

## **ISEP Newsletter No 8 August 1999**

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### **1 Editor's note**

Welcome to the ISEP newsletter! As your new editor I wish to thank Greg Hinkle for previous newsletters. This issue brings you some relevant news and aims to solicit some feedback on a couple of issues that impact on our society. I would also like to keep you informed about the upcoming society meetings in order to maximise attendance. As ever, we welcome any contributions to the newsletter from members.

Geoff McFadden, Newsletter Editor <[g.mcfadden@botany.unimelb.edu.au](mailto:g.mcfadden@botany.unimelb.edu.au)>

### **2 Message from the President**

ISEP remains much the same as when I first made its acquaintance many years ago – a sleepy little society that, every two years, brings together the best protistologists in the world, who then, for a couple of days, create the richest and most vibrant scientific interactions that I have ever experienced! The society is nodding its head to

consciousness for a moment or two as this Newsletter comes forward. It reminds us that soon – July 31, 2000 – we will again be meeting for our biennial meeting.

The President is expected to think deep thoughts, make profound statements, and in numerous other ways contribute absolutely nothing to science. While remarkably proficient at this already, naturally I considered ways to increase and extend my powers, as does any petty bureaucrat. What could ISEP do to be better known? What could give ISEP a bigger voice in the scientific community? How could members become more active in society matters? We have much to choose from in areas like biodiversity: the Convention on Biological Diversity (CBD), Diversitas, Systematics Agenda 2000, Species 2000, Global Biodiversity Information Facility (GBIF), International Biodiversity Observation Year (IBOY), etc. The molecular folk have genome projects that spawn numerous working groups, workshops, meetings, etc. There are other groups I could mention, and if I have slighted yours, my apologies. I even went so far as to meet with Dr. Rita Colwell, Director of the National Science Foundation, and we discussed various means for increasing society activity.

And then, suddenly, I realized the fallacy of all this: one can talk about science or one can do science. Any fool can "talk about" science, and there is no shortage of fools at the moment. ISEP protistologists talk about science for a couple of days once very two years; the rest of the time we do science. It is "to do science" that is important. This is the only means for procuring new knowledge, testing hypotheses and discovering unknown forms of life and life processes. The best way for protistologists to make themselves better known to the scientific community is to "do" good science and publish good papers. Major advances in science have been accomplished via study of protists, and many more achievements remain. But you know that. Go back to "doing science" – this is the best way to help protistology. I look forward to seeing you again in Ceske Budejovice when, for a couple of days, we can take time to talk.

Bob Andersen, President

### **3 Newsletter distribution**

At the Flagstaff meeting the ISEP executive discussed mechanisms for distributing the newsletter. The days of mailing out a hard copy are certainly numbered. Web based methods of distribution should be satisfactory for the majority of members and I have attempted to explore several options in this missive. Charley O'Kelly has kindly created two alternative formats PDF and HTML and we hope this satisfies most readers. Since the newsletter will appear infrequently and delivery technologies are ever changing, I plan to keep an open mind on options. Anyone with opinions on the different formats should drop me a mail and we can explore these options. Those of you who received an email are on our list but not necessarily paid up. Please contact the ISEP membership director Laura Landweber [lfl@princeton.edu](mailto:lfl@princeton.edu) for membership queries.

### **4 Report from ISEP XII (Flagstaff)**

ISEP XII was held during the first week of August 1998 at Flagstaff Arizona. The meeting was dovetailed with the Phycological Society of America and Society of Protozoology. Larry Fritz was the local organiser and did a splendid job. Thanks Larry! Flagstaff turned on delightful weather and delegates were able to visit many of the spectacular environments in the desert southwest. A report of the scientific presentations was published in Protist (McFadden 1998 Protist 149: 293-298). . Michael Melkonian (Protist Editor and former ISEP President) has generously granted permission to reproduce this report online. <http://megasun.bch.umontreal.ca/isep/news8.html>

## 5 Proceedings of ISEP XII

Papers from the Flagstaff meetings are being published in the Journal of Eukaryotic Microbiology. The joint ISEP/SOP/PSA symposium entitled "Evolution of Mitochondria and Chloroplasts" edited by Jim Berger is currently being printed and will appear in Volume 46(4). Contributed papers will appear in forthcoming issues of JEM. Sincere thanks to Denis Lynn and Portia for their help with these proceedings. The editor for the contributed papers was Ojvind Moestrup and Jim Berger edited the symposium papers.

### Symposium: Evolution of Mitochondria and Chloroplasts

Symposium Introductory Remarks: "Evolution of Mitochondria and Chloroplasts".

**Berger, J. D.** ----- 319

#### Part 1. Primary Symbiotic Events: Origins of Mitochondria and Chloroplasts

A Comparative Genomics Approach to the Evolution of Eukaryotes and their Mitochondria. **Lang, B. F., Seif, E., Gray, M. W., O'Kelly, C. J. & Burger, G.** ----- 320

Investigating Deep Phylogenetic Relationships among Cyanobacteria and Plastids by Small Subunit Ribosomal rRNA Sequence Analysis. **Turner, S., Pryer, K. M., Miao, V. P.W. & Palmer, J. D.** ----- 327

#### Part 2 - Secondary Symbiosis – Second-hand Plastids and the Related Problems in Protein Targeting

Plastids and Protein Targeting. **McFadden, G. I.** ----- 339

Principles of Protein and Lipid Targeting in Secondary Symbiogenesis: Euglenoid, Dinoflagellate, and Sporozoan Plastid Origins and the Eukaryote Family Tree. **Cavalier-Smith, T.** ----- 347

The Non-Photosynthetic Plastid in Malarial Parasites and other Apicomplexans is Derived from Outside the Green Plastid Lineage. **Blanchard, J. L. & Hicks, J. S.** ----- 367

## 6. ISEP XIII - Preliminary information

The next meeting of the International Society for Evolutionary Protistology (ISEP XIII) is scheduled to be held on July 31 - August 4, 2000 in Ceske Budejovice (Budweis in German), Czech Republic, which is the regional capital of South Bohemia, and is located approximately 150 km (90 miles) south of Prague. The local organizer is Dr. Julius Lukes [jula@paru.cas.cz](mailto:jula@paru.cas.cz) from the Czech Academy of Sciences (<http://www.paru.cas.cz>) and the University of South Bohemia ([http://ftp.jcu.cz/ju/welcome\\_gb.html](http://ftp.jcu.cz/ju/welcome_gb.html))



Some comments from Julius -

The meeting will be organized by the Institute of Parasitology, Czech Academy of Sciences and the Faculty of Biology, University of South Bohemia, which are located on a small campus in Ceske Budejovice. Registration fee for participants will be \$250-300 or equivalent, for students and accompanying persons \$125-150. The registration fee covers: the Symposium documents, proceedings, midday meals, coffee and tea refreshments, as well as the Welcome and Get-Together parties, at least one of which will be held in a medieval castle. Hotel Gomel, where 50 rooms have been preliminary booked, charges \$30 per single room and \$45 for double room (breakfast included). Student accommodation can be arranged in the campus for \$5 to \$10 per night (breakfast not included).

Transportation is no problem. The nearest international airports are Prague (distance of 90 miles) or Vienna (about 150 miles). Ceske Budejovice is connected with both capitals by fast trains and buses. Transport from the Prague Ruzyně airport with a van and institutional car will be arranged.

During the field trip we could visit Cesky Krumlov, a beautiful and extraordinarily well preserved medieval town (UNESCO heritage town) about 15 miles from Ceske Budejovice, and majestic Schwarzenberg castle (pictured) with a park, hunting museum and gallery next to it, all located in Hluboka, just 7 miles off the campus. Alternative routes can be planned to visit the nature of well-preserved National park Sumava-Boehmerwald on the border with Austria and Germany, about 50 miles distant from C. Budejovice.



In August the weather is warm and pleasant. The campus is within easy



walking distance from the

historic centre of Ceske Budejovice (Budweis in German) (bus lines are available). The town has 80,000 inhabitants and is a tourist centre of South Bohemia, which I, as a local patriot, consider the most beautiful part of the Czech Republic. There are many hotels of all categories, to my knowledge starting from about \$30 per night. Cheap accommodation in student hostels located in the campus can be arranged for a price about \$15 per night. You can eat in nice local restaurants for prices considered very cheap by Western standards. The town is world-famous for its beer - Budweiser, which is served not only in several renaissance and Gothic pubs but almost everywhere. The price for half litre of good beer is only about 50-70cents!

**We hope to see you next year in Ceske Budejovice!**

## **7 Venues for ISEP XIV**

The ISEP charter dictates that the 2002 should be held in Nth America since 2000 will be in Europe. Anyone with suggestions for 2002 venues should contact the Executive. It is possible that the 2004 meeting could be held in Australia.

## **8 Student prizes and Founders' Endowment Fund**

ISEP's first student travel prizes were awarded at the Flagstaff meeting. James Deane from the University of Melbourne and Alistair Simpson from University of Sydney were the inaugural recipients. Congratulations guys! The Founders' Endowment Fund (see Newsletter No. 7 for background) will continue to support student prizes for attendance at the meetings. Contact Gary Saunders [gws@unb.ca](mailto:gws@unb.ca)

The Founders' Endowment Fund became a reality at the 1998 ISEP meetings in Flagstaff, AZ. It was no small task to establish the fund, define the guidelines and actually implement an award competition in the term between ISEP XI and XII, but the opportunity to support the next generation of protistologists more than compensated the Endowment Fund Committee members for their efforts. I would like to take this opportunity to thank the inaugural Endowment Fund Committee - Susan Douglas, Brent Heath and Hans Preisig - for their hard work and dedication to this project.

As expected, there were a few aspects of the application and selection process that required improvement and changes have been implemented as a result of discussions with the Endowment Fund Committee and the ISEP Executive. The new guidelines for the Endowment Fund process are printed below and I encourage all members of the society to take a moment to read this short document.

In the year since Flagstaff the Endowment Fund has increased from \$22,032.00 to \$29,264.00 Canadian. The Fund has sufficient interest income expected prior to ISEP XIII that two or possibly three awards can be provided without reducing the Funds principal balance. There are also investments to insure the slow growth of the fund so

that inflation doesn't erode the value of ISEP's Endowment strength as we reach into the next millennium. In short, our new Endowment is healthy and will continue to contribute to the growth of protistology around the World.

Gary W. Saunders, Treasurer and Endowment Fund Chair

## **The Founders' Endowment Fund** (updated July 27, 1999)

est. 12 February 1997 for the  
International Society of Evolutionary  
Protistology by the inaugural Endowment  
fund Committee:  
Susan Douglas  
Brent Heath  
Hans Preisig  
Gary W. Saunders (Chair)

### **MANDATE, to:**

1. Provide Travel assistance in the form of monetary Awards to eligible students (outlined below) for attendance at the biennial ISEP meeting.
2. Maintain an accessible financial reserve for the Society.

### **PROCEDURES:**

#### **A) ISEP Executive:**

1. Shall appoint, in the year of the biennial meeting, three members to the Endowment Fund Committee. One of these will be a continuing member and shall serve as Chair. There is no limit to the number of terms a member may serve.

#### **B) Endowment Fund Committee (hereafter 'EFC') will:**

1. Consult with the Treasurer on investment of the Endowment Moneys. This is an advisory role and must not violate the responsibilities of the Treasurer as outlined in ISEP by-laws.
2. Select successful applicants for receipt of awards based on the following:

#### **Eligibility**

Any student registered in a graduate program at the time of the meeting, or having graduated less than 3 months prior to the start of the meeting. Students must be members of ISEP at the time of application.

**Criteria**

- 1) Scientific excellence, innovation and likely impact (equally weighted) of the research.
  - 2) Quality (logic and clarity of expression) of the abstract for the research being presented. Successful applicants will give an oral presentation, unless permission to present a poster is granted by the Endowment Fund Chair.
  - 3) In the event of equality based on criteria 1 and 2, distance traveled (preference to those traveling furthest) and seniority (preference to novice graduate studies).
3. Individually rank the applications (1 to n, with no ties) and communicate their rankings to the EFC Chair.

**C) EFC Chair will:**

1. Communicate with the Meeting Organizer concerning the deadline to include Endowment Fund information with the Registration material.
2. Provide an announcement of the awards and instructions for applicants to the Organizer for inclusion with the registration materials that will be distributed to ISEP members.
3. Receive from the Applicants, and distribute to the EFC members, the student applications for evaluation. The Chair will establish an assessment deadline for EFC members.
4. Tally the results of the assessments and, in the event of a tie, serve as tie-breaker. As soon as the decision is made, the Chair will communicate the results directly to: EFC members; all applicants; and, the Treasurer.

**D) Meeting Organizer will:**

1. Consult with the EFC Chair to insure that the Endowment Fund information is included with the registration package distributed to members.

**E) Treasurer will:**

1. Maintain Endowment Moneys in accordance with the duties of this office (ISEP by-laws).
2. Insure that certified checks in an amount equivalent to \$650 Canadian are prepared in United States dollars for presentation at the meeting to successful applicants.

## **F) Application procedure**

Submit **THREE** copies of the application package (below) to the Endowment Fund Chair by the registration deadline (also remember to submit your registration package to the Meeting Organizer).

### **APPLICATION PACKAGE**

- 1) Single page, single spaced, 12 point type, abstract of the paper to be presented, including full list of authors and institution at which the work was conducted. In the event that the required abstract for the meeting is close to this in size, the format required for the meeting would be acceptable, but a 100-200 word abstract would be unacceptable.
- 2) Letter from the student's supervisor indicating:
  - a) That the student meets the eligibility criteria stated above.
  - b) The extent of the work performed by the student relative to co-authors.
- 3) Brief curriculum vitae of the student.

## **9 Membership drive**

If you know of anyone who should be in ISEP, feel free to pressure them into joining! Also, please renew your membership.

### **INTERNATIONAL SOCIETY FOR EVOLUTIONARY PROTISTOLOGY MEMBERSHIP APPLICATION/RENEWAL**

Name:

Postal address:

City, state/province, country:

Postal code:

Telephone number:

Fax number:

E-mail address:

Membership dues are US\$ 25 (\*) for two years.

[ ] I enclose for ISEP membership for the years 199\_\_ through\_\_\_\_ .



Signature:

Date:

(\* Please remit US\$ 25 per two years' membership to:

Dr Gary W. Saunders  
Department of Biology  
University of New Brunswick  
Bag Service #45111  
Fredericton, N.B. E3B 6E1  
Canada

Payment may be made by personal cheque (within the USA), bank money order or bank draft, international money order, or postal money order.

Currently, payment must be made in U.S. dollars.

We can accept payment for two, four, or more years.

## **10/ New Journal**

In the year 2000, the International Journal of Systematic Bacteriology (IJSB) is expanding its subject area to phylogenetic and evolutionary topics including the lower eukaryotes, with a consequent change of title to International Journal of Systematic and Evolutionary Microbiology (IJSEM). IJSB, the official ICSB/IUMS journal of record for new bacterial names, is published by the Society for General Microbiology, the second largest microbiological society in the world.

If you are writing a paper on the systematics of protists, why not send it in to us? The IJSEM has several benefits for authors:

1. Truly international Editorial Board, with Dr Miklos Müller (The Rockefeller University, New York) as the editor for lower eukaryotes.
2. Third highest impact factor (3.724) for a non-review microbiology journal.
3. There are NO page charges.
4. Authors receive 25 FREE offprints and can order more at very reasonable rates.
5. Excellent editorial and production standards.

If you would like to know more please check out our web site at:

<http://www.socgenmicrobiol.org.uk/IJSB/ijsemnews.htm>

If you would like to receive a free sample copy of the IJSB or IJSEM (in January 2000), please send a message including your full name and address to our journal sales office at <mailto:jsales@socgenmicrobiol.org.uk>

We look forward to hearing from you.

Yours faithfully

Aidan Parte

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<http://www.socgenmicrobiol.org.uk/ijsbmain.htm>

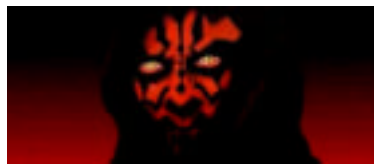
The April 1999 issue (49/2) was published on 20 April - abstracts are available on our Web site.

From 2000, the IJSB will become the International Journal of Systematic and Evolutionary Microbiology (IJSEM), because it is expanding its subject area to phylogenetic and evolutionary topics including the lower eukaryotes such as protozoa and algae. The IJSEM will be published bi-monthly to reduce publication times.

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## 11/ **Star Wars and Endosymbiosis**

If you haven't yet seen Episode 1 of Star Wars (The Phantom Menace), then here's an irresistible excuse. Apparently George Lucas was much taken with the endosymbiosis concept. In this episode we learn that The Force is generated by microscopic organisms that live inside our own cells. Known as "midi-chlorians", these endosymbionts can be only "heard" when a Jedi switches off his/her own mind (I have my mind



switched off lots of times but can't hear zip, Ed.). Anakin Skywalker (who grows up to be Darth Vader) has an extraordinarily high titre of midi-chlorians providing him with an exceptionally strong aliquot of force. If only we could get 1/00<sup>th</sup> of 1% of the box office takings for Star Wars to support endosymbiosis research!

ANAKIN : Master, sir...I've been wondering.. .what are midi-chlorians?

QUI-GON : Midi-chlorians are a microcopic lifeform that reside within all living cells and communicates with the Force.

ANAKIN : They live inside of me?

QUI-GON : In your cells. We are symbionts with the midi-chlorians.

ANAKIN : Symbionts?

QUI-GON : Life forms living together for mutual advantage. Without the midi-chlorians, life could not exist, and we would have no knowledge of the Force. They continually speak to you, telling you the will of the Force.

ANAKIN : They do??

QUI-GON : When you learn to quiet your mind, you will hear them speaking to you.

ANAKIN : I don't understand.

QUI-GON : With time and training, Annie...you will.

Need more? Go to <http://members.aol.com/PrinceG0R0/force.html>