Spring 2006

# American Society of Parasitologists Newsletter, v. 28, no. 1, Winter [i.e. Spring] 2006

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American Society of Parasitologists

# Newsletter

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**From the *Editor* of the Newsletter**

The The ASP newsletter accepts information and news of a parasitological nature from all disciplines. Please assist me in making the content of the ASP newsletter highly relevant. We will be posting material on the web as they are generated by you, the **reader** and **contributor**.

I would like to thank Austin MacInnis and Gil Castro for their help in putting this newsletter together. Their contributions were really welcome and we expect that more of these kinds of things will appear within these pages in the near future.

Sincerely,

Scott L. Gardner

## CONTENTS



**Note: ICOPA XI - Glasgow (6-11th August 2006). THE LAST DATE FOR EARLY REGISTRATION AT A REDUCED RATE OF £350 (£200 FOR STUDENTS) IS 17th MARCH 2006. AFTER THAT TIME THE REGISTRATION FEE WILL BE £450 (£260 FOR STUDENTS). CHOICE OF ACCOMMODATION MAY ALSO BE MORE LIMITED AFTER THIS DEADLINE.**

**NEWS**

Editors Note: The **EMINENT PARASITOLOGIST LECTURE** for 2005 was to be given at the the Annual Meeting of the American Society of Parasitologists in Mobile, Alabama, July 12, 2005. Dr. Gilbert Castro indicated to me that he had prepared an introduction for Dr. J. P. Dubey, recipient of the Eminent Parasitologist Lectureship. I thought it fitting that this introduction be published in the newsletter, even though Dr. Dubey was not able to present due to the cancellation of the annual meeting due to the approaching hurricane.

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## INTRODUCTION
### EMINENT PARASITOLOGIST LECTURE
THE AMERICAN SOCIETY OF PARASITOLOGISTS
JULY 12, 2005
Mobile, Alabama

Dr. J. P. Dubey

Dr. David Williams, who chaired the Selection Committee for the Eminent Parasitologist Lecture should have been the person introducing the 2005 recipient of this high honor from the American Society of Parasitologists. Dr. Williams, who provided outstanding leadership for the committee, was unable to be in Mobile and asked if I would provide the introduction. I consider it a professional privilege and personal pleasure to do so.

The list of nominees for the 2005 Eminent Parasitologist Lecture was extraordinary. All the nominees are known for a lifetime of critically acclaimed work in several different fields and, in some cases, had produced work that is recognized internationally for contributions to multiple biological disciplines. All nominees for 2005 were truly eminent and all had champions among the Selection Committee members. Thus, the committee's charge became one of selecting the most Eminent. The high quality of the nominees presented the committee with a pleasant situation, but with a difficult challenge. Nonetheless, in the end, there was no discord among committee members regarding the outcome of balloting.

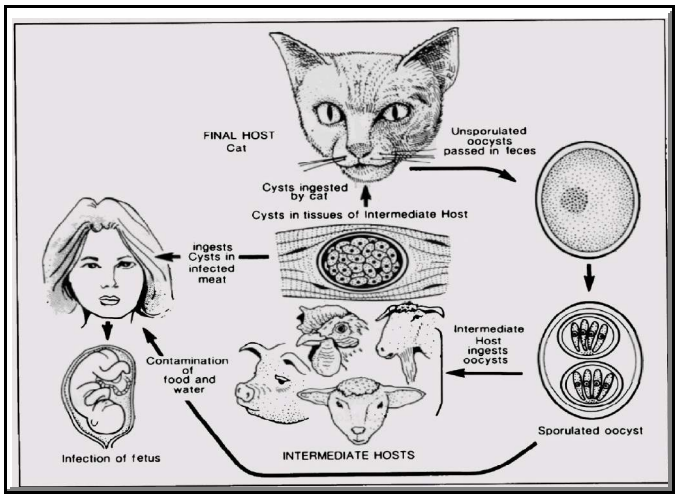
Despite the differences in rationale used by each committee member in coming to a decision, the final selection was based on a criterion that is best expressed in an essay by Arthur Schlessinger Jr. entitled *The Decline of Heroes*. Among historians there are those who believe that history is predetermined and events will happen regardless of the input of specific individuals—if one person does not execute the event another will. Other historians believe that there are individuals whose impact on the course of events in history has been so profound that for them "there could have been no substitute." In the recent history of parasitology, the latter can be said about this year's recipient of the Eminent Parasitologists Lecture—J.P. Dubey.

"There could have been no substitute" that could have achieved what he has achieved in the field of parasitology.

Dr. Dubey is a Meritorious Senior Microbiologist in the Parasite Biology & Epidemiology Laboratory at the U.S. Department of Agriculture and is in Beltsville, Maryland. He has been with the USDA since 1982. Prior to that time he held research and academic positions in the Department of Pathology at the University of Kansas Medical Center, the Department of Pathology at the College of Veterinary Medicine, Ohio State University, and in the Department of Veterinary Science, Montana State University.

He prepared for these positions by obtaining bachelor's, master's and PhD degrees, respectively, at the Veterinary College in Mhow, India, the Veterinary College in Mathura, India and the Department of Medical Microbiology at the University of Sheffield.

Numerous individuals, well recognized in our organization and throughout the world, nominated Dr. Dubey. As a tribute to his 40 years of research contributions, he has been described by renowned colleagues as the "world's expert on ***Toxoplasma gondii, Neospora caninum*** and ***Sarcocystis neurona***. In science, we often hear complimentary comments like that and might find them debatable. There is no debate in this case. Dr. Dubey's discovery of the life cycle of ***Toxoplasma gondii***, is recognized as a benchmark event in the last 50 years of parasitology. I can remember first hand the excitement that surrounded his publication in science that announced this finding. He discovered and named ***Neospora caninum***, the cause of neosporosis in livestock. He discovered and named ***Sarcocystis neurona***, the cause of equine protozoal myeloencephalitis.




From JP Dubey, 1986 - The Life Cycle of ***Toxoplasma gondii***

The quality of Dr. Dubey's work is reflected in the many honors he has received during his prolific research career. He has collaborated with over 350 scientists to publish 800 scientific publications. There seems to be an argument among those who nominated Dr. Dubey, whether he has 800 or 900 scientific publications. I did not worry about this discrepancy. Actually, I found it amusing that a difference of 100 scientific publications in his enormous bibliography is probably statistically insignificant. He has also authored four books and many, many book chapters.

There is no doubt that his work is read and valued throughout the world. In the decade that ended in 2001, The Current Contents, Institute of Scientific Information recognized Dr. Dubey as one of the top 15 most highly cited authors in the plant and Animal Sciences discipline, worldwide.

In recognition for his meritorious contributions to parasitology, Dr. Duby recently (2003) received the highest civilian award given in the government for exceptional service—the Presidential Rank Award, Dr. Dubey was also the first recipient of the Distinguished Veterinary

Parasitologist Award from the American Association of Veterinary Parasitologists, the Lifetime Achievement Award from the Indian Association for the Advancement of Veterinary Parasitology and the R. Barclay McGhee Award in Protozoology from the American Society of Parasitologists.

Clearly, Dr. Dubey's career is one characterized by leadership, as well as scholarship. His personal attributes that were underscored by his nominators describe him as both a scientist and a humanist. I had come to that conclusion based on several interactions that I have had with Dr. Dubey during my career. I often think of the giants in the field when I entered Parasitology in 1964 as a graduate student. I believe that Dr. Dubey's contributions to parasitology place him within the ranks of these larger-than-life figures that most in this room, of my vintage, can remember with great delight, awe and nostalgia.

It gives me pleasure to present Dr. J.P. Dubey, the recipient of the Eminent Parasitologists Lectureship for 2005.

Gilbert A. Castro, Ph.D.
Vice President for Health Affairs
The University of Texas at El Paso
500 W. University Drive
Administration Building, Room 312
El Paso, TX 79968-0501

Gilbert A. Castro (circa 2005)

**Editors Note:** The following paper, written and prepared for The Journal of Parasitology in 1969 was never published. It was rejected outright at the time by the editor, Justis Mueller. Recently, Austin MacInnis was doing some housekeeping in his office and he found this manuscript and sent it to me to see if we could publish it in the hope that those teaching parasitology would find it useful.

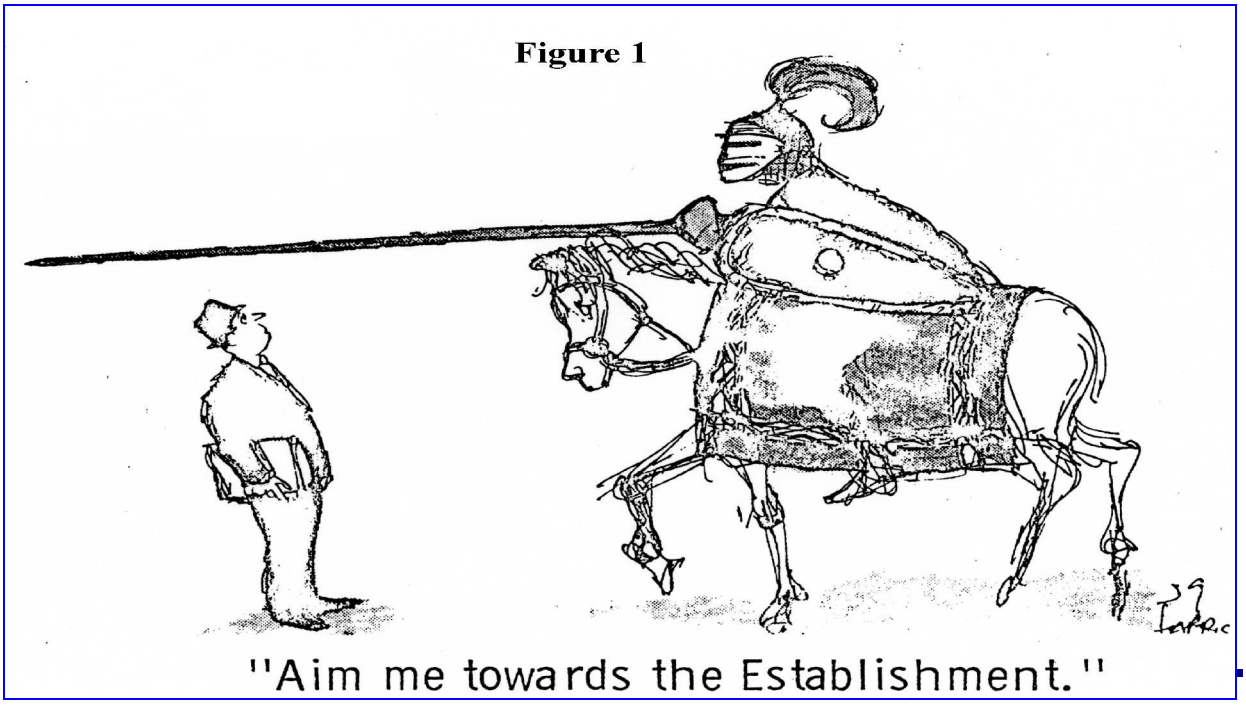
# TEACHING EXPERIMENTAL PARASITOLOGY

Austin J. MacInnis
Department of Zoology
The University of California
Los Angeles

Part of a Symposium conducted by
The American Society of Parasitologists
Madison, Wisconsin, 1968

*Abstract:* Observation serves as the foundation for Parasitology, as it does for most sciences. For the past 300 years most of the efforts of parasitologists were directed to gross and microscopic observations of parasites, and organization of this information into categories such as morphology and taxonomy. As knowledge of parasites accumulated, observations were coupled with experiments on life cycles, behavior, physiology, and pathology. Today, and tomorrow, experimentation is and will be at the frontier of Parasitology. It therefore must be taught. The unanswered questions that confront us are: 1) What are the important experiments to do, 2) What techniques must be used to make the observations in the experiments, 3) How will we teach our students experimentation? The answers to these questions are complex, but they may be reduced to simple forms for discussion: The important experiments add a significant bit of knowledge to science. Techniques are secondary to formulation of the hypothesis, but it is clear that parasitologists must be prepared to use any and all of the techniques of science. Undergraduates may be taught by doing experiments, repeating experiments done by others, and by our leading them from observation, to question, to experiment.

**Figure 1**



"Aim me towards the Establishment."

Mr. Chairman and Colleagues:
The logical way to examine the subject assigned to me for this symposium is by experiment. But in what direction should I proceed? The modern approach to most, if not all, University subjects these days, and the direction I have chosen is illustrated in Figure 1. The preceding lectures by Drs. Sogandares and Kruidenier have outlined what the Establishment controls: they control curricula and the classical courses. As Scientists, we and the Establishment cannot be opposed to change, and some changes have been prescribed. (*I will attempt to find the manuscripts or at least the abstracts of these papers and publish them in the next newsletter -Editor*).

It is true that I have tried to poison the well by this approach, but let me illustrate how we may still drink from it. The connotation of the word "classical," as Dr. Kruidenier pointed out, may imply those teaching methods and contents of courses that survived the ravages of time and change because of their truth, beauty, and success. To others, however, classical may imply the outmoded material of the past. I choose to believe that the classical has survived because of its utility, but, as I will point out later, we may gain additional benefit from the classical course in Parasitology by emphasizing experimental aspects.

The charge given to me by the committee was to try to show you the utility and means of introducing more experiments into parasitology courses, assuming that this would be an improvement. Since this is an assumption, the precautions noted by Siever (1968) are pertinent here. I will propose how each of us may change and evaluate the success of changing curricula and classical courses to include some, or more experiments.

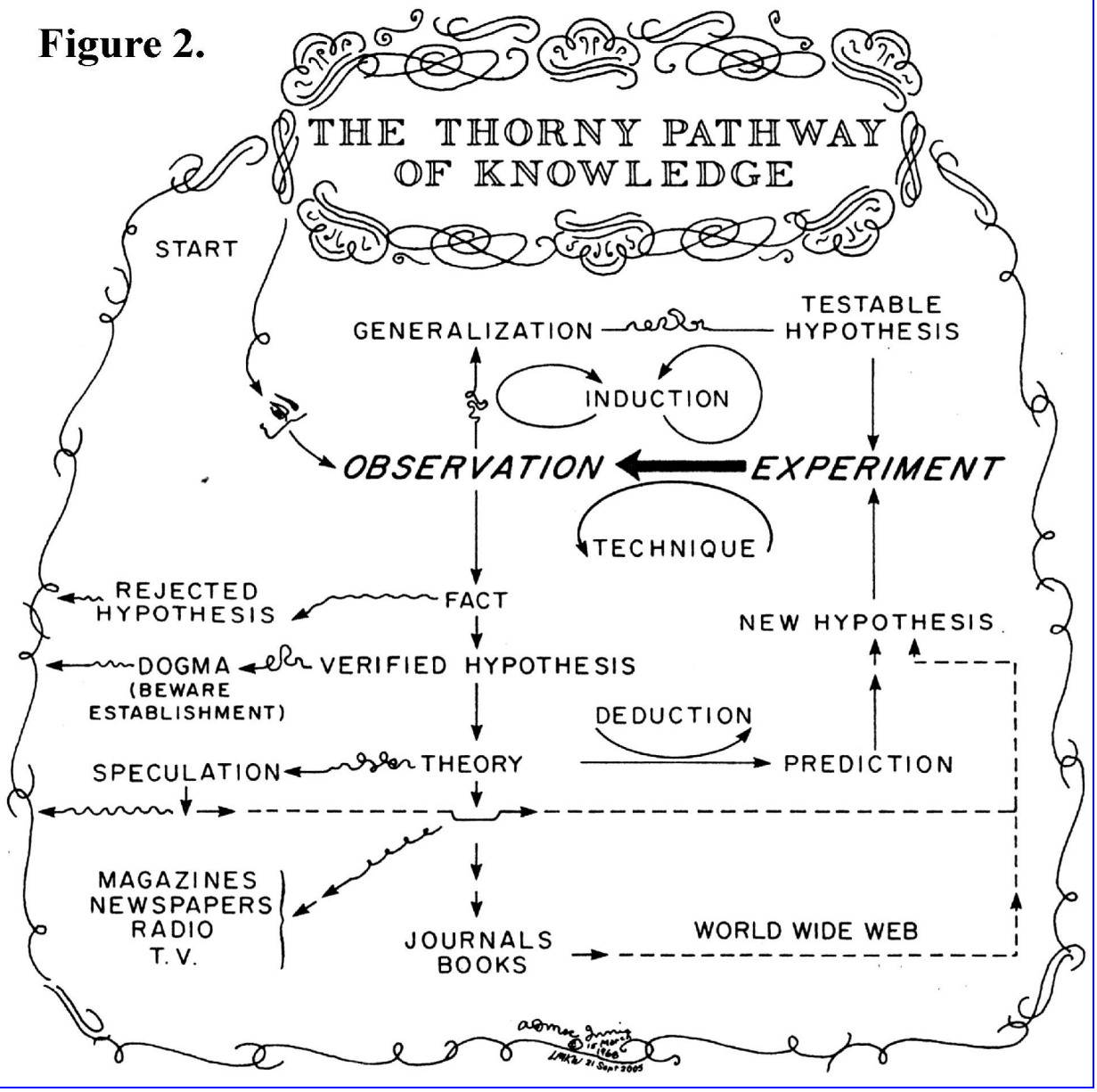
What can we do to improve the classical course? To begin answering this question I remind you that sometimes even professors overlook or forget that our daily lives are a series of testable hypotheses. To put this "observation" in perspective, let me briefly review what I call the Thorny Pathway of Knowledge, as shown in Figure 2. From this figure you can see the central and essential position of experimentation in accumulation of knowledge. Note also that technique is not part of the main pathway, but is a required cofactor upon which the functioning of the pathway is dependent. Observe also that HYPOTHESIS precedes EXPERIMENT in the pathway.

Since I have taken the experimental approach to my subject, I must start with an hypothesis. My hypothesis, like others is based on assumptions, observations, and facts.

HYPOTHESIS:

CONDUCTING EXPERIMENTS IN THE LABORATORY PORTION OF PARASITOLOGY COURSES IS A VALUABLE LEARNING EXPERIENCE FOR TEACHER AND PUPIL.

**Figure 2.**




To test this hypothesis we must design an experiment which will, or will not, verify it. We must establish the variable, control, and our means or technique of observation: How will we evaluate the results of our experiment? I will temporarily delay a direct answer to this, because reflection on the hypothesis brings to mind a number of additional questions that are inherent in the main hypothesis. Let us examine some of these questions, hoping that this process will lead us to the one elegant experiment which will provide the ultimate test of our hypothesis.

As illustrated in this lecture, student and teacher must first begin with a question or hypothesis. If one does not begin with a hypothesis, he may wander about making random

observations among the trivia. Eventually one must sort out these observations, organize them, and begin constructing, questions and hypotheses.

The first thing students must learn about experimentation is formulation of a testable hypothesis.

One then designs an experiment to test the hypothesis.

Obviously, a very important problem is, "What experiment should one do?" The criteria that I set for selecting the experiment are the following:

1. The experiment should be SIMPLE.
2. The experiment should WORK.
3. The results should be NON-TRIVIAL.
4. Seek an answer that is NOT YET KNOWN.

What is a simple experiment? Although the answer to this is relative, it may be conceded that simple experiments usually give a yes or no answer. If we do a nonsuccessful experiment, we will not adequately test our hypothesis, thus criterion two above. By nonsuccessful experiment I mean one in which the technique malfunctions, the organism malfunctions, or something similar, assuming that the hypothesis and experimental design are satisfactory. Such malfunctions are often disastrous in the classroom. Concerning criterion three, we know that a trivial observation today, may be non-trivial tomorrow, so we can only use our best judgement: try to illustrate a principle.

Why seek an answer that is not yet known? Because almost any student you can bring to the point of being the first person to know some bit of information, will have experienced the indescribably pleasure and satisfaction of making an observation that is his own contribution to science. Few people who take this bait get off the hook.

Many of us find these requirements for experiments hard enough to meet for our research, let alone to meet them for a class experiment. However, these requirements can be met. Experiments that meet some of these requirements also suffice, since students can learn much by repeating classical experiments, the results of which are usually predictable, but sometimes yield new findings. The distinction between research and re-search (= reexamine) made by Ben Dawes (1961) is pertinent concerning this aspect.

A problem of secondary importance is how the "observations" will be made in the experiment. This returns us to the problem of technique. Again simplicity is the essence: Don't use an electron gun or lazer just because you have one, when you could peer through a pea shooter and get the same results. Reading the paper by Hugghins (1961) can be helpful on this point. However, our students must also be exposed to the most sophisticated techniques available, so that they may use them when appropriate. Students must also learn to develop new techniques.

Let me take a moment to point my lance at those people who begin with technique instead of hypothesis. When the cart is in front of the horse, little progress can be made. Those who teach "Technique courses" must be acutely aware of hypothesis, and pass this awareness on to the student.

An additional question that confronts us concerns Dr. Sogandares's topic of curricula which I must also consider briefly here: To whom should we be teaching experimentation? From my experience, as both a student and teacher, I found that experiments really enhance and brighten an

introductory course in parasitology, adding an important dimension to those musty boxes of slides. There also has appeared among many of my colleagues, a growing trend for teaching a second undergraduate course in parasitology devoted entirely to experiments. Some undergraduates conduct honors and research projects with parasites. There are numerous course or curricular areas concerning parasites in which experiments must be conducted, and some of these are listed in Table 1.

TABLE I
Courses in which experimentation must be taught.

| UNDERGRADUATE | GRADUATE | PROFESSIONAL |
|---|---|---|
| Core Courses | Protozoology | Medical |
| General Parasitology | Helminthology | Dental |
| and Symbiosis | Arthropodology | Veterinary |
| Experimental Parasitology | Virology | Public Health |
| Honors and Research Projects | Physiology of Parasites | |
| | | POST GRADUATE |
| Medical Parasitology | Ecology of Parasites | |
| Microbiology | *ad infinitum* | All areas |

The next problem is where we begin to get to the gist of these matters. What exactly do we want our students to take home with them? What do the students want to learn to prepare themselves for the future? What do potential employers want parasitologists to know? We want for the students, and the students want to be able to solve problems, be they in life, laboratory, ivory tower, space, or on the urban crisis. There are other points about this fourth problem that need further consideration. For example, the British Society of Parasitologists (Cox, 1966), the Society for Industrial Microbiology (Miller, 1968) and probably other groups, have conducted symposia with the employers of parasitologists and microbiologists respectively. They considered what the employers would like to have taught to potential employees. We have not adequately considered this aspect. For my purpose in this report, and for simplicity, I will conclude that we learn to solve problems by experimentation. Therefore some practice is justified, whatever the field.

The last problem that I will discuss concerning my hypothesis, is the problem assigned to me by the committee, and which each of you must face: What can we do to make the laboratory portion of our courses more experimental? I will try to solve this problem by presenting two solutions, the first of which is a point of emphasis.

Whatever emphasis we put on experimentation the “old guard” always rebuts by saying, as Cox (1966) has recorded from a symposium on Teaching of Parasitology held by our British colleagues (and I apologize for quoting out of context); “ . . . systematics must be taught . . . there is, and always will be, a need for people who can identify parasites.”

Now that I have established this straw man, let me throw him on the coals to flame up and shed some light on my objective: Systematics, taxonomy, and identification of parasites are also experimental, but we often forget as I mentioned earlier, or take the hypothesis for granted. As an example, let us recall the use of a key to identify worms. Looking at this

specimen we hypothesize that it is a monogenetic trematode. We test the hypothesis by the simple technique of looking to see if the organism possesses the characteristics of a monogene: it doesn't, therefore the hypothesis is proved wrong. We must then make a new hypothesis: This organism is a temnocephalid . . . and so on.

Thus, it is obvious but often forgotten that the scientific method and experimentation pervade all aspects of parasitology. My point in this example is to call attention to the fact that we may add and emphasize experimentation in our laboratory courses by constantly reminding students of hypothesis, or making sure they know to what question the observations should be applied. This does not, however, justify omitting physiology from your courses.

The second solution to this last problem, and my original hypothesis as well, should now be clear to you. To test my hypothesis, and to teach "experimental parasitology" we have a simple solution: Do experiments, applying the criteria mentioned above and other criteria.

What simple, successful, significant experiments can be done? Before providing an answer I will add a few additional criteria: The experiments should be short, inexpensive, use readily available parasites, hosts, and equipment. As an example, let me list some hypotheses that can be tested by experiments done with *Trypanosoma lewisi* in laboratory rats using only a microscope, syringe, balance, stain, and other minor items.

1. When a rat is infected with *T. lewisi* the number of parasites produced increases until the rat dies.
2. The rat can produce active immunity to *T. lewisi*.
3. Passive immunity to *T. lewisi* cannot be demonstrated in the rat.
4. *T. lewisi* causes loss of weight in infected rats.
5. Only one type of antibody is produced by rats against *T. lewisi*.
6. The presence of *T. lewisi* in a rat effects the amount of food consumed by the rat.
7. Treatment of the host with cortisone has no effect on subsequent infection with *T. lewisi*.
8. Absence of certain vitamins in the diet of the host has a detrimental effect on *T. lewisi* infections.
9. The rat produces an antibody that inhibits reproduction of *T. lewisi*.
10. *T. lewisi* is capable of infecting mice.
11. Fructose sustains motility of *T. lewisi in vitro* longer than does galactose.
12. The age of the host has no effect on the growth curve of *T. lewisi*.

Twelve experiments are more than most people can do in one quarter or semester. There are any number of other variations or parameters that can be examined in addition to the simple hypotheses I have listed which can be tested by counting parasites, weighing food or the host, or some other simple observation. The limit to the number of such experiments is prescribed by the amount of imagination and ingenuity of the teacher and student. Similar experiments can be designed with acanthameba, plasmodia, cestodes, trematodes, acanthocephalans, etc.

How do we evaluate the results of using experiments as part of the contents of our courses? There are many ways that this can be done, but they are all related to the success of the student in subsequent life. From a personal and selfish point of view we might evaluate our success by the number of good new students that are enticed into the field, that eventually contribute a new bit of significant knowledge, or do some good in other ways. In my own case, the interests and successes the students have gained by doing experiments has justified my increased emphasis on experimentation. The "control" in our experiment in this report consists of those courses in

which experimentation is not taught. The evaluation of the success of the student (and teacher) resulting from their learning experiences will be judged in time: Will you prosper or impoverish? I have tried to leave you with no alternative but to do experiments.

What practical things can be done to enhance experimentation in our courses? We need the following:

I. Time in the curricula, along with students, teachers and classrooms.

II. Increased availability of parasites for use in experiments. This might be accomplished by:

   A. Encouraging commercial suppliers.

   B. Setting up a cooperative exchange of material among Society members.

   C. Establishing a "type culture" program.

   D. Seeking support of all such programs through the granting agencies.

III. A syllabus of experiments and techniques suitable for use in our courses. This was proposed and started by our Society, but aborted by the Infernal revenooers. Such a syllabus was also proposed by the British Society of Parasitologists (1966), by the Protozoologists, and by Huff Committee report (1958). But nothing is yet available! The answer to this is preparation of the syllabus. I did prepare the Syllabus in 1970 with my colleague Marietta Voge. There are still some copies of Experiments and Techniques in Parasitology (W.H. Freeman and co.) in use today (1968 - editor).

IV. Availability of modern equipment. Your students must learn to use the most modern equipment, or they will not be able to compete. This may be accomplished by aggressively seeking funds from chairmen, deans, and granting agencies.

Most of the items listed in the summary above were mentioned by Huff et al. (1958) in their report. What progress have we made in the past 10 years on these points? Practically none! [What progress have we made in the past 50 years on these points? -Ed.]

Let me stress one final point in closing. Whenever one considers trying something new, be it an experiment, technique, or boyfriend or girlfriend, there exists a certain amount of FEAR of the unknown that must be overcome before a start can be made. Such fear has no place in the academic world, although caution is sometimes prudent. The unknown must be considered not fearful, but so fearfully exciting that one cannot hesitate a millisecond before making the unknown known.

Thus teaching experimental parasitology is simple: Do experiments. If the experiment doesn't work, make a few changes and repeat it until it does work.

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Thanks, Mac for a very nice summary of the Experimental Approach in Parasitology Teaching (Ed.)

# POSITION ANNOUNCEMENTS

ASSISTANT PROFESSOR - INVERTEBRATE ZOOLOGY

The Department of Biological Sciences, Towson University, seeks applicants for a tenure-track position at the Assistant Professor level to begin mid-August, 2005. A Ph.D. in an appropriate field is required. Teaching and post-doctoral experience is desirable. Candidates must have a strong commitment to excellence in both teaching and research. Initial teaching responsibilities will include the following: 1) a majors' introductory course in either Biodiversity or Ecology, Evolution and Behavior (to be determined), 2) upper-level undergraduate/graduate-level courses in Invertebrate Zoology and Entomology. Eventually the person in this position may also teach a graduate (Master's) level course in their area of specialization.

The candidate is expected to develop an active research program involving undergraduate and graduate students. Pursuit of extramural funding is also required. Preference will be given to individuals whose research is at least partly field-oriented and involves the ecology, evolution, behavior, systematics or conservation of invertebrate animals. The successful candidate will be eligible to compete with other junior faculty for a three-year appointment as the newly established Jess Fisher Endowed Chair in the Biological and Physical Sciences. The holder of Chair will receive additional funds to support her/his research program. Much more additional information on this position is available at:

http://wwwnew.towson.edu/biology/TU%20Biology%20-%20Available%20Positions.htm

Qualified applicants should send letter of interest, C.V., one page statements of teaching philosophy and research plans, photocopies of all transcripts, and three letters of recommendation (hard copies of all documents only) to: Chair, Invertebrate Zoologist Search Committee/ Department of Biological Sciences / Towson University / Towson MD 21252 USA. Towson University is an Equal Opportunity/Affirmative Action Employer and has a strong institutional commitment to diversity. Women, minorities, persons with disabilities and veterans are encouraged to apply. Review of applications will begin 15 Jan 2006 and will continue until a suitable applicant is found. Further questions can be directed to L. Scott Johnson at: sjohnson@towson.edu Note that this review is already underway - check first before acting.

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Deadline Close on this one (Ed.)
Parasite Immunologist (Assistant/Associate Professor)

The Institute of Parasitology at McGill University (see http://www.mcgill.ca/parasitology/) is seeking to appoint a tenure track Assistant/ Associate Professor with experience and research

interests in the immunology of parasite infections. The appointee will hold a PhD and have a demonstrated track record in immunology and attracting research funding. We seek applicants with research experience in mechanisms of acquired immunity, immunopathogenesis, immunomodulation of host responses and/or vaccine discovery. The appointee is expected to develop a research program supported by external funding and to teach in the undergraduate and graduate programs at McGill. The appointee will become a member of the FQRNT Centre for Host-Parasite Interactions (http://www.mcgill.ca/chpi/). McGill has a dynamic research community with a commitment to develop research and teaching in infectious diseases and the application of genomic and proteomic approaches. Forward a CV, a summary of your proposed research plans and the names of 3 referees by 17 March 2006 to:
<>Professor Terry Spithill, Director, Institute of Parasitology, McGill University, 21111 Lakeshore Rd, Ste. Anne de Bellevue, Quebec, Canada. H9X 3V9. For further information, see above web site or call (514) 398-7954.

All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents of Canada will be given priority. McGill University is committed to equity in employment.

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Scientific Secretary of the Atlas Florae Europaeae

Finnish Museum of Natural History, University of Helsinki, announces a curator position in the Phanerogams Division of the Botanical Museum (H). The appointee to the post will fill the position of scientific secretary of the Atlas Florae Europaeae, a project for mapping the distribution of vascular plants in Europe (see http://www.fmnh.helsinki.fi/english/botany/afe/index.htm). The secretary will be responsible for national and international contacts (especially correspondence, meetings and negotiations, and communication), and for processing materials for the distribution maps. The secretary will participate in the interpretation of the distribution maps and in the writing of map texts, and will collect information on East Europe in particular. Furthermore, the secretary will conduct research on the distribution and taxonomy of European vascular plants. The duties of the post include teaching a course worth two credits on average per academic year.

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Colleagues,
Please make the announcement below concerning the availability 2 graduate student positions in Insect Sysematics known to potentially interested students. A postable copy of the announcement is attached.
Pardon cross-postings.
John Oswald

*Graduate Student Position Announcement

*Texas A&M University, Department of Entomology

*_Insect Systematics_*, 2 Positions, Taxonomic Groups Open

*/Who/*: We are currently recruiting for two new insect systematics students to work on NSF-funded research projects. The taxonomic focus of each position is open. We are looking for two people with strong interests in systematics and related studies to join the active insect systematics group at Texas A&M. Skills in one or more of the following areas: computer networking and databases (particularly Access), digital keys, phylogenetic analysis, revisionary studies, or scientific illustration, though not essential, will increase your competitiveness for these positions. A masters degree is preferred but students with an outstanding undergraduate record will be considered.

*/TAMU/* */Systematics Faculty and Staff/*: Systematics students at the TAMU Department of Entomology have the opportunity to interact closely with one of the largest groups of active insect systematists at any university in North America: Horace Burke (retired - Curculionidae); Allen Dean (spiders); Anthony Cognato (bark beetles); John Jackman (Mordellidae, Buprestidae); John Oswald, Curator (Neuroptera); Ed Riley, Associate Curator (Chrysomelidae); Joe Shaffner (retired - Hemiptera); Bob Wharton (Braconidae);
Jim Woolley (Chalcidoidea).

*/Other Resources/*: The Texas A&M University Insect Collection, a very actively growing entomological research collection of >2.2 million specimens.

*/Starting dates/*: (Position 1) Open for immediate occupation; (Position 2) Available Fall Semester 2006 (ca. September 2006).

*/Funding/*: Each position offers a 3-year Research Assistantship, including health benefits, conditioned upon continued satisfactory progress in the graduate program.

*/Contact/*: For more information about these assistantships, please contact _Dr. John Oswald_, Department of Entomology, Texas A&M University, College Station, TX 77843-2475; phone: (979) 862-3507; j-oswald@tamu.edu <mailto:j-oswald@tamu.edu>. For questions about and application materials to the graduate program in the Department of Entomology at Texas A&M University, contact Dr. Pete Teel at pteel@tamu.edu <mailto:pteel@tamu.edu>. Detailed information about the Department and graduate studies can be found on the department's web site at http://entowww.tamu.edu/.

Subject: preliminary announcement: Visiting Assistant Prof. position

I haven't been given the go-ahead by the Dean to advertise yet, but I wanted to give advanced warning that if all goes well, we will be looking for a Visiting Assistant Professor in Ecology for the fall 2006/spring 2007 semesters, as a sabbatical replacement (for Mike Palmer). This would be ideal for a recent Ph.D. or postdoc looking for teaching experience. Tentatively, s/he would teach General Ecology both semesters and probably Community Ecology in the fall. S/he would also be expected to act as substitute mentor for Palmer's several grad and undergrad students. Of course, it also may allow time to write up those dissertation or postdoc papers while continuing to troll for tenure-track faculty positions! The particular area of specialty within the broad umbrella of ecology is unimportant, although some knowledge about plant ecology would be helpful for teaching, student mentoring and interaction within the Botany Department. So, please distribute this widely to relevant faculty/students/postdocs and have them watch for our advertisement, most likely not to be posted until after the Regents approve sabbatical leaves in (I think) March. We'll probably post it on the website of the Ecological Society of America and via selected listserves, as well as on our own website (see below). Thanks!

Bill

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# MEETINGS

**Fourth international *Wolbachia* conference, Paradisus, Puerto Rico June 24 – 29, 2006**

Discussion of the latest information by leading authorities about the symbiotic/mutualistic association of *Wolbachia* in arthropods and filariae … Present a paper … Participate in the discussions … Explore Puerto Rico …

Additional information and Conference circulars are available at: http://www.wolbachia.sols.uq.edu.au, or contact Dr. W J. Kozek, Conference Coordinator, at: wkozek@rcm.upr.edu, or (787)-758-2525, ext. 1351.

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**2006 ASP meeting will be held in Glasgow, Scotland August 6-11. For more information go to http://www.icopaxi.org/ The ASP will meet in conjunction with The International Congress of Parasitology - ICOPA**

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**Society of Nematologists Annual Meeting 2006. Kuai. June 13 - 21. See: www.nematologists.org.**

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**Organization of Nematologists of Tropical America [ONTA]. XXXVIII Annual Meeting. San José, Costa Rica. June 26 - 30, 2006.** See: http://www.ontaweb.org

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**AFFILIATES**

Annual Midwestern Conference of Parasitologists
Helminthological Society of Washington
New England Association of Parasitologists
New Jersey Society for Parasitology
Northern California society of Parasitologists
Parasitology Section, Canadian Society of Zoologists
Rocky Mountain Conference of Parasitologists
Southeastern Society of Parasitologists
Southern California Society of Parasitologists
Southwestern Association of Parasitologists

**Note to Members**

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 6.0 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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