or Workshop sponsored or cosponsored by the SOCIETY shall be approved by the Publications Committee and authorized by the Council before their publication. The Publications Committee shall determine that proper credit is given to the SOCIETY in such books and reports.

[wording deleted]

The Publications Committee shall advise the Council on the prices to members and to the public of all books, monographs, and periodicals published or sponsored by the SOCIETY.

At the President's request, the Publications Committee shall prepare lists of nominees for Editor or Editor-in-Chief of publications of the SOCIETY, to be appointed by the President.

Section 6. SIP Newsletter.

(a) Purpose. SIP Newsletter shall be published periodically to communicate current news and information about the SOCIETY and science. It shall not be considered a publication for the dissemination of research results or for the purpose of establishing scientific priority.

(b) The Editor of SIP Newsletter shall be responsible for collation, editing, production, and distribution of SIP Newsletter. The Editor shall be appointed or reappointed by the President, with approval by the Council, within one month of the President's installation in office. The President may request a list of nominees from the Publications Committee (this Article, Sec. 5). The Editor of SIP Newsletter shall serve for a term coincident with that of the President. If a vacancy occurs, it shall be filled for the remainder of the term by appointment by the President.

(c) The Editor of SIP Newsletter shall be a voting member of the Publications Committee (ART. VII, Sec. 6,b).

(d) Regional **and Divisional** Correspondents shall communicate to the Editor of SIP Newsletter newsworthy items from areas of the world where

change of an existing publication shall be reviewed by the Publications Board and approved by the Council.

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(c) The Editor of SIP Newsletter shall be a voting member of the Publications Board (ART. VII, Sec. 6,b).

(d) Regional Correspondents shall communicate to the Editor of SIP Newsletter newsworthy items from areas of the world where SOCIETY members are known to reside. Regional Correspondents are appointed by the SIP Newsletter Editor and shall serve for a term coincident with that of the Editor. Regional Correspondents may be reappointed but no Correspondent shall serve for more than ten consecutive years.

(e) The editorial policy of SIP Newsletter shall be determined by the Publications Board.

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(e) The editorial policy of SIP Newsletter shall be determined by the Publications Committee.

(f) SIP Newsletter shall be distributed to all members of the SOCIETY and it shall be available to the public by subscription.

Section 7. Proceedings and Abstracts of Annual Meetings and Colloquia. The Chairperson of each Annual Meeting shall ensure the Society's publication of a Program and Abstracts of the Meeting. The Chairperson of each International Colloquium shall ensure the Society's publication of a Program, Abstracts, and Proceedings of the Colloquium.

Section 8. Electronic Publications. The Society shall maintain a web site for the purpose of electronic distribution of information about the Society and for electronic publication of items of interest to members.

ARTICLE XII. PARLIAMENTARY PRACTICES

General Membership Meetings and meetings of the Council and of Committees shall be conducted in accordance with Robert's Rules of Order (Revised) in all cases to which such rules apply, except when inconsistent with the Constitution or Bylaws of the SOCIETY and any special rules of order the SOCIETY may adopt.

ARTICLE XIII. LANGUAGE AND INTERPRETATION

Section 1. Official Language. The official language of the Bylaws of the SOCIETY is English, in accordance with the Articles of Incorporation, State of Maryland, United States of America. The SOCIETY encourages

(f) SIP Newsletter shall be distributed to all members of the SOCIETY and it shall be available to the public by subscription.

ARTICLE XIV. PARLIAMENTARY PRACTICES

General Membership Meetings and meetings of the Council, of Boards, and of Committees shall be conducted in accordance with Robert's Rules of Order (Revised) in all cases to which such rules apply, except when inconsistent with the Constitution or Bylaws of the SOCIETY and any special rules of order the SOCIETY may adopt.

ARTICLE XV. LANGUAGE AND INTERPRETATION

Section 1. Official Language. The official language of the Bylaws of the SOCIETY is English, in accordance with the Articles of Incorporation, State of Maryland, United States of America. The SOCIETY encourages translations of the Bylaws, subjects to approval by the Council.

Section 2. Interpretation. Interpretation. of the intent or language of the Bylaws shall be decided by a majority vote of the Council.

ARTICLE XVI. AMENDMENTS

Section 1. Proposal. Any ten members of the SOCIETY may prepare in writing an amendment to the Bylaws, as may be necessary for the proper government of the SOCIETY and not in conflict with its Constitution. Such a proposal shall be submitted to the Secretary at least four months before the next General Membership Meeting, so the item can be considered by the Council before such Membership Meeting.

Section 2. Review. Any proposed change in the Bylaws, or addition thereto, shall require the affirmative vote of a majority of the Council present and voting at a meeting, or of a majority of the Council voting by mail, before submission of the proposal to the membership.

Section 3. Posting. The proposal, if approved by the Council, and the Council's recommendation must be

translations of the Bylaws, subjects to approval by the Council.

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Section 2. Review. Any proposed change in the Bylaws, or addition thereto, shall require the affirmative vote of a majority of the Council present and voting at a meeting, or of a majority of the Council voting by mail, before submission of the proposal to the membership.

Section 3. Posting. The proposal, if approved by the Council, and the Council's recommendation must be posted and publicized to the membership for at least 24 hours before the General Membership Meeting.

Section 4. Adoption. The proposed change in the Bylaws shall be adopted when and if approved by a three-fifths vote of Members present and voting at a General Membership Meeting.

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PROPOSED BY-LAWS FOR DIVISIONS

ARTICLE I. NAME

This group shall be known as the DIVISION OF (Subject Matter) of THE SOCIETY FOR INVERTEBRATE PATHOLOGY (hereinafter referred to as the DIVISION).

In this context, (Subject Matter) refers to basic and applied studies of (Subject Matter) associated with invertebrates, with the aim of using acquired knowledge to (a) understand interactions with invertebrates, (b) control pest and vector populations of invertebrates, and/or to prevent or cure diseases of invertebrates caused by these pathogens or parasites.

ARTICLE II. OBJECTIVES OF DIVISION

The objectives of the DIVISION shall be:

1. To promote scientific knowledge of the Division's subject matter through discussions, reports and publications.
2. To stimulate worldwide interaction among scientists who have special interests in the Division's subject matter through the organization of workshops and symposia at the annual meeting of the SOCIETY, as well as to provide assistance in the organization of international meetings.
3. To provide an organizational structure through which problems and matters relevant to the study of the subject matter may be presented for discussion and action among interested scientists.
4. To provide an organized body of expertise which can be readily identified and accessed by persons or organizations within or outside the SOCIETY who are

in need of knowledge or consultation on the subject matter as defined in ARTICLE I.

ARTICLE III. MEMBERSHIP AND FINANCES

Any member of the SOCIETY FOR INVERTEBRATE PATHOLOGY who has a special interest in the subject matter shall be eligible for membership in the DIVISION.

Membership in the DIVISION shall be contingent upon payment of an annual fee in addition to the annual SOCIETY dues. The annual fee shall be set by majority vote of the DIVISION'S Executive Committee.

ARTICLE IV. OFFICERS AND EXECUTIVE COMMITTEE

1. A Chairperson-Elect and a Secretary-Treasurer shall be elected biannually by ballot at a session of the DIVISION held during the Annual Meeting of the SOCIETY. Officers shall take office at the close of the meeting at which they shall have been elected.
2. The Chairperson-Elect will become Chair at the end of his/her two-year term.
3. The Executive Committee shall consist of the Chairperson, Chairperson-Elect, Secretary-Treasurer plus two other Division Members-at-Large to be elected in like manner. However, to provide continuity in leadership, one of the Members-at-Large of the first slate of officers shall be elected for a one year term only and that office will be refilled for a *two-year term* after the first year. Thereafter, one Member-at-Large will be selected for a two-year term at each Annual Session. To provide further continuity

in leadership, the Chairperson and Secretary-Treasurer immediately retiring shall be ex-officio members of the Executive Committee for a two-year term.

4. Nomination for Officers and member of the Executive Committee must be published in the DIVISION membership for at least twenty-four hours before submission for vote at the Annual session on of the DIVISION.

5. The duties of the Officers and the Executive Committee with the aid of such other committees as are appointed by the Chair, shall be to conduct the affairs of the DIVISION, within the framework of the Constitution and Bylaws of the SOCIETY, according to these Bylaws and to the expressed wishes of the DIVISION member present at the Annual Session.

6. The Organizational Committee, selected on a specific date at an Annual Meeting of the SOCIETY, shall serve until the first officers of the DIVISION are elected at the next Annual Session.

ARTICLE V. WORKING GROUPS

1. When desirable for facilitating the activities of the DIVISION, Working Groups may be formed with the approval of the Council of the SOCIETY. The subject matter and scope of such Working Groups shall be defined by the Executive Committee of the DIVISION.

2. Officers of each divisional Working Group shall be, at a minimum, a Chairperson, a Chairperson-Elect and a Secretary-Treasurer. They shall be elected and replaced in the same manner and serve the same terms as the corresponding officers of the DIVISION.

3. The Executive Committee of the DIVISION shall submit in writing to the Council of the SOCIETY a proposal for the formation of each Working Group. The date of the Council approval shall be the effective date of organization of the Working Group.

ARTICLE VI. EFFECTIVE DATE OF ORGANIZATION

The date of the Council's approval of these Bylaws shall be the effective date of the organization of this DIVISION.

ARTICLE VII. TERMINATION OF THE DIVISION

1. A majority of DIVISION members voting, as determined by a mail ballot, may recommend to the Council of the SOCIETY that the DIVISION be terminated.

2. A Division failing to maintain for two successive years a minimum of 20 members in good standing shall automatically forfeit its title and rights as a Division of the SOCIETY.

3. Upon dissolution of the DIVISION, any assets after payment of debts and encumbrances shall be transferred to the Treasurer of the SOCIETY FOR INVERTEBRATE PATHOLOGY to become the property of the SOCIETY.

ARTICLE VIII. AMENDMENTS OF THESE BYLAWS

1. An amendment may be proposed by the Executive Committee or by a majority of the members present and voting at an Annual Meeting.

2. The proposed amendment shall be printed promptly and sent to all members of the DIVISION, together with a letter ballot. The Secretary shall canvas the ballots returned to him/her within 60 days from the date of mailing of the ballot and the proposed amendment shall be considered adopted if it receives the approval of two-thirds of the members voting.

3. The amendment shall become effective immediately after ratification by the council of the SOCIETY.

In response to the resolution adopted by Council in Sapporo "Recognize and celebrate the fortieth (40th) anniversary of the convening in August 1958 of the 1st International Conference on Insect Pathology and Biological Control with the leadership of Professor Jaroslav Weiser in Prague, Czechoslovakia," Dr. Weiser sends us the following photo of the participants at this meeting.



1. J. Lips, 2. I. Hrdý, 3. E. Templin, 4. Mrs. Templin, 5. W. Koehler, 6. J. Jasič, 7. U. Sedlag, 8. P. Bovey, 9. H. Fankhänel, 10. I. Hodek, 11. V. Butovitsch, 12. P. Štáry, 13. J. Pospíšil, 14. S. Günther, 15. Liu Chung-lo, 16. L. Vasiljevič, 17. V. SkuhraVj, 18. V. Landa, 19. Mrs. Vasiljevič, 20. I. Rubcov, 21. K. Novák, 22. J. Diabola, 23. J. Franz, 24. E. Steinhaus, 25. W. Schwenke, 26. J. Holman, 27. J. Patočka, 28. M. Tadič, 29. A. Kalandra, 30. A. Krieg, 31. P. Ivanov, 32. A. Jevlachova, 33. H. Sachtleben, 34. M. Dirmanov, 35. G. Bergold, 36. A. Huger, 37. P. Mesnil, 38. W. Kruel, 39. V. Nikolova, 40. R. Grigorova, 41. J. Arbatskaja, 42. N. Shepetilnikova, 43. H. Bírová, 44. V. Talalaev, 45. S. Svirskaja, 46. N. Telenga, 47. A. Balevski, 48. V. Poltev, 49. F. Simmonds, 50. J. Foltýa, 51. H. Howard, 52. Mrs. Poltev, 53. V. Vasev, 54. J. Weiser, 55. L. Weismann, 56. Andrejev, 57. Gabrovská, 58. A. Huba, 59. Mrs. Gershenzon, 60. S. Gershenzon, 61. L. Sincova, 62. Filatova, 63. H. Sandner, 64. J. Masner, 65. M. Čapek, 66. L. Bailey, 67. Avesalomov, 68. D. Stefanov, 69. J. Briggs, 70. M. Crooke, 71. Mrs. Ferriere, 72. Ch. Ferriere, 73. C. Rivers, 74. C. Toumanoff, 75. G. Domenichini, 76. S. Kolubaiv, 77. S. v Nevšický, 78. B. Dasgupta, 79. P. Garnham, 80. E. Nováková, 81. K. Heqvist, 82. J. v. Rosen, 83. J. Erdős, 84. L. Masner, 85. Z. Bouček.