

Department of Biological Sciences Newsletter

"from biomolecules to the biosphere"



No. 5

February 3, 2012

Announcements

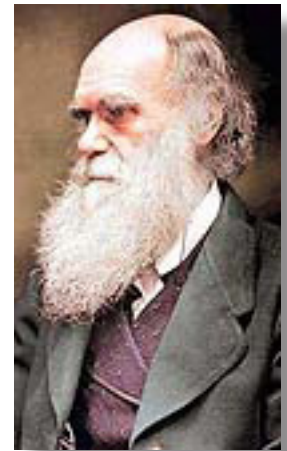


Biosocial after the Department Council Meeting on February 7th, 2012. Cookies, candy and juice will be served after the finish of the council meeting in BI 211.

27th Annual Darwin Dinner - Tickets are now on sale for the 27th Annual Darwin dinner on February 10th! This year's speaker is the internationally-renowned philosopher, scientist and best-selling author Daniel Dennett. This is an incredible opportunity for people to see a larger-than-life evolutionary celebrity. His books, including 'Breaking the Spell' and 'Darwin's Dangerous Idea', have dealt with such topics as the evolution of consciousness, critiques of adaptationism, and the biological basis of religion. You can see a 2003 TED talk of his research here:

http://www.ted.com/talks/dan_dennett_on_our_consciousness.html

The title of the talk is the 'Evolution of Reasons'. Bring your friends for the talk (its free!), and then stay for a catered dinner at MacEwan Hall for an opportunity to discuss the talk with others, enjoy a great meal, and play the annual Darwin quiz!



Tickets for the buffet dinner (with vegetarian option) are now on sale. They are: \$25 for students, \$35 for non-students, \$45 for faculty. **Final numbers for the dinner are due February 3! So people need to register ASAP.**

Email Matthew mr.morris@ucalgary.ca or Jobran jmchebib@ucalgary.ca to reserve your spot today! Tickets will also be on sale at the end of EEB 601 in BI211 Mondays at 1:00 pm.

Please note that you do not need to reserve a spot if you are only attending the lecture - just show up in ST140 before the lecture's start at 4:30. There has been a lot of interest - seating for the lecture will be first come, first served. Purchasing a dinner does NOT guarantee you a seat for the lecture, so plan to be there well ahead of time.

Please see page 11 of this newsletter for additional details.

Canadian Society of Zoologists 2012 will be at Mount Allison University. Please see page 12 for more details.

Seminars



BCEM 601 seminars - Mondays at 16h00 in BI 211

February 6 - Subrata Paul - Structural insights into the virulence factor cascade of *Pseudomonas aeruginosa*

CDP 601 seminars - Wednesdays at 16h00 in MS 319

February 8 - Siyu Liang - Hormone Cross-talk In Plant Stress Response: Role of Abscisic Acid and Brassinosteroid In Stress Tolerance In *Arabidopsis thaliana*.

EEB 601 seminars - Mondays at 12h00 in BI 211

February 6 - Paul Simpson - TBA

Micro 601 seminars - Wednesdays at 11h00 in BI 211

February 8 - Marc Demeter - Tailings ponds, mixed species biofilms and naphthenic acid degradation

Scholarships



UNDERGRADUATE RESEARCH SCHOLARSHIPS

PURE -Programs for Undergraduate Research Experience: Applications (including documents from the supervisor) are due on **10 Feb 2012**.

Visit: <http://www.ucalgary.ca/provost/TLFC/awards/undergrad>

USRP-Undergraduate Student Research Program in Health and Wellness: Application deadline- **15 Feb 2012** <http://www.kin.ucalgary.ca/usrp>

For more undergrad summer research opportunities, visit the department webpage <http://bio.ucalgary.ca/undergrad/scholar.html>

GRADUATE SCHOLARSHIPS

2012 Alberta Chapter of The Wildlife Society Student Awards

http://joomla.wildlife.org/Alberta/index.php?option=com_content&task=blogcategory&id=23&Itemid=305



Did you know....

Candidacy Examination Regulations within Biological Sciences

****please note students admitted to program prior to July 1, 2012 have the option of following the new regulations for the written portion, or the old regulations for the written portion of their Candidacy.***

- 1) In accordance with regulations of the Faculty of Graduate Studies, Ph.D. students are required to attempt a Candidacy Examination no later than 28 months after their initial registration (36 months for students who have transferred from a M.Sc. program). A student is expected to complete their course requirements prior to undertaking her/his Candidacy Examination (or at least at the end of the same term as the Examination). Note that a student is assessed program fees until the term after successful completion of the Candidacy Examination, after which she/he is assessed continuing fees (a reduction of approximately 70%).
- 2) The Candidacy Examination should serve two purposes:
 - assess the student's background knowledge of their discipline;
 - evaluate the student's preparedness to conduct high-quality research in their particular field of study.
- 3) The Candidacy Examination will include a written and 2-hour oral component, all of which will be conducted within a one-month period. The written component will be completed during the first three weeks of the examination period to allow examiners one week to evaluate the resulting documents before the oral examination.
- 4) The written component will involve two documents (i and ii below) that address topics within the student's Area of Specialization, as identified when the student's Research Proposal is accepted by her/his Supervisory Committee (within 12 months of initial registration):
 - i. Critical review essay – This review should address a topic that is more restricted than the student's area of specialization, but is sufficiently broad to allow synthesis of related subjects, issues and perspectives. Recent reviews in "Critical Reviews in ..." or "Trends in ..." journals provide examples of the expected scope of such reviews. Such a review should: include a historical overview; explain essential concepts and critically evaluate contemporary perspectives; appraise the empirical support for the guiding concepts, including apparent inconsistencies; and identify topics that warrant specific attention to advance the field of study. (minimum length – 20 pages, double spaced, excluding title page, references and illustrative material).
 - ii. Either:
 - a. Simulated research proposal – This proposal should address a hypothesis concerning a specific subject that is not the topic of the student's own research. The proposal will begin by

identifying the scientific rationale for the proposed research that motivates a specific hypothesis, which in turn will generate the prediction(s) to be tested. Then, a description of the proposed research will characterize the study design and the specific methods that would be used to conduct the research. The scope of the proposed research, were it to be conducted, should be sufficient to produce a single publication in a top-ranking journal in the field of study. (Maximum length – 10 pages, double spaced, excluding title page, references and illustrative material)

b. Essay on focused topic – This essay will address current perspectives on a specific phenomenon, hypothesis, or protocol. The topic of this essay should be more limited than would be addressed by a review, allowing the student to examine it in greater detail. (Length [double spaced], excluding title page, references and illustrative material: minimum – 10 pages; maximum– 20 pages)

Which of options ii.a or ii.b will apply for a specific examination must be decided by the Examination committee and communicated to the student at least two months prior to the one-month examination period. For each written component, a student will be provided with a choice of two topics decided by the Examination Committee. The student will be informed of these topics four weeks before the date of the oral examination. The written components of the Examination are expected to be a student's own work, so that a student is required to complete this component independently.

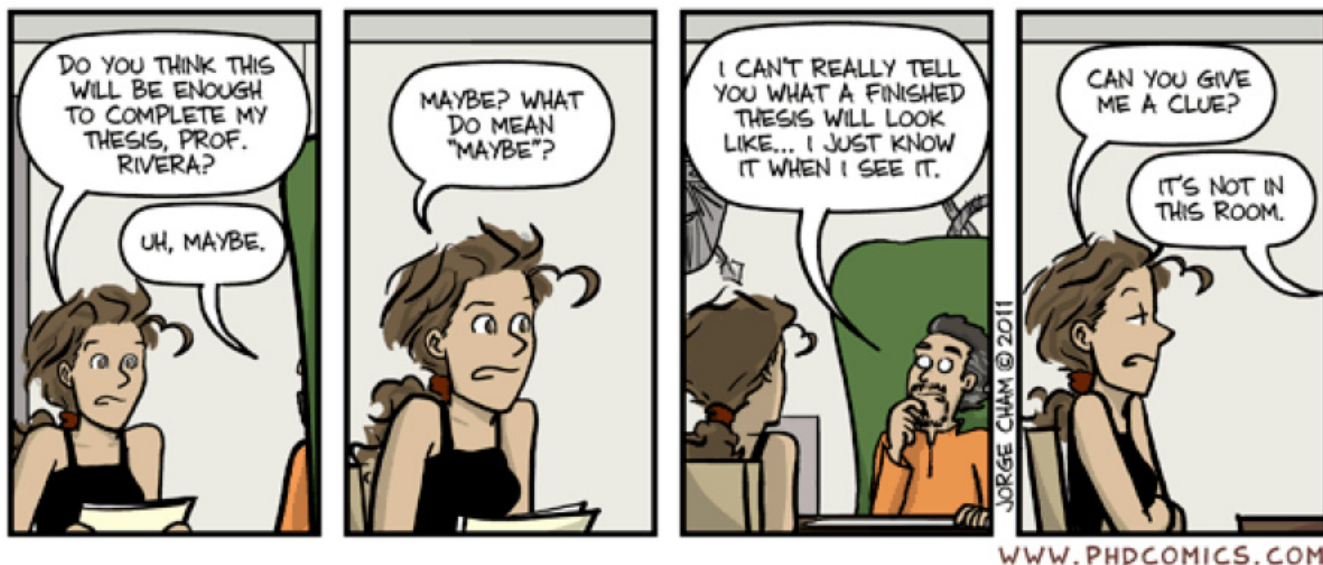
5) The oral examination assesses a student's knowledge of her/his Area of Specialization and preparedness to conduct high-quality research, and should not be limited to elaboration or scrutiny of the written components. Although the student's written components may form the basis of some questions, typically early during the oral examination, exploration of additional topics within the student's Area of Specialization is expected.

6) The Examination Committee includes all members of a student's Supervisory Committee, plus one member from a University unit other than the Department of Biological Sciences and one additional member, who may be from the Department of Biological Sciences. All members of the Examination Committee propose and agree on the questions that comprise the written component of the Examination. In addition, they participate in questioning during the oral component. The oral component will be overseen by a Neutral Chair, who is not involved in the student's project.

7) The Examination format described above is required of all students who register on or after July 1, 2012. This format may also be used by students who registered before July 1, 2012, if their Examination period begins no earlier than February 2, 2012 (i.e., oral examination scheduled no earlier than March 1, 2012).

Research Proposals

The M.Sc. Research Proposal for Shaelen Korschuh entitled "Functional Significance of Thyroid Hormone in Fish Development", will be held on February 13, 2012 at 1:30 p.m. in Biological Sciences room 186C.



The M.Sc. Research Proposal for Isha Nasa entitled “The role of reversible phosphorylation in global regulation: PP1 as the Master Controller”, will be held on February 3, 2012 at 10:00 a.m. in Biological Sciences room 246.

The M.Sc. Research Proposal for Cassandra Maier, in the area of “Comparative Reproductive Endocrinology and Ecotoxicology”, was accepted by her Supervisory Committee on January 23, 2012.

Ph.D. Candidacy Oral Examinations - Candidacy Exams are Closed Exams.

Anastassiiia Moussatova (Supervisor: P. Tieleman), will be holding her Ph.D. Candidacy Examination, in the area of “Computational Biochemistry”, on February 22, 2012 at 9:00 a.m. in BioSciences room 499. (Neutral Chair: TBA)

Thesis Oral Examinations - Exams are “Open” unless otherwise noted.

Please note: *Pre-defense seminars are a degree requirement for all M.Sc. and Ph.D. students in Biological Sciences. Typically, the seminar will take place immediately preceding the Oral Defense Exam.*

It is the student’s responsibility to book the necessary com-media equipment with either Christine (220-3578) or David (220-8307) for their examination. Please book the equipment as soon as you have the date set for your exam/proposal meeting. (defense seminars are held one hour before the stated defense time in BI 211 unless noted otherwise)

Lorraine Johnston Adderley (Supervisor: J. Vamosi), will be defending her M.Sc. Thesis, in the area of “Plant Reproductive Ecology” on February 29, 2012 at 10:00 a.m. in BioSciences room 499. (Neutral Chair: C. Shemanko).

Congratulations

Hillary Ward, who passed her Ph.D. Candidacy Examination, in the area of “Fisheries Ecology & Management”, on January 30, 2012!



Jacson Laliberte who passed his M.Sc. Thesis, in the area of “Fish Ecology”, on February 1, 2012!



Positions / Opportunities

Sessional Teaching positions available - SPRING 2012

BIOL 205, Spring 2012 Sessional Lecturer – Biology 205, The Organization and Diversity of Life
An instructor is required to teach this half course, which will be offered during the Spring 2012 session. Biology 205 provides a study of biological concepts and mechanisms for non-majors, illustrated by current examples of medical and environmental problems. Preferred qualifications include a Ph.D. in one of the Biological Sciences, and previous teaching experience. The base salary is \$5930. Interested persons should apply to Dr. Michael Hynes, Associate Head (undergraduate programs), Dept. of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4 (email: biosci@ucalgary.ca). The deadline for submission of an application letter and resumé is February 27, 2012.

BIOL 305, Spring 2012 Sessional Lecturer – Biology 305, The Human Organism
An instructor is required to teach this half course, which will be offered during the Spring 2012 session. Biology 305 introduces human biology to non-majors, leading to an appreciation of how the human body maintains itself and carries out the functions necessary to sustain any organism. Preferred qualifications include a Ph.D. in one of the Biological Sciences, and previous teaching experience, ideally in this course. The base salary is \$5930. Interested persons should apply to Dr. Michael Hynes, Associate Head (undergraduate programs), Dept. of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4 (email: biosci@ucalgary.ca). The deadline for submission of an application letter and resumé is February 27, 2012.

BCEM 393, Spring 2012 Sessional Lecturer – Biochemistry 393, Introduction to Biochemistry
An instructor is required to teach and coordinate labs for this half course, which will be offered during the Spring 2012 session. Biochemistry 393 introduces the structure and function of carbohydrates, amino acids, proteins, lipids, and (co)enzymes, and also provides an introduction to metabolism. Preferred qualifications include a Ph.D. in one of the Biological Sciences, and previous teaching experience in Biochemistry. The base salary is \$5930 for lectures, with an additional \$1000 for lab coordination. Interested persons should apply to Dr. Michael Hynes, Associate Head (undergraduate programs), Dept. of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4 (email: biosci@ucalgary.ca). The deadline for submission of an application letter and resumé is February 27, 2012.

BIOL 243, Spring 2012 Sessional Lecturer – Biology 243, DNA, Inheritance, and Evolution. An instructor (or several instructors) is required to teach and coordinate labs for this half course, which will be offered during the Spring 2012 session. Biology 243 is one of our two new introductory courses in Biology. It provides an introduction to central concepts in evolution and biodiversity, as well as the role of DNA as a vehicle for inheritance of genetic information. Preferred qualifications include a Ph.D. in one of the Biological Sciences, and previous teaching experience. Since this is a new course taught with a new philosophy, previous experience teaching BIOL 243 is highly desirable. It may be possible for two instructors to cover the two halves of the lecture material. The lab coordination could be done by the lecturer(s), or by a different person. The base salary is \$5930, with an additional \$1000 for lab coordination. Interested persons should apply to Dr. Michael Hynes, Associate Head (undergraduate programs), Dept. of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4 (email: biosci@ucalgary.ca). The deadline for submission of an application letter and resumé is February 27, 2012.

BIOL 311, Spring 2012 Sessional Lecturer – Biology 311, Principles of Genetics. An instructor is required to teach and coordinate labs for this half course, which will be offered during the Spring 2012 session. Biology 311 introduces topics of Mendelian inheritance, allelic relationships, genetic and sex linkage, sex determination, chromosome structure, segregation and recombination, structure and function of genetic material, molecular genetics, genetics of bacteria and viruses, gene function, complementation, and regulation of gene expression. Preferred qualifications include a Ph.D. in one of the Biological Sciences, and previous teaching experience. It may be possible to hire separate instructors for the lab and lecture components. The base salary is \$5930, with an additional \$1000 for lab coordination. Interested persons should apply to Dr. Michael Hynes, Associate Head (undergraduate programs), Dept. of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4 (email: biosci@ucalgary.ca). The deadline for submission of an application letter and resumé is February 27, 2012.

BIOL 313, Spring 2012 Sessional Lecturer – Biology 313. An Introduction to Ecology and Evolution. An instructor is required to teach and coordinate the labs for this half course, which will be offered during the spring 2012 session. Biology 313 introduces ecological processes and evolutionary principles that explain the origin, maintenance, and dynamics of biological diversity, including population dynamics and communities, the evolution of traits, and mechanisms of genetic change of populations. Preferred qualifications include a Ph.D. in one of the Biological Sciences, and previous experience teaching in the field of Ecology. The base salary is \$5930, with an additional \$1000 for lab coordination. Interested persons should apply to Dr. Michael Hynes, Associate Head (undergraduate programs), Dept. of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4 (email: biosci@ucalgary.ca). The deadline for submission of an application letter and resumé is February 27, 2012.

SUMMER 2012

BIOL 331, Summer 2011 Sessional Lecturer – Biology 331, Introduction to Cellular and Molecular Biology

An instructor is required to teach this half course, which will be offered during the Summer 2012 session. Biology 331 introduces principles of cellular structure and function, including molecular organization and function of membranes, organelles, the nucleus and cytoplasmic structures, regulations of cell proliferation, assembly of organelles, and cell interactions. Preferred qualifications include a Ph.D. in one of the Biological Sciences, and previous teaching experience in Cell and Molecular Biology. The base salary is \$5930. Interested persons should apply to Dr. Michael Hynes, Associate Head (undergraduate programs), Dept. of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary, AB T2N 1N4 (email: biosci@ucalgary.ca). The deadline for submission of an application letter and resumé is February 27, 2012.



Calgary Zoo Field Technicians - The Centre for Conservation Research, whose main focus is the science of recovering at risk species, is currently seeking five field technicians to assist with field work. The research will primarily be on northern leopard frogs in Southern Alberta and/or black-tailed prairie dog/ black-footed ferrets in Grasslands National Park, Sask. http://calgaryzoo.com/component/option.com_jobline/Itemid.275/task.view/id.131/



Calgary Zoo 2012 Conservation Research Fellowship - In partnership with the Alberta Society of Professional Biologists, we are pleased to announce our annual Conservation research Fellowship position. The aim of this fellowship is to aid the professional development of recent graduates as they develop their careers in the field of conservation biology. http://calgaryzoo.com/component/option.com_jobline/Itemid.275/task.view/id.130/

Partner Staffing is currently working to find a talented biologist for their successful EPC Client. - A leadership role supervising, coordinating, and developing biological sciences and environmental assessment consulting business.

Proposal writing, cost estimating, project management and client liaison.

Supervision, mentorship, and training of junior staff.

Field assessment of aquatic and terrestrial environments in urban and remote locations.

Preparation of technical reports for clients and regulatory agencies.

Environmental monitoring for a variety of projects.

Preparation of mitigation, compensation and restoration plans.

Requirements

Bachelor's or Masters degree in biology or equivalent

Eligible for membership with The Alberta Society of Professional Biologists(ASPB)

5-10 years experience in environmental impact assessments, environmental effects monitoring, aquatic biology and ecology.

Proven experience with business development in the consulting industry.

Familiarity with federal and provincial environmental legislation and regulations.

Excellent organizational, communication and technical report writing skills.

Ability to work in a team environment and to develop and mentor staff.

Contact: Christopher Collins (www.partnerstaffing.com)

The Student Activities Fund is a new collaboration between the Students' Union Quality Money program and the University of Calgary. The fund will disburse up to \$65,000 every year to qualifying undergraduate and graduate students. There are three application periods in 2012, with deadlines of **Feb. 15, April 1 and Oct. 19**.

The current deadline for online applications is **February 15 at 4:30 p.m.** For more information, please visit: www.ucalgary.ca/leadership/saf

UCIT winter courses: NVivo, IBM SPSS Statistics and SAS Courses - Online Information and Registration now available at : <http://www.ucalgary.ca/mathstats/training-schedule>

Intro to NVivo, February 16

Intro to IBM SPSS Statistics, March 6 & 8

Intermediate IBM SPSS Statistics, March 20 & 22

Advanced Topics in IBM SPSS Statistics, April 3 & 5

Intro to SAS, April 19

Intro to NVivo, April 17

The above courses are free for UofC staff and students.

Biotech Job Bank (www.bhrc.ca) has current employment opportunities in the biotechnology industry in Canada. The Biotech HR Pulse is available in PDF format at: www.bhrc.ca/Pulse/index.html. Phone 519-457-1470, Ext 268, Fax 519-457-3997.

University Affairs Career Ads. Current employment opportunities, including all facets of the biological sciences, in Canadian universities may be found at the University Affairs website: www.universityaffairs.ca. Career ads are available in HTML format at: http://www.universityaffairs.ca/career_ads/index.html

Conferences / Workshops / Courses



8th International Symposium on Bioinformatics Research and Applications - May 21-23, 2012, Dallas, Texas

<http://www.cs.gsu.edu/isbra/>

The International Symposium on Bioinformatics Research and Applications (ISBRA) provides a forum for the exchange of ideas and results among researchers, developers, and practitioners working on all aspects of bioinformatics and computational biology and their applications. Submissions presenting original research are solicited in all areas of bioinformatics and computational biology, including the development of experimental or commercial systems.

We seek two categories of submissions: extended abstracts of up to 12 pages in Springer LNCS format, and short abstracts of up to 4 pages. Both types of submissions must be made electroni-

cally by following the instructions at <http://www.easychair.org/conferences/?conf=isbra2012>. Submission implies willingness of at least one author to register and present at the symposium.



Professional Grant Development Workshop
Master the techniques of writing superior and winning proposals
March 14 - 16, 2012

8:30 a.m. – 4:30 p.m.

To be held at: University of Alberta Edmonton, Alberta

Sponsored by: The Grant Training Center <http://granttrainingcenter.com/>

**2012 China Canada Systems Biology Symposium
and 19th Methods in Protein Structure Analysis**



2nd China Canada Systems Biology Conference and the 19th Methods in Protein Structure Analysis June 25-28 2012 - <http://www.oisb.ca/>

The goal of this meeting is to bring together internationally recognized scientists and students in the field of systems biology, protein biochemistry, and proteomics to promote scientific discussion and the development of new collaborations.

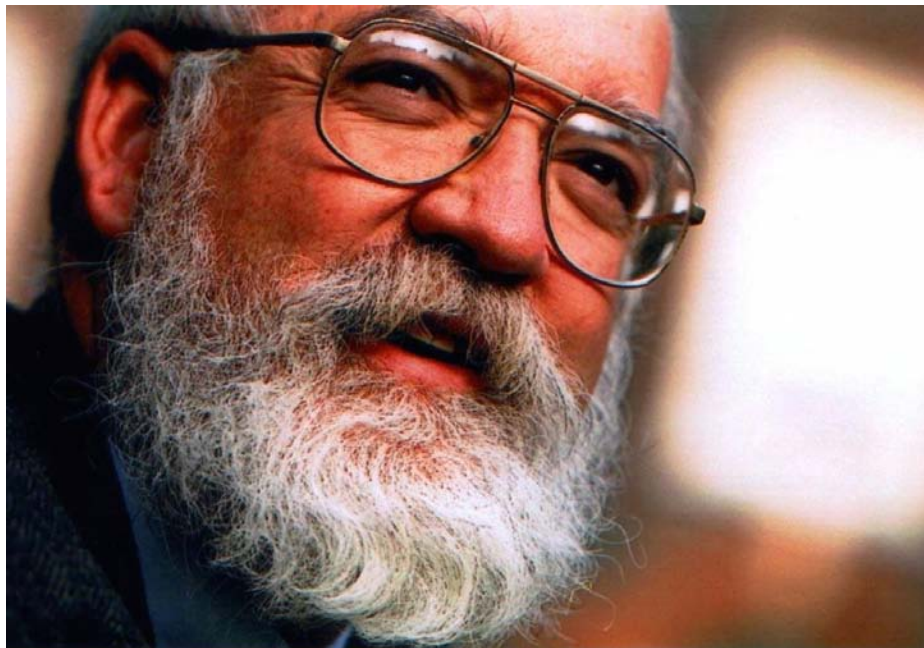


The 27th Annual

Darwin Lecture

“The Evolution of Reasons”

Dr. Daniel C. Dennett



Friday 4:30pm, Feb 10th, ST140

Dr. Dennett is a philosopher, writer and scientist whose research centers on the philosophy of biology, particularly as related to the field of evolutionary biology. He is co-director for the Center for Cognitive Studies and the Austin B. Fletcher Professor of Philosophy at Tufts University. He is also the author of several popular books, including **Breaking the Spell** (2006), **Freedom Evolves** (2003) and **Darwin's Dangerous Idea** (1995)



Co-hosted by the Biological Sciences and Philosophy Departments. Lecture is Free. Catered Dinner to follow, for tickets write Matthew mr.morris@ucalgary.ca or Jobran jmchebib@ucalgary.ca



MOUNT ALLISON UNIVERSITY
SACKVILLE, NB
MAY 7 - 11 MAI, 2012

IMPORTANT DATES/DATES IMPORTANTES:

ABSTRACT DEADLINE: 17 FEBRUARY 2012

DATE LIMITE POUR LA SOUMISSION DE RÉSUMÉ: 17 FÉVRIER 2012

EARLY REGISTRATION: 16 MARCH 2012

DATE LIMITE POUR L'INSCRIPTION: 16 MARS 2012

CSZ 2012 SECTION SYMPOSIA
SYMPOSIUMS DE SECTION SCZ 2012

**CMD: "METAMORPHIC TRANSITIONS IN ANIMALS –
AN EVOLUTIONARY DEVELOPMENTAL PERSPECTIVE"**

**MDC: "TRANSITIONS MÉTAMORPHIQUES CHEZ LES ANIMAUX –
UNE PERSPECTIVE ÉVOLUTIONNAIRE DÉVELOPPEMENTALE"**

EEE: "RECRUITMENT VARIABILITY OF MARINE ANIMALS: CAUSES AND CONSEQUENCES"
ÉÉÉ: "VARIABILITÉ DE RECRUTEMENT DES ANIMAUX MARINS: CAUSES ET CONSÉQUENCES"

CPB: "ENVIRONMENTAL STRESSORS AND DEVELOPMENTAL PLASTICITY"

BPC: "STRESSEURS ENVIRONNEMENTAUX ET PLASTICITÉ DÉVELOPPEMENTALE"

PIE: "PARASITISM, IMMUNITY IN THE AQUATIC ENVIRONMENT"

PIE: LE PARASITISME, IMMUNITÉ DANS L'ENVIRONNEMENT AQUATIQUE

For more information, please contact

Pour plus d'information contactez

csz2012@mta.ca

Mount Allison
UNIVERSITY

www.csz2012.com

**JOGGINS**
FOSSIL CLIFFS