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A Message from the President of the Entomological Society of America to the American Phytopathological Society

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The views expressed in this article do not necessarily reflect those of the ESA Governing Board or the membership as a whole.

The president of APS, George Agrios, asked if I, as president of the Entomological Society of America (ESA), would discuss issues of concern for both societies and ways that we can better relate to and interact with one another. I have been an APS member since 1963, one year after I joined ESA as a student member. While I do not claim to know APS as well as ESA, I am sufficiently acquainted with both societies to offer suggestions to develop better working relationships.

One of the complaints I have heard levied against the ESA by my APS colleagues is that our society is so difficult to deal with. A recent example cited is the ESA's decision a few years ago to withdraw its membership from the Inter-Society Consortium for Plant Protection (ISCPP). This has been interpreted by APS members as a lack of interest by the ESA in speaking out on issues that concern plant protection.

It might help to explain that the backgrounds and interests of ESA members are incredibly diverse. This diversity is an enormous strength, but can make it very difficult to agree on such divergent issues as developing a society-wide statement on the use of pesticides or in backing political groups organized to speak out on environmental concerns.

A history of the ESA. Much of what the ESA is today as a society can be traced to our origins (1). We began as an entomology club formed in 1872 as a subsection of the Natural History Section of the American Association for the Advancement of Science (AAAS). The club was composed of practicing professional entomologists, especially those employed by state and federal government to conduct research on economically important insects. It also was composed of amateur entomologists who in those days made important contributions to the taxonomy and natural history of insects.

In 1889, under the leadership of C. V. Riley, who was the first chief of the USDA Bureau of Entomology, a number of entomologists broke away from the AAAS club and formed the American Association of Economic Entomologists (AAEE). Membership was restricted primarily to "practical economic entomologists," thereby excluding the amateurs who outnumbered the professionals. Although Riley had broad entomological interests, including work on insect mimicry and pollination ecology, he saw the AAEE in very pragmatic terms. His view that members should be professionals engaged in practical problems is clearly stated in his 1889 presidential speech.

> Applied entomology is often considered a sordid pursuit, but it only becomes so when the object is sordid. When pursued with unselfish enthusiasm born of the love of investigation and delight in benefiting our fellow men it is inspiring, and there are few pursuits more deservedly so, considering the vast losses to our farmers from insect injury and the pressing need that the distressed husbandman has for every aid that can be given him. Our work is elevating in its sympathies for the struggle and suffering of others. Our standard should be high—the pursuit of knowledge for the advancement of agriculture.

Riley went further in commenting on the relationship between applied and classical entomology:

> I have ever felt that one ostensibly engaged in applied entomology and paid by the State or National Government to the end that he may benefit the agricultural community can be true to his trust only by largely overcoming the pleasure of purely entomological work having no practical bearing. I would therefore draw the line at discipline work except where it is incidental to the economic work and for the purpose of giving accuracy to the popular and economic statements.

Thus, a clear distinction was made. If you pursued entomology for the sheer pleasure of it, for its intellectual stimulation without concern for human needs, the AAEE was not interested in your membership. Rather, the AAEE was keen on tying bonds to the political leadership of agriculture and access to public funds through the Hatch Act.

The early interests of the AAEE were with the biology and life history of insects, but only as prerequisites to control, the selection and testing of insecticides and application equipment, the development of a legal framework to prevent fraudulent marketing of insecticides, and the prevention of the introduction of exotic insect pest species.

In the first years of the AAEE, the society published its proceedings in the USDA Bureau of Entomology publication, Insect Life. Then, in 1908, when the society was 200-plus members strong, it published the first volume of the Journal of Economic Entomology. The journal is still published by the ESA.

The narrow focus of the AAEE did not meet the needs of the expanding entomological community, both professional and amateur, who practiced entomology apart from concerns of the impact of insects on man and his agriculture. Thus, in 1906, under the leadership of John Henry Comstock, the first teacher of American entomology and a Cornell professor, the original Entomological Society of America was born with more than 400 members. The first periodical of the society, the Annals of the Entomological Society of America, was published in 1908. The eighty-fourth volume of the journal was published this year. The scope of the journal and interests of its ESA members were highlighted in the first issue. It was expected that the new society and journal would serve those insect scientists whose work interfaced with other branches of science. The Annals published papers dealing with faunistic and biological problems, taxonomy, and morphology.

The ESA also was a home for amateur entomologists. H. H. Lyman, an amateur from Montreal, stated, "If [ESA] were to be mainly a society of professional entomologists, it might well be questioned why it should exist in addition to the [AAEE], as, at least on this continent, almost all professional entomologists are, of necessity, economic ones. The Society will fall short of its highest usefulness if it fails to secure the support and cooperation of the great body of amateur entomologists." Despite the differing goals of the two societies, many entomologists belonged to both. Ultimately, 11 entomologists served as presidents of both societies.

The eventual consolidation of the ESA and AAEE into a single society took place in 1953. The primary arguments in favor of consolidation were both logistical and philosophical. A single organization could operate more efficiently by engaging professional staff members and consolidating operations. On the philosophical side, the membership could communicate more effectively with its diverse components. Externally, the discipline could be better represented by a single organizational voice.

There was considerable reluctance, especially among members of the original ESA, for consolidation. Alva Peterson, a professor at the Ohio State University and an influential spokesman, made his feelings known: "some of us believe that fundamental research on insects is just as important as insecticide research—the members have the distinct fear of the applied side of entomology." Although I joined the ESA nearly 10 years after the merger and was not involved in the great debates, I am well aware that tensions between basic and applied entomologists and between entomology the science and entomology the technology continue to exist.

The ESA today. Today the ESA is the largest entomological society in the world, with more than 8,300 members and an annual budget exceeding $2.1 million. What is disturbing, however, is the net loss of 900 members since 1986, much of this loss from student members. Twenty percent of members were students in 1986; today only 12% are students. Apparently this also is a problem for APS.

Colleges and universities employ the largest share of our members (38%). The ESA differs from APS and other agriculturally based professional societies in that a substantial number of members are not employed by land grant colleges or the larger research universities. Rather they are entomologists or biologists working with insects who teach at small, four-year liberal arts colleges. Most of these members do not consider themselves economic entomologists. In contrast, most of our members employed by government and industry (36%) are concerned with insects of importance to plant, animal, and human health.

The amateur members who played such an important role in the origin of our society now number fewer than 1%. The society does not now have programs that meet the interests or needs of amateurs. Instead, amateurs have joined local and state organizations and societies that support activities such as field trips and collecting and cataloging local insect fauna.

The disciplinary interests of ESA members are extraordinarily diverse. Subject matter, divided along functional lines, is reflected in the six sections of the society (Table 1). Members can be designated in only one section. Using this information as a guide, I would estimate that up to half of ESA members do not identify themselves as plant protection entomologists. Members of section D are economic entomologists, but their interests are insects important to animal and human health.

The society treads carefully, not wanting to offend members who do not consider themselves economic entomologists. Some of our members continue to echo the words of Alva Peterson, fearing the potential dominance of applied entomologists. This has ramifications when the society deliberates on such issues as affiliation with other scientific or professional organizations. You may now better understand why ESA members voted to discontinue its affiliation with the Council for Agricultural Science and Technology (CAST), believing that CAST's objectivity was compromised by its ties with the pesticide industry, and why, after the ESA took a leadership role in formation of the ISCPP, 10 years later members voted to discontinue affiliation, finding that it provided insufficient benefits to the society as a whole.

I am proud of the great diversity of interests, opinions, and attitudes of ESA members. Presentations at the annual meeting or papers published in our journals range from such practical subjects as evaluation of transgenic plants against insect pests or the testing of products to control ticks and lyme disease to the more esoteric, such as the evolution of insect wings and flight or how water striders communicate by sending vibrational signals on the surfaces of ponds and streams. This diversity of the ESA is reflected in achievements of the more than 15 members who have been elected to the National Academy of Science. The most recent ESA member so honored is University of California insect biochemist and toxicologist John Casida. The names of other ESA members elected to the academy will be familiar to you for their accomplishments in plant protection entomology. Among them are former Texas A & M University chancellor Perry Adkisson, University of Illinois professor Robert Metcalf, and Cornell University's Wendell Roelofs. Animal protection entomology has benefited from the pioneering work of USDA scientist and administrator Ed Knipling for his work on screwworm eradication by the sterile male release technique.

Other ESA members elected to the academy have studied insects for reasons other than plant and animal protection. Cornell's Tom Eisner is renowned for his work on insect chemical defenses, Stanford's Paul Ehrlich for his work on insect/plant coevolution, and Harvard's E. O. Wilson for his theories on island biogeography and sociobiology, ideas stimulated by his work on social ants. Also, in 1991 Wilson won his second Pulitzer Prize, this time for the book he coauthored, The Ants (Belknap Press). Despite that the motivations for Eisner, Ehrlich, and Wilson's work were not practical concerns, spin-off from their work serves as a basis for plant protection entomology by other scientists. The ESA and all of mankind have benefited from these scientists who study insects "for the pure pleasure of it."

The ESA annual meeting traditionally is held within the first two weeks of December. Upwards of 3,000 members and guests have been in attendance at recent meetings. This year's meeting, to be held in Reno, Nevada, will offer more than 1,600 presentations. This year we will offer several new agendas and formats for programs. As APS has done, we will begin a full schedule of programs on Sunday and will probably continue to do so as long as airlines offer savings to travelers staying over on a Saturday night. To encourage members to present posters rather than oral papers, this year we are coupling poster displays with continental breakfasts. The cost of breakfasts will come from donations from commercial sponsors and registration fees of participants. This has helped to boost poster submissions by more than 25% this year. We also will have student paper and poster competitions early in the meeting. A day has been set aside for a symposium and 10-minute papers so that video presentations can be offered by members. The theme of this year's meeting is communication, highlighted by program symposia on acoustic, visual, and chemical insect communication and application of communication theory to integrated pest management. I welcome APS members to join us at the annual meeting in December. Not only will many of you find the subject matter of interest, but APS may want to consider incorporating some of the events and special programs that ESA offers to its members.

For example, perhaps APS could do more for its students at the annual national meeting. At the ESA annual meeting, we recognize the most outstanding student members from our five branches with the prestigious Comstock awards. We hold student paper and poster competitions (these are often the best presented), the Student Affairs Standing Committee organizes a formal conference on topics such as professional ethics or how to prepare journal manuscripts, and students participate in the popular

TABLE 1. Professional interests of Entomological Society of America members

Section	Subject matter area	ESA members (%)
A	Systematics, morphology, evolution	10
B	Physiology, biochemistry, toxicology, molecular biology	11
C	Biology, ecology, behavior, biological control	30
D	Medical and veterinary entomology	14
E	Extension	9
F	Crop protection	27

Linnaean Games, a college bowl-like competition where university teams are challenged by their knowledge of entomology.

ESA publications. In 1990, the ESA published more than 7,000 pages of scientific and professional information. Four journals are published with six issues per volume. As noted previously, the society continues to publish the Journal of Economic Entomology and the Annals of the Entomological Society of America. In 1972, a new journal was launched, Environmental Entomology, to serve as a place where insect ecologists and those concerned with environmental insect science could publish their work. In 1986, ESA took over the publication of the Journal of Medical Entomology, a journal that was formerly published by the Bishop Museum in Honolulu, Hawaii. This was a "friendly takeover," not unlike when, in 1980, APS volunteered to take over the Plant Disease Reporter from the USDA. Longer monographs, such as taxonomic revisions of insect groups, are published in the newly revamped Thomas Say Publications. Insecticide and Acaricide Tests is published once a year so members can rapidly disseminate information on efficacy tests for pesticides. We publish a monthly newsletter to inform members of society business and current events in the profession.

The ESA also has a publication unlike that of other professional societies. It is the quarterly magazine, the American Entomologist. Here we publish feature articles of broad interest to entomologists and other scientists. The magazine is undergoing a rapid evolution from its rather drab forebear, the Bulletin of the Entomological Society of America. Color illustrations liven up articles and give the feature insect photo a dramatic presentation. A forum section affords members an opportunity to express their views on science, society, and their profession. Edited columns on extension entomology and entomology education have been introduced. A natural history feature section is in the works. To make the magazine not only educational but fun to read, entomological limericks, poems, and cartoons are scattered throughout.

A new publication is on the horizon: a series of handbooks on insect pests. ESA has noted the considerable success of the APS Press disease compendium series. This will be the first time that the ESA has made a serious attempt to publish entomological information other than original research. The audience for the handbooks will be entomologists, as well as other agricultural research scientists, extension specialists, farmers, pest control operators and consultants, agricultural teachers and their students, area and county agents, veterinarians, foresters, master gardeners, public health officials, and homeowners. Because of the nature of ESA, the scope of the handbooks will be broader than that of the APS compendia. Not only will pests of plants be included, but also handbooks that cover household and structural pests and insects and acarines of importance to human and animal health and comfort. The first handbook on insect and mite pests of soybeans is scheduled for publication in mid-1992.

ESA certification programs and professional registry. In addition to the annual and branch meetings and publications of the society, the ESA provides other services to its members. We help employers and those seeking jobs to find one another; we provide scholarships, fellowships and grants; and yes, we sell T-shirts, coffee mugs, and beautiful insect calendars. But there is one service ESA provides to its members that APS does not. I am referring to our professional certification program, the American Registry of Professional Entomologists (ARPE). The impetus for the registry came in the 1960s, especially from our medical entomologists, most of whom are employed by the U.S. Armed Forces and the Public Health Service. These entomologists work side by side with physicians and engineers whose professional competence is vouched for by registry memberships. Entomologists, without the backing of a similar registry, were being bypassed for promotion and higher pay scales. Because of a need for this service by our medical entomologists, the predecessor of today's ARPE was formed in 1970 as a self-governing, self-supporting subsidiary of the ESA.

Today, the need for a professional registry has expanded to include all members who provide the public with advice or services concerned with the control of insects. Until recently, between 1,100 and 1,500 ESA members were registered by ARPE. ARPE programs stress standards, continuing education, ethics, identity, and status. Currently, the registry is restricted to ESA members; however, serious thought now is being given to providing certification services, for a fee, to nonmembers of the ESA. These would be public and private workers who deal with the public. There has been some dissatisfaction within the ESA for having ARPE as a self-governing ESA subsidiary. ESA members are now voting on constitutional and bylaws changes that would make the ESA Governing Board directly responsible, and ARPE would be replaced with a certification board. [Note: ESA members overwhelmingly approved of these changes by ballot vote.] I am aware that APS is considering whether to develop its own certification program or to have instead the Agronomy Society's American Registry of Certified Professionals in Agronomy (ARCPACS) serve APS members. Many factors will enter into your decision—cost, liability, input from the volunteer element of the APS, etc.—but be certain that the examination and certification of professional competence in plant pathology is in the hands of APS members. Also realize that in the certification of nonprofessionals, including continuing education workshops and short courses and testing services, there is a potential for profit. Does APS want the American Society of Agronomists to reap the recognition and financial benefits from the work of APS members?

Cooperation between APS and ESA. At the invitation of your president, I met with the Executive Committee of the APS Council. The exchange of ideas included those I presented at the President's Forum. As a starter, we talked about the possibility that our societies could cosponsor at least one symposium at each other's annual meeting on a regular basis. At least four sessions at this meeting would have been excellent candidates for joint sponsorship: the IPM symposium on food and the environment, the tomato spotted wilt virus colloquium, the discussion session on insect transmission of plant viruses, and the informal discussion on whitefly-related disorders of plants. To carry the idea one step further, we discussed holding a joint annual meeting for our societies in 1998, a year when APS will hold its annual meeting later in the year rather than in August and would fall within the time frame of ESA's annual meeting in early December.

We discussed the current status of ISCPP and the potential for ESA to reestablish its involvement in the consortium. I believe that ESA would look favorably on rejoining, but this would depend largely on a reexamination of the goals and objectives of the ISCPP. In my opinion, there is a need for entomologists, plant pathologists, nematologists, and weed scientists to speak with a common voice, to lobby federal legislators for increased competitive and formula funds for plant protection research, as well as to tell the public that pesticides and genetically engineered plants, insects, and microorganisms can play a safe and effective role in protecting plants from pests and diseases.

To continue the dialogue begun at the St. Louis meeting, I have invited 1991-92 APS President O. W. Barnett to attend the ESA annual meeting in Reno and meet with the Governing Board. We have much to learn from one another, from the way we conduct our annual meetings and publication programs to the development of our strategic long-range plans and our professional certification programs.

We also could get to know one another better if more entomologists and plant pathologists held dual memberships in both societies. While this would not be appropriate for all members, it does not seem unreasonable to me for research scientists engaged in integrated pest management, or extension entomologists and plant pathologists concerned with crop protection, to be members of both societies.

LITERATURE CITED

1. Smith, E. H. 1989. The Entomological Society of America: The first hundred years, 1889-1989. Bull. Entomol. Soc. Am. 35:10-32.