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Newsletter of the American Society of  
Parasitologists

Parasitology, Harold W. Manter Laboratory of

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Spring 2007

## American Society of Parasitologists Newsletter, v. 29, no. 1, Spring 2007

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ASP Newsletter

Vol 29. No. 1.

Spring, 2007

American Society of Parasitologists

# Newsletter

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[\[http://asp.unl.edu\]](http://asp.unl.edu) December 2006

## From the *Editor* of the Newsletter

The ASP newsletter accepts information and news of a parasitological nature from all disciplines. Consider publishing your parasite poems, posting a link to your favorite "parasite lecture" or otherwise send something in to the editor.

Sincerely,

Scott L. Gardner

Manter Laboratory of Parasitology  
University of Nebraska-Lincoln

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*A view of earth from the moon - taken during one of the Apollo missions.  
Complements of NASA.*

### **A Global Biodiversity Map – Dr. Edward O. Wilson, Harvard University**

*(Published in "Science" September 28, 2000)*

As genomics and biomedicine are to human health, so ecology and conservation biology are to the planet's health. Unfortunately, compared with their sister disciplines, ecology and conservation biology are still disadvantaged. Their growth is hampered by a seldom-acknowledged deficiency: our ignorance of most of the world's biodiversity, particularly at the level of individual species, where knowledge is foundational to all other studies of diversity and hence of the whole living environment. The number of species given a scientific name is believed to fall between 1.5 million and 1.8 million. The true, full number, including those still undescribed, can only be guessed at to the nearest order of magnitude, with the opinion of many experts gravitating toward the vicinity of 10 million. Reliable biodiversity assessments are limited to a few relatively well-known groups, including the vascular plants, vertebrates, and a small number of invertebrates such as corals and butterflies. If the true number of species is about 10 million, these focal groups add up to fewer than 5% of the total. Bacteria, mites, nematode worms, fungi, beetles, and other major environmental players are necessarily ignored, or at best given "morphospecies" code numbers. Even among the small minority of all



species diagnosed and named, fewer than 1% have been subject to the kind of careful biological studies needed to undergird ecology and conservation biology.

To describe and classify all of the surviving species of the world deserves to be one of the great scientific goals of the new century. In applied science, this completion of the Linnaean enterprise is needed for effective conservation practices, for bioprospecting (the search for new natural products in wild species), and for impact studies of environmental change. In basic science, it is a key element in the maturing of ecology, including the grasp of ecosystem functioning and of evolutionary biology. It also offers an unsurpassable adventure: the exploration of a little-known planet.

Pieces of a worldwide biodiversity project are being put in place. In 1999, the Megascience Forum of the Organization for Economic Cooperation and Development created the Global Biodiversity Information Facility to coordinate and bring online all electronic databases for various groups of organisms. CD-ROMs of individual groups for different parts of the world proliferate, augmenting a continued flow of traditional print monographs.

New electronic technology, increasing exponentially in power, is trimming the cost and time required for taxonomic description and data analysis. It promises to speed traditional systematics by 2 orders of magnitude. What is lacking and needed now is a concerted effort, comparable to the Human Genome Project (HGP), to complete a global biodiversity survey--pole to pole, whales to bacteria, and in a reasonably short period of time.

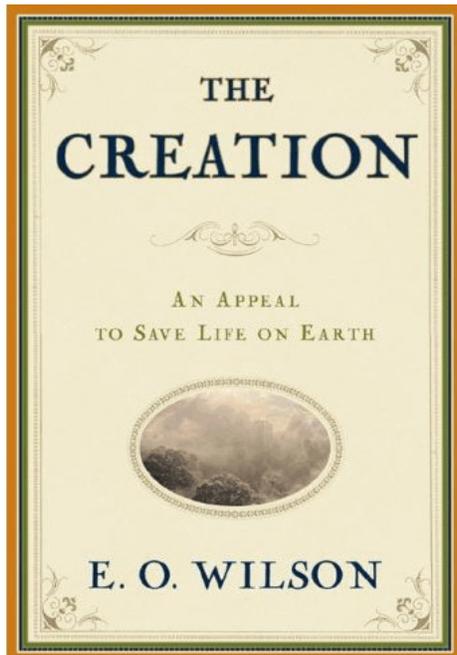
If treated as a near-horizon goal instead of an eventual destination, the survey will multiply benefits in basic and applied science. The key choke point will also be quickly revealed. It is not the needed tools of informatics, most of which are already at hand. Nor is it a persuasive rationale, which can be readily expressed to scientists and the public alike. Rather, it is the severely limited capacity of museums and other collections-oriented facilities to collect, prepare, and analyze specimens, and the shortage of expert taxonomists to do the job.

According to a recent survey by the Association of Systematics Collections, in North America only 3000 Ph.D.-level researchers are active in the exploration and description of the world's fauna and flora. At a rough guess, another 3000 are engaged elsewhere in the world. Museums, universities, and government agencies in the United States collectively spend between \$150 million and \$200 million each year on systematics research. These levels are incommensurate with the magnitude of the task and of the benefit it offers humanity.

What will it cost to complete such a map? Suppose there are in fact about 10 million living species. The cost per species, using newly available informatics technology, might be \$500, for a total of \$5 billion spread over 10 to 20 years, hence roughly comparable to the HGP. As in that enterprise, per-unit cost can be expected to drop as technology is improved, while scientific and practical benefits from the accumulating knowledge grow exponentially.

Edward O. Wilson is Pellegrino University Research Professor at the Museum of Comparative Zoology, Harvard University, 26 Oxford Street, Cambridge, MA 02138-2902, USA. E-mail: [ewilson@oeb.harvard.edu](mailto:ewilson@oeb.harvard.edu).

*Editors note:* I thought it appropriate to publish again the call for action on a global biodiversity map by E. O. Wilson, published in 2000, especially since his new book “*The Creation*,” has more recently been available. This, to add a small amount of fuel to a fire that may ignite to cause us to actually do something about conservation of biodiversity and avoidance of species extinctions at the massive scale that is now occurring. Most people now living have not seen wilderness, they do not understand what the landscape of the earth looked like before humans started cutting, burning, clearing, growing, and building. For most of us, a “natural landscape” is not really natural, nor are the animals and plants that live there now. For our children to never see or walk through areas of the earth that have not been cut over many times, is for them, and to all of humanity, a tragic loss. How can we afford to continue to ignore the natural world as we retreat further and more completely into laboratories, studying things (in our cases, parasites) that many times, really have little to do with wild organisms and natural systems? Should not the great museums and natural history research programs of our nation be united under an umbrella of protection, funded and supported by the people who have been taught about what is actually happening on our earth? Lets do something about what is happening. We need to work together to get life through the bottleneck that is fast approaching. At least teach our children about natural history before it is all gone and like David Schmidly, President of Oklahoma State University has recently written, if we do, then our children will learn more about nature by experiencing it instead of happily looking at photographs of extinct (or soon to be) mice and clicking their plastic mice to try in vain to “learn more” by looking at an image of a once real mouse on a computer screen.



*From Publishers Weekly*

With his usual eloquence, patience and humor, Wilson, our modern-day Thoreau, adds his thoughts to the ongoing conversation between science and religion. Couched in the form of letters to a Southern Baptist pastor, the Pulitzer Prize-winning entomologist pleads for the salvation of biodiversity, arguing that both secular humanists like himself and believers in God acknowledge the glory of nature and can work together to save it. The "depth and complexity of living Nature still exceeds human imagination," he asserts (somewhere between 1.5 million and 1.8 million species of plants, animals and microorganisms have been discovered to date), and most of the world around us remains unknowable, as does God. Each species functions

as a self-contained universe with its own evolutionary history, its own genetic structure and its own ecological role. Human life is tangled inextricably in this intricate and fragile web.



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Understanding these small universes, Wilson says, can foster human life. Wilson convincingly demonstrates that such rich diversity offers a compelling moral argument from biology for preserving the "Creation." Wilson passionately leads us by the hand into an amazing and abundantly diverse natural order, singing its wonders and its beauty and captivating our hearts and imaginations with nature's mysterious ways. 25 illus. (Sept.) *Copyright © Reed Business Information, a division of Reed Elsevier Inc. All rights reserved.*

### ***From Booklist***

Famed entomologist, humanist thinker, and cogent writer Wilson issues a forthright call for unity between religion and science in order to save the "creation," or living nature, which is in "deep trouble." Addressing his commonsensical yet ardent discourse to "Dear Pastor," he asks why religious leaders haven't made protecting the creation part of their mission. Forget about life's origins, Wilson suggests, and focus on the fact that while nature achieves "sustainability through complexity," human activities are driving myriad species into extinction, thus depleting the biosphere and jeopardizing civilization. Wilson celebrates individual species, each a "masterpiece of biology," and acutely analyzes the nexus between nature and the human psyche. In the book's frankest passages, he neatly refutes fantasies about humanity's ability to re-create nature's intricate web, and deplores the use of religious belief (God will take care of it) as an impediment to conservation. Wilson's eloquent defense of nature, insights into our resistance to environmental preservation, and praise of scientific inquiry coalesce in a blueprint for a renaissance in biology reminiscent of the technological advances engendered by the space race. *Donna Seaman Copyright © American Library Association. All rights reserved*



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## "The Tomb of the Unknown Shad"

By Brian Franklin

Poking and prodding before slicing your belly; you  
Simply stare back with cold, lifeless eyes.

Ova gushes out like stinking orange jelly, while  
Pondering gonadal development and size.

I see liquefied liver and pyloric caeca,  
Exploring your unpleasantness - let's take a peek-a!

Spread open your corpse rife with membranous pockets;  
Sloughing scales with a metal-like sheen.

A type of twisted treasure hunt for the worm Anisakis,  
Near the vent and the ovary, or anywhere in between.

I sever the head - hear it split open with a CRACK, and  
Search for the prize in your semicircular sac!

Odoriferous emissions so sickeningly sweet; they  
Roam the halls, fill the room, and encircle my nose.

A sigh of relief, for the task is complete.  
A pan full of guck and blood-spattered clothes.

Post-mortem journey - swept away by a wave?  
Your Body in a shallow, unmarked, rectangular grave.

Brian Franklin is currently a Fisheries Biology major at Oregon State University, Corvallis, Oregon.

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## Book Review.

**Synopsis of helminths endoparasitic on snakes of the United States and Canada, by Carl H. Ernst and Evelyn M. Ernst, Society for the Study of Amphibians and Reptiles, Herpetological Circular No. 34. 86 p. (US \$9.00)**

This colossal synopsis includes reports of the parasites known to infect snakes that occur, at least marginally, in the United States and Canada. The list of references includes articles published up to the year 2005, and it is divided into a helminth and a host catalog. For the former, the species of helminths are presented alphabetically within their more inclusive taxonomic rank. For each species the authors offer information on the habitat in the host, species of snakes that it is known to occur in, distribution, and references. For some species they include comments and notes. The “host catalogue” introduces the species of snakes, alphabetically ordered within the six families that the authors report. For each of the species of snakes, the species of helminths recorded and references are provided.

In general, the synopsis is valuable because it is the first cross-referenced checklist for these symbionts. For that reason it should be an obligatory starting point for people working in the symbiotic association between snakes and helminths. Among them we may have students, wildlife managers, biologists, pet owners and veterinarians, who quite often find rare worm infections in their cold-blooded patients. This should be a quick reference to narrow down the possible etiological agents. It should be noted however, that there are few inconsistencies in the text.

In the catalog of helminths the names of the authors are shown following the scientific name. However, that is not repeated for any of the species of snakes. Also, caution should be exercised in the use of the taxonomy of the species of parasites. As the authors follow the keys of Yamaguti (197\*\*), any changes made to the taxonomy of parasites for at least in the last 34 years have not been accounted for. As examples we may cite the species included in *Dracunculus*. Unfortunately, this affects several of the synonyms offered by the authors below the species name (i.e. *Arhythmorhynchus brevis* is a junior synonym of *Polymorphus brevis*).

Several of the records cited in the catalog come from localities other than the United States or Canada. This is not a surprise when we consider species collected in Mexico, which is part of the geographic range for some species of snakes, like *Crotalus molossus* and *Thamnophis eques*, just to mention two. However, there are records from Australia, Brazil and Taiwan that seem a little bit



odd. In the latter case –as an example- the authors include the parasites of *Pelamis platurus*. This marine snake has a wide distribution including the Indic and Pacific Oceans; although it has been recorded in the southwestern coast of the United States it may not be a common inhabitant of the area. Another case is the inclusion of the parasites of introduced species (i.e. *Boa constrictor*).

By reading the introduction it gives me the impression that the authors initially wanted to include only the parasites of snakes from the United States. It would have been an excellent idea to include the records from Mexico. The reasons are that it includes the distribution of few species of snakes (after all, they recognize no boundaries) and most of its territory is part of the Nearctic Realm. This concatenates with the need of having more inventories and studies on the systematics of parasites of snakes.

Finally, authors should have been consistent with the indication of species that occur in snakes as larval forms. This was the case for most of the unidentified worms. Also, most of the readers not familiar with parasitological terms will face difficulties remembering that microfilarias, cystacanths, and cercarias are not adult forms. Especially when they are used as part of the scientific name.

The checklist is highly valuable and its usefulness would be increased by an order of magnitude if the Society for the Study of Amphibians and Reptiles would make this checklist available on-line. Several of the targeted readers (some amateur scientists and students) now use online resources as a primary source of information.

**By Associate Newsletter Editor, F. Agustin Jimenez-Ruiz, Manter Laboratory of Parasitology, University of Nebraska - Lincoln.**

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***THE RETIRED PARASITOLOGIST EDGE*** (in contrast to “corner” which *The Editor* thought too confining for these two). As an explanation, I have seen that animals that are “cornered” seem to have less than happy dispositions, and who knows what might occur with a retired parasitologist trapped in a corner? (*Ed*)

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The following paragraph is a suggestion for a “lead” by the Editor of the ASP Newsletter for our new column. We thought we should give the Editor a paragraph he may choose to use, or not to introduce us.

This introduction was printed in the last issue of the ASP Newsletter and I am running again to provide a base for Dick and John, just in case the last column was missed by the reader (*Ed*).

“*The Editor* wishes to announce a new column for the ASP Newsletter, “*The Retired Parasitologist Edge*.” This is a column that will appear from time to time when this growing



group of parasitologists, (i.e., our colleagues no longer earning a salary) has opinions, issues or comments on the state of the discipline. This month you find the first of a sometime series entitled "Dear Dick and John." Mimicking "Car Talk" by "Click and Clack, The Tappet Brothers" on National Public Radio, or NPR, this column will tend to focus on those questions and issues encountered on retiring. The authors have just retired from careers searching for the ultimate answers in parasitology and are now able to consider even larger questions of life from their rocking chairs. We hope you enjoy this tongue-in-cheek column by two new retirees, Dick Seed and John Oaks." *The Editor* will make an effort to include "podcast" information supplied by the authors so "the reader" may also become "the listener." Because these two fellows are "old" we would expect a certain degree and level of crabiness and I am sure that you, the reader, will appreciate the sage advice that these two provide.

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### The Dear Dick and John Column

D & J column #2

**Letter from an unidentified reader:**

Dear Dick and John:

I really enjoyed reading your first column. I had no idea there were so many useful ways to dispose of my old reprints. However, reprints were only a relatively minor part of my problem. After emptying my office of the old reprints, I still have 12 very large boxes of books and already all of the bookshelves at the house are filled. What do you recommend is the appropriate way to dispose of my books?

Thanks for your help,

Troubled Parasitologist

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Dear Troubled:

Books are certainly a more serious problem than reprints! We, as true scholars, NEVER throw out books. They are loved and cared for just like our children. So what do you do with a 30 to 40 year collections of books? The obvious answer to your question would be to take them home. Well, we tried that and our wives asked "where in the world do you think you are going with those things (the actual conversation in one of our houses [DS] was more colorful than that and in some cases the suggestions were physically impossible). So again, what do you do with all those tons of books? Well several suggestions mentioned previously (ASP Newsletter 28(3) 2006) concerning what to do with the piles of reprints are worth repeating.

1. If your marriage is stable, begin building bookshelves in your home office NOW! Making them floor to ceiling is recommended. The earlier you do this before retirement, the less your spouse is likely to guess your intentions. Closets can also make good storage units, but do not build shelves in a closet in which your spouse already has their clothing. This immediately will



raise you spouse's suspicion. Remember, if you are going to retire in the near future, shelves first then let the books trickle in. A couple of books a night will never be detected, if you routinely bring your papers home in a satchel.

2. Pack them up and send them to a colleague. Again with the phrase "thought these might be of interest to you, since you are working in this field. The colleague will be flattered that you remember him/her and who would deny that he or she is "active" in a particular field. However, remember do not include a return address for the reasons given previously. If you do this just before you retire, the University will often pay the freight charges, especially if you conceal the actual total cost by shipping the containers over a period of months.

Now for some new suggestions:

3. Take them to an ASP meeting. Fill that second suitcase up to the airline's 50 lbs limit or better yet, a month or two before the annual meeting, send as many pounds as you wish via U.S. Postal Service book rate to the meeting organizer. Less clutter for the wife (husband) to yell about and ASP makes a few dollars from the book sale for the Student Travel Fund. Remember there is no such thing as an out-of-date parasitology text. They are all treasures that some faculty member or student will want for their library and for which they are willing to pay a few dollars. Remember, also, book donations are a tax deduction! This becomes increasingly important for those on a fixed retirement income.

4. One sure fire solution is to put the books on a chair in your Department hallway with a big sign that says "FREE BOOKS - TAKE ONE OR ALL". What poor starving graduate student can pass up the opportunity to obtain a free book no matter how old! One of us (JO) found that the first stack, he had taken to the hallway, was gone before he could return with the second. Late at night when no one is around, we have even seen faculty pick up a book or two (for historical purposes only).

5. Have you ever watched Home Garden TV and the programs that shows you the very latest in interior design? Remember seeing that attractive, expensive interior decorator pile of suitcases found at flea markets, one on top of the other to form the latest in end tables, or light stands. We have even seen decorators place a glass tray on top of the suitcases for use as a very fashionable coffee table. Well, books can be used in the same way. Stack them up and they make incredible architectural elements for that room you don't exactly know what to do with. They can be used to make end tables, coffee tables, night stands and, when piled from floor to ceiling, even neat columns. Your neighbors, when visiting, will be impressed by your cleverness, your design sense and even more by your vast reading knowledge. Also, if you have neighbors who are not great readers but wish to appear as great intellectuals, it is possible that you could rent some books to them for their empty book shelves. You would be making a few dollars and doing a public service at the same time. Who knows they may even attempt to read one of the volumes on tropical diseases and learn about Loa loa?

6. Check your yellow pages for bistros and cafes that might offer a book corner operating on the principle, "take a book, return a book." Here is an excellent chance to get a set of new books for retirement reading, ones your spouse may not find as objectionable as "those parasitology books," and with your exchange, you are doing the good work of parasitology, i.e., spreading the word. Be aware, you may get inquiring looks and even challenged by the management, should you bring your books by the box load. We suggest several visits and the use of brown paper bags to

hide the titles. Even two paper bags full bring looks of concern. Be stealthy and take your time enjoying selecting books over a drink of your choice. Remember, managers rarely challenge those who financially support their establishments.

7. One final suggestion. At one of our homes (DS) the garage, cellar and attic were literally packed with items that my parents had accumulated over 50 plus years of marriage. One day, when a neighbor came by, my father was seated in a comfortable lawn chair just outside the open garage doors. The neighbor look into the garage asked him "John, what are you going to do with all of that stuff in your garage?" My father answered without a moment's hesitation "That is not my problem but my heir's problem!" and so it was. Therefore one additional solution is to take those beloved books home, store them carefully in the attic, basement and/or the garage and when you go to that great parasitologist's heaven in the sky, it will be your heir's problem!

Remember to send us your questions to us. Our motto is: Your freedom is our freedom. The Dick & John Retirement Consults, Inc. are only here to serve you!

Dick and John, brothers in parasitism

Richard Seed and John Oaks can, most likely, be contacted at:

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*Richard Seed* (in red shirt)  
and *John Oaks* (in white  
shirt).

## **AIBS Public Policy Report, Volume 8, Issue 3, February 6, 2007**

- An early look at the FY 2008 budget for biology
- Attention graduate students: 2007 AIBS EPPLA application deadline nears
- Politicization of science has an ear in new Congress
- From the Federal Register
- New in BioScience: "Declining Amphibian Populations: What is the Next Step?"

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### **AN EARLY LOOK AT THE FY 2008 BUDGET FOR BIOLOGY**

Although appropriations for fiscal year 2007 have yet to be finalized, on Monday, 5 February 2007 the President released the administration's budget request for the 2008 fiscal year. Aside from the widely reported plan to actually include a budget estimate for the cost of the war in Iraq and to reduce the deficit over the coming five years, the budget plan also articulates the administration's priorities for all federal agencies and programs. Based on an earlier and still preliminary analysis, some science programs at select agencies could see significant budget increases in FY 08 if the administration's budget numbers are adopted by Congress. Importantly, not all areas of research and not all federal agencies are slated for overdue budget increases.

At the National Science Foundation (NSF), the administration has requested significant budget increases for directorates viewed as central to the administration's American Competitiveness Initiative (ACI). Although the proposed increases vary by directorate, many of the physical science, engineering and cyber- related directorates would receive budget bumps ranging from nearly 7 to 10 percent. The BIO directorate would receive almost 4.1 percent in new funding, placing the FY 08 request at roughly \$633 million or \$ 25.15 million more than the administration's FY 07 request. Meanwhile, the social science, behavior and economics directorate would receive roughly 3.9 percent in new funding. Overall, for Research and Related Activities (RR&A) programs, the administration has requested \$5.131 billion, an average increase across all directorates of roughly 7.7 percent over the FY 2007 request.

The AIBS Public Policy Office is now in the process of evaluating the federal budget for other biology and environment related programs and will include additional analysis in forthcoming reports.

### **POLITICIZATION OF SCIENCE HAS AN EAR IN NEW CONGRESS**

In an effort to address political interference in climate change research, Representative Henry Waxman (D-CA), chairman of the House Oversight and Government Reform Committee, and vocal defender of federal scientists, has already convened a committee hearing to investigate



reports of political interference with the reporting of scientific findings on climate change by federal scientists. Witnesses included Drew Shindell from NASA Goddard Institute for Space Studies; Rick Piltz, a former senior associate, U.S. Climate Change Science Program; Francesca Grifo, Union of Concerned Scientists (UCS); Roger Pielke, Jr., professor of environmental studies at the University of Colorado and environmental sciences fellow, Cooperative Institute for Research.

Ms. Grifo testified that the UCS questioned nearly 2,000 federal scientists and according to the final report, released the same day as the hearing, 44% of Fish and Wildlife Service scientists were requested, "to refrain from making findings that would protect a species." Additionally, 150 federal climate scientists stated they were subjected to political interference in the previous five years (report details may be found at:

[www.ucsusa.org/news/press\\_release/investigation-reveals-0007.html](http://www.ucsusa.org/news/press_release/investigation-reveals-0007.html)). Other instances of interference were recounted by each of the witnesses.

Representative Brad Miller (D-NC), chairman of the Subcommittee on Oversight and Investigations of the House Committee on Science and Technology, also intends to look into reports of political interference in scientific research. Chairman Miller indicated that he has a backlog of nearly one hundred tips and complaints not previously covered in the press. Tips and complaints were recorded through a "tip line" found on the committee's website.

Information from the hearing, including witness testimony and opening statements is available at: <http://oversight.house.gov/story.asp?ID=1162>

## **FROM THE FEDERAL REGISTER**

The following items appeared in the Federal Register during the week ending 3 February 2007. For more information on these or other recent items, please visit the AIBS Federal Register Resource at [www.aibs.org/federal-register-resource/index.html](http://www.aibs.org/federal-register-resource/index.html).

### **COMMERCE**

- Availability of Grant Funds for Fiscal Year 2007

### **DEFENSE**

- Estuary Habitat Restoration Council; Open Meeting

### **EDUCATION**

- Office of Postsecondary Education; Overview Information; American Overseas Research Centers Program; Notice Inviting Applications for New Awards for Fiscal Year (FY) 2007  
- Office of Postsecondary Education; Notice of Intent To Establish Negotiated Rulemaking Committees Under Title IV of the Higher Education Act of 1965, as Amended

### **ENVIRONMENTAL PROTECTION AGENCY**

- National Advisory Council for Environmental Policy and Technology



## INTERIOR

- Wild Horse and Burro Advisory Board; Meeting
- Scientific Earthquake Studies Advisory Committee

## STATE

- Office of Ocean Affairs; New Conservation and Management Measures and Resolutions for Antarctic Marine Living Resources Under the Auspices of CCAMLR

The following items appeared in the Federal Register during the week ending 26 January 2007. For more information on these or other recent items, please visit the AIBS Federal Register Resource at <http://www.aibs.org/federal-register-resource/index.html>

## COMMERCE

- Marine Protected Areas Federal Advisory Committee; Public Meeting
- Draft (2007) Strategic Plan for Fisheries Research

## EXECUTIVE OFFICE OF THE PRESIDENT

- Executive Order 13423 of January 24, 2007
- Final Bulletin for Agency Good Guidance Practices

## FEDERAL COMMUNICATION COMMISSION

- Effect of Communications Towers on Migratory Birds

## HEALTH AND HUMAN SERVICES

- Public Meeting of the President's Council on Bioethics on February 15-16, 2007

## NATIONAL SCIENCE FOUNDATION

- Committee on Equal Opportunities in Science and Engineering; Amended Notice of Meeting

## **NEW IN BIOSCIENCE: “DECLINING AMPHIBIAN POPULATIONS: WHAT IS THE NEXT STEP?”**

In the February 2007 Washington Watch article in BioScience, Megan Kelhart explores the state of amphibian conservation. An excerpt from the article follows:

“Declines in global amphibian populations have been in news headlines around the world since they were acknowledged in 1989 at the First World Congress of Herpetology. Eager to explain the causes, biologists have established ambitious research, monitoring, and inventory programs. But what is being done at the policy level to stem current declines and prevent future losses?”

“According to biologist Edmund Brodie, a professor at Utah State University, very little is being done.”



To continue reading, please visit

<http://www.aibs.org>

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## **POSITION ANNOUNCEMENT**

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Faculty Research Assistant, Ecological Parasitologist

Oregon State University Cooperative Institute for Marine Resources Studies.

Overview: As a member of team of ecologists studying juvenile salmon and their habitat in the Pacific Northwest, this research position studies the parasite communities of juvenile Chinook and Coho salmon to address habitat use and trophic interactions.

Qualifications: BA/BS, MS preferred, in biological science, such as zoology, biology, fisheries or ecology. Strong quantitative skills related to data processing and statistical analyses.

Coursework/background in parasitology. Proven experience in use of computer software for data entry, analysis, and presentation of results in graphical form.

Experience with preparation of written and oral presentation of research results. Ability to work independently and cooperatively with a large team of scientists.

Salary: \$33,960 - \$37,116

Closing Date: April 23, 2007



For full details see <http://jobs.oregonstate.edu>, Posting # 0000600.

Contact: Kym Jacobson (kym.jacobson@noaa.gov ) or Jessica Waddell ([jessica.waddell@oregonstate.edu](mailto:jessica.waddell@oregonstate.edu)) for questions.

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## **Manter Laboratory of Parasitology *PARASITECAST*<sup>(TM)</sup>**

The Harold W. Manter Laboratory of Parasitology and the School of Biological Sciences at the University of Nebraska - Lincoln are pleased to announce the creation of a new web service. This service is called *PARASITECAST*<sup>(TM)</sup> and is a podcast of the parasitology lectures and seminars that are hosted by the Manter Laboratory. The Thursday noontime parasitology seminar series at the University of Nebraska has continued unbroken since 1972.

To listen to a *PARASITECAST*<sup>(TM)</sup> go to <http://lamarck.unl.edu/hwml/> and click on the “cast” of your choice. Feel free to link to or download to your favorite mp3 player.

If you have video, audio tape, mp3, or wav file with useful parasitological information on it, send it to the archives of the American Society of Parasitologists. We will then copy the data from the tape (audio only at this time) and post it to the *PARASITECAST*<sup>(TM)</sup> web site.

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## **ASP Meeting 2007.**

See our web site: <http://asp.unl.edu> for more information.

Hotel reservations must be made using the link for Hotel Registration when you access. <http://www.mda.cinvestav.mx/aspmsp07> .

### **Our group number is: 19450.**

Early registrations rates (on or before February 27, 2007) are \$105 (+ 17% tax) for a standard single/double room.

**[You must register on or before Friday, April 27, 2007 to receive the ASP group rate.](#)**



## PRESIDENTIAL ADDRESS\*

### THINKING GLOBALLY, ACTING LOCALLY

Timothy P. Yoshino

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Thank you, Mike, for that kind introduction, and many thanks to the membership of the American Society of Parasitologists (ASP) for the honor and privilege of serving as your president this year. It has been especially good fortune to be serving during a year in which the ASP is meeting jointly with the British Society of Parasitology in conjunction with the 2006 International Congress of Parasitology (ICOPA) here in Glasgow, which promises to be a very exciting meeting. However, I must admit that choosing a topic suited to this venue for my address was a bit of a challenge. The title I finally chose, “Thinking globally, acting locally,” was adapted from the phrase “Think globally, act locally” coined by environmental scientist Rene Dubos, who promoted the idea that in addressing global environmental problems one has to first consider the unique conditions that are working at the local level to formulate action plans (Eblen and Eblen, 1994). With this ICOPA meeting as a backdrop, I thought it most fitting to highlight the tremendous opportunities we have as parasitologists to think globally about our discipline, while at the same time for ASP as a “local” organization to take an introspective look at who we are, and how we operate as a society to take advantage of the many opportunities and obligations presented to us as part of this global community.

#### THINKING GLOBALLY

Here at the ICOPA, it is apparent that parasites continue to exact a high toll in human disease and suffering. For protozoan parasites, malaria is still the “top dog” of human parasitic diseases with billions of people at risk of infection, more than 300 million infected, and 1–2 million deaths per year, a majority of which are children (World Health Organization, 2005). Other important protozoans, such as the trypanosome and *Leishmania* spp., also are responsible for debilitating sickness in the millions. Parasitic helminths, such as the schistosome blood flukes, filarial worms, and intestinal helminths, infect hundreds of millions of people worldwide, and although these parasites may not be as deadly as malaria, they slowly sap the strength and vitality of their victims, resulting in significant loss of productivity and work years (Lammie et al., 2006). Like most infectious diseases, these major protozoan and helminth parasites track very closely with poor nutrition, unsanitary conditions, and inadequate (usually nonexistent) public health infrastructure that is directly linked to poverty. It is therefore anticipated that human parasitic disease will continue to plague the world well into the foreseeable future.

Consequently, there is continued critical need for understanding the basic biology of parasites, i.e., how they live and how they interact with their hosts and their environment in time and

space. It is in this arena that broadly trained parasitologists can make significant contributions.

As in human medicine, our domestic animals also carry an abundance of parasites that impact not only the health of these animals’ populations but also human health in the forms of loss of food production or zoonotic disease transmission. Although research funding for parasites of veterinary importance will continue to emphasize the applied sciences of drug development, vaccinology, and diagnostics, new concerns with food safety and biosecurity, increasing commercial interest in organic animal food products, and advancements in the parasite genomics, are creating many opportunities for basic parasite research.

Of course, parasites are found in all other animals and, for many of us, the excitement of discovering new parasites in our favorite host species is what first attracted us to parasitology. Not surprisingly, they also cause disease in their wildlife hosts, which has led to many interesting research problems for parasitologists, as many of our ASP members have discovered. Examples of diseases caused by parasites run the gamut from whirling disease in trout, trematode-induced deformities in frogs, and parasitic castration in snails, to the famous work by the late Roy C. Anderson on moose sickness.

Clearly, parasites, from a global perspective, are ubiquitous and ever-present threats to all free-living animals, including humans. However, as the world changes, so will parasites, by adapting to these changes. So, what are some of the “drivers” that are now, or may in the future, affect parasite populations or how we investigate them? Below are some examples of drivers that will impact parasitology in the future.

#### Global warming

Well before the release of Al Gore’s film *An Inconvenient Truth*, most (at least those with any intelligence) agree that global warming, and the resulting dramatic climate change it brings, is real and will undoubtedly affect parasite distribution and transmission patterns worldwide, thereby producing unpredictable effects on human and animal health. With this changing landscape, expertise in an array of parasitologic disciplines, both field- and laboratory-based, will continue to be in high demand.

#### Habitat destruction and pollution

Habitat destruction and increased pollution are inevitable outcomes of continued global economic development, especially in second and third world countries. New land development will lead to accelerated biodiversity loss, including parasite species, especially in critical conservation zones (Brooks et al., 2006). Another consequence of new land development is the potential emergence of new infectious disease agents. Brooks and Hob-

\* Presidential address. American Society of Parasitologists, 7 August 2006, Glasgow, Scotland, U.K.

erg (2006) argue that infectious disease experts, including parasitologists, trained in the latest methods of systematics and phylogenetics will be required in efforts to generate comprehensive inventories of potential infectious agents in nature.

### Armed conflict and poverty

Political instability, armed conflict, and economic strife, all too common in many parts of the developing world, will continue to drive poverty. Unfortunately, because infectious diseases closely track with poverty, this virtually guarantees the persistence of parasitic diseases as future major health concerns.

### Biosecurity and food safety

Since 9/11 and the anthrax scare in the United States, biosecurity and food safety have surfaced as major national priorities. Because of these concerns, parasitologists with broad training in epidemiology/ecology, systematics, and diagnostics will have excellent opportunities in these growing fields, both in terms of jobs and prospects for research funding.

### Biotechnology

Finally, technological advances in the life sciences have significantly altered our view of parasite biology and parasite–host interactions at the molecular-to-community levels of organization. Genomics and proteomics, powerful imaging technologies, bioinformatics, sophisticated geographic information systems, mathematical modeling, and the like are rapidly becoming essential analytical tools for parasitologists and will continue to shape our discipline in the future.

Undoubtedly there are other drivers that will influence the continued importance of parasites as pathogens of humans, animals, or plants, or simply as fascinating members of our biotic world. So, from a global perspective, priorities emphasizing parasitic diseases have created a broad interest in parasitology and the underlying biology of the parasitic lifestyle. Clearly, parasitology as a field is alive and well, and opportunities abound as scientists in a variety of disciplines engage in both applied and basic research of their favorite parasites.

## ACTING LOCALLY

So, from a local perspective, the ASP seems to be well situated to take advantage of the popularity of parasitology. Traditionally, we have always had broad interest and expertise in a wide range of disciplines and have engaged in studying the variety of “cool” parasite, whether from humans, domestic animals, or any other hosts of interest. In studying our favorite parasite groups, we generate new information and publish our results in the *Journal of Parasitology* and other journals. We are involved in training the next generation of parasitologists as undergraduate and graduate students and postdocs and also in educating the general public about these fascinating organisms. Finally, we interact with scientists and educators in other disciplines and scientific societies to enrich our knowledge outside of parasitology and also to educate and inform our colleagues about the wonders of parasites. However, that said, the question might be asked, How is the ASP doing in 2006? Are we the same ASP we were 20 yr ago, even 10 yr ago?

To address these questions, at the recommendation of the

2005 Priorities and Planning Committee, the ASP distributed a member survey to obtain a “snapshot” of who we are today and how we, as a society, are doing in meeting the needs of our membership. The last time such a survey was conducted was in 1992 (see *Journal of Parasitology* **79**: 798–807) so it gave us an opportunity to see what, if any, changes have occurred over the past 13 yr. The idea also was that an updated survey at this time could provide valuable information upon which a Strategic Plan could be created to help map out our future. Now, I don’t know how you all feel about strategic planning, but I liken it to a colonoscopy, having recently undergone this procedure myself. It is something that should be done regularly, although you never look forward to the experience. It can be very uncomfortable and somewhat painful as you go through the procedure, but in the end (no pun intended), it is thought to be important and usually worthwhile to ensure your good health in the future.

That being the rationale, in 2005 an ad hoc Strategic Planning Committee was formed consisting of a group of past and present ASP officers (see ACKNOWLEDGMENTS), with input from Mike Moser’s membership committee and the collective wisdom of past ASP presidents and other members. The committee’s charge was to identify our strengths and vulnerabilities, target specific challenges we currently face, and then brainstorm possible actions to address these challenges. Many of the issues and actions I will be discussing today are not at all new but represent reoccurring themes that I feel require revisiting as the environment of, and forces acting on, the ASP change over time. So, with that as an introduction, what did the survey tell us?

### ASP member survey: summary of results

*Basic demographics:* The 2005 survey was distributed by e-mail to approx. 750 members, from which 114 surveys (~15%) were returned. This was not a great return, but not being one to be stopped by lack of statistical power, we forged ahead with our “analysis.” In terms of broad occupational categories, the majority of respondents represented faculty (76%), followed by researcher/scientists (13%), graduate students (7%), and postdocs (4%), and this is consistent with primary appointments being mainly in universities and colleges (88%), then government agencies (8%), and industry (4%). Most of our members were not hired as “parasitologists” (55%), compared with 45% who were. The nonparasitologist positions represented a wide range of disciplines, e.g., microbiology (most numerous), general biology and zoology, invertebrate zoology, ecology, genetics, immunology, and a few others. This indicates that our students and postdocs are receiving excellent training in diverse areas and have been very competitive for jobs in academia, government, or industry.

*What activities are ASP members engaged in?:* With a majority of members being in academic institutions, many of us teach (76%), with 64% providing instruction in parasitology. Compared with 1992, in which 57% of members taught, we seem to be involved more heavily in instructional activities. The good news is that, even if we are not being hired as parasitologists, students are still being exposed to parasitology in the classroom, thus promoting the discipline to an important target audience.

TABLE I. Membership in the American Society of Parasitologists from 1995 to 2006 by member category. Data compiled from statistics provided by Allen Press, Inc. and those reported in published minutes of ASP Council meetings.

Year	Membership category			Total
	Regular	Student	Other	
1995	1,003	167	266	1,436
1997	996	165	177	1,338
1999	—	—	—	1,203
2001	804	142	186	1,132
2002	784	124	193	1,101
2003	745	133	192	1,070
2004	704	131	187	1,022
2005	650	137	186	973
2006*	588	82	184	854

\* Data compiled through May 2006.

Furthermore, survey data also indicate that approx. 85% of members are actively engaged in research, with most publishing regularly. This is comparable to the 1992 data (81% involvement). One trend noted in the current survey, however, was a shift in the balance between traditional laboratory and field research areas being pursued by the ASP membership. Over the last decade, member participation in research has become more focused in the field-oriented areas such as ecology, systematics, phylogenetics, evolution, and taxonomy compared with the 1992 profile, which showed more of a balance in represented disciplines.

The longer term implications of this shift in research emphases are unclear at present, and the planning committee was somewhat divided as to how this situation should be addressed. One view is to continue on our current path and let “natural selection” take care of things, probably resulting in complete loss of some disciplines. Others felt that efforts should be made to “invest” in underrepresented areas with the goal of developing greater participation in disciplines organized at the cellular and molecular levels, or emphasizing pathogenesis, diagnostics, vector biology, and the like. Personally, being one of those “underrepresented areas” facing extinction, I favor the latter option. But I also believe that the real strength of the ASP is in its identity with and commitment to its disciplinary diversity. As other organizations emphasize specialization, the ASP is unique in truly representing the broadest expertise encompassing the field of parasitology as a whole. In addition, even though laboratory-based research areas have decreased relative to the more field-oriented disciplines, a substantial number of member laboratories investigating basic cellular and molecular biology, immunology, or pathology are still very active in ASP affairs. By building on these research groups, it is envisioned that ASP can again build a strong presence of these research fields and hopefully strengthen our ability to attract new members representing the entire spectrum of parasitological disciplines.

### Challenges facing the ASP

With the above-mentioned demographic sketch as background, one of the main impetuses for the survey and planning process was to gain some insight into the steady decline in ASP

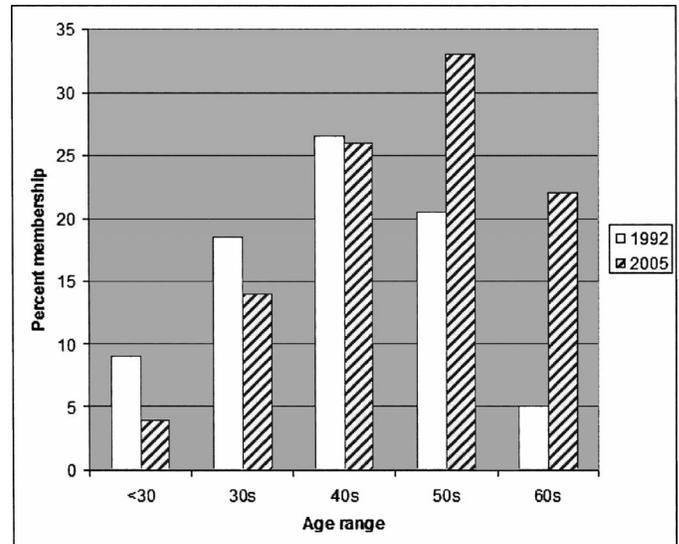


FIGURE 1. Distribution of American Society of Parasitologist members by age categories. Comparison of survey data results from 1992 (open bars) and 2005 (striped bars). The 1992 prevalence data for each age category were extrapolated from original survey figures and therefore represent estimates of actual percentages.

membership we have been experiencing over the last decade and longer (Table I). However, before going further, there are several points I want to make clear. First, presently there is no need to panic because we certainly are not in a crisis situation. The ASP is financially strong and our members continue to be very active in supporting the society. However, because of the persistence of this decline, it is only prudent that we continue to plan **and act** to address this situation, with the eventual goal of reversing it. Second, membership decline has been well recognized and discussed by many of my predecessors, and revisiting this subject here does not at all imply that my past presidential colleagues have shown inadequate concern or given insufficient effort. Factors involved in membership are complex, and I suspect that I will not be the last president to address this issue. Finally, the ideas on how we might approach membership issues are not necessarily new. Indeed, many have been prominently proposed and a number have been implemented in the past. The goal of the planning committee was not to reinvent the wheel but rather to consider new and existing strategies that could serve as possible action plans for us to follow.

So, why the declining membership? The decline seems to be coming from 2 sources. As shown in Figure 1, we, as a Society, are getting older. In comparison with the 1992 survey data, there is a prominent shift in age distribution of our members to the right. A positive spin on this age shift is that it provides a great opportunity for the younger parasitologists to step up and assume leadership roles, not only in their fields of research but also in society activities. This, however, assumes that younger parasitologists are joining the ASP to fill the ranks left by retiring older members. Unfortunately, the number of younger members joining the ASP also has declined relative to the 1992 survey (Fig. 1). If the numbers of new members entering the society cannot keep pace with our geriatric cohort, then an obvious challenge for us is in recruiting new members. Also, if one looks at the length of time individuals have retained their

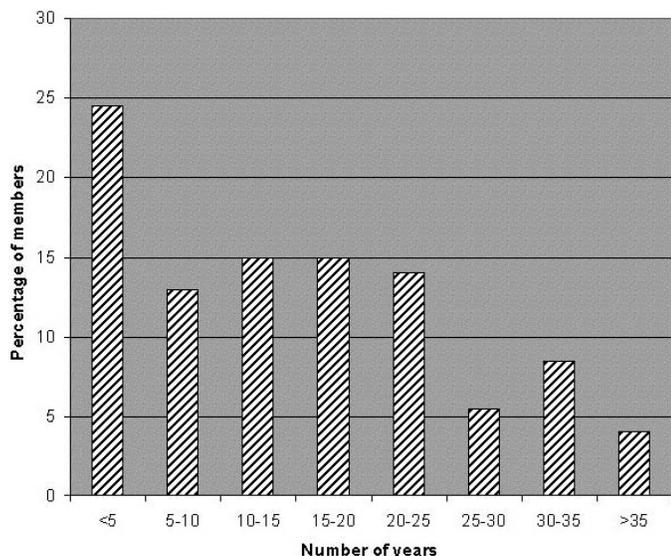


FIGURE 2. Distribution of American Society of Parasitologist members according to the number of years of continuous membership. Note that the largest percentage of decrease in members (~50%) occurs during the first 5 yr of membership.

membership (Fig. 2), there is a significant loss of members during the first 5 yr (approx. 50% of the yr 1–5 cohort), after which time membership stabilizes. This suggests 2 things. First, because the majority of new members are graduate students, retention efforts might be targeted to that time of transition from student to the first postdoc or other position, e.g., faculty, scientist; and, second, if we are able to retain new members for at least 5 yr, there is a high probability that they will become regular members for life. Thus, we must look at ways of increasing retention of new members.

In addressing the major issues of recruitment and retention, the primary question the planning committee asked was, What external and internal factors are affecting ASP membership, especially those influencing our younger members? The ASP is facing a highly competitive environment in which graduate students and postdocs looking at career options and professional development in parasitology now have a wide choice of specialized research disciplines in which to enter. Unfortunately for us, many of these students and postdocs will join researchers who work with parasites in the laboratory or field but who do not necessarily consider themselves as parasitologists or identify with the ASP.

The “value” that current and potential members, especially our graduate students and postdocs, place on being a member of the ASP is based on a combination of factors, including the monetary cost of membership; their initial and continued interactions with the society; the camaraderie established with their fellow students, mentors and other members; and their participation in and support of the 2 most tangible features we offer as an organization, i.e., our annual meetings and our “publications,” which include the *Journal of Parasitology*, the ASP Newsletter, and the ASP website (<http://asp.unl.edu>). For our younger members, making choices regarding where to spend their money, time, and effort depends on whether they feel they are receiving adequate value. Simply put, if the value is there,

they will join and stay; if not, they will seek other venues. Therefore, it is imperative that we examine what we offer, and what, if any, changes may enhance our “value added,” thereby making the ASP more competitive in building our membership.

### Addressing the challenges

From the collective wisdom of ASP’s past leadership, the Strategic Planning Committee and other members too numerous to mention, I include here some of the thoughts (and actions) that the ASP should consider in addressing the challenges before us.

*Cost of membership:* I think the perception for new members is that ASP is too expensive to join or remain a member. The reality is that joining ASP is really a bargain, even for regular members. With the new 3-yr, first-time member rate, students pay an average of only \$17.50 per year, which includes a subscription of the *Journal of Parasitology* and many other perks, including travel and research grant awards, discounts on meeting registrations and publishing in the *Journal of Parasitology*, student paper competition awards, graduate student symposium, and (wild) graduate student parties at our annual meetings. This is a great deal, **but we need to be much more aggressive in getting the word out** to new and prospective graduate students. In addition, to facilitate transition from student-to-regular member status in the ASP, the Council in its meeting yesterday approved a new provision in which newly graduated Ph.D.s will be offered a 1-time, 3-yr membership at the student rate (currently  $\$35 \times 3 \text{ yr} = \$105$ ). It is hoped that a combination of special student–postdoctoral membership dues incentives potentially spanning a total of 6 yr, will help to bridge the transition to regular member, and, in so doing, according to our survey, increase the rate of membership retention.

*Promoting the ASP from within—annual meetings:* Our annual meetings represent a major focus for the society and serves multiple functions, e.g., exchange of new information and ideas, experience in giving scientific presentations, establishment of research collaborations and networking, new acquaintances, reconnections with friends and colleagues, and, importantly, engagement in the business of the society. Member participation in these meeting fluctuates from year-to-year, but survey data indicate that 40% of members have attended only 1 or no meetings in the past 4 yr, and an additional 20% have attended only half the meetings. Some of the reasons given for not attending include high meeting cost, competing meetings, a lack of interaction with researchers both within and across disciplines, and a lack of professional or social connections to the society, especially for students and younger members. How do we address these concerns and start to build greater participation in our meetings?

Cost of attending national meetings continues to be problematic; finding that balance between attractive venues and reasonable cost. Unfortunately, many college campuses, previously low-cost meeting sites, have discovered that hosting summer meetings can actually be profitable, and prices of housing and facilities have significantly increased. However, comparatively, college campus meetings still can be very affordable, and we need to be more vigilant in including such locations as we explore future meeting sites.

One effective way of energizing our program and encour-

aging interest in both core and underrepresented fields of parasitology is to sponsor major symposia that focus on applying cross-disciplinary approaches to addressing basic or applied research in parasitology. Symposia could feature, cutting-edge technologies, integrating disparate concepts or fields, or addressing controversial topics. A key point is that these special symposia should be organized every year, so that members begin to expect and anticipate these events. To accomplish this, suggestions for symposium topics should be actively solicited early by a symposium committee (or an appropriate subcommittee), so that symposium topics and potential speakers can be identified for meetings at least 1 yr in advance. This would provide adequate time for planning and advertising. Alternatively, ASP members who belong to nonparasitological societies also could organize parasite-oriented symposia or workshops or give special presentations at those meetings highlighting the ASP and our work to our nonparasitology colleagues and students. The ASP should make available funding to promote these “outreach” projects.

As the survey has shown, many ASP members are involved in teaching parasitology, and although we sporadically have had workshops or symposia on teaching, there is clearly sufficient interest in this area to have teaching become a regular feature of our annual meetings. These could take the form of show-and-tell sessions, workshops on various teaching approaches, or satellite workshops involving primary or secondary school teachers. Lee Couch, Chair of the ASP Education Committee, organized a fantastic workshop for grammar school teachers during the ASP meeting in Albuquerque on the use of parasites in teaching biology. Another way to promote the ASP and parasitology might be to offer a “Woods Hole”-type course in field parasitology geared to the graduate student and postdoc level and patterned after the popular “Field Parasitology” course taught by our own John Janovy, Jr., at the Cedar Point Biological Station. Regardless of the format, promotion of teaching is a niche the ASP should be exploiting.

Finally, joint meetings, although logistically challenging at times, should become a more regular part of ASP’s meeting agenda. Survey data indicate that more than 60% of members feel that joint meetings are either important or very important. I can think of no better way to make others aware of the ASP and to promote interdisciplinary interactions than meeting face to face with other societies. Although meetings with those societies with a “natural” connection to parasitology, e.g., American Association of Veterinary Parasitologists, Protozoologists, Nematologists, Wildlife Disease Association, and . . . yes, Tropical Medicine and Hygiene, are important, occasionally meeting with our “host” organizations (mammalogy, ornithology, and so on), sister disciplines such as the Ecological Society of America or American Association of Immunologists, or even larger groups such as Comparative and Integrative Biology or American Institute of Biological Sciences, should be added to the mix.

*Promoting the ASP from within—regional affiliate societies:* Our regional affiliate societies are critically important to the health and well being of the ASP because these groups represent our membership at the grass-roots level. Officially, there are nine affiliate societies that represent the “extended family” of the ASP, and it seems that 2 of these, the New Jersey Society and the Southern California Parasitologists have now become

inactive. Regional affiliates, in many cases, serve as the first exposure of undergraduate and graduate students to the ASP, and the best opportunity for them to begin developing professional and personal relationships with their peers and established members. For the ASP, this represents a critical time for instilling the passion of parasites in new members and starting to nurture their longer term relationship with the society. An informal sampling of a couple of regional societies also revealed that only about 20% of regional society student members were also members of ASP. Therefore, it should be a highest priority for the ASP to support and augment the activities of our regional affiliates and encourage more graduate and undergraduate student participation at the national level. How can this be accomplished?

Work directly with inactive affiliates by identifying members interested in reorganizing the group and providing seed funding for initiating a meeting and program.

Continue (and enhance if possible) support for “Best Student Paper” travel to the national meeting and reactivate the affiliates “Keynote Speaker” program to bring in outside speakers to address regional meetings.

Provide “no strings attached” stipends to affiliates for “meeting enhancement” perhaps awarded on a competitive basis for new member recruitment efforts at the local or national levels.

Actively encourage participation of affiliate members in the ASP by soliciting, each year, a list of members who would be willing to serve on ASP committees, and when a national meeting is held in an affiliate’s region, by inviting members from those regions to assist in meeting activities by serving as paper and symposia chairs, organizing a region-specific symposium, or hosting a satellite research or teaching workshops.

Encourage greater participation of our regular members in regional meetings to support programs and encourage greater student interest. All regular ASP members should attend at least one regional meeting each year. Students who see active member participation will themselves become more energized and excited about parasites, and, hopefully, the ASP.

*Promoting the ASP to the outside: communicating our science:* In addition to annual and regional affiliate meetings, the ASP publishes the *Journal of Parasitology* and a quarterly newsletter and maintains an active website (<http://asp.unl.edu>). These media serve as the major communication outlets for not only our members but also the outside world. These media are critical to creating visibility for the society.

Under the steadfast leadership of editor Jerry Esch and tireless efforts of the associate editors and reviewers, the ASP produces an excellent journal, the *Journal of Parasitology*, which over the past few years has become a full participant in electronic publishing. Ironically, however, although manuscript submissions are at an all-time high, member survey data indicate that a large number (56%) have published 1, or no, papers in the *Journal* in the past 4 yr. The 2 reasons most highly cited for not publishing in the society journal were an inappropriate “target audience” and low “impact factor (IF).” The target audience, although perceived to be important, in reality has become less so given the nature of today’s electronic literature searches and retrieval. Molecular parasitologists worldwide will see a gene expression paper published in the *Journal* through PubMed Central. Therefore, choosing to publish then becomes

a question of the journal's "stature" or status within parasitology, and this is where IFs come into play. Jerry Esch, in his editor's report to Council yesterday, indicated that according to recent Institute of Scientific Information data, the *Journal of Parasitology* ranked eighth among 20 parasitology journals in IF, even though the *Journal* is the second most frequently cited of the 20 journals with which we are compared. Because our present IF is due mainly to the large number of papers published annually, we are exploring several options that we hope will result in significantly increasing the *Journal of Parasitology's* IF and thus our ranking. It is envisioned that, over time, a higher IF for the *Journal* will encourage both regular members and new authors to consider publishing in the *Journal*, and eventually attract a larger audience of potential ASP members. In addition, the Membership Committee has already implemented a plan to solicit membership from authors who publish in the *Journal of Parasitology* but are not members.

Likewise, our newsletter and website both serve as important communication vehicles for the ASP. The website in particular has the greatest potential for recruiting new members and adding value for current members by providing detailed descriptions of the ASP, its member benefits, and application forms. The Membership Committee is already engaged in arranging website exchanges with other societies to increase our external visibility. Other website features we are currently exploring include the posting of the tables of content and abstracts for articles in press in the *Journal of Parasitology*; creation of a members-only, password-protected site for online voting or transactions that require greater security; and online capabilities to join the ASP, renew memberships, or register for meetings. Students and postdocs have commented that having designated areas to post their resumes, and a "job board" updated with current positions available would be most helpful in their networking efforts. These are but a few of the ideas on how the website could be used as a tool in promoting active participation in ASP affairs. Websites are only as good as they are kept updated, and, fortunately, we have 2 dedicated members, Scott Gardner and Mark Siddall, our website gurus, who have devoted many hours to the website and our instructional technology initiatives. Their efforts are much appreciated.

*Promoting the ASP to the outside—engaging the public:* For the general public, the ASP should be the first point of contact for authoritative expertise in all things parasitological. However, to reach this goal, we need to be more proactive in promoting the work of the ASP by sharing our passion with kids in the classrooms, civic organizations, local medical societies, public agencies, and the like. To facilitate this process, the ASP Education Committee has organized a "Speakers Bureau" that can match speaking engagements with willing ASP volunteers. Recognizing the need for increased public visibility for all areas of science, the Council of Scientific Society Presidents requested that each society, including the ASP, write 2 articles in the next year highlighting interesting research by our members for release to the national news media. Perhaps the ASP Newsletter editorial board or a new public relations committee could serve to facilitate this and other activities aimed at raising the public

profile of the ASP and its members. Is it time to consider hiring freelance science writers to publicize our fascinating work? Perhaps so.

## CONCLUDING REMARKS

What I have tried to do in this address is to provide a glimpse of the current state of ASP in 2006. The message I have tried to convey is that the ASP is a strong society that provides a premium to all of its members, both young and older. However, we are facing some challenging times, and although we still need to be thinking globally about the many opportunities available to us as scientists, we also must act locally to ensure a bright future here at home. This means being proactive in promoting ourselves to our constituents, i.e., first to our members, especially graduate students, postdocs, and younger established members; second, to our nonparasitology colleagues and students; and, finally, to the general public in which we must engender an understanding and appreciation of the work we do. To be successful in attracting new members and retaining those we have will require a strong commitment on the part of ALL members to actively engage in the affairs of the society at the national **and** regional levels. It will only be through these efforts that we will attain the rewards of a continued vibrant and growing ASP.

The American Society of Parasitologists is an organization with a long and proud history, and I feel most fortunate to have been a part of it for the past 35 yr. I want to thank the members of the ASP Strategic Planning Committee and many other fellow members for their valuable input into the planning process, the Yoshino laboratory for their assistance, and above all, my wife, Laureen, for her patience and support, especially over the past couple of months as I prepared this address. Thank you again for the privilege of serving as president this past year and for your kind attention this morning.

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The ASP Newsletter welcomes news stories and articles. Please send your text electronically to Scott Gardner as an e-mail and attach as an MS Word document. Drawings, photographs, charts, or tables can be sent as B/W TIF files at 300 dpi. Please send TIF files one at a time. A general rule is to limit photograph size to 3x5". You may attach both text and graphic files to your email message.

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