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# E v o l D i r

August 1, 2005

M o n t h i n R e v i e w

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## Forward

This listing is intended to aid researchers in population genetics and evolution. To add your name to the directory listing, to change anything regarding this listing or to complain please send me mail at [Golding@McMaster.CA](mailto:Golding@McMaster.CA).

Listing in this directory is neither limited nor censored and is solely to help scientists reach other members in the same field and to serve as a means of communication. Please do not add to the junk e-mail unless necessary. The nature of the messages should be “bulletin board” in nature, if there is a “discussion” style topic that you would like to post please send it to the USENET discussion groups.

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## Conferences

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### Bordeaux PhDEvolBiol Sept4-9

#### 11th Meeting of PhD Students in Evolutionary Biology

There are opportunities for additional students to attend the 11th Meeting of PHD Students in Evolutionary Biology, Bordeaux (France), from September 4th to September 9th. Registration fee is 300 euros with all meals and accomodations.

Registration is possible at <http://kimura.univ-montp2.fr/mpseb> Best regards,

The organizing committee:

Eric Bazin<bazin@univ-montp2.fr>	Emmanuelle Billard
<billard@sb-roscoff.fr>	Stéphane De Mita
<demita@ensam.inra.fr>	Julien Dutheil
<Julien.Dutheil@univ-montp2.fr>	Emmanuelle Eveno
<eveno@pierroton.inra.fr>	Baptiste Faure
<bfaure@sb-roscoff.fr>	Matthieu Faure
<matthieu.faure@univ-montp2.fr>	Olivier Lepais
<Lepais@pierroton.inra.fr>	Delphine Muths
<muths@sb-roscoff.fr>	

Julien.Dutheil@univ-montp2.fr    Julien.Dutheil@univ-montp2.fr

The next annual SEEPAGE Meeting (South-East Ecology, PopulAtion Genetics and Evolution Meeting) is coming soon. REGISTER NOW at ([www.clemson.edu/~mptacek](http://www.clemson.edu/~mptacek) - click on SEEPAGE 2005)

WHEN: September 23-25, 2005 HOST: Clemson University, Dr. Margaret Ptacek WHERE: Camp Kanuga, Hendersonville, NC (<http://www.kanuga.org/> - for more info about the camp)

SATURDAY NIGHT KEYNOTE SPEAKER: Dr. David McCauley, Vanderbilt University

SPECIAL GUEST SPEAKER: Dr. Felix Breden, Simon Fraser University

The weekend will also include contributed 15-minute talks, a poster session, and spirits!

Visit the webpage for updates and details! ([www.clemson.edu/~mptacek](http://www.clemson.edu/~mptacek) - click on SEEPAGE 2005)

NOTE - For questions or more information email Michele: ([kittell@clemson.edu](mailto:kittell@clemson.edu)).

Michele Kittell and Margaret Ptacek Department of Biological Sciences Clemson University 132 Long Hall Clemson, SC 29634 office - 864 656-6964 [kittell@clemson.edu](mailto:kittell@clemson.edu), [mptacek@clemson.edu](mailto:mptacek@clemson.edu)

“Margaret B. Ptacek” <[mptacek@CLEMSON.EDU](mailto:mptacek@CLEMSON.EDU)>

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### ClemsonU SEEPAGE2005 Sept23-25

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### Fremantle AustralasianEvolSociety Sept27-30

Final Announcement 4th Meeting of the Australasian  
Evolution Society

27th-30th September 2005

Esplanade Hotel Fremantle Western Australia

Plenary Speakers

Geoff A. Parker FRS, University of Liverpool, UK  
H. Carl Gerhardt, University of Missouri, USA  
Mark Blows, University of Queensland, Australia  
Russell D. Gray, University of Auckland, NZ

Registration Closes July 31st

Members Full Registration \$350.00 Student \$250.00

Non Member Full Registration \$425.00 Student \$325.00

Registration fees include welcome reception 1800-2000 on 27th September, Abstract book and delegate package, entrance to the meeting, and tea/coffee & lunches on 28th to 30th September. There will be an optional conference dinner on the evening of 30th September priced at \$95.00 or \$75.00 for students. The cost includes 5h access to beverages. Download and complete the registration form, and e-mail to [wjk@cyllene.uwa.edu.au](mailto:wjk@cyllene.uwa.edu.au)

Accommodation at the venue is available at a cost of \$180.00 per room single/double/twin share. Details of the venue can be found on the Hotels fact sheet (pdf). A variety of other options, ranging from Hotels to Apartments and Units, from B&B to Backpackers, are available and can be booked using the Fremantle Tourist Information web site @ <http://www.FremantleWA.com.au> –

Professor Leigh W. Simmons Zoology Building School of Animal Biology (M092) The University of Western Australia Nedlands Tel: +61 8 6488 2221 WA 6009 FAX: +61 8 6488 1029 Australia

<http://www.lwsimmons.org> UWA CRICOS Provider Code 00126G

— Jason Kennington School of Animal Biology, M092 The University of Western Australia 35 Stirling Highway Crawley WA 6009 Australia

Tel: +61 8 6488 3233 Fax: +61 8 6488 1029 [wjk@cyllene.uwa.edu.au](mailto:wjk@cyllene.uwa.edu.au)

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**Malta Mediterranean Seagrass  
May29-Jun3**

Dear Colleagues, we are pleased to announce that the first Mediterranean Seagrass Workshop (MSW) will be held in Malta from the 29th of May to the 3th of June 2006.

MSW 2006 is the first meeting that focuses on Mediterranean seagrasses and aims to bring together seagrass biologists from all over the Mediterranean to discuss current knowledge of the state of seagrasses, and to present aspects of their latest research.

Please visit the web site <http://events.um.edu.mt/-msw2006/index.html> for details of abstract submission and registration.

Important dates: 15th of October Close of abstract submissions 15th of December Notification of abstract acceptance 29th of February Close of early registrations 30th of April Close of registrations 30th of May Start of Seagrass 2004 3rd of June End of Seagrass 2004

Register to the MSW 2006 mailing list at [mswinfo@um.edu.mt](mailto:mswinfo@um.edu.mt) for further announcements and updates.

The MSW 2006 Organising Committee  
[gpro@szn.it](mailto:gpro@szn.it)

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### Marseilles EvolBiol Sept21-23

The program of the 9th evolutionary meeting at Marseilles that will take place the September 21st, 22nd 23rd is available : <http://www.up.univ-mrs.fr/evol/-congres/> Best regards Pierre

– Pierre Pontarotti EA 3781 EGEE (Evolution Génome Environnement) Université d'Aix Marseille I Centre St Charles 3 Place Victor Hugo 13331 Marseille Cedex 3 33491106489 <http://www.up.univ-mrs.fr/evol> We are organizing the 9th Evolutionary Biology Meeting at Marseille <http://www.up.univ-mrs.fr/evol/congres/>

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### Oslo Hennig Society July25-29 REGISTRATION ONLY EXTENDED

24th MEETING of the WILLI HENNIG SOCIETY

Fagernes, Norway, 25-29 July

>>>>\_\_\_\_\_REGISTRATION  
TENDED\_\_\_\_\_<<<<<

but.....ABSTRACTS ARE NOW  
\*\*\*CLOSED\*\*\* .....

Registration and booking on space-available basis until meeting begins. Contact the Quality Hotel Fagernes – For all relevant information, see:

<http://folk.uio.no/victoraa/Frontpage.files/-slide0003.htm> victor.albert@nhm.uio.no

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## UAberdeen FSBI July10-14

Dear colleagues

We are pleased to announce that the web site for the 2006 Annual Meeting of the Fisheries Society of the British Isles (FSBI) is up and running. The meeting will take place at the University of Aberdeen, Scotland July 10-14 2006. The topic of the meeting is:

?Fish Population structure: Implications to conservation.?

Programme outline, key note speakers, registration information as well as information on accommodation and travel is available at:

<http://www.fsbi2006.org.uk/> Abstract submission deadline for oral or poster presentation is November 1st 2005.

Best wishes, Daniel Ruzzante

Daniel Ruzzante, Associate Professor Canada Research Chair in Marine Conservation Genetics Department of Biology, Dalhousie University, Halifax, Nova Scotia, Canada, B3H 4J1 phone: (902) 494-1688 fax: (902) 494-3736 e-mail: [daniel.ruzzante@dal.ca](mailto:daniel.ruzzante@dal.ca)

<http://myweb.dal.ca/ruzzante> Canada Research Chairs <http://www.chairs.gc.ca>  
Daniel.Ruzzante@Dal.Ca

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## ULeiden EvolSynthesis Sept16

Extending the Synthesis Integrating micro- and macro-

evolutionary scales

September 16, 2005, 1-Day Symposium in Leiden, The Netherlands

Speakers: Niles Eldredge, John Thompson, Paul Brakefield, Sergey Gavrillets, Ryan Gregory, David Jablonski, Rich Lenski, William Miller.

This Symposium has grown out of a Working Group organized by Niles Eldredge and John Thompson at the National Center for Ecological Analysis and Synthesis, Santa Barbara, California.

Place: Large Lecture Theatre, Institute of Biology, Leiden University, Kaiserstraat 63, Leiden from 9.45 to 17.30. Maps etc: <http://biology.leidenuniv.nl/-ibl> Further information and registration: [brakefield@rulsfb.leidenuniv.nl](mailto:brakefield@rulsfb.leidenuniv.nl). Light lunch will be organized for registered attendees; Indonesian Dinner with the speakers is available at 25 Euros per head for registration by 5 September.

Paul Brakefield, Institute of Biology, Leiden, The Netherlands

“Prof. Paul Brakefield”  
<[brakefield@rulsfb.leidenuniv.nl](mailto:brakefield@rulsfb.leidenuniv.nl)>

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## UManchester EvoDevo Sept9

Dear colleagues

We are pleased to announce that the web site for the 6th UK evo-devo meeting is now up and running. The meeting will take place here at the University of Manchester on 9 September 2005.

The web site contains information on the programme, which will be updated as new details become available, and the registration form.

You find the web site at the following URL: <http://www.flywings.org.uk/EvoDevo2005> The deadline for registration is 22 August 2005. We would appreciate, however, if you can register earlier than that.

Posters are welcome. If you'd like to present a poster at the meeting, please indicate this on the registration form.

I look forward to seeing you at the meeting in Manchester!

Best wishes, Chris Klingenberg

Christian Peter Klingenberg Faculty of Life Sciences

The University of Manchester Michael Smith Building 275 5082 E-mail: [cpk@manchester.ac.uk](mailto:cpk@manchester.ac.uk) Web:  
 Oxford Road Manchester M13 9PT United Kingdom <http://www.flywings.org.uk> [cpk@manchester.ac.uk](mailto:cpk@manchester.ac.uk)  
 Telephone: +44 161 275 3899 Fax: +44 161 [cpk@manchester.ac.uk](mailto:cpk@manchester.ac.uk)

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## GradStudentPositions

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### BerlinBotanicGarden PlantSystematics

The Botanic Garden and Botanical Museum Berlin-Dahlem (FU-Berlin) invites applications for a PhD student position (BAT IIa/2) funded by the German Science Foundation (DFG) starting in October 2005. The position is initially available for 2 years.

The research project is settled within the field of plant systematics and focuses on the character evolution within the genus *Crepis* (Asteraceae). Analysis includes molecular, karyological and morphological techniques to revise evolutionary hypotheses about character evolution.

Candidates must hold a Master or Diploma degree in Biology, or related fields. We seek highly committed and motivated applicants who enjoy working in a team.

We offer a well equipped scientific environment with good working atmosphere and the possibilities of cooperation within the scientific community.

Deadline for applications is August 15th 2005. Applications should be sent to:

Freie Universität Berlin Zentraleinrichtung Botanischer Garten und Botanisches Museum Berlin-Dahlem (BGBM) Dr. B. Gemeinholzer Königin-Luise-Str. 6-8

14191 Berlin (Dahlem) Germany

“Gemeinholzer,  
<[B.Gemeinholzer@BGBM.org](mailto:B.Gemeinholzer@BGBM.org)>

Birgit”

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### CardiffU MHC MolEvol

NERC-funded PhD studentship Molecular Ecology on MHC

Deadline applications: 14 July 2005

Applications are invited for a three and a half years full-time NERC-funded studentship to be held in the Molecular & Evolutionary Ecology Group at Hull University (UK) in collaboration with the School of Biosciences, Cardiff University (UK).

The student will investigate the genetic variation at the genes of the Major Histocompatibility Complex (MHC) in a range of wild guppy populations in Trinidad and Tobago. In particular, the candidate will: (1) analyse the effects of founder events on genetic variation at the MHC, (2) test the association between MHC variation and parasite resistance and load, and (3) quantify the spatial and temporal variation in MHC in natural populations in Trinidad. Depending on specific interest of the PhD candidate, the project may also involve development of computer programs to simulate the evo-

lution of sequence variation, data mining of GenBank data, analysis of parasite infections at Cardiff University and/or conduct fieldwork in Trinidad.

The Molecular and Evolutionary Ecology research group at the University of Hull currently consists of eight postdoctoral research assistants, 16 postgraduate students, three research technicians and seven permanent academic staff and Fellows (see <http://www.hull.ac.uk/biosci/>). The student will receive training in the molecular and evolutionary theory and analysis, with many other training courses, tailored to the specific interests of the candidate, available within our established graduate school. The NERC studentship covers University fees. The stipend of ca. £12,000 pa is however only paid to UK students.

The successful candidate will have expertise in molecular techniques, including PCR and sequencing, and have a strong interest in evolution. He/she will be supervised by Dr Cock van Oosterhout (Molecular Ecology, University of Hull), and co-supervised by Dr John Greenman (Postgraduate Medical Institute, University of Hull) and Dr. Joanne Cable (Cardiff University).

Contact: For more information and informal discussions, please contact Cock van Oosterhout. Email: [c.van-oosterhout@hull.ac.uk](mailto:c.van-oosterhout@hull.ac.uk) Tel. 01482-465505

– Dr. Cock van Oosterhout University of Hull Hull HU6 7RX, UK Tel.: +44(0)1482 465505 Tel.: +44(0)1482 466434 Fax.: +44(0)1482 465458 <http://www.hull.ac.uk/biosci/staff/vanoosterhout.html> <http://www.microchecker.hull.ac.uk>

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## McMasterU GermLineMutations

We seek a M.Sc. student for a collaborative study of fathead minnows that we will cage in situ near a historical coal tar spill (Randle Reef) and at reference sites near by in Hamilton Harbour, Lake Ontario, and then return to the laboratory for follow-up evaluation. The longer-term goal is to assess the genetic damage, long-term developmental effects, and reproductive effects in fish caused by exposure to Randle Reef water and sediment before, during, and after the Randle Reef clean-up operation. The student will gain experience exposing fathead minnows to sediments, and rearing fish offspring to assess heritable mutations. We will examine germ-line mutations in tandem repeat DNA as well as vitellogenin levels, developmental deformities, and survival of the exposed adults' fry. Transfer to a Ph.D.

program may be possible depending upon the timing of the spill clean-up. The student will be based in the Biology Department at McMaster University and will work part of the time with our collaborators, Environment Canada Scientists, at Canada Centre for Inland Waters. Please send Cover letter, CV, Transcripts, and list of references to the following address.

James S. Quinn, PhD Biology Department McMaster University Hamilton, ON L8S 4K1 (905) 525-9140 ext 23194 [quinn@mcmaster.ca](mailto:quinn@mcmaster.ca) <http://www.science.mcmaster.ca/biology/faculty/quinn/-quinn.htm> jim quinn <[quinn@mcmaster.ca](mailto:quinn@mcmaster.ca)>

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## Spain EvolSponges

below are some options for European Union citizens willing to earn a PhD on sponges. Thanks and my apologies for those not interested.

Mikel

The Center for Advanced Studies at Blanes (CEAB) of the Spanish Scientific Research Council (CSIC) invites applications for three 36-month Marie Curie predoctoral fellowships in the areas of marine chemical ecology and genetics. Candidates will develop a research project to investigate:

1. genetic vs. environmental factors affecting the production of chemical defenses in sponges
2. genetic basis of the skeletogenesis in sponges: identification of genes and proteins involved
3. identification, cloning, and expression of gene clusters encoding polyketide synthases

To apply, send a letter of research interests, a CV, and arrange for two letters of reference to be sent by email to Dr Mikel A Becerro ([mikel@ceab.csic.es](mailto:mikel@ceab.csic.es)) or Dr María-J. Uriz ([iosune@ceab.csic.es](mailto:iosune@ceab.csic.es)) before July 15th 2005. Review of applications will begin July 16th. Start date as early as August 1st is possible and desirable; mention availability in your cover letter. We look for motivated and independent candidates with interests in benthic ecology and genetics. Research projects will include extensive diving, so diving certification is needed to achieve the goals of the projects, and it's preferred but not required before deadline. Candidates need to hold a BSc or MSc degree in Biology, and need to be from any country within the European Union except Spain or UK (fellowship #1), Spain or Germany (fellowship



#2), and Spain or Estonia (fellowship #3).

Candidates will join a young and dynamic team of researchers with interests in biological interactions in benthic communities at the CEAB, but will also spend 18 months at the partner institution associated with each fellowship. For information on the CEAB and their staff research interests visit [www.ceab.csic.es](http://www.ceab.csic.es). For more information on the fellowships, email Mikel Becerro or María J Uriz.

Mikel A Becerro, PhD Center for Advanced Studies (CEAB, CSIC) Acc Cala St Francesc 14 17300 Blanes (Girona) SPAIN Phone: + 34 - 972 336 101 Fax: + 34 - 972 337 806

Sandra Duran, PhD Postdoctoral Fellow Smithsonian Marine Station at Fort Pierce 701 Seaway Dr Fort Pierce, Fl 34949 Phone: (772) 465 - 6630 x147 Fax: (772) 461 - 8154 email: [duran@sms.si.edu](mailto:duran@sms.si.edu) [www.sms.si.edu](http://www.sms.si.edu)

Sandra Duran <[duran@sms.si.edu](mailto:duran@sms.si.edu)>

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## TexasStateU MateChoice

### BEHAVIORAL ECOLOGY OF SAILFIN AND AMAZON MOLLIES

Graduate Research/Teaching Assistantship for M. S.

Applications are being sought for one student interested in pursuing an academic career studying behavioral ecology (mate choice and sperm use) of sailfin and Amazon mollies starting fall 2005. Amazon mollies, *Poecilia formosa*, are a unisexual (all female) fish species that are parasitic on the closely related bisexual sailfin molly, *P. latipinna*. Conflict exists between male sailfin mollies trying to mate with their own species, and the unisexual females trying to appropriate a mating from these males. Dr. Andrea Aspbury and I have NSF funding (2 full summers) and departmental teaching assistantships (2 academic years) for a masters research assistant to work on this system. See <http://www.bio.txstate.edu/~gabor/gabor.htm> and <http://www.bio.txstate.edu/~gabor/aspbury/aspbury.htm> for details about our research interests.

The Department of Biology offers a strong environment in evolutionary ecology as the basis for training in behavioral ecology. Students will benefit from interactions with other faculty interested in evolutionary questions: Dr. Jim Ott (Insect-plant interactions and ecological genetics), Dr. Susan Schwinning (Plant ecology), Dr.

Mike Forstner (Vertebrate systematics and population genetics), and Dr. Chris Nice (Speciation in insects and phylogeography).

San Marcos, Texas is located 30 miles South of Austin, the Live Music Capitol. Both San Marcos and Austin are rich cultural and recreational environments in which to live and study. The Texas State campus overlooks the city of San Marcos and the headwaters of the crystal clear San Marcos River (<http://www.continuing-ed.swt.edu/aquarena/photo.html>). San Marcos and Austin are NOT the Texas you see or think of from TV!

For information on applications see <http://www.bio.txstate.edu/grad/GradGuide.html> (Disregard application deadlines). Please also see the Department of Biology for admission information (<http://www.bio.txstate.edu/>) and Texas State University (<http://www.txstate.edu/>) web sites for more information.

To apply for this position please send a letter of interest to Dr. Gabor ([gabor@txstate.edu](mailto:gabor@txstate.edu)) & Dr. Aspbury ([aspbury@txstate.edu](mailto:aspbury@txstate.edu)) stating why you are interested in doing this work. Also send a CV/resume of related research, coursework, grades, GRE scores and any other relevant experience via email (preferably) or snail mail. We will respond as soon as we get this information and will consider candidates until a suitable one is found.

Please Note: We will be attending the Animal Behavior Society Conference in Snowbird, Utah. If you are attending and would like to talk with us about the position, please either email us ahead of time, or find us at the conference.

–

Caitlin R. Gabor, Ph. D. Associate Professor Texas State University (Formerly SWT) Department of Biology, Science Building Room 384 San Marcos, TX 78666-4615 Work: (512) 245-3387; Fax: (512) 245-8713 E-mail: [gabor@txstate.edu](mailto:gabor@txstate.edu)

<http://www.bio.txstate.edu/~gabor/gabor.htm>

Caitlin Gabor <[gabor@txstate.edu](mailto:gabor@txstate.edu)>

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## UBern BirdPopulationRegulation

ines: 72

PhD position in Population Ecology

Regulation of local bird populations: deeper insights from integrated population models

A 3-year PhD project is available at the Division of Conservation Biology of the University of Bern, Switzerland.

An opening for a PhD position is available from 1st October 2005. The position is funded by the Swiss National Science Foundation. The general aim of the study is to advance integrated population models in order to model the dynamics of local populations. Integrated population models are of growing interest as they make simultaneous use of different kinds of data allowing the estimation of otherwise inaccessible demographic parameters. The population models shall be developed such that they are suited to analyse population dynamics of a typical short-lived passerine bird (red-back shrike *Lanius collurio*) and of a long-lived species with delayed recruitment (white stork *Ciconia ciconia*). From both species long time data series are available.

The ideal candidate is a very motivated graduate student with strong skills in quantitative data analysis and a deep understanding in mathematics. Ideally the candidate has knowledge in Bayesian statistics. The candidate does not need to have a biological education, applications of graduated mathematicians or statisticians are welcome. The study does not contain field work.

Applications, including a letter of motivation, CV and, possibly, list of publications should be sent until 31 July 2005 to the address below. Further information will also be delivered on request.

Michael SCHAUB Div. Conservation Biology Zoological Institute University of Bern Baltzerstrasse 6 CH-3012 Bern Switzerland Tel. ++41 (0)31 631 31 63 Fax. ++41 (0)31 631 45 35 e-mail: michael.schaub@nat.unibe.ch [www.conservation.unibe.ch](http://www.conservation.unibe.ch) Dr. Michael SCHAUB Div. Conservation Biology Zoological Institute University of Bern Baltzerstrasse 6 CH-3012 Bern Switzerland Tel. ++41 (0)31 631 31 63 Fax. ++41 (0)31 631 45 35 e-mail: michael.schaub@nat.unibe.ch

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Schweizerische Vogelwarte CH-6204 Sempach Switzerland Tel. ++41 (0)41 462 97 66 Fax. ++41 (0)41 462 97 10 e-mail: michael.schaub@vogelwarte.ch

michael.schaub@nat michael.schaub@nat

## UBremen CopepodEvolution

The Department of Biology and Chemistry at the University of Bremen is offering a

Ph.D. Position in ecology and evolution of marine copepods

starting on 1 September 2005 and at first restricted to 1 year. Salary is according to the German public service pay scale BAT IIa/2.

The project Biodiversity and ecology of deep-sea copepods in polar seas speciation processes and ecological niches in the homogeneous environment of the pelagic realm“ (funded by the German Science Foundation) focuses on the ecological niches and evolution of dominant deep-sea copepods in the Antarctic and Arctic.

The project aims at an improved understanding of causes and mechanisms sustaining a surprisingly high biodiversity at meso- and bathypelagic depths despite the very limited food supply and the absence of physical barriers. Modern molecular genetic techniques (DNA sequencing) are applied to study phylogenetic relationships, while biochemical methods (trophic biomarker fatty acids, stable isotopes) are used to elucidate differences in feeding behaviour and dietary composition of sympatric species.

Tasks: In co-operation with the PIs, Dr. H. Auel (marine zoology) and Dr. M. Kochzius (molecular genetics), the candidate will investigate the vertical distribution of deep-sea copepods in both polar regions. She/he will conduct feeding experiments and respiration measurements on board. To study dietary spectra, trophic marker fatty acids and stable isotopes will be analysed. Phylogenetic relationships will be studied by molecular markers. We envisage collaboration with international biodiversity initiatives, such as CoML, CMarZ, Zoogen, and BOL.

Requirements: The candidate must have a M.Sc. or German Diploma degree in biology with special qualifications in marine biology, biological oceanography, molecular genetics, or a related field. We are looking for a highly motivated and dedicated person with a broad interest in the ecology and evolution of marine organisms. She/he must be able to organise and implement the work programme efficiently and independently. The project offers the chance to combine field work at sea with state-of-the-art laboratory analytics in biochem-



istry and molecular genetics. Therefore, we prefer a young scientist with experiences in both fields. Willingness and ability to participate in sea-going expeditions of several months are required, as well as fluent oral and written English language skills. Basic German would be an advantage, but is not necessary. Know-how and practical skills in experimental work with zooplankton, especially copepods, and molecular genetic and/or lipidbiochemical methods (DNA sequencing, gas chromatography) would be an advantage. In addition, experience in ship-borne expeditions is welcome.

We are planning to extend the post for another 24 months, but this is still subject to approval by the German Science Foundation (DFG). The University of Bremen is an equal opportunity employer. Female candidates are encouraged to apply. Handicapped persons will be preferred if they show the same professional and personal qualifications.

Applications including a letter of motivation, CV, photograph, and transcripts of certificates, as well as contact addresses of two potential referees shall be submitted under the key word COPS to: Dr. Holger Auel, Marine Zoologie (FB 2), Universität Bremen, P.O. Box 330 440, 28334 Bremen, Germany before 31. July 2005. kochzius@uni-bremen.de kochzius@uni-bremen.de

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### UKonstanz EvoDevo

#### Ph.D. POSITION IN DEVELOPMENTAL AND EVOLUTIONARY BIOLOGY

We are seeking a highly motivated student interested in pursuing graduate study (3 years) at the Ph.D. level in the field of Developmental Biology in the Department of Evolutionary Biology (Prof. A. Meyer) at the University of Konstanz, Germany.

We are working with zebrafish to unravel the roles of retinoic acid signaling during zebrafish development and regeneration, and on fin development from an evolutionary perspective. The Ph.D. project will be based on this theme. Methods applied will include genetics, manipulations of embryonic tissues and molecular techniques. For more information, please consult the references at the bottom of this page, and visit: <http://www.evolutionsbiologie.uni-konstanz.de/%7Egerrit/index.htm> Successful applicants should have good practical skills in molecular biology (PCR, cloning), and a strong interest in developmental or evolutionary biology should be evident from previous work.

A Masters Degree or equivalent to German 'Diplom' in Biology is required. We have an international group and the everyday working language is English. The Department is excellently equipped for molecular genetic and developmental analyses and houses a large zebrafish aquarium facility. Konstanz is located in southern Germany, close to the Swiss Alps and Zürich airport.

Initial funding at the German BAT2a/2 level is available, but candidates are also encouraged to apply for their own funding. Expected starting date is in the second half of 2005. Applications (by mail to [gerrit.begemann@uni-konstanz.de](mailto:gerrit.begemann@uni-konstanz.de)) should include CV, 1-2 reprints of publications (if available), and names and emails of 2-3 referees.

References: 1.) Begemann G, Marx M, Mebus K, Meyer A and Bastmeyer M (2004): Beyond the neckless phenotype: influence of reduced retinoic acid signaling on motor neuron development in the zebrafish hindbrain. *Developmental Biology* 271: 119-129. 2.) Begemann G, Schilling TF, Rauch, GJ, Geisler, R and Ingham PW (2001): The zebrafish neckless mutation reveals a requirement for raldh2 in mesodermal signals that pattern the hindbrain. *Development* 128:3081-94. 3.) Keegan BR, Feldman JL, Begemann G, Ingham PW and Yelon D (2005): Retinoic acid signaling restricts the cardiac progenitor pool. *Science* 307:247-249.

Dr. Gerrit Begemann Department of Biology Fach M617 University of Konstanz D-78457 Konstanz Germany

Tel. +49 7531 882881 e-mail: [gerrit.begemann@uni-konstanz.de](mailto:gerrit.begemann@uni-konstanz.de) e-mail: [gerrit.begemann@uni-konstanz.de](mailto:gerrit.begemann@uni-konstanz.de)

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### UWisconsinStevensPoint FishGenetics

M.S. Assistantships in Fisheries Genetics and Fisheries Ecology

The Wisconsin Cooperative Fisheries Research Unit (WICFRU) and the College of Natural Resources (CNR) at the University of Wisconsin-Stevens Point has openings for several M.S. students in Fisheries Science beginning Summer/Fall 2005. Potential projects include: - Stock structure of Muskellunge in Wisconsin - Walleye reproductive success and genetic diversity in Wisconsin - Genetic evaluation of on-site rearing oper-

ations and lake sturgeon rehabilitation

The program offers educational opportunities integrating field ecology, resource management, and applied scientific research. Resources available to students include use of the Molecular Conservation Genetics Laboratory, computer and AV equipment, SCUBA equipment, and generous travel support. Successful applicants are expected to have completed a B.S./B.A. in a related biological sciences field (i.e., resource management, biology, zoology, botany, microbiology, etc.) with an undergraduate GPA of 3.0 and minimum GRE scores of 1000 (quantitative and verbal). All Wisconsin Cooperative Fishery Research Unit WICFRU students are expected to attend and participate in scientific meetings, maintain professional memberships in an appropriate society, and communicate with resource agency personnel regarding their research. Students will be part of a diverse CNR graduate program ([www.uwsp.edu/cnr](http://www.uwsp.edu/cnr))

aimed at providing superior education, communication, and science-based management professionals.

Research assistants of WICFRU receive funding for 2 years at \$16,000/year and paid tuition. Individuals interested in applying to the program should send a letter of interest, resume, 3 references and photocopies of transcripts and GRE scores to contact Dr. Brian L. Sloss (Conservation genetics: [brian.sloss@uwsp.edu](mailto:brian.sloss@uwsp.edu)):

Wisconsin Cooperative Fishery Research Unit College of Natural Resources University of Wisconsin-Stevens Point 800 Reserve Street Stevens Point, Wisconsin 54481

Brian L. Sloss Assistant Unit Leader Wisconsin Cooperative Fisheries Research Unit Biological Resources Division - U.S.G.S. College of Natural Resources University of Wisconsin-Stevens Point Stevens Point, WI 54481 715-346-3522 715-346-3624 (Fax) [brian.sloss@uwsp.edu](mailto:brian.sloss@uwsp.edu)

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### Berlin EvolGeneticist

The Institute of Zoo and Wildlife Research (IZW) in Berlin is Germany's premier wildlife research institute ([www.izw-berlin.de](http://www.izw-berlin.de)). To implement its revised and expanded research program, the institute seeks to appoint

1 evolutionary geneticist

to develop a rigorous, externally funded research concept that focuses on the fields of immune genetics, conservation genetics and phylogenetics. A strong research record in these fields, extensive experience with modern molecular methods and theoretical or experimental expertise will be advantageous. The successful candidate should have a strong interest in interacting with scientists from a wide variety of fields. S/he will replace the retiring head of the Research Group Evolutionary Genetics (currently three scientists and three technical assistants) and participate in the development of the overall research program of the Institute.

1 immunologist

to run the immunology lab and develop a concept for conducting research on the immunological consequences of pathogen-host interactions and diseases and immunocompetence in wildlife. We expect experience in clinical and infection immunology, serology, molecular biology, possibly protein chemistry, a willingness to interact with scientists from a wide variety of fields and a strong interest in wildlife and evolutionary issues.

All positions are initially limited to three years, starting after 1 September 2005 (immunologist) and 1 February 2006 (geneticist). The IZW is determined to increase the proportion of women in science and particularly encourages female scientists to apply. Applications preferably reach us by 15 July (immunologist) and 30 July 2005 (geneticist). Please direct informal enquiries to or submit your CV, publication list, a letter indicating your research interests and experience and the names and contact details of three referees to

Prof Dr Heribert Hofer, Institute of Zoo and Wildlife Research, Alfred-Kowalke-Str. 17, D-10315 Berlin, Germany; Fax ++(49)-30-5168735; Email: direktor@izw-berlin.de

— Ende der weitergeleiteten Nachricht / End of forwarded message — Prof Heribert Hofer Director Institute for Zoo & Wildlife Research Alfred-Kowalke-Str.17 D-10315 Berlin Germany

tel + (49)-30-5168101 fax + (49)-30-5168735 email: direktor@izw-berlin.de <http://www.izw-berlin.de>  
Member of the Center for Infection Biology and Immunity [ZIBI] [www.biologie.hu-berlin.de/~ZIBI/](http://www.biologie.hu-berlin.de/~ZIBI/)

ecology, fisheries biology, and marine archeology. In addition, this individual will manage the day-to-day research, education, and outreach operations of the FSUML and be the liaison between FSU main campus faculty and the FSUML. The successful candidate will be expected to work with the Director of the FSUML to define and implement a renewed commitment by FSU to emphasize marine science and will be assisted by a laboratory manager. Minimum qualifications include a PhD in an appropriate science, leadership skills, administration experience, national or international scientific reputation, and a demonstrated ability to attract research funding. A courtesy appointment with the appropriate academic department at Florida State University is expected. Salary and rank will be commensurate with experience. Evaluation of applications will begin August 1, 2005 and continue until the position is filled. More information can be found at <http://www.marinelab.fsu.edu/>. Please send cover letter, curriculum vitae, research statement, and the names and contact information of three references to Marine Lab Search, 109 Westcott, Florida State University, Tallahassee, FL 32306 or electronically to marine-search@research.fsu.edu. Questions can be addressed to Don Levitan (levitan@bio.fsu.edu). The Florida State University is an Equal Opportunity, Affirmative Action employer, committed to diversity in hiring, and a Public Records Agency.

Don Levitan Dept. of Biological Science Florida State University Tallahassee, Fl. 32306-1100 Phone (850)644-2524 Fax (850) 644-9829 internet: levitan@bio.fsu.edu <http://bio.fsu.edu/%7elevitan/> Don Levitan <levitan@bio.fsu.edu>

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## FloridaStateU MarineEvol AssocDirector

Scholar Scientist and Associate Director Florida State University Marine Laboratory

The Florida State University Marine Laboratory (FSUML) is recruiting a full time Scholar Scientist to serve as the Associate Director for Research, Teaching, and Outreach. The position will be based at the facility on the Gulf of Mexico, 45 miles from FSU's main campus in Tallahassee. The successful candidate will be expected to maintain an extramurally funded research program based at the FSUML in an area that is complimentary with the missions of the FSUML, which include oceanography, marine biology, coastal

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## GrinnellCollege 2 EvolBiol

Grinnell College Department of Biology Two Tenure-Track Faculty Positions Microbiology and Plant Biology

Grinnell College invites applications for two tenure-track faculty positions (microbiology and plant biology) at the rank of assistant professor in the Department of Biology. The positions begin in August, 2006. The successful candidates will be expected to teach two courses in our inquiry-based curriculum (Introduction to Biological Inquiry [Bio 150] and either Molecules, Cells, and Organisms [Bio 251] or Organisms, Evolution and Ecology [Bio 252]) and a third course at the

upper-level in the candidate's area of specialty. Candidates will be expected to teach in the general education program (e.g. the first-year tutorial) of the college as well. Candidates must have a Ph.D., post-doctoral experience and plan an active research program involving undergraduates. Start-up funds, excellent equipment, new and recently renovated facilities, support for student-faculty research, and a biological field station are available. Grinnell is a highly selective, residential, liberal-arts college with an enrollment of about 1500 students from across the country and around the world. One-third of the college's students major in the sciences, including about 35 biology and 15 biological chemistry graduates in recent years. The department has 12 faculty with active research programs and offers an innovative curriculum centered around research-based learning; for information see <http://www.grinnell.edu/academic/biology/>. In their letters of application, candidates should discuss their interest in developing as a teacher and scholar in an undergraduate, liberal-arts environment that emphasizes close student-faculty interaction and values diversity; they should also address their ability to teach one of the department's second-year core courses and upper division courses in the areas of either microbiology or plant biology. Send c.v., three letters of recommendation, copies of all transcripts, and other supporting materials to: Charles H. Sullivan, (specify Microbiology or Plant Biology) Search Committee, Department of Biology, Grinnell College, 1116 8th Avenue, Grinnell, IA 50112-1690 (phone 641-269-3042; fax 641-269-4285; biologysearch@grinnell.edu). Electronic applications will not be accepted. To be assured of full consideration, all materials should be received by October 3, 2005.

Grinnell College is an equal opportunity/affirmative action employer committed to attracting and retaining highly qualified individuals who collectively reflect the diversity of the nation. No applicant shall be discriminated against on the basis of race, national or ethnic origin, age, gender, sexual orientation, marital status, religion, creed, or disability. For further information about Grinnell College, see our website at [www.grinnell.edu](http://www.grinnell.edu). Jonathan (Jackie) Brown Associate Professor Biology Department Grinnell College Grinnell, IA 50112

ph: 641-269-3096 (office) Web: <http://web.grinnell.edu/individuals/brownj/> On leave until August 2006:

641-325-0062 (cell) 808-959-4724 (home) – Mainlanders should note that Hawaii Standard Time is 5 hours EARLIER than Central Daylight Time. Call after noon, your time, yeah?

1271-A Malawaina St Hilo, HI 96720

brownj@grinnell.edu

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## HarvardU DevelopmentalPrimatology

### DEVELOPMENTAL PRIMATOLOGY

The Program in Biological Anthropology, Harvard University, seeks a faculty member at Assistant (tenure-track), Associate (tenure-track), or Full Professor level interested in the developmental biology of humans and related primates from an evolutionary perspective.

All aspects of the relationship between genotype and developing phenotype relevant to primates/humans are appropriate, including gene expression, embryogenesis through postnatal development of major organ systems, physiology and behavior. Applications from or nominations for women and minority candidates are encouraged.

This search is part of a broader initiative to develop a large and comprehensive research program in evolutionary developmental biology at Harvard University, which will involve several departments in both the Faculty of Arts and Sciences and Harvard Medical School. Successful applicants will interact with colleagues in Biological Anthropology with interests in human/primate genetics and genomics, behavioral ecology, reproductive ecology, functional/developmental anatomy, and paleobiology, as well as with the wider community in the Life Sciences.

Applicants should submit a curriculum vitae, statements of research and teaching interests, representative publications, and the names and addresses of three references to Daniel E Lieberman, Peabody Museum, 11 Divinity Avenue, Cambridge, MA 02138, USA. If possible, please have letters of reference submitted at the time of initial application. Letters of nomination from third parties are also welcome. Review of applications and nominations will begin October 1, 2005.

Further information about Biological Anthropology is available at: <http://www.bioanth.harvard.edu/>. Send e-mail inquiries to [mlynch@fas.harvard.edu](mailto:mlynch@fas.harvard.edu).

Harvard University is an Affirmative Action/Equal Opportunity Employer.

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## KansasStateU ResearchAssist

KSU Division of Biology is seeking a molecular ecology research assistant. The incumbent will be responsible for day to day operation of a molecular genetics lab that is involved in ecological studies and will primarily be responsible for genetic data collection of a carnivore phylogeography study, and may be involved with small mammal capture and handling in the wild. In addition, the incumbent will manage student research technicians and maintain a database. Required: B.S. in Biological Sciences or related field; eligibility to obtain a US Drivers License; experience with molecular genetic techniques including PCR and cloning; lab experience with DNA extraction, amplification and visualization; and database maintenance computer skills, including familiarity with Excel. Preferred: experience with microsatellite and sequencing analysis, animal capture and handling experience, QAQC lab experience or experience with ancient DNA. This is a 12-month renewable contract, full-time position; salary commensurate with experience. Send letter of application, CV or resume, and names of three professional references to: Dr. Samantha Wisely, KSU Biology, 111 Bushnell Hall, Manhattan, KS 66506 or email wisely@ksu.edu. Review of applications will begin July 21, 2005, and continue until position is filled. KSU is an equal opportunity employer and actively seeks diversity among its employees. Paid for by Kansas State University.

Dr. Samantha M. Wisely Assistant Professor, Wildlife Biology Division of Biology Ackert Hall Kansas State University Manhattan, KS 66506-4901 Office:785.532.0978, Lab:785.532.6413 Fax:785.532.6653, email: wisely@ksu.edu <http://www.ksu.edu/wiselylab> wisely@ksu.edu

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## SimonFraserU Aquaculture

Dear Geneticists,

I am looking for a research and development position (e.g. research associate, genetics specialist etc.) on a project molecular genetic tools for responsible aquaculture development and sustainable fisheries manage-

ment.

I have following significant experiences in molecular genetic analyses and their integration into aquaculture and aquatic resources management;

- Genetic relatedness - Pedigree analysis - QTL analysis of commercially important characteristics - Marker-assisted- selective breeding - Population genetics and Wildlife forensics - Selective/artificial breeding of fish and shellfish - Intensive and integrated fish farming, and fish farm management - Fish processing: quality control

I have graduate degree in Fish genetics and Aquaculture. If you require to further discussing my multidisciplinary skill set, please do not hesitate in contacting me via email <agoel@alumni.sfu.ca>.

Hoping to hear from you in the near future, I am,

Thank you, Amit Goel

Amit Kumar Goel M.Sc. (Molecular Genetics, Simon Fraser University, Canada) M.Sc. (Aquaculture, Asian Institute of Technology, Thailand) MBB, 8888, University Drive, Burnaby, B.C., V5A 1S6 Canada Phone: +1-778-855 5795 (Cell) E-mail: agoel@alumni.sfu.ca

Amit Kumar Goel <agoel@alumni.sfu.ca>

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## StKilda FieldAssist

SOAY SHEEP RESEARCH - ST KILDA SUMMER 2005

FIELDWORK ASSISTANT

We are currently looking for a volunteer for this years Soay sheep summer expedition to St Kilda, a group of islands 180km off the coast of north-west Scotland. The expedition runs from the 21st July till the 30th August.

Activities: - Censusing sheep with telescopes and hand-held computers - Mortality searches - Assistance in the annual catch up of sheep

Requirements: - Must be available for the full period stated - MUST be fit, St Kilda has a very demanding terrain and running will be required during the catch up - A background in Biological Sciences

Travel to the island will be by helicopter from Benbecula (Outer Hebrides) and the team will stay in cottages built by the original inhabitants of St Kilda (since restored by the National Trust for Scotland). Expenses



incurred from Edinburgh whilst travelling will be reimbursed and food/accommodation on island are provided. This is an ideal opportunity to gain field experience on a large mammal project and to visit St Kilda, the remotest of British islands.

RED DEER RESEARCH - RUM SUMMER 2005

FIELD ASSISTANT

We are also looking for a volunteer to join the research project on red deer on the Isle of Rum from mid July until the end of September 2005. The candidate would work at the remote field station on Rum and collaborate with a second volunteer to locate and recognise individual deer in the field and collect faeces from specific individuals. The candidate would also help measuring bones (skulls and legbones) stored in the field station. Field conditions will be wet, windy, cold, midgy, but beautiful! Board and lodging will be provided.

If you wish to apply to work with either project please send a CV with covering letter and contact number and details of two referees.

CONTACT: Jill Pilkington EMAIL: j.pilkington@ed.ac.uk

j.pilkington@ed.ac.uk

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### Trondheim EvolBiol

ASSOCIATE PROFESSORSHIP IN BIOLOGY (Evolutionary Biology) A highly qualified individual is sought to fill a vacant position in Evolutionary Biology at the Department of Biology, Norwegian University of Science and Technology, Trondheim, Norway. We are seeking a highly motivated person with a broad scientific background, working with problems in the interface ecology/population genetics and with an interest in using modern molecular tools to solve questions in evolutionary ecology. The successful candidate should be interested in questions related to conservation biology. For further information on the position, please see <http://www.bio.ntnu.no/eng/news.php>. Further enquiries about the position may be made to the Head of Department, Professor Eivin Roskaft, tlf. + 47 73 59 60 73, e-mail: [roskaft@bio.ntnu.no](mailto:roskaft@bio.ntnu.no). Applications should be sent to the Norwegian University of Science and Technology, Faculty of Natural Sciences and Technology, N-7491 Trondheim before 2005-08-20. Please quote NT-37/05 in all correspondence.

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Hans K. Stenoi Department of Biology Norwegian University of Science and Technology N-7491 Trondheim, Norway Phone: +47 7359 6096, +47 9189 7592, Fax: +47 7359 6100

stenoien@bio.ntnu.no

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### UMiami MolGenetics

Senior Research Associate II in Molecular Genetics Department of Biology University of Miami

Applications are invited from individuals with training and experience in molecular genetics research, including familiarity with ABI (Applied Biosystems) genetic analyzers (ABI 310, 3130XL), as well as experience in sequencing, genotyping, rtPCR, in situ hybridization, and Northern, Southern, and Western blotting. Minimum qualifications include a M.S. degree and five years of relevant experience. Duties will include working with faculty and students on molecular genetics projects, supervising or conducting sample testing, compilation and interpretation of results, and collaboration on proposals and publications. Currently, most projects deal with molecular ecology and evolutionary genetics, but the range of topics is expected to expand as new faculty in cellular and molecular biology join the department. In addition, this individual will be responsible for the oversight and management of the departments core facility in molecular genetics, including training and supervision of others in experimental methods as well as the development and implementation of new procedures in concert with the faculty and chair. This is a full-time, twelve-month research professional position. Salary is competitive and commensurate with qualifications. Send application materials, including letter of application, CV, and 2 letters of reference, electronically to Dr. Theodore H. Fleming, Department of Biology, University of Miami, Coral Gables, FL 33124; email [tfleming@fig.cox.miami.edu](mailto:tfleming@fig.cox.miami.edu); phone 305-284-6881. Review of applications will begin immediately and will continue until the position is filled. An Equal Opportunity/Affirmative Action Employer

Ted Fleming Professor and Interim Chairman Department of Biology University of Miami 1301 Memorial Drive Coral Gables, FL 33124 Voice: 305-284-6881 Cell: 305-298-8102 Fax: 305-284-3039 [tfleming@fig.cox.miami.edu](mailto:tfleming@fig.cox.miami.edu)



tffleming@wasp.bio.miami.edu

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## UOregon EvolBiol

The following will appear in the July 15 issue of Science:

The University of Oregon Center for Ecology and Evolutionary Biology (CEEB) and The Department of Biology invite applications for a tenure-track position (assistant professor) in evolutionary biology. We are particularly interested in evolutionary biologists studying the evolution of gene function and other central biological processes at the molecular level, as well as those using molecular approaches to investigate fundamental evolutionary processes. The successful candidate will have an outstanding research program and a commitment to excellence in teaching. Applicants should submit a curriculum vitae, statements of research interest and teaching philosophy, and three letters of recommendation to: Evolution Search Committee, Department of Biology, University of Oregon, Eugene, OR 97403-1210 (<http://evolution.uoregon.edu/>; no email applications, please). To ensure full consideration, applications must be received by September 9, 2005.

The University of Oregon is an Equal Opportunity/Affirmative Action Institution committed to cultural diversity and compliance with the Americans with Disabilities Act. Women and minorities encouraged to apply. We invite applications from qualified candidates who share our commitment to diversity.

Patrick C. Phillips, Associate Professor of Biology Center for Ecology and Evolutionary Biology  
 Email: [pphil@uoregon.edu](mailto:pphil@uoregon.edu) Phone: (541) 346-0916 | FAX (541) 346-2364 Address: 5289 University of Oregon Eugene, OR 97403-5289 USA  
 Web: Lab <http://www.uoregon.edu/~pphil> EvoNet <http://www.EvoNet.org>  
 CEEB <http://evolution.uoregon.edu> IGERT <http://evodevo.uoregon.edu> [pphil@uoregon.edu](mailto:pphil@uoregon.edu)  
[pphil@uoregon.edu](mailto:pphil@uoregon.edu)

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## US EPA Genetics Invasive Species

The Molecular Ecology Research Branch (MERB) of

the Ecological Exposure Research Division, U.S. Environmental Protection Agency is seeking an individual to provide services under a contractual agreement in support of genetics research on invasive species. The candidate should have completed (within the past two years) a minimum of a bachelor's degree in Biology or a related sub-discipline such as Genetics, Molecular Biology, Biochemistry, Environmental Sciences, Zoology or Botany. The preferred candidate will have demonstrable laboratory skills/experience in molecular biology or genetics of invertebrate eukaryotic organisms. The preferred candidate will also have experience in general laboratory practices, including health and safety practices. The MERB is responsible for developing genetics-based indicators of exposure to environmental stressors as well as approaches for assessing ecological condition. Invasive species represent an important, but poorly characterized environmental stressor. MERB has recently initiated an invasion biology research program to better understand the impact of invasive species on the environment. For more information refer to the EERD website: <http://www.epa.gov/eerd/RMI.htm>. The candidate will work within a multi-disciplinary research team and will interact and work closely with key personnel in the MERB invasion biology research program and collaborators at the Smithsonian Environmental Research Center, Portland State University and the University of California at Davis. The student will provide technical laboratory and field support for research projects focusing on (1) colonization of Pacific coast estuaries and the Great Lakes by aquatic invasive species (2) the development of diagnostic molecular markers to screen ship ballast for aquatic invasive species. Specific duties will support and assist the Principle Investigators (PIs) with all work involved in the development and completion of these two tasks. Work involved with the tasks may include, but is not limited to: (1) hatching of resting stage eggs and rearing of subsequent broods until maturity (2) tissue and sample collection and organization (3) DNA extractions (4) PCR amplification and purification (5) molecular cloning (6) Genotyping (7) DNA sequencing (8) Analysis of genotype and DNA sequence data (9) other general laboratory and field duties necessary to carry out research (ie. sample collection and transport, routine equipment maintenance). The contract period will be for one year, with the option of an additional year. The duty location is at the US EPA facility located at 26 W. Martin Luther King Drive, Cincinnati, OH 45268. Work will be performed under a variety of settings including office, laboratory, and field. The hourly rate for this position is \$14.75.

All questions are to be forwarded via email

to the Contract Specialist at the following e-mail address: [clausen.rebecca@epa.gov](mailto:clausen.rebecca@epa.gov). Interested parties should review all material relevant to the requirement by looking at the following website address: <http://www.epa.gov/oamrtpnc/q0500318/index.htm> [bagley.mark@epamail.epa.gov](mailto:bagley.mark@epamail.epa.gov)  
[bagley.mark@epamail.epa.gov](mailto:bagley.mark@epamail.epa.gov)

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## US EPA PopulationModeling

The United States Environmental Protection Agency is seeking to fill up to two research positions in the fields of population modeling and spatial statistics in the Ecological Exposure Research Division in Cincinnati, OH (<http://www.epa.gov/eerd>). The population modeler will develop novel methods that incorporate population genetic and GIS data into spatially explicit models of population vulnerability. This individual will directly contribute to ongoing projects in aquatic ecosystem assessment, aquatic invasive species assessment, and biotechnology risk assessment, in addition to exploring new research opportunities. Experience with population modeling techniques and understanding of population genetics theory is essential. The statistician will analyze spatial relationships between environmental stressors, including land use patterns, and biological or water quality indicators or endpoints. This individual will be involved in studies with data at varying spatial scales, including, but not limited to, those describing stream networks and those generated using remote sensing techniques. This individual will also serve as a statistical consultant for other projects in EERD and broad experience with a variety of statistical approaches is required. Candidates with excellent credentials in both population modeling and spatial statistics are encouraged to apply for both positions

These are permanent, full-time positions requiring U.S. citizenship. A bachelor's degree or higher is required. Desirable applicants will have a doctoral degree (e.g., PhD) in the areas of population biology, statistics, population genetics, landscape ecology or related biological sciences disciplines. Salary ranges from \$62,918 to \$97,264 and is commensurate with qualifications. The selected candidate will be eligible for a full benefits package.

Complete announcements for both positions can be found at <http://www.epa.gov/ezhire/> under "Any Qualified Applicant". The announcement number for

the Population Modeler (Research Biologist/Research Entomologist/ /Research Fishery Biologist) is RTP-DE-2005-0135 and the announcement number for the Spatial Statistician is RTP-DE-2005-0136. The announcements are open through August 19, 2005. Application materials must be submitted online by midnight the closing date. The U.S. EPA is an Equal Opportunity Employer. For more information, contact Mark Bagley ([bagley.mark@epa.gov](mailto:bagley.mark@epa.gov)) on the population modeler position and Karen Blocksom ([blocksom.karen@epa.gov](mailto:blocksom.karen@epa.gov)) on the spatial statistician position.

[bagley.mark@epamail.epa.gov](mailto:bagley.mark@epamail.epa.gov)  
[bagley.mark@epamail.epa.gov](mailto:bagley.mark@epamail.epa.gov)

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## UTexasAustin EvoGenetics MicrobioLabManagr

UTexasAustinEvoGeneticsMicrobioLabManagr  
 7/14/2005

**General Information** The position will provide technical assistance in the genetic analysis of animals, plants, and microorganisms. The position will be in the lab of Ulrich Mueller, Section of Integrative Biology, Patterson Labs ([www.biosci.utexas.edu/IB/faculty/mueller.htm](http://www.biosci.utexas.edu/IB/faculty/mueller.htm)). Research in the laboratory integrates population genetics, molecular ecology, microbial ecology, and animal behavior. The main duties of the manager/technician will be the management of the genetics and microbial labs, including the lab's automated sequencer (ABI3100). The position is funded for at least eight years.

**Required Qualifications** Bachelor's degree in biology. Experience with nucleic acid research techniques. Experience in molecular genetic techniques. Experience in acquiring and storing supplies, materials, and equipment in a biological laboratory. Experience with scientific equipment used in a genetics laboratory. Experience supervising students and others in performing technical procedures and methods in biological laboratory. Supervisory experience. Experience in using a computer for word-processing, databasing, and use of the Internet. (Equivalent combination of relevant education and experience may be substituted as appropriate.)

**Preferred Qualifications** Experience in DNA sequencing, sequencing analysis, and microsatellite DNA marker development (including genomic library prepara-

ration and cloning). Experience in high-throughput genotyping and a strong background in molecular biology. Preference will be given to candidates with the some of the following skills: DNA and RNA work; experience with robotics in extraction and PCR setup; DNA sequencing, RT-PCR, and SNP genotyping. We also emphasize the ability to interact and work collaboratively with others, as the technician will work closely with post-docs, graduate students, and undergraduate researchers.

How to apply: Application through Website of the University of Texas under Job Class Code 4222. <http://utdirect.utexas.edu/pnjobs/> For more information send e-mail to both: [abbie.green@mail.utexas.edu](mailto:abbie.green@mail.utexas.edu) or [umueller@mail.utexas.edu](mailto:umueller@mail.utexas.edu)

Ulrich G. Mueller Integrative Biology Patterson Laboratories University of Texas at Austin 1 University Station #C0930 Austin, TX 78712, USA

E-mail: [umueller@mail.utexas.edu](mailto:umueller@mail.utexas.edu) Fax: 512-471-3878

<http://www.biosci.utexas.edu/IB/faculty/mueller.htm>

Ulrich Mueller <[umueller@mail.utexas.edu](mailto:umueller@mail.utexas.edu)>

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### UWisconsinMadison GenomeResourceCurator

SCIENTIST-GENOME RESOURCE CURATOR  
UNIVERSITY OF WISCONSIN, MADISON

#### PRINCIPAL DUTIES:

Perform analyses of genome data to advance development of therapeutics, diagnostics and vaccines as well as basic research on pathogenic enterobacteria including *E. coli*, *Salmonella* and *Yersinia*. Use these data and annotations derived from these analyses to populate an NIH-contracted Bioinformatics Resource Center under development in our group. Work with the project technical team to further develop and test the system. Conduct outreach to the greater scientific community to encourage direct participation in genome annotation, train users of the resource and address user-query driven analyses. This individual must show initiative in design and execution of the analyses that are both useful for populating the resource and suitable for scholarly publication. This individual will also be responsible for writing papers, proposals, progress reports, and web-accessible summaries. Travel to scientific conferences and meetings with representatives of other NIH Bioinformatics Resource Centers is expected.

#### QUALIFICATIONS:

Ph.D. in Bacteriology, Genetics, Computational Biology or related field

2 years of postdoctoral experience in genomics, microbiology or related field; competence in standard computational analyses of genome data is essential. Strong written and oral communication skills must be demonstrated. Preference will be given to individuals with expertise in both computational and pathogenesis, protein function or immunology.

Send a resume and a cover letter referring to Position Vacancy Listing #50658 to:

Hunter Johnson, Biotechnology Center, 425 Henry Mall, Madison, WI 53706-1580 email: [hunter@biotech.wisc.edu](mailto:hunter@biotech.wisc.edu).

For Additional information, please see:

[http://www.ohr.wisc.edu/pvl/pv\\_050658.html](http://www.ohr.wisc.edu/pvl/pv_050658.html)

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### WHOIndia PlasmodiumEvolutionaryGenomics

#### SCIENTIFIC POSITIONS OPEN TO STUDY PLASMODIUM EVOLUTIONARY GENOMICS

Following scientific positions are available initially for one year (with a possible extension of one more year) under a World Health Organization (WHO) funded research project to study *Plasmodium* evolutionary genomics in India. The project is a collaborative initiative between Dr. Hema Joshi of the Malaria Research Centre, Indian Council of Medical Research (ICMR), New Delhi and Dr. Aparup Das of Poornaprajna Institute of Scientific Research, Bangalore. 1. Research Associate (RA) Masters degree in Zoology/ Life Sciences with Genetics/ Molecular Biology/ Biotechnology/ Bioinformatics and Ph. D. in similar subject(s). Candidates should have published research papers in international journals of repute. Preference will be given to candidates with experience (and interest) in applying modern molecular biological techniques to evolutionary and/or malaria research. Applications from candidates with previous experience on genomics and DNA sequence analyses are highly encouraged. Salary : Rs. 12,000.00 per month (fixed) + House Rent Allowances (HRA) 2. Junior Research Fellow (JRF) Masters degree in any branch of Life Sciences/ Biotechnology/ Bioinformatics/ Microbiology

with some research experiences in modern molecular biology. Indian CSIR-UGC National Eligibility Test (NET) qualification is preferred but not essential for exceptionally bright candidates. Salary: Rs. 8,000.00 per month (fixed) + (HRA) Interested candidates (ONLY Indian nationals) should send their CV, contact details (postal address for correspondence with e-mail address, telephone and fax numbers) along with the details about their education and training with degree/ division/ grade/ percentages of marks obtained/ honors and awards/ extra curricular activities/ list of research publications etc. preferably by e-mail so as to reach by 15th August 2005. Applicants for RA should include names and e-mail addresses of two potential academic referees Incomplete and late applications will be out rightly rejected. Only short-listed candidates will be called for interview which will be held either at Delhi or Bangalore, no traveling or other allowances

will be paid for attending interview, no interim inquiries will be entertained. The selected candidates will have to work either at Delhi or Bangalore. However, based on the need, they are expected to move between the two labs. All positions are co-terminus with the project; no claim of any nature for a permanent placement will be entertained afterwards. Full applications/ pre-application inquiries must be sent to: Dr. Aparup Das, Faculty Fellow Population Genomics and Evolution Laboratory Department of Biology Poornaprajna Institute of Scientific Research Post Box No. 18, Devanahalli BANGALORE - 562 110, INDIA Tel: +91-80-27647333 (O), 27647555 (lab) Fax: +91-80-27647444 E-mail: [aparup@poornaprajna.org](mailto:aparup@poornaprajna.org); [adas@uni-muenchen.de](mailto:adas@uni-muenchen.de) Homepage: <http://www.poornaprajna.org/aparup.htm> Aparup Das <[aparup@poornaprajna.org](mailto:aparup@poornaprajna.org)>

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### ABI377 firmware

Dear all few days ago we disgracefully deleted the collection software from our old and (at that moment) perfectly working ABI 377. We downloaded from the ABI website a copy of the collection softare available online (2.5 the same version of our old one), and we properly installed it. Following installing instructions the new firmware was sent to the machine that now seems to recognize the mac again and makes no problems in any setteling operation. The problem is that even if we try to make runs, pre-runs and plate checks the main collection window and the gel image are staying perfectly white and untouched, even if the mac says that the laser is correctly running, and the seq make is nice sound... can anybody help us in solving this unsuspected trouble? Cheers

Dr. Gianluca Corno CNR - Institute of Ecosystems Study Department of Microbial Ecology Largo Tonolli 50 Verbania (Italy)

Gianluca Corno <gianluca.corno@ise.cnr.it>

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### Beckman CEQ8000 query

Dear all,

Does anyone have any positive/negative experience on using Beckman CEQ8000 or Beckman CEQ8800 automatic sequencers/genotypers? Any comparisons with ABI machines (cost of running, quality of sequences etc) would be very helpful.

Best wishes, Dmitry Filatov

Dmitry Filatov <d.filatov@bham.ac.uk>

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### Beckman CEQ8000 query answers

Dear Evoldir members,

Thank you for sharing your experience of using Beckman vers ABI! Apparently there was a similar question on Evoldir a few months ago. Margaret Ptacek have kindly sent me a summary of the previous opinions, which is included below together with the new responses (hence, it is quite a long "summary", but this seems to be the question which interests many people).

My own experience from many years with ABI and one week demo with CEQ8000:

The hardware is generally similar, but Beckmans are simpler in use and service (and cheaper); chemistry seems to be the weak side for beckmans - it is more sensitive to DNA/primer concentrations and it takes more time and effort to optimise the reactions for beckmans, compared to ABI. It is also not so easy to dilute/scale down the sequencing reactions with beckmans, hence



the running costs may be somewhat higher compared to ABI.

All the best,

Dmitry Filatov

\*\*\*\*\* Dr D.A.Filatov Lecturer in Evolutionary Genetics School of Biosciences University of Birmingham Edgbaston, Birmingham B15 2TT United Kingdom

===== I was interested to see your question on EvolDir since I just ordered a CEQ 8000 this week. I've worked extensively with ABI systems up til now, and so I can send you my thoughts on the two systems.

Without a doubt, ABI systems are good. I was in France for the last two years, and while there I purchased a 4 capillary 3100. They have made many hardware improvements since the days of the 310. One thing which is still a pain is their syringe-gel-loading system (this may have changed in the last year). They have automated this with a software wizard, but I still find it easier to do manually. One nonetheless still loses significant amounts of polymer while trying to get all the air bubbles out of the system. The glass syringes are also expensive and easily breakable, and so you should have at least one extra syringe (of both sizes) ordered if different users will be using the system.

Their software has improved as well, although it is still quite complicated to use. Furthermore the new software is connected with an Oracle database, which is naturally useful for huge sequencing factories but which may be overkill for smaller laboratories. You need a new and fast windows 2000 computer with at least 1 GB RAM to get it to work. The final negative aspect of their software is the cost (very very expensive) and the fact that you are not 'officially' allowed to install it on different computers (unless you buy more expensive licences). They have gone the 'Microsoft' way since the various software components are all bundled now, so you can't get away from buying the whole package for fragment sizing and fragment analysis. What was once possible was to only buy the GeneScan software for fragment sizing, but then not buying their Genotyper software since there are free packages available on the net to do fragment analysis (Genographer, for example).

The laser question is a significant one. I wasn't in France long enough for me to experience the laser wearing out, but I was in Munich in 1997 when our 310's laser did die, and it was very expensive to replace. This was one positive thought for the CEQ system, which has a longer lasting diode laser system (or so they say?).

As far as I can tell, the capillaries are similar between both systems. They both say that they arrays are good for 100 runs, but you should just use them until they die (I had one up to 850 runs on our 310).

The 5 dye system of ABI is of course better than the 4 dye system of the CEQ, but this is balanced by the costs of the labels, which are quite expensive for the ABI. They don't have exclusive rights to all the dyes though, and so you can order at least 3 of the 5 from other companies for less money. I was recently running 6 to 8 microsatellite loci per run on an ABI 9600, with two loci per color if you develop the primers to give you non overlapping products (e.g. locus one 100 to 200 bp; locus two 300 to 400 bp).

ABI size standards are expensive, although there are ways around this by making your own (if you're interested there was another recent EvolDir email about this, which I can send you if you need).

Despite all of this, I still like their systems because they are reliable and you are guaranteed to get good data from them without wasting too much time. It's just a matter of getting used to setting up the hardware and figuring out the software.

So I just opted for the CEQ 8000. My decision is based upon the fact that I'm setting up my own group, and so funding is not unlimited. I've never worked with one, but the positive points I found were:

Cheaper and longer lasting laser. No software licenses needed, and so you can install the software on as many computers as needed. One polymer and capillary for both sequencing and fragment analysis. Here's an important point for me at least. Beckman Coulter is really

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This message has been arbitrarily truncated at 5000 characters. To read the entire message look it up at <http://life.biology-mcmaster.ca/~brian/evoldir.html>

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## BrittleStar samples

Dear evoldir members,

I'm a French PhD student working on an echinoderm : the brittle star *Amphipholis squamata*. For the phylogeography part of my thesis I would need some specimens from all around the world with an emphasis on the North Atlantic coasts and all the Mediterranean



coasts. So if I can help you get rid of your old samples I'll be glad. Samples should be send in 95 alcohol. Thanks you very much for your help. Emilie

Emilie Boissin Umr 6540-Dimar Station marine d'Endoume Rue de la Batterie des Lions 13007 Marseille France

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truth within the other. This basic tenant has seemingly been neglected by many involved in this Neo-Scopes Monkey Trial.

Andrea Drauch

adrauch@purdue.edu

**Campanula rotundifolia samples**

The Galloway Lab at the University of Virginia is interested in obtaining seeds of CAMPANULA ROTUNDIFOLIA for molecular studies this fall. We have become interested in the evolutionary consequences of ploidy variation among populations of this species which have been reported as diploid, tetraploid, and hexaploid throughout the northern hemisphere. We would greatly appreciate any WILD COLLECTED seeds that could be sent our way. Basically we are looking for assistance in getting a number of mature seed pods from several different plants in disparate populations. If you can help with this request, several fruits from each plant can be pooled and placed in separate envelopes (ie: one envelope per plant). This can then be sent to.....

Dr. Kevin S. Burgess Research Associate Department of Biology Gilmer Hall, University of Virginia P.O. Box 400328 Charlottesville, VA 22904-4328 Phone: 434-982-5599 Fax: 434-982-5626 burgessk@virginia.edu <http://www.virginia.edu/biology/home.html> Please go to the following web-site for more information on the identification of Campanula rotundifolia [http://www.people.virginia.edu/~ kb3aw/](http://www.people.virginia.edu/~kb3aw/) Thanking you in advance for your assistance with this project.

"Kevin S.Burgess" <kb3aw@virginia.edu>

**Catholic evolutionist response**

Science shouldn't care about the position of the Catholic Church on evolution, nor should they take a position on the Catholic Church at all. Science has no power to evaluate religion, as religion makes its claims on faith, where science is restricted to empirical phenomenon. Neither one has any power to evaluate the

**CatholicChurch policy on Evolution**

Not surprising, but discouraging.

""""""""""

NY Times, July 7, 2005 Finding Design in Nature By CHRISTOPH SCHÖNBORN Vienna

EVER since 1996, when Pope John Paul II said that evolution (a term he did not define) was "more than just a hypothesis," defenders of neo-Darwinian dogma have often invoked the supposed acceptance - or at least acquiescence - of the Roman Catholic Church when they defend their theory as somehow compatible with Christian faith.

But this is not true. The Catholic Church, while leaving to science many details about the history of life on earth, proclaims that by the light of reason the human intellect can readily and clearly discern purpose and design in the natural world, including the world of living things.

Evolution in the sense of common ancestry might be true, but evolution in the neo-Darwinian sense - an unguided, unplanned process of random variation and natural selection - is not. Any system of thought that denies or seeks to explain away the overwhelming evidence for design in biology is ideology, not science.

Consider the real teaching of our beloved John Paul. While his rather vague and unimportant 1996 letter about evolution is always and everywhere cited, we see no one discussing these comments from a 1985 general audience that represents his robust teaching on nature:

"All the observations concerning the development of life lead to a similar conclusion. The evolution of living beings, of which science seeks to determine the stages and to discern the mechanism, presents an internal finality which arouses admiration. This finality which directs beings in a direction for which they are not responsible or in charge, obliges one to suppose a Mind which is its inventor, its creator."

He went on: "To all these indications of the existence of

God the Creator, some oppose the power of chance or of the proper mechanisms of matter. To speak of chance for a universe which presents such a complex organization in its elements and such marvelous finality in its life would be equivalent to giving up the search for an explanation of the world as it appears to us. In fact, this would be equivalent to admitting effects without a cause. It would be to abdicate human intelligence, which would thus refuse to think and to seek a solution for its problems.”

Note that in this quotation the word “finality” is a philosophical term synonymous with final cause, purpose or design. In comments at another general audience a year later, John Paul concludes, “It is clear that the truth of faith about creation is radically opposed to the theories of materialistic philosophy. These view the cosmos as the result of an evolution of matter reducible to pure chance and necessity.”

Naturally, the authoritative Catechism of the Catholic Church agrees: “Human intelligence is surely already capable of finding a response to the question of origins. The existence of God the Creator can be known with certainty through his works, by the light of human reason.” It adds: “We believe that God created the world according to his wisdom. It is not the product of any necessity whatever, nor of blind fate or chance.”

In an unfortunate new twist on this old controversy, neo-Darwinists recently have sought to portray our new pope, Benedict XVI, as a satisfied evolutionist. They have quoted a sentence about common ancestry from a 2004 document of the International Theological Commission, pointed out that Benedict was at the time head of the commission, and concluded that the Catholic Church has no problem with the notion of “evolution” as used by mainstream biologists - that is, synonymous with neo-Darwinism.

The commission’s document, however, reaffirms the perennial teaching of the Catholic Church about the reality of design in nature. Commenting on the widespread abuse of John Paul’s 1996 letter on evolution, the commission cautions that “the letter cannot be read as a blanket approbation of all theories of evolution, including those of a neo-Darwinian provenance which explicitly deny to divine providence any truly causal role in the development of life in the universe.”

Furthermore, according to the commission, “An unguided evolutionary process - one that falls outside the bounds of divine providence - simply cannot exist.”

Indeed, in the homily at his installation just a few weeks ago, Benedict proclaimed: “We are not some casual and meaningless product of evolution. Each of us is the re-

sult of a thought of God. Each of us is willed, each of us is loved, each of us is necessary.”

Throughout history the church has defended the truths of faith given by Jesus Christ. But in the modern era, the Catholic Church is in the odd position of standing in firm defense of reason as well. In the 19th century, the First Vatican Council taught a world newly enthralled by the “death of God” that by the use of reason alone mankind could come

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## CatholicChurch policy on Evolution

### 2

The cardinal’s op-ed was apparently heavily influenced by the Discovery Institute (the main pushers of “intelligent design” creationism in the U.S.), and may not represent an impending shift in the views of the Catholic Church, which has never been particularly into Paley or neoPaleyism.

Some more context and clarification, from an Austrian posting on the Panda’s Thumb evolution blog:

[http://www.pandasthumb.org/archives/2005/-07/victim\\_of\\_the\\_w.html#c37497](http://www.pandasthumb.org/archives/2005/-07/victim_of_the_w.html#c37497) Regarding the Schönborn text: It has now arrived in Austria, with a front page article in “Die Presse” (I did not check the other newspapers). Interestingly, in the course of the day several updates and additional articles were posted on “diepresse.com”, where Schönborn clarifies that he mostly refers to a fine-tuned universe and not to ID in biology. Also, he strongly distanced himself from every YEC-viewpoint. Quote (my translation): “You cannot and may not act based on faith against knowledge. Faith and knowledge are never contradictory. Attempts to reduce earths history to six days with preposterous hypotheses are void of any seriousness.”

I think he got under heavy fire and I think that this was a surprise, given the number of updates and posts in the austrian press. The general viewpoint was, that the cardinal was far out of his depth and commenting on things that are not his “magisterium”.

Four stories about Schoeborn/evolution are the front page of DiePresse.com, although mein Deutsch is nicht

gut: <http://diepresse.com/> See also: followup news story from the New York Times:

Leading Cardinal Redefines Church's View on Evolution <http://www.nytimes.com/2005/07/09/science/09cardinal.html> Letters replying to the Cardinal's piece: <http://www.nytimes.com/2005/07/11/opinion/11church.html> ...including this one:

"Cardinal Christoph Schönborn is hardly the person to state an official position because he was outside the mainstream of Catholic thought when as the chief editor of the official Catechism of the Catholic Church, he accepted the historicity of the early chapters of Genesis."

General analysis: [http://www.pandasthumb.org/archives/2005/07/victim\\_of\\_the\\_w.html](http://www.pandasthumb.org/archives/2005/07/victim_of_the_w.html)  
matzke@ncseweb.org

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## CatholicChurch policy on Evolution

### 3

explainer What Catholics Think of Evolution They don't not believe in it. By Keelin McDonell Posted Tuesday, July 12, 2005, at 3:19 PM PT

In a New York Times op-ed, Roman Catholic Cardinal Christoph SchÄ wrote that it's a misconception that the Catholic Church believes in evolution. While conceding that "[e]volution in the sense of common ancestry might be true," SchÄ asserted that natural selection is not compatible with church teachings. In a follow-up article, several Catholic biologists refuted the cardinal's essay. What is the Catholic Church's stance on evolution?

That it's a fine theory for explaining the natural world as long as it doesn't deny divine purpose and causality. The Catholic Church has never embraced biblical literalism. That may be why, unlike evangelical Christian faiths, Catholics have never made creationism a religious tenet. The church has produced letters, studies, encyclicals, and speeches in the last 100 years that praise the scientific research behind the concept of evolution. But it has never endorsed "belief" in evolution by including it in the Catholic Catechism, the church's official compendium of teachings and beliefs.

Largely due to its embarrassing condemnation of Galileo in the 17th century, the church has since been very cautious about responding to scientific theories. It took the Vatican nearly a century to react formally to

Darwin's 1859 treatise *The Origin of Species*. The official response came in 1950, when Pope Pius XII wrote in the encyclical *Humani generis* that "the Teaching Authority of the Church does not forbid that a research and discussions a take place with regard to the doctrine of evolution." Some Catholic scholars say Pius XII issued the encyclical as a response to the rise of communism. Embracing evolution could have been the Vatican's way of heading off the atheistic Communist Party, which might have used Darwin's theories as evidence that God doesn't exist.

Between 1859 and 1950, several Catholic biologists tried to reconcile evolution with church doctrine. In the 1920s, the Jesuit priest Pierre Teilhard de Chardin made a controversial attempt to integrate the new science with Catholic beliefs. His unorthodox views were silenced, however, when his Jesuit superiors shipped him off to do research in China. But around the same time, a consensus started to develop among Catholic biologists that evolution did not necessarily contradict Catholic teachings.

The Vatican made no more major pronouncements until the pontificate of John Paul II. In 1996, John Paul sent a letter to the Pontifical Academy of Sciences noting that there was "a significant argument in favour of this theory [of evolution]." At the same time, the pope assigned the question of "ultimate meaning" to theology. In 2002, the church's International Theological Commission, which convened to address challenges posed by "scientific understanding and technological capability," seemed to support John Paul's statements. "[A]ccording to the Catholic understanding of divine causality," the commission wrote, "true contingency in the created order is not incompatible with a purposeful divine providence."

After Cardinal SchÄ's op-ed was published last week, he told the New York Times that it had not been approved by the Vatican. He also stated that there were no plans to issue new guidelines on teaching evolution in Catholic schools. Theological experts think that SchÄ's essay likely has more to do with Pope Benedict XVI's desire to caution Catholics against relativism than to change the church's thoughts on evolution.

Explainer thanks Kenneth Miller of Brown University, Michael A. Hoonhout of Catholic University, John F. Haught of Georgetown University, and Paul Crowley of Santa Clara University. Keelin McDonell is a reporter-researcher at the New Republic.

Commentary on the recent New York Times op-ed by Cardinal Schonborn on Catholic theology and evolution.

kent@darwin.eeb.uconn.edu

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## Cichlid micros

Hello,

I need microsatellite markers for an African cichlid, *Pseudocrenilabrus multicolor*, from Uganda. I am not aware that any microsatellites have been isolated for this species. I would like to know if they have been isolated in any other closely related species, and if these should amplify well in my species. Any help would be appreciated.

Thanks,

Erika Crispo erika.crispo@mail.mcgill.ca

Erika Crispo <erika.crispo@mail.mcgill.ca>

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## Clarification Liberal view Christianity

Dear Brian,

My two impulsive postings to EvolDir have generated some totally unexpected responses - I was mistakenly perceived to be antisemitic. Certain faculty members in the States were contacting our university administration and the Canadian Jewish Society to propagate the misperception.

I have immense respect for many Jewish scientists in population genetics and molecular evolution and do not have any bad feelings against Jews. I believe that anyone who knows me would agree with me.

My intention is to reconcile between science and religion so as to avoid or at least reduce unnecessary misunderstanding and confrontation.

I may have been insensitive. If I have offended anyone through the two postings, here is my sincere apology. My postings do not represent the position of my department and my university.

I should be grateful if you could post this email with the subject line: Others: Clarification on "A liberal view of Christianity".

Best. Xuhua Xia

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## DNAsp on Macs

I need to use DNAsp for Fu and Li analyses of mtDNA sequence and population data. Unfortunately, I have only Macs available (G5's and G4's, with plenty of memory and fast processors). I'm running OS X 10.3x ("Panther") but am in the midst of switching to "Tiger." Several PC emulators are available for OS X, including Virtual PC (now a Microsoft product), and a new one with a very attractive price, Guest PC. The DNAsp websites indicates that the program will run under the former (though I think they are talking about a version for the PowerPC, i.e. "Classic" OS 9.2).

I would be interested in hearing from anyone who has tried, using either of these programs or any others, to run DNAsp on a Mac, especially OS X. Did it work? Was it abysmally slow? etc...

Thanks very much.

"Bruce J. Turner, Dept. Biological Sciences, VPISU, Blacksburg, VA 24061" <fishgen@vt.edu>

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## Data conversion answers

Dear colleagues,

Last week, I post my requirements for converting data. I received a numerous suggestions from colleagues. Almost people recommended COVERT (<http://www.agriculture.purdue.edu/~fnr/html/faculty/Rhodes/Students%20and%20S>) software, MSD ([http://i122server.vu-wien.ac.at/-MSA/MSA\\_download.html](http://i122server.vu-wien.ac.at/-MSA/MSA_download.html)) Microsatellite Toolkit, Genetix. It is very appreciate for that. Cheers Binh Thai

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## Dobzhansky Evolution Creation

The recent exchange on Evoldir has reminded me of Dobzhansky's famous 1973 essay in *The American Biology Teacher*. While the title (*Nothing in Biology Makes Sense Except in the Light of Evolution*) has been widely quoted, there is much in the essay that is relevant here. I am particularly fond of the following paragraph:

“Antievolutionists fail to understand how natural selection operates. They fancy that all existing species were generated by supernatural fiat a few thousand years ago, pretty much as we find them today. But what is the sense of having as many as 2 or 3 million species living on earth? If natural selection is the main factor that brings evolution about, any number of species is understandable: natural selection does not work according to a foreordained plan, and species are produced not because they are needed for some purpose but simply because there is an environmental opportunity and genetic wherewithal to make them possible. Was the Creator in a jocular mood when he made *Psilopa petrolei* for California oil fields and species of *Drosophila* to live exclusively on some body-parts of certain land crabs on only certain islands in the Caribbean? The organic diversity becomes, however, reasonable and understandable if the Creator has created the living world not by caprice but by evolution propelled by natural selection. It is wrong to hold creation and evolution as mutually exclusive alternatives. I am a creationist and an evolutionist. Evolution is God's, or Nature's method of creation. Creation is not an event that happened in 4004 BC; it is a process that began some 10 billion years ago and is still under way.”

To Dobzhansky, then, being a creationist and an evolutionist were not mutually exclusive alternatives. Personally, I still don't know exactly how I feel about it all, but I find that sentiment reassuring (and wish more people felt the same and would stop hating on others with a viewpoint other than their own).

For interested parties, the rest of the essay can be read online at <<http://people.delphiforums.com/~lordorman/light.htm>> . Best, Steve

Dr. Steven M. Vamosi Assistant Professor and Ingenuity New Faculty Department of Biological Sciences University of Calgary Calgary AB T2N 1N4 CANADA <http://homepages.ucalgary.ca/~smvamosi/> <http://homepages.ucalgary.ca/~smvamosi/>

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## DryLeaf DNA extraction

Dear colleagues,

Could you please suggest protocols for DNA extraction from oaks dried leaves?

We know that is better to extract from buds but we have to extract from dried leaves because there is no possibility to collect again samples.

We use the next protocol:

Grind 30mg dried leaf material

Add 1ml extraction buffer (ATMAB with mercaptoethanol)

Leave at 60oC for 45 min with agitation

After cooling at room temperature for 10 min, add 400 m l 'wet' chloroform and mix gently until an emulsion is formed.

Centrifuge at 13,000 rpm at room temp for 8 minutes and transfer upper, aqueous, phase to a clean tube.

Add 600 m l ice cold (20oC) Isopropanol and invert tubes several times to precipitate the DNA. Tubes left at 20oC for 90 minutes.

Centrifuge at 13,000 rpm for 8 min to pellet the DNA. Pour off supernatant and leave tubes upside down for a few minutes to drain.

Wash pellets with 1ml of 76% ethanol leave at room temperature for minimum of 60 mins (also possible to leave overnight).

Centrifuge at 13,000 rpm for 8 min. Pour off supernatant and air-dry pellets at room temp.

Dissolve DNA in 100 m l of autoclaved H<sub>2</sub>O.

The results for DNA extracted from dried oak leaves are very poor but for buds it works well.

Hence, please suggest from your experience, how to optimize this protocol?

Thank you in advance.

Dragos Postolache < [dragospostolache@yahoo.com](mailto:dragospostolache@yahoo.com) >

Scientific researcher

Simeria Forest Research Station <http://www.icashd.rdslink.ro/indexe.html>

Dragos

POSTOLACHE



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## Evol Religion moved to web

In an effort to move this discussion elsewhere, I will continue to post messages dealing with this subject on the website, but for those messages that go through me directly, I will no longer place them in the queue for nightly mailings.

Brian Golding

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More messages can be found at

<http://evol.mcmaster.ca/brian/netevoldir/Other/Lists.for.origins.discussions> <http://evol.mcmaster.ca/brian/netevoldir/Other/SteveFreeland.offer> <http://evol.mcmaster.ca/brian/netevoldir/Other/Scopes.trial> <http://evol.mcmaster.ca/brian/netevoldir/Other/Clarification.Liberal.view.Christianity> <http://evol.mcmaster.ca/brian/netevoldir/Other/Move.the.discussion.2> <http://evol.mcmaster.ca/brian/netevoldir/Other/Move.the.discussion> <http://evol.mcmaster.ca/brian/netevoldir/Other/Evolution.christianity> <http://evol.mcmaster.ca/brian/netevoldir/Other/Evolution.Religion.question> <http://evol.mcmaster.ca/brian/netevoldir/Other/Evolutionist.position.30> <http://evol.mcmaster.ca/brian/netevoldir/Other/Make.it.stop>

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## Evol on Catholicism

Why should anyone take seriously the beliefs of members of an organisation that derives its official views from documents written 2000 years ago, which lack any independent support, and claim to record events such as the virgin birth and the resurrection which violate all that we know about biology?

Brian Charlesworth <brian.charlesworth@ed.ac.uk>

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## Evolution Religion question

Hi,

I have read with interest the previous messages on Evolution and Religion. I think there is a basic, simple distinction to be made here, and I do think that the 'non-atheistic' persons are somewhat reticent to clearly state this: when you refer to "believing in Religion", you should clarify if:

1) You believe, as for example Einstein, in a 'God' Nature, or even a 'God' Love, but without this implying believing in the more specific, 'fantasy' points referring to your religion (e.g. if you are Christian, you believe that a man, son of a virgin, died more than 2000 years ago, revived after that, and is now somewhere in the sky seeing us).

2) You believe actually in those specific points, i.e., if you are Christian you believe in such specific points of the bible, the opening of the seas, etc.

This is crucial to clarify this discussion. If you just believe in an 'abstract', 'God' Nature, as Einstein, for example, such believe has no contradiction with a scientific vision of the world. However, people that actually believe in such more specific points, such as the opening of the seas by a man son of a virgin that died, revived, and fled to the sky to see us from above, should CLEARLY state this and at least discuss how the believing in such things do not collide with a scientific vision of the world. If a man can open the seas, or can die, revive and fly after that, than I really do not know what I am doing in my lab during all day.

But this is my personal view of the subject, perhaps someone can really conciliate such a believe in those more specific points with a scientific view of the world.

I would thus just like to ask to those that really believe in such specific points of their religions to write us and explain how they can do that. I think, or at least I hope, I am open minded, and I would just like to try to understand this. You should understand that at least for some of us it seems theoretically difficult to conciliate such views, so it would be nice, I think, to hear your arguments.

Greetings to all of you,

Rui

– Dr. Rui Diogo



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College London, England

AND

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### Evolution christianity

Having read some of the comments re science and religion I would like to ask a question and make a comment. Question is, when your children are ill, do you visit 1) a priest or 2) a doctor? Anyone who answers 2 would be judged by most to be rational. Anyone believing in God who does not answer 1, a hypocrite. Anyone who is a non-believer and answers 1, barmy.

DJ Hosken <D.J.Hosken@exeter.ac.uk>

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### Evolutionist position 30

Dear Colleagues, If it can't be subjected to the scientific method then it isn't science. Intelligent design and/or creationism can be taught in a religion or philosophy course, but not in a science course because neither can be subjected to scientific inquiry. Thus they cannot be objectively test. If they cannot be objectively tested then we are not dealing with science. Thus, the issue is not whether individual scientist believe themselves to be above the realm of religion. The issue is whether creationism or intelligent design is science; and as such, can be taught in a science class. They are not and they cannot. Although I enjoy a philosophical discussion as well as the next person. I do think we should focus on something that has been demonstrated so often that it has become fact — evolution. Tracie

Tracie M. Jenkins Dept. of Entomology The University of Georgia

To: jenkinst@uga.edu Subject: Other: The  
position of the evolutionist 30 Send reply  
to: brian@helix.biology.mcmaster.ca Date sent:

Sun, 24 Jul 2005 02:40:29 -0400 (EDT) From:  
evodir@evol.biology.mcmaster.ca

Dear colleagues,

With regard to the latest discussions on how to defend evolutionism in the face of the teachings of catholic leaders:

If there is one message that may actually make it through the walls of the ivory towers, it may be the humble but yet powerful concession that scientists do not offer ultimate, or complete knowledge. Yet, what we produce tends to improve our understanding and also the conditions of human life. To me, this is the most important message to put forward in today's world of conflict between fundamentalist schools.

It should be made clear that ideas like "intelligent design" cannot be refuted scientifically. Rather, the whole point of science is to ignore explanations that appeal to spiritual powers, as I have come to see it. When some people complain that scientists pretend there are no metaphysical issues, I would argue that this is the very strength of science. This is the method by which real progress is made.

But with this view follows a certain kind of tolerance for others who are not satisfied with incomplete knowledge, or with purely materialist explanations. We must accept that we leave room for spiritualistic and mystical ideas.

The fight for reason can not be reduced to the question of origin of life. It is much more fundamental than this. Indeed, it probably needs to be fought within many of us every day, myself included.

Besides, I side with Richard Dawkins who insist that rational explanations do not in any way reduce the wonders of the world. On the contrary, the beauty of the (hypothetically) explained world is probably our best weapon.

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### Evolutionist position on Catholicism 10

Dear Colleagues passionate in this debate,  
I also feel that there is lack of philosophical perspective

and rigour in the “easy” shortcuts to “scientifically” deny a metaphysical universe - just as much as we may not diminish the value of science itself using ethical or, worse, emotional arguments! But I acknowledge the social and political relevance of positions that take advantage of ignorance and misunderstandings to propose a world where only one view of reality is acceptable. I still like freedom of thought...

: ) Sincerely

Daniela Salvini

Daniela Salvini <dsa@kvl.dk>

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## Evolutionist position on Catholicism

### 11

I am startled that anyone living in American society can think, as Guy Hoelzer does, that “awareness of a plausible material-only perspective should have a calming influence over a smoldering situation.” The public has been made aware of plausible material-only perspectives for over a century, to little effect. The difficulty lies, in part, with the fact that the way people who are not trained in science perceive the world is quite counter to what science tells them; in fact even those who accept the discoveries of science are largely “taking it on faith”. We as scientists forget what it is like to NOT have that training. We promulgate the problem by teaching science to most people as a series of Facts without giving any understanding of the experimental and mathematical methods that let us develop those facts from observations (many of which require sophisticated instrumentation rather than the naked eye).

As a physicist colleague of mine once pointed out, the ordinary person cannot accept the concept of inertia EXCEPT on faith – in the everyday world, when you roll a ball across a floor, it eventually stops. Even an air hockey puck stops eventually. Aristotle noted it, and for many centuries that was “the fact”. A student who learns the concept of inertia generally is “taking it on faith” unless they go on to a more in-depth study of physics.

Thus we do very little to help our cause when we use rhetoric that attempts to alienate science from religion. [Even I, retaining the very healthy doubt instilled by my Unitarian-Universalist upbringing, have to admit that I \*believe\* that eventually all unexplained phenomena will have a material explanation, but that’s a BELIEF

based on the fact that so far science seems to have been able to find a material explanation for so many things. There is currently no scientific evidence that it will all work out that way.] Instead, we demonstrate to people whose grasp of the scientific method is weak that we are mean-spirited human beings with little empathy for their world view. As any religious proselytizer will tell you, that is no way to win converts! We do different damage when we fail to speak up about how science arrives at its conclusions.

Ultimately the problem returns to the way in which we fail to educate our fellow citizens, from an early age, about the methods of science (as opposed to “the facts”). Young children are natural experimentalists – a baby in a high chair who knocks her milk cup onto the floor repeatedly and observes the consequences has made an observation (I knocked the cup on the floor; dad picked it up and refilled it); develops a hypothesis (knocking the cup on the floor makes dad pick it up and refill it); tests the hypothesis via repeated sampling (and understands innately that larger samples are better); modifies the hypothesis when presented with new data (mom does the same thing; my older sister laughs when the cup hits the floor, ergo knocking the cup on the floor makes adults pick it up and refill it). We take this natural scientific impulse and squeeze it out of most people by the time they are 13. Studies in American show that kids make very good progress in understanding science up until about grade 4; by grade 8 they are far behind.

So rather than debating whether we can safely ignore the Catholic Church, or accept them but battle their anti-scientific message, I think we need to shift this discussion to creating a public that can incorporate scientific information into its world view as the result of careful study, not “on faith”. Until most people recognize the vast amount of critical analysis that goes into the “Theory of Evolution” and are comfortable with the methods we use to arrive at our conclusions, they have no particular reason to “trust us” any more than they trust Cardinal Schonbrunn. Instead of railing against the anti-scientific, we need to take an active role in re-inventing science education at all levels (which, in my opinion, would first involve getting away from mandatory standardized testing so that teachers can teach method and inquiry rather than facts). If we on evoldir are not contributing to solving the problem of a poorly-educated public, then we are never going to make much headway against authority figures like the Cardinal.

Gail Simmons gsimmons@csi.cuny.edu

“I have a great deal of work, what with the housekeeping, the children, the teaching, and the laboratory, and

I don't know how I shall manage it all" - Marie Curie  
Gail Simmons <gsimmons@mail.csi.cuny.edu>

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### Evolutionist position on Catholicism 12

Austin Hughes has urged us to accept that religious claims form a canon of 'first philosophy' that is self-evidently distinct from 'natural science'. Accepting for a moment that such a dichotomy somehow holds, i.e. that there are indeed parallel and mutually independent modes of inquiry about reality – one subject to testing, and the other not – I can't see how one would discriminate among the infinite claims that could be classified as 'first philosophy' (solely by virtue of their lack of empirical grounding). Perhaps Austin can explain on what reasoned grounds he has chosen to accept certain such claims (e.g. the existence of an all-knowing, undying, entirely invisible virgin-born male ape, of admittedly unknown karyotype) but reject others (e.g. the existence of invisible, massless, tea-drinking giant pink elephants with  $i/2$  toes on each of their  $\pi/3$  feet).

Moreover, given that the claims of 'first philosophy' are apparently extraneous under Occam's razor, how can one reasonably defend the necessity of any such claim as key to an accurate understanding of the world? By Hughes' own definition, 'first philosophy' appears to comprise the set of all propositions whose truth versus falsehood lacks empirical consequence; to adopt any such belief seems, to me, unparsimonious. I'm surprised that so insightful and prolific a scientist would view an insistence on intellectual parsimony as an unfair 'prejudice'.

Nathaniel Pearson University of Chicago

Nathan Pearson <n-pearson@uchicago.edu>

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### Evolutionist position on Catholicism 13

In some of the postings discussing the view of the Catholic Church on evolution, it has been suggested that we should consider what has caused so many people to become religious. There are actually scientific

studies (in the context of social sciences) on the effects of religion. While these studies don't deal at all with Evolution or Creationism, I thought these studies might be interesting to some, particularly as this discussion seems to be extending beyond evolution vs creationism. Here are some links.

[http://www.nichd.nih.gov/new/-releases/religious\\_views.cfm](http://www.nichd.nih.gov/new/-releases/religious_views.cfm)

<http://-www.youthandreligion.org/>

Miriam Barlow

Miriam Barlow <mbarlow@sph.emory.edu>

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### Evolutionist position on Catholicism 15

I share Brian Charlesworth's healthy skepticism about religious beliefs. I also try to tackle problems based on logic rather than preconceived beliefs ( of course, I do not always succeed).

In the current debate about Intelligent Design, the problem - in my view - is a political one rather than a scientific one. For instance, the kinds of books that do, or do not, appear on a school curriculum, will be decided by local school boards, state legislatures and courts of law. It will not be decided as the result of a laboratory experiment, a field collection trip and/or a computer simulation. In other words, science has something to do with it - but not everything. Consequently, we must try to think as politicians as well as scientists.

As a first tiny step toward becoming more politically aware, I used Google to find the CIA "World Factbook" on the distribution of religious beliefs (the data are listed below). According to the CIA, we - the sceptics - are outnumbered about seven to one worldwide. What should we do based on these figures? One option is to flee from our labs and seek sanctuary in the closest church, mosque, temple or synagogue (listed according to their expected frequencies on the planet). A second, more serious option is to maintain our intellectual positions and our views, while recognizing the magnitude of the political challenge. A third option, which I do not recommend, is to dismiss the religious majority. That would simply be bad politics, as well as being not very civil.

Is there anything practical that can be done, other than waging a potentially futile war of words against the religious majority? A possible solution is provided by Alan Leshner in his Science editorial entitled "Redefining Sci-

ence” that appeared in the July 8 issue. His suggestion that Intelligent Design could be taught in a comparative religions course, but not in a biology course, seems reasonable to me. It is, however, the kind of compromise that would probably be rejected by many on both sides of the debate.

In conclusion, I believe that we live in a world where religious, cultural and artistic values have a huge influence on our lives, including our scientific lives, despite the fact that they are not based on any objective evaluation. Although these factors do not generally affect the outcomes of our experiments, they can influence our choice of scientific problem - often through funding allocation decisions. As a scientist, I would find a world that contained less subjectivity to be much less confusing and frustrating - but maybe less interesting too!

Donal Hickey, Department of Biology Concordia University, Montreal.

CIA World Factbook (2003). Christians 32.84% (of which Roman Catholics 17.34%, Protestants 5.78%, Orthodox 3.44%, Anglicans 1.27%), Muslims 19.9%, Hindus 13.29%, Buddhists 5.92%, Sikhs 0.39%, Jews 0.23%, other religions 12.63%, non-religious 12.44%, atheists 2.36% (2003 est.)

Donal Hickey <dnhickey@alcor.concordia.ca>

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## Evolutionist position on Catholicism

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One of the problems we are encountering here is that so many scientists are unfamiliar with philosophy. “First philosophy” or “metaphysics” is NOT equivalent to religion. It is perfectly possible to have a metaphysics without any religion at all. After all, Aristotle, who was not religious (at least in any sense we would recognize today), is both the source of the term “metaphysics” and of the distinction between metaphysics and natural science that was later adopted by the Catholic Church. It is perfectly possible for a nonbeliever to address questions of first philosophy or metaphysics. First philosophy deals with questions such as how we are able to know the truth about anything. Have you ever seen a convincing scientific explanation of why science works? Of course not. One has to go outside of science to deal with the concepts (evidence, reason, truth) on which science depends. First philosophy – whether practiced by a believer, an agnostic, or an atheist – uses a dif-

ferent mode of reasoning than that of natural science. It is based on reason and argumentation, not on experiment or observation. Yet science depends on ideas from first philosophy, whether scientists are aware of it or not. Most scientists and philosophers now accept, following Popper, that an essential characteristic of scientific hypotheses is that they are expressed in falsifiable form. (Note that Popper had to step outside of science to formulate and argue for that position.) Now consider the statement: “No sentence can be simultaneously both true and false.” Is the latter statement falsifiable? Of course not. Yet if we do not accept that statement, we cannot do science. In fact, if we do not accept that statement we cannot even live our day-to-day lives. A statement such as, “There is an intelligent being that designed the universe” also potentially belongs to the realm of first philosophy. Note that my saying that the statement belongs to the realm of first philosophy does not imply that the statement is true. I also say “potentially” because religious believers may treat such a statement as an article of faith. However, philosophers are free to examine such a statement by the light of reason alone. Like any other philosophical statement, it is subject to argument for or against. This or similar statements have in fact been proposed and argued about for centuries by philosophers, not all of whom were in any way religious. It is true that certain philosophical statements, like the above example, will always be subject to debate. Yet there are other statements of first philosophy that some have ventured to describe as “self-evident.” For example, when Jefferson et al. (1776) declared certain propositions regarding human rights to be “self-evident,” they did not view those as religious statements (despite reference to a Creator) and still less as statements of natural science. Rather, they viewed them as basic philosophical principles. The human rights whose existence Jefferson claimed to be “self-evident” are not material objects and cannot be empirically measured in any way. No falsifiable hypothesis regarding the existence of human rights could ever be devised. Yet I for one would not trust very far any person who does not accept their existence, or indeed anyone who does not consider their existence to be “self-evident.” In dealing with a person in society, it doesn’t matter so much to me so much whether they go along with Jefferson when it comes to the “Creator” part – that’s their own business – but I’d be very wary of anyone who denies the the rest of Jefferson’s “propositions.” However, those propositions belong to metaphysics, not to natural science. A rigorously “materialist” position (such as several recent postings have recommended) would lead one to deny that there is such a thing as a natural human right. In fact, the ideologies of Communism and Fascism were

consistently materialist in denying the existence of human rights – and in acting accordingly. Which should remind us that we have at least as much (if not more) to fear from consistent materialists as we do from religious fanatics. I think it is important to remember the distinction between metaphysics and natural science because it provides the perfect answer to ID: The idea of “intelligent design” is a very interesting idea, one can say, but it belongs to metaphysics not to natural science. Therefore, a biology class is not the appropriate place to discuss such an idea. End of argument.

Austin Hughes

“Austin L. Hughes” <austin@biol.sc.edu>

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## Evolutionist position on Catholicism

18

Austin,

I do not accept Intelligent Design. And I agree that it has some falsification issues. For clarification, I am a nonreligious well-trained Darwinian evolutionary biologist with a PhD in evolutionary genetics and plenty of natural history and ecological insight.

Nonetheless, I think Intelligent Design is, in principle, a scientific claim. It is a claim which is eroded every time scientists find more detailed explanations for evolutionary history.

Most philosophers of science are not dogmatic Popperians. Nor are scientists in practice. The possibility of falsification is not the only criterion for a scientific theory. I tend to follow Lakatos – research programs die out if they don’t make progress, and this process is, and probably should be, the main way science proceeds. Few scientists are Intelligent design researchers, because the more materialistic approaches continue to work. And because ID research has provided little illumination or new insights into the history or mechanisms of evolution.

I tell my students that if scientists had never found any “missing links” between chimps and humans, that scientists would now doubt Darwin’s theory about human evolution. But we have found a dozen missing links and thousands of relevant fossils. If scientists had never found evidence that organic molecules could abiotically form, then we might well believe the origin of life needed Divine inspiration (as Darwin sometimes supposed or at least conceded in the final sentence of the Origin).

And, if we never find natural circumstances in which RNA molecules can spontaneously, abiotically, form, then scientists will begin to wonder the same thing. But in the 150 years since Darwin published his theory, lots of gaps have been filled. Progress does not seem anywhere close to an end. Meanwhile Intelligent Design has made very little progress in the past few thousand years. Both are legitimate scientific theories. One isn’t going anywhere.

Patrick Foley patfoley@csus.edu

Patrick Foley <patfoley@csus.edu>

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## Evolutionist position on Catholicism

19

When did evoldir become alt.agnostic?

Several posters are advocating fighting ID by arguing that we should advance an athistic alternative. This strikes me as naïve politically (we will loose a lot of allies from more mainstream religions). It also seems rather arrogant to insist that anyone who accepts evolution has to accept the rest of the athiest world view (which is just as much a matter of faith as religion: can you prove the non-existance of God, without the aid of a Babel fish?).

People are able to square their theological and scientific beliefs. If our aim is to tackle ID (an attack on a scientific idea), why shouldn’t we respect people’s theological views? Of course, if the real aim is to advance the athiest agenda, using evolution as the battle ground, then at least be honest about it.

Bob

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Telephone: +358-9-191 51479 Mobile: +358 50 599 0540 Fax: +358-9-191 51400 WWW: <http://www.RNI.Helsinki.FI/~boh/> Journal of Negative Results - EEB: [www.jnr-eeb.org](http://www.jnr-eeb.org) “Anon.” <bob.ohara@helsinki.fi>



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## Evolutionist position on Catholicism

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I try to answer to Brian Charlesworths message, whose basic views are not too different from mine, reminding all of us that the attempt to understand nature and its laws is only part of the task of us scientists. Another important part of our work is to share our knowledge with the community we are in, and it is here that the views expressed by cardinal Schönborn in his New York Times article are relevant to us. I cannot check the citation at the moment, but I remember Darwin asking in one of his letters (possibly to Hooker) whether a conclusion that is true at the 100 per cent level, but remains the privilege of a small minority, is better than a conclusion that is only 80 per cent true, if the latter is accepted by the majority of people.

Scientists have a social responsibility, and we must not forget it. Although my knee-jerk reaction would have been to propose a distinguished evolutionist, possibly Charlesworth himself, to submit a paper on theology to the New York Times, that would have been a bad idea, I think. I find it particularly futile to discuss whether science is better or worse than religion. They are distinct human activities, such as art and science. Much like a geneticists opinion on cubism is of no special interest for art historians, Schönborns views offend, in the first place, the Catholics who, above and beyond their metaphysical beliefs (about which science has nothing to say, because science only deals with the physical world) are interested in a rational interpretation of natural phenomena. I also think that a member of the Catholic hierarchy has no right to call neo-Darwinism a dogma, when all of Darwins work shows a strenuous effort to submit any conclusions, including his own, to scrupulous critical evaluation. Finally, I think that, although it would be simpler (and more pleasant) to lock ourselves in our laboratories and keep working on the subjects we like most, ever since Darwin the study of evolution has had undeniable political reflexes and implications, and particularly so in this unfortunate moment of the worlds affairs. I have no simple solutions to propose, but I think that we cannot and should not keep our mouths shut. Even for people like me who call themselves atheists, it is crucially important that people who call themselves Christian be free to pursue their interest in evolution, if they feel that there is no logical contradiction between their scientific views and

their religious ideas.

Guido Barbujani

Guido Barbujani <bjg@unife.it>

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## Evolutionist position on Catholicism

20

On Religion and Biology We like to quote Dobzhansky that nothing in biology makes sense except in the light of evolution, but that is of course a non-sense statement. A lot made sense in biology before Darwin, and many or even most life scientists today do not use evolution in their daily work. So it is easy for critics to point out things that do make 'sense' usnig views other than evolution. A lot of systematics can be done that way, as can a lot of biochemistry, human biomedical genetics, and agricultural breeding to name but a few areas. Many human geneticists I know specifically say that evolution is not relevant—not for religious reasons but because they don't want to have to take it into account, or see whey they need to do so, in trying to find the cause of disease. Of course, the facts in life science are all \*consistent \*with evolution, and make \*more \*sense, and that is why 'evolution' is such a unifying concept. But, in regard to schools and religious statements such as by the Catholic Church....just what do they mean by 'evolution'? If that everything is due to natural selection, then this is patently wrong, unless you entirely deny a role for drift, for example. If 'evolution' means that life is the result of an historical process from one common origin here on earth, that is partly correct—only partly because (for example) if panspermia or Mars-life were true, we would still hold evolutionary views. Horizontal transfer could (in principle) mean that life had multiple origins—indeed, how likely is it that only \*one \*set of molecules in one tiny sulphurous pond in the entire earth did 'life' processes occur? Or in the school debate do we mean that science is about what we can study and organize about life in terms of those things that can be observed, tested, measured, and the like—and that our current best explanation is 'evolution'? Just what is it that we wish to be taught in schools that is not its own kind of dogma (even if it is materially true, or more so than a religious dogma)? If we were ourselves a bit clearer about the subtleties of the concepts that we want in science, things might go a bit more smoothly. When the Church says 'evolution' is or isn't true, what do they mean?

Common origin through historical processes instigated by God? That's very different than what Darwin had in mind. His was the Hobbesian view, that we are \*by nature \*the result of competition, inequity, ruthlessness, etc. because it is through Malthusian processes that we were formed by history. That means that 'original sin' was really \*origin \*sin, because we had our ill nature before anybody bit any apples, not afterwards. I hardly think the Church means that when they support, as they did in the previous Pope's tenure, the consistency of the Darwinian theory of evolution with Church teachings. Like most things, much of the debate is about semantics, used by contending groups in defense of competing world views that, in turn, almost always are rallying symbols around other things like control of political power and resources, feelings of security, and so on. That is certainly the case here. Ken Weiss Penn State University

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Kenneth M Weiss, PhD Evan Pugh Professor of Anthropology and Genetics Department of Anthropology Penn State University 409 Carpenter Bldg University Park, PA 16802 tel: 814 865 0989 fax: 814 863 1474 email: kenweiss@psu.edu Lab URL: [http://146.186.95.23/weiss\\_lab/index.html](http://146.186.95.23/weiss_lab/index.html) Ken Weiss <kennethweiss@gmail.com>

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## Evolutionist position on Catholicism

21

Dear Austin et al.,

I snipped most of the post below to focus on what I see as a flaw in reasoning.

On Jul 20, 2005, at 11:11 PM, evoldir@evol.biology.mcmaster.ca wrote:

> It is true that certain philosophical statements, like the > above example, will always be subject to debate. Yet there are > other statements of first philosophy that some have ventured to > describe as "self-evident." For example, when Jefferson et al. > (1776) declared certain propositions regarding human rights to be > "self-evident," they did not view those as religious statements > (despite reference to a Creator) and still less as statements of > natural science. Rather, they viewed them as basic philosophical > principles.

Indeed. I would further specify that these principles are merely social norms that emerged during cultural

evolution. I don't know whether Jefferson would agree with me, but my argument is that these principles come and go through the process of cultural evolution. As dearly as I hold these principles myself, they did not exist in a cultural vacuum waiting to be discovered. Jefferson and his colleagues made them up, inspired by the Greeks and other predecessors.

> The human rights whose existence Jefferson claimed to be > "self-evident" are not material objects and cannot be empirically > measured in any way. No falsifiable hypothesis regarding the > existence of human rights could ever be devised.

Indeed. They do not exist except as symbolic (to us) templates (neural, spoken, written, etc.).

> Yet I for one would not trust very far any person who does not > accept their existence, or indeed anyone who does not consider > their existence to be "self-evident." In dealing with a person in > society, it doesn't matter so much to me so much whether they go > along with Jefferson when it comes to the "Creator" part – that's > their own business – but I'd be very wary of anyone who denies the > the rest of Jefferson's "propositions."

I would not want to change these societal norms either, but that does not mean that they exist outside of the symbols or evolved (and evolving) structure of our society. As far as being "self-evident", that certainly depends on the social context and experience of the observer. I'm glad they were "self-evident" to Jefferson, and the feel that way to me, but I think there is no basis for claiming that they are universally "self-evident."

> However, those propositions belong to metaphysics, not to > natural science.

This is the sticking point for me. I know there is a long tradition of thinking and writing about metaphysics in both religion and philosophy in which the word "metaphysics" has taken on particular meanings. If I take the word to mean what it suggests on the surface, phenomena outside the realm of the material universe, then my stance is that there is simply no such thing as metaphysics at all. I am glad to live in a society where people are free to believe otherwise, but I think the "material-only" perspective is badly muddled by failing to point out that there is neither evidence of nor a logical need to invoke the existence of anything metaphysical in trying to understand any phenomenon. In this sense, the propositions you referred to are not metaphysical at all. They exist as physical structures in the neural networks that manifest our minds and in the symbolic structures we use for communication.

> A rigorously "materialist" position (such as several recent > postings have recommended) would lead one

to deny that there is > such a thing as a natural human right. In fact, the ideologies of > Communism and Fascism were consistently materialist in denying the > existence of human rights – and in acting accordingly. Which > should remind us that we have at least as much (if not more) to > fear from consistent materialists as we do from religious fanatics.

I obviously disagree. All ideologies are the product of cultural evolution. In that sense Communism, Fascism and Democracy are only qualitatively different outcomes of this process. On what basis do you claim that “natural human rights” exist beyond the cultural norms that evolve? Rights are granted. They do not exist in a cultural vacuum.

You could be correct that the national adoption of a purely materialist perspective could lead to less sympathetic forms of government like Communism or Fascism, but I doubt it. It certainly would not be inevitable. The historical governments you have in mind did not come into being because the population became materialistic, rather they tried to impose that perspective after taking power.

> I think it is important to remember the distinction between > metaphysics and natural science because it provides the perfect

— / —

This message has been arbitrarily truncated at 5000 characters. To read the entire message look it up at <http://life.biology.mcmaster.ca/~brian/evoldir.html>

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## Evolutionist position on Catholicism

22

Aloha,

I very much appreciate Gail's thoughtful appraisal of faith and how we (science geeks) too request it of those not so intimate with our studies.

I would like, in the interests of precision and accuracy, to point out that many of us appear to be using the word “reigion” when what we mean is Judeo-Christian religions as faith reliant docterines. Allow me please to quote His Holiness The Dalai Lama (the leader of Tibetan Buddhism) with respect to the need for reason in Buddhist practice (please read the book for more complete contextualization):

... Consequently, I believe it is very important for Buddhist scholars and thinkers to become better acquainted with [science] For example, scientific investigation of the existence of a particular subject may reveal a multitude of logical fallacies. If we then persisted in accepting its existence, it would contradict reason. If it can be clearly proved that something that should be findable if it exists cannot be found under investigation, then from a Buddhist point of view we accept that it does not exist. If this somehow contradicts some aspect of Buddhist doctrine as contained in the scriptures, we have no other choice but to accept that the teaching is in need of interpretation. Thus, we cannot accept a teaching literally simply because it has been taught by the Buddha: we have to examine whether it is contradicted by reason or not. If it does not stand up to reason, we cannot accept it literally. We have to analyze such teachings to discover the intention and purpose behind them and regard them as subject to interpretation. Therefore, in Buddhism great emphasis is laid on the importance of investigation.

The Joy of Living and Dying in Peace.: Core teaching of Tibetan Buddhism HH The Dalai Lama

With respect, Cam

– Cam Muir Ph.D. Assistant Professor Biology Department University of Hawai'i - Hilo 200 W. Kawili St. Hilo, HI, 96720 [cmuir@hawaii.edu](mailto:cmuir@hawaii.edu) 808-933-3154 (office) <http://www2.hawaii.edu/~cmuir/> Cedric C Muir <[cmuir@hawaii.edu](mailto:cmuir@hawaii.edu)>

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## Evolutionist position on Catholicism

23

Dear Members,

I have followed with great interest on this debate of religion versus evolution. I feel that one factor remain uncommented on is the psychological aspect of the religion and science.

According to the father of modern psychology Carl Jung, religious concepts such as God or a Creator are 'archetypes' embedded in our common unconscious. In another words, such concepts are universal (and inherited) across different races, cultures, and even transcends time. Such archetypal images are best illustrated in myths and folklore. For example, in many cultures there are a universal description and certain degree of acceptance in concepts such as ghosts, spirits,

souls, and gods.

Jung believes that these archetypes are embedded in our shared unconscious and hence we all 'feel' and accept these concepts to a certain degree.

I feel that science itself is also an embedded archetype. our continuous efforts to understand, explore, and rationalize is also universal.

So I don't think we are looking at the whole picture yet. I think once we have taken into consideration all of the informations available to us, then could we begin to settle this debate. Otherwise, we'll just be keep on going around in circles.

All the best wishes,

(Layperson on both subjects)

– <http://www.fastmail.fm> - Access all of your messages and folders wherever you are

wa\_yang@ftml.net

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## Evolutionist position on Catholicism

### 24

Guy Hoelzer has already eloquently rebutted Austin Hughes' red herring/argument-by-consensus about the concept of 'rights'. I would like to address two other key arguments that Hughes has put forth:

> Most scientists and philosophers now accept, following Popper, > that an essential characteristic of scientific hypotheses is that they > are expressed in falsifiable form. (Note that Popper had to step > outside of science to formulate and argue for that position.) Now > consider the statement: "No sentence can be simultaneously both true > and false." Is the latter statement falsifiable? Of course not. Yet > if we do not accept that statement, we cannot do science. In fact, if > we do not accept that statement we cannot even live our day-to-day > lives.

First, the statement in question -is- falsifiable. All one needs to do to falsify it is to find a sentence that is simultaneously both true and false. Cheekily, I nominate 'I am Spartacus' as just such a sentence. Less cheekily, one might nominate 'This sentence is false.' If you reject both of these nominees, there are an infinite number of other sentences to check, so get cracking.

Maybe Hughes was trying to fashion a conundrum (such as 'this sentence is false') in order to highlight a sup-

posed distinction between logical reasoning and empirical falsifiability. Let's go ahead and grant him such a distinction – or at least grant that Gödel's Incompleteness theorem suggests that it is ultimately impossible to prove anything absolutely. But even granting that, Hughes' next claim:

> A statement such as, "There is an intelligent being that > designed the universe" also potentially belongs to the realm of first > philosophy.

simply does not follow (unless we give the term 'potentially' a loose interpretation). The claim in question differs qualitatively from a logical conundrum such as 'This sentence is false'. Unlike the latter, the 'intelligent designer' claim is entirely empirical. Meaning that if the claim were true, the world would be empirically different (i.e., it would have an additional real being in it) than it would be if the claim were false. Our difficulty in falsifying the claim is not due to some epistemological shortcoming of logic, but simply to our finite resources in searching every cranny of the world for such a material being.

Finally, on to ID (where it seems like a lot of these posts end up heading toward):

> I think it is important to remember the distinction between > metaphysics and natural science because it provides the perfect answer > to ID: The idea of "intelligent design" is a very interesting idea, > one can say, but it belongs to metaphysics not to natural science. > Therefore, a biology class is not the appropriate place to discuss > such an idea. End of argument.

The end of argument comes much earlier for ID. Its core claim -is- falsifiable (on solely logical terms, too). That claim is:

The world is too complex to have manifested by chance; therefore, it must have been designed by an inherently more complex being.

This is laughable reasoning. All the hullabaloo about which course it belongs in, whether or not we should politically appease its proponents, &c. misses the glaringly obvious flaw that the 'intelligent designer' cannot, under ID's own assumptions, have manifested by chance, but must itself have been designed by a yet more complex, more intelligent designer, &c. And on and on, ad nauseam. Apparently, it's turtles all the way down...

Folks, we need to be out there publicly debunking this stuff, not sitting back on our heels apologizing for science encroaching on ancient-but-well-funded bs.

> Austin Hughes > > "Austin L. Hughes"  
<austin@biol.sc.edu> >

Nathan Pearson <n-pearson@uchicago.edu>

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## Evolutionist position on Catholicism

25

A person that accepts the common origin of life in this planet, yet refuses to accept the biological-social-historical explanation of religion strikes me as a curiosity. Religion owes its existence to same roots and forces as love for the partner, parental love and respect for fellow man. Like love and zealousness for the partner is exercised in the name of honor, a human-made concept, so is religion exercised in the name of god, an equally human-made concept. Together with honor and ethos, religion may have been necessary for the working of human societies, but like honor and ethos it may lead to crime (think of the analogy between vendetta and honor and genocide and religion).

Rather than philosophizing about metaphysics, we better devote our energies into making the sociobiological nature of religion (and of the concept of god) more and more abundantly clear and accepted. Very few of us understand the theory of aerodynamics, but all sign our acceptance of it any time we step in a plane. It is not a matter of faith in the theory. Rather, it is the assurance that if it worked several million times before it will work again. It is the force of the repeated occurrence that replaces mysticism with pragmatism in every day life. No more people today understand everything about medicine in the village I was born, and no fewer believe in god than in my grandfather's generation. Yet practically nobody will call the priest to chase away the bad spirit when he/she falls ill, as was the overwhelming practice in my grandfather's generation. When we have more tangible and compelling evidence for the sociobiological nature of religion (from the molecular and cellular basis of such things as fear, love and hope) the shifting form religious appeals to realism will be as inevitable as was the replacement of the priest by the physician in my village.

But do not expect the need to appeal to something spiritual to disappear, for the same reason we do not expect that the full sociobiological explanation of parental love will cause its dissipation. People will continue to kneel in worship of a concept that they fully realize it is of their own creation. Evolution can be as obvious and as unshakably proven as the Earth's orbit around the sun, but the voices for intelligent design will remain.

Irrational but explainable.

Eleftherios Zouros <zouros@biology.uoc.gr>

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## Evolutionist position on Catholicism

26

On Jul 24, 2005, at 2:15 AM, evoludir@evol.biology.mcmaster.ca wrote:

>>> ID: The idea of "intelligent design" is a very interesting idea, >>> one can say, but it belongs to metaphysics not to natural science. >>> Therefore, a biology class is not the appropriate place to discuss >>> such an idea. End of argument. >>> > > Actually, I DO think WE evolutionists must bring ID into the > classroom. How can we "debunk" ID if we refuse to deal with it? > This "ignore-it-and-it-will-go-away" philosophy was mistakenly > adopted by the NCSE and evolutionists who boycotted the recent Kansas > State Board of Education hearings (see below).

Let me propose something practical on this theme. In 1966, the Wistar Institute of Anatomy & Physiology in Philadelphia held a symposium entitled "Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution". This symposium was attended by a small group of scientists, including evolutionary biologists whose names will be familiar (Mayr, Medawar, Waddington, Wright, Lewontin), as well as several others that we would call "computer scientists" today. The latter had tried to use evolution-inspired methods to solve complex optimization problems, and they found that this approach failed. This led them to the conclusion that random mutation and selection did not constitute a sufficient theory to account for evolution, and that some other principles were needed. Several of them developed mathematical arguments for the improbability of certain biological outcomes.

The important thing to note is that the organizers of the conference brought together these two groups for the specific purpose of discussing challenges to the prevailing view, challenges that were judged creditable and that were brought forth by scientists.

The symposium volume, dated 1967, is very interesting reading. It is at this symposium, during a transcribed discussion included in the volume, where Medawar says "The whole real guts of evolution— which is, how do you come to have horses and tigers, and things— is outside the mathematical theory. So when people say that a



thing is vacuous, I think they may be thinking of this part of it.” I had seen this quote before, but it was always truncated after “horses and tigers and things”.

More to the point, the Wistar Symposium, 1967, seems to be required reading for advocates of intelligent design. If you poke around on the internet you will find that ID advocates are still drawing arguments straight out of this symposium volume.

Now, please, I do not want to be flooded with emails from people who haven't actually read the Wistar volume and don't actually know anything, but wish to assure me that these and other criticisms of neo-Darwinism have no substance and were rebutted long ago. Save yourself the trouble— I have no need of further evidence of the “circle-the-wagons” mentality.

However, if any of you are interested in responding to the Wistar volume, or if you know of a scientific paper or book that responds to it, please contact me with specific information, and maybe I can start to assemble some kind of resource relevant to this. At the very least, I will summarize any substantive responses and post the results back to evoldir.

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(stoltzfu@umbi.umd.edu) CARB, 9600 Gudelsky  
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240 314 6255, [www.molevol.org/camel](http://www.molevol.org/camel)

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### Evolutionist position on Catholicism

3

Dear Colleagues,

The message of Brian Charlesworth refers to the old question of material versus immaterial world. In a physic world the miracles described in the Bible and the New Testament, and in the books of other religions, lack any empirical support and can not be verified by experiments. But are material objects the only real thing existing in our world? The position of Charlesworth deserves all my respect, as I believe that God created us free to think and to choose. However, I do not see in his statements the same kind of respect for those who believe in things that can only be seen with eyes of the faith. The attempt to make the religious messages to appear as merely and stupid things, and to call ridiculous the people having religious beliefs, is to me the same lack of tolerance that in (fortunately over-come) past times other fundamentalists people applied

to non-believers, even bringing them into fire.

– Prof. José Serrano. Departamento de Zoología. Facultad de Veterinaria. Universidad de Murcia. Campus de Espinardo. 30071. Murcia (Spain)

Jose Serrano <jserrano@um.es>

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### Evolutionist position on Catholicism

4

Guido Barbujani mirrors my own thoughts. Informed commentary on evolutionary theory or any other subject, from any source, should be welcome (my first department Head was a music critic for the local paper). Conrariwise, the musings of a (so far as I know) scientifically uninformed Catholic apparatchik on a scientific matter are of no relevance. We should recall Professor Huxley's response to Bishop Wilberforce. The matter is relevant only in a socio-political context, in which in my own country the so-called “Christian” Right seems to be finding strange bedfellows among newly-conservative Catholic theologians. They're welcome to each other; I affirm my preference for the ape, or at least the mitochondrial Eve.

Steve Carr

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### Evolutionist position on Catholicism

5

Dear Friends,I wonder if I am the only one who is impressed by weakness of the objections to Brian Charlesworth's query. The claim that science and religion are compatible with each other seems largely to have reduced to idea that religion deals in matters that are ultimately unknowable and so cannot be touched by science. This would be fair enough, I suppose, if the intention were to show that religion is of no inter-

est whatsoever to scientifically-minded people, but instead it is somehow regarded as legitimizing religion as part of a scientist's worldview. This is what I regard as remarkable. In my youth, while I was still religious (disclosure: Society of Friends, or Quakers, of which I retain a large ethnic imprint), I regarded the existence and nature of God as quite open to empirical investigation and wondered why no one seemed to be doing just that. We now see why.

To those who continue to maintain that religion and science are compatible, I always say flatly No, they are not. And the reason has nothing to do with the evidence. Religion is based on faith. Science is based on doubt. One cannot have both without admitting to a sort of schizophrenia, with some rather heavy costs.

Yours for Doubt,

Christopher K. Starr Dep't of Life Sciences University of the West Indies St Augustine, Trinidad & Tobago tel (868) 645-3232 ext 3096 or 662-2002 ext 3096 fax (868) 663-5241 or 663-9684 <http://www.uwi.tt:8081/lifesci/index.htm> "Christopher K. Starr" <ckstarr99@hotmail.com>

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## Evolutionist position on Catholicism

6

There is also a purely pragmatic issue at stake here. Regardless of what we may think about religious faith, it is not only here to stay but it is clearly gaining political power and an increasingly central place in public life, at least in the United States. There is little reason to expect that this will change any time soon. Thus, like it or not, we have to deal with the fact that most Americans, and their elected leaders who plot research and education budgets and policy, are "people of faith". Responding to creationist challenges, ridiculous as they may be, by insulting religious people in general is shooting ourselves in the foot. This will just support the creationist caricature of scientists as elitist atheists (communists, etc.) who are out of touch with normal people.

There can obviously be no compromise on the objectivity and evidentiary basis of scientific knowledge, and we are all obligated personally as scientists to uphold those standards and communicate them effectively to the general public. Nevertheless, we can neither ignore religion nor dismiss it. If rigorous, objective science is to survive and thrive, we will have to find common

ground and ways to engage creatively and productively with the open-minded but quiet majority of religious people.

Emmett Duffy

Emmett Duffy <jeduffy@vims.edu>

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## Evolutionist position on Catholicism

7

After reading several messages that try, to varying degrees, to reconcile empirical and magical thinking, I feel it's time for more of us (scientists) step forward to publicly echo and defend Brian Charlesworth's views on the latter. Brian rightly expressed incredulous dismay that core claims of some long-outmoded ancient cosmologies (from southwest Asia, in particular) continue to hold sway in our society, and continue to demand our nominal 'respect', as Jose Serrano put it, if not our outright adherence.

As I see it, an adult who claimed that Santa Claus or a floating pink elephant actually existed and was watching over them would be widely scoffed at, if not deemed insane. Yet somehow the belief that a parthenogenetically born, invisible, all-knowing sky-man who died 2000 years ago is watching over one is considered a tenet of 'faith' not to be publicly ridiculed or subjected to the same sort of scrutiny deserved by any earnest claim about reality.

As evolutionists, we might spend a bit more time and effort considering how the capacities for spreading and adopting such empirically groundless beliefs have evolved in humans – i.e. how such beliefs may serve the interests of particular individuals in a hierarchical primate social structure, how they may function to distort and exploit the perception of kin relations (one thinks of the rife kinship terms in many religious contexts, for example) – and less time and effort appeasing institutions that feel so threatened by the potential demise of such beliefs.

Despite widespread protestations to the contrary, modern cosmology (and its implied sub-fields, such as biology) -is- in direct and inescapable conflict with many fossilized claims derived from older cosmologies. Think of the struggles of Galileo and Huxley – but think also of Kennewick Man; of the current strife over astronomy at Kitt Peak in Arizona; of reproductive luddites who invoke mealy concepts like 'the sanctity of [specifi-

cally human] life; and of the Catholic church's tortuous dissembling on evolution.

Scientists have no duty to graciously duck such conflicts, or to help society sweep them under a rug of 'tolerance' – rather, we ought to be forcefully pointing out the ways in which human insight has advanced, and the ways in which longterm societal interests may be best served by adopting new insight, rather than clinging to patently silly ideas. Ideological relativism – 'your ideas are inherently fine, and mine are inherently fine' – is simply inconsistent with the public responsibility of every scientist.

Nathaniel Pearson University of Chicago

Nathan Pearson <n-pearson@uchicago.edu>

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## Evolutionist position on Catholicism

8

Greetings,

I, for one, applaud Dr. Charlesworth's forthright statement. Not only do I agree with his position, but I think it expresses respect for others in its clarity and honesty. We do not do society a favor by blurring our position with politically correct language. Intolerance and disagreement are different things.

I also think that this is a critical time for the material-only viewpoint, which I see as fundamental to all science, to be clearly articulated to the general public. I know that there are many scientists who have faith in the existence of immaterial things and I do not want to debate that issue here. My point is that the material-only view needs to be made clear as a plausible theory to all. In my opinion, devotion to mythologies has often led humans to counter-productive and even destructive behavior. Further, religion is currently fueling a dangerous global situation, or it is being used as a foil to the same end. Either way, awareness of a plausible material-only perspective should have a calming influence over a smoldering situation.

Guy Hoelzer Department of Biology University of Nevada Reno Reno, NV 89557

Phone: 775-784-4860 Fax: 775-784-1302

"Guy A. Hoelzer" <hoelzer@unr.edu>

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## Evolutionist position on Catholicism

9

Dear Colleagues:

I have read with interest the recent comments on evolution and Catholicism. I am myself an evolutionary biologist and a practicing Catholic, something I have never seen to be contradictory, based on the authoritative teaching of the Church since Pope Pius XII and a philosophical tradition that goes back many centuries. It is sometimes said that anti-Catholicism is the last socially acceptable prejudice, and unfortunately we have seen some evidence of the truth of this statement in recent postings.

In my opinion, the creationists (both the crude "young earth" creationists and the slicker ID types) make a fundamental philosophical error: a confusion between natural science and first philosophy (or metaphysics). The distinction between natural science and first philosophy goes back in the Catholic tradition to at least St. Augustine and Boethius, and it was a key idea in the philosophical system of St. Thomas Aquinas. The concept of a Creator (or even of an "intelligent designer") is an idea of first philosophy and thus is outside the realm of natural science.

It is important, however, that evolutionary biologists not make the same philosophical error. Some evolutionists may dismiss first philosophy altogether (as do logical positivist philosophers such as Quine), but even a belief in the absence of any metaphysical reality is a statement within the realm of metaphysics, not a statement of natural science. Natural science in and of itself can no more disprove the existence of any metaphysical reality than it can prove its existence.

In Pope John Paul II's famous 1996 letter (of which Cardinal Schoenborn seemed so dismissive), he warned Catholics against a philosophy of "evolutionism," which uses the fact of biological evolution as an unwarranted basis for creating a materialistic first philosophy. If one gets past the pugnacious tone of Cardinal Schoenborn's letter, one can see that he is really saying the same thing. Rather bizarrely, Cardinal Schoenborn has given the name "Neo-Darwinism" to the materialist philosophy he is opposing. This is very confusing for biologists, since we are accustomed to use the term "Neo-Darwinism" to designate the synthetic evolutionary theory that forms the theoretical basis of modern

biology. The cardinal is using this term in a very different sense, and I'm not sure what is the origin of this eccentric usage. It is also worth noting that the opinions expressed by Cardinal Schoenborn are his own; he has no status to speak in the name of the universal Church.

However, we all should be able to share Cardinal Schoenborn's concern for the erosion of reason in recent years. Philosophical error is rampant on both sides of recent debates about evolution, as indeed in some of the other heated debates that characterize our society at the present time.

Austin Hughes

"Austin L. Hughes" <austin@biol.sc.edu>

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### Evolutionist position on religion 17

The exchange of opinion after Cardinal Schoenborn's op-ed shows by itself that it is an empirical fact that evolutionary biologists can combine evolutionary biology as a science and religion. Moreover, this is well known: remember Dobzhansky, David Lack, Simon Conway Morris among others, and two scientists both called Miller (paleontology and biochemistry) who have done good work in the US denouncing ID. Combining religion and science it therefore shown to be possible - the sort of fact that cannot be denied by anyone's private opinion.

The position that science by itself leads to atheism as a world view is the main contention and overriding motivation of the ID ideologues. If we espouse this view, we grant ID its main point. After all, ID is not primarily about science - it is part of a movement that sees the world as sharply divided between atheists and Christians, and attacking evolution as if it equals atheism is their public relations point. ID 'science' is not that important anyway; it has not advanced over the last 10 years, and science is not the main effort of the Wedge movement. The ID movement tries to force us into a world that is sharply divided into two opposing camps, not so much on science, but on the role of religion in culture. I think the answer to ID is that they have the relation between evolution and religion wrong to start with, that the world is not as black / white as zelotes see it.

Gerdien de Jong

dr Gerdien de Jong Evolutionaire Populatiebiologie

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tot 1 augustus 2005: University of California Riverside, CA 95207

g.dejong@bio.uu.nl

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### FMBio system II

Dear evoldir members,

We are a lab doing population genetics and phylogenetics research on coral and sea urchins in Hawaii. We would be interested in doing microstallite analyses for some of the projects, so we are looking for a FMBio System II to visualize Tamra staining. MiraiBio now only offers the new FMBio System III, which is quite expansive. We are looking for a used instrument that we could buy from another lab, so if you want to sell yours, please let us know as we are ready to bargain! Thanks a lot,

Catherine Lippé Lab technician University of Hawaii at Manoa lippe@hawaii.edu

C L <lippe@hawaii.edu>

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### ForestBiodiversityEurope mailing list

Dear EvolDir members, please take note on a new yahoo group mailing list:

ForestBiodiversityEurope

The main goal of this group is to discuss professional opportunities of European researchers that work on common topics such as Forest Biodiversity and Forest Genetic Resources but are in different countries or laboratories.

This mailing list offers also a unique opportunity for scientists from different institutions throughout Europe to create links for future cooperation.

The other objective of ForestBiodiversityEurope group is also to share information about, scholarships, grants, conferences, study abroad opportunities, exchange programs, professional training programs and internships

for PhD students and young researchers that works on Forest Biodiversity topics.

The final objective is to gather round a critical mass of senior researchers and young researchers in order to cross disseminate information, experience, knowledge, theories and opinions.

<http://groups.yahoo.com/group/-ForestBiodiversityEurope/> Dragos Postolache  
Scientific Researcher ROMANIA Simeria Forest  
Research Station [www.icashd.rdslink.ro/indexr.html](http://www.icashd.rdslink.ro/indexr.html)

Dragos POSTOLACHE  
<dragospostolache@yahoo.com>

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## GenePop Arlequin DataConverting

Dear All It is very appreciated. If you show me, how I can covert data from GenePop to Arlequin for running arlequin, or quick ways to format microsatellite data for running arlequin. I have tried the tools for converting data in arlequin but it did not work.

Cheers Binh

Binh Thai PhD Research Student School of Ecology and Environment Deakin University P.O. Box 423 Warrnambool, Victoria, 3280 AUSTRALIA Phone: +61 3 5563 3569, +61 431 745 873 Fax: +61 3 5563 3462 e-mail: [tbt@deakin.edu.au](mailto:tbt@deakin.edu.au)

Binh Thai <[tbt@deakin.edu.au](mailto:tbt@deakin.edu.au)>

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## God Love Religion Reason

Dear all,

I have read with interest the postings on evolution and catholicism. I think we need to focuss the discussion. Several writers have written about God and Love and religion and reason. I thought you may like to hear Gandhi who did a lot of thinking about some of these things in his search for how to develop a peaceful society:

“ My religion is based on truth and non-violence. Truth is my God. Non-violence is the means of realising Him”

“ There should be truth in thought, truth in speech,

and truth in action. To the man who has realised this truth in perfection, nothing else remains to be known because all knowledge is necessarily included in it.”

“ No religion which is narrow and which cannot satisfy the test of reason, will survive the coming reconstruction of society in which the value will have changed and character, not possession of wealth, title, or birth will be the test of merit.”

Gandhi said that non-violence is not possible without a living belief in God. I do not know if this statement was his final judgement about human nature regarding the need of a God (regardless of the march of science and arts in search of truth) or a true reflection of his own belief in God. I believe it is the former as his statement equating God with Truth would suggest that he did not believe in God the way organized religions do.

One writer wrote that Love can not be measured. Sure it can be - by counting absence of wars, bloodshed, poverty and hatred!

I think the discussion should be steered away from dwelling on past confrontation between science and faith (religion) and towards what we can do, as scientists and citizens, to convince people, slowly but steadily, to restore religion to a “reason-based” enquiry and dialogue about life and world.

I think who decides what should be taught in the schools about the origins and diversity of life, and how to convince religious leaders, around the world, that “reason” is the most potent weapon against ignorance and hatred - are the two most important points for scientists to confront in this war.

Rama Singh

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Rama S Singh <[singh@mcmaster.ca](mailto:singh@mcmaster.ca)>

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## LeontodonAsteraceae samples

We are seeking seeds from multiple species and populations of Leontodon for a survey of genome sizes in the genus to find a candidate for genome sequencing. Most species in Asteraceae have rather large genomes that make them poor candidates for sequencing. Leontodon longirostris has the lowest recorded 2C-value in Aster-



aceae ( $2C = 0.8$ ), putting it in the appropriate range for sequencing. Only five species in the genus have records in the Kew C-value database. We are surveying the genus in order to identify candidates for sequencing. If you have *Leontodon* seeds that you could send, or have access to living material and would like to obtain genome size estimates, please contact us.

Thanks,

Eric Baack Loren Rieseberg

ebaack@indiana.edu ebaack@indiana.edu

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## Liberal view Christianity 2

A liberal view of Christianity

(This follows the first posting with sections I and II)

III. The greatest difficulty in comprehend the message of Love

Both the New and the Old Testaments used many parables. A parable is a thought experiment (or gedankenexperiment that had been used many times by Ernst Mayer in his popular writings). Before I highlight the greatest difficulty in comprehend the message of Love, I wish to share with you a parable that is not from the Bible, but from ancient Greek - Plato's allegory of the cave.

Imagine prisoners chained since childhood inside a cave, with their heads immobilized in such a way that their eyes are fixed on a wall. Immediately behind the prisoners is a road along which men, animals and other things travel. Behind the road is an enormous fire that projects the shadow of the travelers to the wall that the prisoners are facing. Also, the voice of the travelers is echoed from the wall in such a way that the prisoners believe that the words come from the shadows. Gradually, the prisoners become quite good in identifying the travelers by their shadows and voices that constitute the "reality" in their minds.

Now suppose a prisoner is freed. Gradually he will comprehend a new reality. Once thus enlightened, he naturally would want to return to the cave to convey the new reality to his fellow prisoners. Unfortunately, once back in the cave, he finds himself much less able to identify the travelers by their shadows than his fellow prisoners. Being thus perceived as inferior by his fellow prisoners, he fails completely in communicating the new reality to his fellow prisoners who believe to know

better. The fellow prisoners are too arrogance to listen.

It is the arrogance in the mind of the prisoners that prevents them from comprehending the new reality.

It is the arrogance in the mind of the ancient Jews that prevented them from comprehending the word of Love.

Human arrogance is the greatest barrier standing between us and the word of Love. The Bible states that all humans are sinners, that human arrogance is the most fundamental sin, and that Satan is the embodiment of arrogance. One might note that the Bible has no record of Satan as a rapist or a maker and user of WMD (Indeed, the easily identifiable mass-killer in the Bible is not Satan but God himself). Satan is arrogance. Arrogance can do a great evil, and is the root cause of all human conflicts.

God made two everlasting calls to human in the book of Genesis. When Adam and Eve were persuaded to believe that they knew better and ate the apple, God was then unable to find them where they should have been, and He made the first everlasting call to man: "Where are you?"

When the arrogance in Cain's mind persuaded him to believe that he deserved better and drove him to kill his brother Abel, God made the second everlasting call to man: "Where is your brother Abel?"

"Where are you?"

"Where is your brother Abel?"

Where are we?

Where are our brothers and sisters?

Should we be so arrogant as to dismiss the questions entirely? Surely they are not scientific questions, but they are not intended to be scientific questions.

IV. Gedankenexperiment and reality: the separation of the physical and the spiritual worlds

I wish to highlight one more point from Plato's allegory of the cave. We should not confuse a parable with physical reality. If, after hearing Plato's allegory of the cave, one insists in the existence of the cave and the group of prisoners, and takes upon himself to find the cave on certain continent and the prisoners in certain history books, then one surely has missed entirely the message behind the parable. Yet many evolutionary biologists (e.g., Prof. Brian Charlesworth) have demanded to see such caves before they will pay attention to religion, and many creation scientists have been determined to produce such caves (and indeed have found many of them).

The Bible is a giant parable to convey the message of

Love and eternity. There is no cave or prisoner to be found.

I have previously mentioned the four major difficulties in understanding Love, i.e., (1) Love is eternal, (2) Love is incompatible with an arrogant mind, (3) Love is spiritual, and (4) our limited view of Love is often confounded by the evil which is called Satan in the Bible. So far I have covered the first three major difficulties.

The next section (i.e., section V) will cover the fourth difficulty, and section VI deals with something that few of us would have expected, i.e., the extremely similarity in the way of thinking between the Christian fundamentalists and the neo-Darwinian scientists.

Here are the section titles:

V. The fundamental difference between the forefathers of USA and President Bush

VI. The similarity between Christian fundamentalists and the evolutionary fundamentalists (the hardened neo-Darwinians): the Panglossian paradigm in religion and evolution

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This message has been arbitrarily truncated at 5000 characters. To read the entire message look it up at <http://life.biology.mcmaster.ca/~brian/evodir.html>

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## Lists for origins discussions

In an effort to move this discussion elsewhere, listed at the bottom of this message are some of the lists designed for the purposes of discussion that deal with creation.

I will continue to post messages dealing with this subject on the website, but for those messages that go through me directly, I will no longer place them in the queue for nightly mailings.

Brian Golding

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<http://groups-beta.google.com/group/ScienceInEvolution> Science In Evolution Group description: This is a science list designed to examine the arguments put forth by creation “science”. The following will not be tolerated: Personal assaults, politics, religion. Beyond that, please feel free to state the scientific theory of creation, or to ask questions

about the evidence for evolution.

<http://groups-beta.google.com/group/ssandc> Towards a New Synthesis of Evangelical Christianity and Science Group description: This group seeks to be a site where posters can air and discuss alternatives to both evolution and fundamentalism ideas of the origin and development of life on earth. It also seeks to provide a space where original interpretations of science and the Bible.

<http://groups-beta.google.com/group/Evolution-of-religion> Religion for Evolution Group description: Evolution is universal and applies to all things physical and social. Religions, cultures, politics, sports, etc. use social instincts for identity. Group bonding is emotional and instinctual. Survival by group identity applies to all social animals. Consciousness is a measured achievement.

sci.bio.evolution <http://groups-beta.google.com/group/sci.bio.evolution> Description: Discussions of evolutionary biology. (Moderated)

bionet.molbio.evolution Description: Discussions about research in molecular evolution (Moderated) <http://groups-beta.google.com/group/bionet.molbio.evolution>

talk.origins Description: Evolution versus creationism (sometimes hot!). (Moderated) <http://groups-beta.google.com/group/talk.origins>

alt.talk.creationism <http://groups-beta.google.com/group/alt.talk.creationism> evolution ngo <http://groups-beta.google.com/group/evolution-ngo> Group description: ideas for formulating an ngo dedicated to providing community resources for the advancement of science education.

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Golding@McMaster.ca

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## MSat dosage compensation

Dear EvoDir members, I'm working with polyploid animals and I use some microsatellite primers that show dosage effect (most of them run on an ABI3100 system). As longer fragments get amplified less than shorter fragments, I have to compensate for these effects, especially at short loci (meaning: a dosage proportion of 2:1 means not the same for loci 79bp/86bp as for 79bp/104bp). I have calculated a compensation factor that I can use, but are there any publications that deal with the lesser amplification of larger alleles? Maybe

somebody has even developed a formula for such cases? I'd be happy for any suggestions... Cheers, -Christian

Christian Jakob Zoological Institute University of Zurich Winterthurerstrasse 190 CH-8057 Zurich, Switzerland christian.jakob@zool.unizh.ch

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### Make it stop

Dear all,

Can we please agree that this discussion on God/Love/Catholicism/ Gandhi/Other-stuff-not-to-do-with-science has nothing to do with running evolutionary analysis software, advertising evolutionary conferences, postdoctoral research positions in evolutionary biology, or evolutionary biological research in general? This is really distracting and is quite irrelevant to the day-to-day purpose of this email list. I just typed in "Religious mailing lists" in Google and it seems that the people who would like to continue this conversation for another 50 posts have plenty of alternative venues. Please use them.

Alexei

- Dr Alexei Drummond Lecturer in Bioinformatics, Department of Computer Science The University of Auckland Private Bag 92019, Auckland, New Zealand Ph: +64 9 3737599 ext 88298 Email: alexei@cs.auckland.ac.nz WWW: <http://www.cs.auckland.ac.nz/~alexei>

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### More on the Archbishop

With all respect due the Archbishop of Vienna (NY Times July 7, 2005, "Finding Design in Nature"), I object to his general thesis that "faith and reason" oppose "Neo-Darwinism and atheism". Mixing up the philosophy of atheism with the science of evolution is a common mistake, an error that comes from both from the anti-evolutionists and those who oppose traditional religions. The Archbishop's logical leap, that atheism and "Darwinism" are one and the same, misses one of the most important aspects of science. Science, including evolution, is agnostic with reference to "final causes". The scientific method can't tell us whether (or

not) we are ultimately directed by some "higher" intelligence. By studying evolution, scientists can't know, ultimately, whether order in nature provides evidence for or against a designer, intelligent or otherwise. Theologians other than the Archbishop have been clear on this distinction. In his search for prior texts about the relationship between faith and science, the Archbishop should have gone farther into the past, perhaps to St. Augustine in the 4th century. Or he could have returned just to 1852, when John Henry Newman wrote "I believe in design because I believe in God, not in God because I see design." As for scientists, understanding evolution may make them feel as fulfilled atheists, but they too should realize that this feeling comes from faith, not from science.

- Michael F. Antolin

Department of Biology Colorado State University Fort Collins, CO 80523-1878 U.S.A.

e-mail: Michael.Antolin@ColoState.edu Voice: (1)-970-491-1911 FAX: (1)-970-491-0649

Colorado State University Plague Project: <http://rydberg.biology.colostate.edu/plagweb/> Short Grass Steppe Long Term Ecological Research project: <http://sgs.cnr.colostate.edu/> Program Integrating Mathematics, Ecology and Statistics (PRIMES) NSF IGERT Graduate Training Program <http://www.primes.colostate.edu> michael.antolin@colostate.edu

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### Moss DNA extractions

We are attempting with very mixed success to extract DNA from Antarctic moss samples in order to generate primers for microsatellite to genotype using existing primers. Success with a variety of standard extraction protocols has been very patchy. Does anyone have a recommended method for moss.

David Ayre

School of Biological Sciences, University of Wollongong dja@uow.edu.au

dja@uow.edu.au

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## Move Catholicism debate to another newsgroup

I'm tired of getting hundreds of these Catholicism mails. I'm really not interested in what the pope or any religion for that matter has to say about evolution. Can we keep this a scientific newsgroup and can the people interested in that topic please start their own newsgroup! I'm sorry if I hurt any religious feelings here. Thanks, Max

MK <maximilianotto@gmx.at>

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## Move the discussion

Thank you! My mailbox is filled with enough spam as it is. We went through this back in the 1990's when Brian first created the Evoldir site. Back then it quickly became a forum for people to express opinions about various things, carry on public debates, etc... We agreed as a community to end that use of the site and to keep it focused on professional topics such as job and meeting announcements. I propose we go back to that model, else I and probably others will just take our names off the list. Best, Mike

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Michael Blouin Dept. Zoology Oregon State University Corvallis, OR 97331 541-737-2362 <http://oregonstate.edu/~blouinm/index.htm> — Original Message — From: <evoldir@evol.biology.mcmaster.ca> To: <blouinm@bcc.orst.edu> Sent: Sunday, July 24, 2005 10:40 PM Subject: Other: Move the discussion elsewhere

> > While I have strong opinions about all this (that is, if anything, I'd > say that Brian Charlesworth understated a number of points) I also feel > that I didn't sign on for dozens of daily emails in this discussion, and > messages like this bit of evangelism aren't even to the point. Can the > discussion be moved elsewhere? > > Gordon Fox > > I'll echo an earlier poster: > > evoldir@evol.biology.mcmaster.ca wrote: > >>A liberal view of Christianity >>>By Xuhua Xia (a liberal

Christian) >> >>I. What is God? >> >>The Christian Bible defines God explicitly in the first book of John: "He >>who does not love does not know God, for God is love." [1 John 4:8]. >> >>God is love. In fact, little confusion will arise if I use God and Love as >>synonyms, which is what I will do in the following sections. >> >>Given that God is love, one might think that few would have rejected God >>and >>the message of Love. However, there are fundamental difficulties for us to >>comprehend the message of Love. >> >>II. Fundamental difficulties in communicating the message of Love >> >>There are three major difficulties for us to comprehend Love. First, Love >>is >>eternal. Second, Love is spiritual. Third, our limited view of Love is >>often >>confounded by the evil which is called Satan in the Bible. For these >>reasons, people of wisdom from time immemorial have almost always >>reluctant >>to spread the word of Love. >> >>The book of Jonah in the Old Testament tells of a prophet Jonah who was >>instructed by God to bring a message of God to the city of Nineveh. Jonah >>found the job so difficult to carry out that he would rather die than >>going >>to Nineveh, trying all he could to run away from Nineveh. It is indeed >>very >>difficult to spread the word of God to the Ninevites or to any one who >>does >>not believe in God. I know this because, at this very moment, I can feel >>what Jonah had felt. >> >>Let me take a little detour. Suppose you see a female swallow building a >>nest under the eave of a house that is about to collapse after having stood >>for 300 years. You probably would have a strong desire to communicate to >>the >>swallow that the house is about to collapse and that poor little baby >>swallows would be crushed. But there are two immediate difficulties >>associated with the communication. First, you do not speak the swallow >>language. Second, the swallow, being short lived, does not have a good >>concept of the life span of the house. The house might have looked the >>same >>to her ever since she was born. Thus, even if you can transform yourself >>into a swallow and can speak the swallow language, it will still be nearly >>impossible to communicate to the swallow that the house is at the very end >>of its 300 years of age. >> >>If swallows are difficult in grasp the concept of a few centuries, will we >>be in a much better position to comprehend the concept of eternity? >> >>Jesus was the transformed swallow who tried to tell people that they were >>building their nests in a house that was about to collapse. Because of the >>difficulty of his contemporaries in understanding the concept of eternity, >>he had used many parables. However, the message of Love did not get >>through >>and Jesus was crucified. >> >>Today's scientists

are much better equipped to comprehend the eternity >>than >>those in Jesus' time. Most biologists today are at ease talking about >>evolutionary events spanning millions or even billions of years. However, >>many of them are hardened in such a materialistic way that they would deny >>anything spiritual. If Love cannot be measured in meters or grams or hours >>or degrees or joules or centi-morgans, then there is no material basis of

— / —

This message has been arbitrarily truncated at 5000 characters. To read the entire message look it up at <http://life.biology.mcmaster.ca/~brian/evoldir.html>

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## Move the discussion 2

I agree that it would be a good idea to create a discussion forum for this area of debate. I am forwarding these emails to other scientists outside biology who are interested in the evolution v creationist debate. I think it would be good if other people outside biology could sign onto the list to join in this debate group, who are not necessarily interested in any of the other subjects in the directory.

Alternatively, maybe you could set up a daily digest containing all the emails on this subject, which is sent out to people once daily. Then people can simply delete it if they are not interested.

Best wishes, Cat

—Original Message— From: [evoldir@evol.biology.mcmaster.ca](mailto:evoldir@evol.biology.mcmaster.ca)  
[mailto:evoldir@evol.biology.mcmaster.ca] Sent: 25 July 2005 06:34 To: catherine.jones-3@student.manchester.ac.uk Subject: Other: please move the Catholicism debate to another newsgroup

I'm tired of getting hundreds of these Catholicism mails. I'm really not interested in what the pope or any religion for that matter has to say about evolution. Can we keep this a scientific newsgroup and can the people interested in that topic please start their own newsgroup! I'm sorry if I hurt any religious feelings here. Thanks, Max

MK <maximilianotto@gmx.at>

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## Move the discussion elsewhere

While I have strong opinions about all this (that is, if anything, I'd say that Brian Charlesworth understated a number of points) I also feel that I didn't sign on for dozens of daily emails in this discussion, and messages like this bit of evangelism aren't even to the point. Can the discussion be moved elsewhere?

Gordon Fox

I'll echo an earlier poster:

evoldir@evol.biology.mcmaster.ca wrote:

>A liberal view of Christianity >By Xuhua Xia (a liberal Christian) > >I. What is God? > >The Christian Bible defines God explicitly in the first book of John: "He >who does not love does not know God, for God is love." [1 John 4:8]. > >God is love. In fact, little confusion will arise if I use God and Love as >synonyms, which is what I will do in the following sections. > >Given that God is love, one might think that few would have rejected God and >the message of Love. However, there are fundamental difficulties for us to >comprehend the message of Love. > >II. Fundamental difficulties in communicating the message of Love > >There are three major difficulties for us to comprehend Love. First, Love is >eternal. Second, Love is spiritual. Third, our limited view of Love is often >confounded by the evil which is called Satan in the Bible. For these >reasons, people of wisdom from time immemorial have almost always reluctant >to spread the word of Love. > >The book of Jonah in the Old Testament tells of a prophet Jonah who was >instructed by God to bring a message of God to the city of Nineveh. Jonah >found the job so difficult to carry out that he would rather die than going >to Nineveh, trying all he could to run away from Nineveh. It is indeed very >difficult to spread the word of God to the Ninevites or to any one who does >not believe in God. I know this because, at this very moment, I can feel >what Jonah had felt. > >Let me take a little detour. Suppose you see a female swallow building a >nest under the eave of a house that is about to collapse after having stood >for 300 years. You probably would have a strong desire to communicate to the >swallow that the house is about to collapse and that poor little baby >swallows would be crushed. But there are two immediate difficulties >associated with the communication. First, you do not speak the



swallow >language. Second, the swallow, being short lived, does not have a good >concept of the life span of the house. The house might have looked the same >to her ever since she was born. Thus, even if you can transform yourself >into a swallow and can speak the swallow language, it will still be nearly >impossible to communicate to the swallow that the house is at the very end >of its 300 years of age. > >If swallows are difficult in grasp the concept of a few centuries, will we >be in a much better position to comprehend the concept of eternity? > >Jesus was the transformed swallow who tried to tell people that they were >building their nests in a house that was about to collapse. Because of the >difficulty of his contemporaries in understanding the concept of eternity, >he had used many parables. However, the message of Love did not get through >and Jesus was crucified. > >Today's scientists are much better equipped to comprehend the eternity than >those in Jesus' time. Most biologists today are at ease talking about >evolutionary events spanning millions or even billions of years. However, >many of them are hardened in such a materialistic way that they would deny >anything spiritual. If Love cannot be measured in meters or grams or hours >or degrees or joules or centi-morgans, then there is no material basis of >Love. And anything that does not have a material basis should be dismissed >and ignored. > >Do we really want to deny the existence of Love? > >Probably many of us may not want to deny the existence of Love, even if it >cannot be measured in meters or grams or hours or degrees or joules or >centi-morgans. Will we then be in a good position to comprehend the message >of Love? > >In the next posting, I will highlight the greatest difficulty in comprehend >the message of Love. > >Best. >Xuhua > >Dr. Xuhua Xia >CAREG and Biology Department >University of Ottawa >150 Louis Pasteur, P.O. Box 450, Station A >Ottawa, Ontario >Canada K1N 6N5 >Tel: (613) 562-5800 ext 6886 >Fax: (613) 562-5486 >URL: <http://aix1.uottawa.ca/~xxia> > >Xuhua.Xia@uottawa.ca > > >

– Dr. Gordon A. Fox Voice: (813)974-7352 Fax: (813)974-3263 Dept. of Biology ((for US mail:)SCA 110) ((for FedEx etc:)BSF 156) Univ. of South Florida 4202 E. Fowler Ave. Tampa, FL 33620, USA <http://boojum.cas.usf.edu/index.pl/home>

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This message has been arbitrarily truncated at 5000 characters. To read the entire message look it up at <http://life.biology.mcmaster.ca/~brian/evoldir.html>

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## MrBayes models

Can anybody help me with the implemenation of models in MrBayes?

I have a dataset of 18S ribosomal RNA for which I have identified the stem and loop regions. I am implementing a doublet model for the stem regions (partition 1). Then I ran the loop regions (partition 2) through Modeltest, resulting in TrN+I+G as the appropriate model. According to this model, there are two distinct transition rates, but only one transversion rate. Is there any way to implement this in MrBayes? As I understand it, the lset settings for partition 2 would be: `nucmodelKy4 Nst=3 rates=gamma` But: the possible values for Nst are restricted to 1, 2 or 6 And what about the invariable sites? If I cannot implement Nst=3, is it advisable to go up to Nst = 6, resulting in a more complex GTR model and probably longer computation times? Any help is appreciated. Thanks, Anja

Anja Schulze, postdoctoral fellow Smithsonian Marine Station 701 Seaway Drive Fort Pierce, FL 34949, USA Phone: 772-465-6630 x 105 Email: [schulze@sms.si.edu](mailto:schulze@sms.si.edu)

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## MultiplexPCR primer design

Hi all!

I am looking for a good program to design primers for a multiplex- PCR to detect simultaneously several indel polymorphisms between two closely related species. Ideally, from a set of sequences from both species, the program should align sequences, find indel polymorphisms and design the appropriate primers for these. Any suggestions?

Thank you very much for your answers!!

Maria Margarita Ramos EEB Dept, Princeton University

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## NYT Op-Ed considered

This is just a short follow-up to the posting on Evoldir of the 7 July 2005 NYT Op-Ed piece by Christoph Schönborn. In that piece Cardinal Schönborn dismisses Pope John Paul's 1996 statement (e.g. evolution is "more than a hypothesis") as "...vague and unimportant..." An outsider might wonder, however, if that view conflicts with the notion of papal infallibility which the Cardinal does support as "important and valid" (Catholic News Service 1 April 2005). Infallibility is hard and cuts at least two ways.

On a related topic, to see an open letter concerning science and religion which has been signed by over 5000 Christian clergy urging "school board members to preserve the integrity of the science curriculum by affirming the teaching of the theory of evolution as a core component of human knowledge" go to <[http://www.uwosh.edu/colleges/cols/religion\\_science\\_collaboration.htm](http://www.uwosh.edu/colleges/cols/religion_science_collaboration.htm)>. This letter may be helpful for those involved with their local public school boards.

David Mindell

David Mindell <[mindell@umich.edu](mailto:mindell@umich.edu)>

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### PAM distance help

Hi all,

I am looking for a way to calculate distances between pairs of protein sequences. I need to implement the algorithm inside my own program so I can't use external tools like phylip package. Currently I'm using PAM250 matrix to infer these distances, but I'm not sure if I am doing it right because my resulting distances are very different than those obtained with protdist(phylip).

Should I use the odd matrix or the frequency matrix?

By the way, can somebody give me an easy example of how to calculate the distance for a simple pair of sequences obtaining a normalized distance between 0 and 1?

For example:

What would be the steps to calculate the distance (0..1) between the following sequences using Pam250.

Seq 1: APTP Seq 2: APAA

ProtDist (phylip) returns this: \_\_\_\_\_  
Seq1 Seq2 Seq1: 0.000000 0.571077 Seq2: 0.571077  
0.000000 \_\_\_\_\_

Perhaps this is silly, but I am really frustrated because I don't get the same values !!!

Thanks in advance!!

- Jaime Huerta Cepas ( [jhuerta@cipf.es](mailto:jhuerta@cipf.es) ) Functional Genomics Unit (Bioinformatics Department) CIPF (Centro de Investigación Príncipe Felipe) Avda. Autopista del Saler, 16 (Junto al Oceanográfico). 46013, Valencia (Spain) Phone: (34) 96 328 96 80 - Fax: (34) 96 328 97 01 <http://bioinfo.cipf.es> [jhuerta@ochoa.fib.es](mailto:jhuerta@ochoa.fib.es)

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### PCR multiplex

Hi all:

I am trying to develop primers for PCR multiplex in *Pagrus pagrus* (sparidae), do you know some software for this purpose?

thanks in advance

Rodrigo.

Atte. Rodrigo Badilla. Biologo Marino. Programa de Doctorado en Acuicultura. ULPGC. Las Palmas, Gran Canaria. España. movil:+34 606237167

[rodrigo.badilla@gmail.com](mailto:rodrigo.badilla@gmail.com)

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### ParentageAnalysis SSR answers

Dear Colleagues, thank you very much for the suggestions, some of which are especially useful. I am copying here the replies I received to the question I posted about 10 days ago: QUESTION Dear Colleagues, could anyone mention existing softwares for parentage analysis that take into account microsatellite size also accounting for possible mistyping errors? I would like to use a method that can assign a higher probability of identity to alleles with very similar size, not a merely qualitative assignment. I will be thankful for your help Daniela Salvini PhD student Center for Forest and Landscape (Arboretum) Royal Veterinary and Agricultural University HKongevej 11 2970 HDENMARK Tel.: 0045 35281639 Fax.: 0045 3528 1511 [dsa@kvl.dk](mailto:dsa@kvl.dk)

\*\*\*\*\*REPLIES\*\*\*\*\*

Daniela, Have you tried using the software program

CERVUS? I don't know exactly off the top of my head where it is available online, but I do know it is available as freeware via the internet. Our lab has had good success using this program conducting parentage assignments for salmonids (i.e., Chinook). Cheers - Cory Cory Bettles Fisheries Biologist Conservation Biology Unit Science Division/Fish Program Washington Dept. Fish & Wildlife 600 Capitol Way N. Olympia, WA 98501-1091 Ph: (360) 902-2801 Fax: (360) 902-2944 Email: bettlcmb@dfw.wa.gov

Brian, She can download PROBMAX from the following site of Dr. Danzmann at Univ. of Guelph. That might serve her purpose. <http://www.uoguelph.ca/~rdanzman/software/PROBMAX/> Cheers! Amit

Hi Daniela, I don't know of any method that takes into account allele size similarity, but I like the program PARENTE, which does take into account error rates in microsatellite typing. Hope that helps, Devon <http://jhered.oxfordjournals.org/cgi/content/full/93/6/458> Good morning Try PROBMAX by Roy Danzmann out of the University of Guelph, Canada or CERVUS is good as well out of the University of Edinburgh, UK as well see if you can get KINSHIP by Christophe Herbinger out of Dalhousie University, Canada. KINSHIP works well but last I heard wasn't publicly available yet ... maybe it is now? Peace Darrin

Dear Daniela, I would recommend the software "Parente" available at <http://www2.ujf-grenoble.fr/leca/membres/manel.html> I join here the computer note which describes this program. You can allow a number of allelic incompatibilities in the parentage analysis, to account for genotyping errors. Hope you will find it useful, Best Eva

Hi Daniela, I assume you mean taking allele size into account only where there is a mismatch (i.e. in the treatment of mutation/scoring error). If so I think that the best publicly available package is probably Papa (Duchesne et al. 2002. Molecular Ecology Notes, 2, 191-193). It should do what you want and has different options for how to treat error/mismatch. Of course using a model like that for errors assumes that the most common type of problem is that you mis-score an allele by one repeat unit. This may be the case e.g. if you are using dinucleotides with a lot of stutter, but sometimes the biggest source of scoring error might be different (e.g. allelic drop-out). Also, while mutation may follow an SMM (or may not...) it's very unlikely to be a major contributor to false exclusions over a single generation. Alastair J Wilson PhD Postdoctoral Research Fellow Alastair.Wilson@ed.ac.uk tel. 0131 6507287 Institute of Evolutionary Biology School of Biological Sciences The University of Edinburgh Ashworth Laborato-

ries The King's Buildings West Mains Road Edinburgh EH9 3JT, UK

Dear Daniela, Currently, PaPa (Package for the Analysis of Parental Allocation) is the only program taking in consideration microsatellite size and typing errors by the parameters e and S. You can download the program from <http://www.bio.ulaval.ca/louisbernatchez/downloads.htm> Best Dirk

Dear Daniela, Jones et Ardren (2003) published an interesting paper about software that could be used in case of parentage analysis. It will be a long story to describe all the methods, this paper summarizes it very well. I've been using PAPA (package for the analysis of parental allocation) for the parentage analysis. PAPA performs parental allocation based on breeding likelihood methods, and comprises simulators that allow statistical assessments of allocation accuracy (including transmission error). Furthermore, this software is user-friendly. Best wishes, nicolas Jones A.G., Ardren W.R. : Methods of parentage analysis in natural populations. Molecular Ecology, 12, 2511-2523, 2003.

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This message has been arbitrarily truncated at 5000 characters. To read the entire message look it up at <http://life.biology.mcmaster.ca/~brian/evodir.html>

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## People working on Sturgeon Sex Specific Markers

Dear Brian

I am a researcher and now studying about "Sex Specific Marker in Sturgeon by AFLP technique". I am really interested to be familiar with other researchers that work in this regards (sex markers in aquatic animals). If it is possible would you please introduce them to me. Thank you.

with best regards Mahtab Yarmohammadi

mahtab yarmohammadi  
<mahtab\_yarmohammadi@yahoo.com>

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Science evolves

Op-Ed piece in the LA times suggesting that scientists need to do a better job of reaching out with their ideas.

<http://www.latimes.com/news/opinion/commentary/-la-oe-wallace17jul17,0,2954031.story?coll=la-news-comment-opinions>

Jason P. Curole USDA Postdoctoral Fellow in Genomics and Genetic Mechanisms Department of Biology Stauffer Hall of Science, Rm 463 835 W 37th Street Los Angeles, CA 90089-1340

Voice: 213-821-3199 Fax: 213-740-8123

[jcurole@usc.edu](mailto:jcurole@usc.edu)

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## Science, its limitations and evolution

Dear All,

As someone who believes that there is much more between heaven and earth than science can (yet?) explain, I look at the evolution versus intelligent design discussion, and I can see why science seems to be at the losing hand. And honestly, I am personally sometimes appalled by how scientists claim their personal beliefs as science.

For me, science and my spiritual beliefs are not mutually exclusive. Science claims to work by the scientific method, of observing, hypothesis building and (repeated) testing before one can establish truth in science. And more precisely, a test that fails to show the presence of something, is no proof for the non-existence of that same something, because one could be just looking at the wrong place, in the wrong way or whatever. Science is therefore inherently limited and the sole reason we still have science is that we do not know everything (yet). And when I look back at the past centuries of scientific research, I see a way paved with discoveries once deemed "impossible", "non-existing", etc. It is the nature of science to discover what we do not yet know. And before the proof, we just do not know (yet).

If I talk about my spiritual beliefs with scientists, they often claim that: "those things do not exist". As long as it is their own belief (aka "I do not believe those things exist"), fine. However, when they claim it is proven by science, I ask for that proof, as I am curious about that. However, I often get a long explanation why they believe it does not exist, but until now, I have not seen the scientific proof of the non-existence of (for example) gods, spirits, etc.

This inherent limitation of science, and the current status of our proven knowledge, leaves a tremendous space uncovered. There are however aspects of my life that are important and are beyond what science can explain, and realizing the inherent limitations of science makes it possible for me to integrate those two.

With evolution, I have the same problem. We have a lot of evidence for the random version of evolution, and we do not need the hand of an intelligent designer to explain evolution. However, due to the inherent limitations of science, we cannot prove a hand of an intelligent designer has been absent completely. However, this does not automatically prove the opposite either, and I yet have to see even a decent indication that it might be true, let alone solid scientific proof for intelligent design, but until now, I have not heard anything else than the perceived impossibility of science to explain certain aspects. And I challenge the ID-people to come up with testable hypotheses that prove the existence of an intelligent designer as a better explanation of the current random-event driven version of evolution. But until we have scientifically proven that intelligent designers do not exist, some people will keep believing in them.

At the moment, I see science losing the cultural war in the US. And I honestly expect that the bud-heading between religious oriented intelligent designers (who have not yet proven anything) and evolutionists (who have not yet proven the non-existence of an intelligent designer) will only increase in the near future. Until scientists adopt a more inclusive stance that does not alienate people of faith, I do not see much improvement. Acknowledging the limitations of science, and the space it leaves for people to believe beyond that point, is in my opinion an important step towards a larger acceptance of evolution by people.

Ok, this were my \$0.02 in this discussion.

Kim (who does not believe in parthenogenesis of humans beyond the petridish, but imagine a wolbachia evolving to just do that.....) - <http://www.kimvdlinde.com> [kim@kimvdlinde.com](mailto:kim@kimvdlinde.com)

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## Scientific faith

Dear Friends, Dr Makarieva is quite mistaken to say that one takes nothing on faith in science. There are exactly three articles of faith at the heart of the natural sciences: 1. The universe exists. (If it does not, then

we are studying nothing.)2. It is lawful. (If it is not, then we have no way to study it.) 3. These laws can be known. (If they cannot, then our efforts are in vain.)

In other words, natural scientists take the bare minimum on faith, that which cannot be avoided. This is why religion and science are absolutely incompatible. The fact that there are some good scientists who are at the same time religious does not in any way demonstrate any compatibility between the two. (It is really quite a foolish argument, one that we should all be embarrassed to see on this site.) It simply demonstrates that humans are immensely flexible, with a great capacity for holding two contradictory ideas at once.

Yours for Doubt,

Christopher K. Starr Dep't of Life Sciences University of the West Indies St Augustine, Trinidad & Tobago tel (868) 645-3232 ext 3096 or 662-2002 ext 3096 fax (868) 663-5241or 663-9684 <http://www.uwi.tt:8081/lifesci/index.htm> "Christopher K. Starr" <ckstarr99@hotmail.com>

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### Scopes trial

a historical treatment of the famed Scopes trial - and this is a look at the legal aspects written by a lawyer / law professor. "As a law professor, I was particularly interested in understanding the legal side of the case. I wondered how the judicial system ended up being a forum for debating such non-legal questions as whether evolution is consistent with the Bible. The answer turns out to be pretty interesting."

<http://volokh.com/> from Orin Kerr July 26, 2005 at 5:55pm - -henry schaffer

hes@unity.ncsu.edu hes@unity.ncsu.edu

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### Silverstaining Acrylamide Gels

Dear Colleague

I am a researcher and I am studying sex marker in Sturgeon by AFLP marker. unfortunately in our lab we dont have radioactive facilities and I have to stain the denature poly acrylamid gels with silverstaining.

would you please advice me, is it possible to analysis with this staining? thank you very much.

with best regards

Mahtab Yarmohammadi

mahtab yarmohammadi  
<mahtab\_yarmohammadi@yahoo.com>

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### SingleCopy gene

Hi all,

I am looking for a single-copy gene as an internal standard for real-time PCR. This gene should be if possible - conserved in vertebrates or at least in birds. Maybe some one has an idea or ready to use degenerated primers ;-).

Thank you,

Iris

- Iris M. Vargas Jentzsch Ph.D. Student School of Biological Sciences University of Canterbury Private Bag 4800 Christchurch - New Zealand

mobile: 0064 021 1623853 e-mail: imj15@student.canterbury.ac.nz

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### Singlecopy genes

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## Singlecopy genes answers

Dear Evoldir members,

I got many useful responses for the question I posted five days ago. Thank you to all who responded. One paper was particularly useful:

Groth, JG and Barowclough GF (1999) Basal divergences in birds and the phylogenetic utility of the nuclear RAG-1 gene. *Molecular phylogenetics and Evolution* 12(2): 115-123

Not sure about beta-actin (if there is a fragment conserved enough but found only in single copy) and I did not try with p53 yet. The responses are pasted below.

Original message:

Hi all,

I am looking for a single-copy gene as an internal standard for real-time PCR. This gene should be, if possible - conserved in vertebrates or at least in birds. Maybe some one has an idea or ready to use degenerated primers ;-).

Thank you,

Iris

Pooled responses:

— This paper reports on duplicated human genes that have conserved, single copy orthologs outside of the human (or primate?) lineage:

Ciccarelli F.D., von Mering C, Suyama M, Harrington E, Izaurralde E, and Bork P. (2005) Complex Genomic Rearrangements Lead to Novel Primate Gene Function. *Genome Res.* 15:343-51.

Don't know if they have primers, though.

Dannie Durand Associate Professor Departments of Biological Sciences and Computer Science Carnegie Mellon University 4400 Fifth Avenue Pittsburgh, PA 15213 email: durand@cmu.edu tel: 1-412-268-6036, fax: 1-412-268-7129 <http://www.cs.cmu.edu/~durand/Lab>

— Hey Iris,

what about beta-Actin?

cheers,

dominio

— Hi Iris

Have a look at RAG-1 it may suit your needs

see Groth, JG and Barowclough GF (1999) Basal divergences in birds and the phylogenetic utility of the nuclear RAG-1 gene. *Molecular phylogenetics and Evolution* 12(2): 115-123, and

Townsend et al (2004) *Molecular phylogenetics of squamata: the position of snakes, amphisbaenians, and dibamids, and the root of the squamate tree Systematic Biology* 53(5): 735-757

cheers,

Kelley

Dr K Whitaker Department of Genetics University of Pretoria Hatfield 0002 South Africa

Tel: +27 12 420 3871 Email: kelley.whitaker@up.ac.za

— Dear Iris,

I only have limited experience working on birds - but wonder if the z/w linked sexing marker (chromohelicase-domain) would be useful? It is highly conserved and much used - so you wouldn't have to convince a referee that it was single copy (although you might need both z and w specific primers if dealing with females - I don't know how different fragment lengths work on real-time pcr.)

best wishes,

Sara

— Dear Iris, I would be very interested in seeing the answer you'll get on your question on a single copy gene to be used as an internal standard in qPCR. To my knowledge Primmer et al. published something on SNPs identification in birds using conserved primers...perhaps this could be a good point to start with.

— Hi Iris- I know of several house keeping genes that might be useful for your case. Personally, I am standardizing the real-time PCR with internal primers for the gene P53, which is an oncogene involved in cell cycle. What you can do is to download sequences in birds for this gene from the NCBI web page and to design primers in the most conserved region. Keep in mind that the PCR product should not be longer than 150bp. Sincerely, Ivan.

— I would recommend the RAG1 gene for this, but not sure if it would work for RT-PCR (don't know enough about RT). It is highly conserved in vertebrates, and some pubs have actually been written using it for Aves. I have used it for deeper level systematics in fishes. If you are interested, let me know, I have the references. Please email me at amahon@odu.edu. Cheers, Andy

Andrew Mahon Ph.D. Candidate Molecular Sys-

tematics Laboratory Department of Biological Sciences Old Dominion University Norfolk, VA 23529 <http://www.odu.edu/sci/bgso/PersonalPages/-AndyMahonPersonalPage.htm> – Iris M. Vargas Jentzsch Ph.D. Student School of Biological Sciences University of Canterbury Private Bag 4800 Christchurch - New Zealand

mobile: 0064 021 1623853 e-mail: imj15@student.canterbury.ac.nz

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### Software Treefinder bugfix

Dear All,

the bug in the latest TREEFINDER version is now repaired and the program is available for download ([www.treefinder.de](http://www.treefinder.de)). Sorry for the inconvenience.

Gangolf Jobb <g@treefinder.de>

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### State Standards

Dear list members,

In 2000, Lawrence Lerner published a report on the standards for evolutionary biology in secondary school education across the states.

<http://www.edexcellence.net/foundation/-publication/publication.cfm?id=42>

Five years have passed. Has anything comparable been published more recently?

Thanks

Norman

Norman Johnson njohnson AT ent DOT umass DOT edu

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### SteveFreeland offer

Dear Evoldir,

In agreement with requests that the religion/science debate find its own venue, I humbly offer this as one possible such place:

<http://www.evoldingcode.net/forum/-viewforum.php?f=14> (hosted by my good friend Roger of <http://www.diversityofone.biz/>)

This (very new) venture was originally intended as a simple news-bulletin-board of the endless worrying developments taking place in the USA. But if anyone would like to continue the evoldir exchange, then they would be welcome to do so: users simply need to generate a (free) login in order to post a message (and not even that to read what others have posted!).

Of course there are many other, already established online venues that may be more suitable: talkorigins is perhaps the best known. What we can offer at evoldingcode/net is a relatively pristine domain in which the scientists of evoldir can talk to one another in peace.

Steve Freeland <http://www.evoldingcode.net> Asst. Prof. Bioinformatics UMBC Maryland

freeland@umbc.edu

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### UCambridge DarwinProject

The complete work of Charles Darwin online

A major new project at the University of Cambridge will create a comprehensive scholarly collection of Charles Darwin's published and unpublished writings, except for correspondence, on the world wide web. The project, designed and directed by Dr John van Wyhe (University of Cambridge), is based at The Centre for Research in the Arts, Social Sciences and Humanities (CRASSH) at the University of Cambridge. A major three year grant by the AHRC has been awarded to Professor James Secord (Department of History and Philosophy of Science, University of Cambridge) and Professor Janet Browne (Wellcome Trust Centre for the History of Medicine, University College London) to make the project possible. The project aims to make available online every book, article and significant unpublished manuscript by Darwin, including associated contemporary book reviews and related sources. The letters are being published separately by the Darwin Correspondence Project. New editorial introductions and notes will accompany all the texts. Each page will be available as digital text and photo image form. All of the digitised texts will retain page or folio numbers

and full formatting such as italics. An innovative feature will be a complete bibliography and catalogue of manuscripts. The site will be of invaluable use to students and scholars in the fields of history, history of science, literature, philosophy, the natural sciences and lay readers throughout the world. It will have a powerful custom-made search engine providing integrated retrieval and display of material across the full range of Darwin's published works and manuscripts-in short almost everything Darwin ever wrote. For further information see: <http://darwin-online.org.uk> – Dr John van Wyhe

Director The complete work of Charles Darwin, University of Cambridge CRASSH, 17 Mill Lane, Cambridge, CB2 1RX <http://darwin-online.org.uk> Affiliate Research Scholar Dept. of History & Philosophy of Science, University of Cambridge Free School Lane, Cambridge CB2 3RH, UK

John van Wyhe <jmv21@cam.ac.uk>

Clarification.Liberal.view.Christianity <http://evol.mcmaster.ca/brian/netevoldir/Other/-Move.the.discussion.2> <http://evol.mcmaster.ca/brian/netevoldir/Other/Move.the.discussion> <http://evol.mcmaster.ca/brian/netevoldir/Other/-Evolution.christianity> <http://evol.mcmaster.ca/brian/netevoldir/Other/Evolution.Religion.question> <http://evol.mcmaster.ca/brian/netevoldir/Other/-Evolutionist.position.30> <http://evol.mcmaster.ca/brian/netevoldir/Other/Make.it.stop> (the switch from evoldir to netevoldir is temporary for the remainder of the month)

The address <http://evol.mcmaster.ca/brian/evoldir.html> should always work and follow the links from there.

Brian

Golding@McMaster.ca

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## Visualizing microsat bands

What are the advantages, disadvantages of each non-hazardous method of visualizing microsat bands on acrylamide gels ?

Now I stain gels with AgNO<sub>3</sub>. All methods generating hazardous waste are unacceptable to the PI in whose dna lab I start working 1Aug. I will post all responses on evoldir. Thanks for your help.

AEM Baker 101 Morgan Bio University of KY Lexington 40506 0225

mouse <mouse@lamar.colostate.edu>

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## Wrong web links

The web links in my previous email should read

<http://evol.mcmaster.ca/brian/netevoldir/Other/-Lists.for.origins.discussions> <http://evol.mcmaster.ca/brian/netevoldir/Other/SteveFreeland.offer> <http://evol.mcmaster.ca/brian/netevoldir/Other/Scopes.trial> <http://evol.mcmaster.ca/brian/netevoldir/Other/>

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## phyloXML

ANNOUNCING PROPOSAL FOR phyloXML – AN XML APPLICATION TO DESCRIBE PHYLOGENIES

This is to announce our proposal for phyloXML.

Rationale:

There are different formats to describe phylogenies. Many of them have three drawbacks: 1. Specific to a particular software. 2. Contain information about how the phylogeny was created, but do not allow to annotate the phylogeny itself (except with branch lengths and names), especially with data from other domains. 3. Not extensible.

We suggest that an XML based format might reduce some of these drawbacks.

Yet, since an XML format is only useful if it is widely used and accepted by a large part the community, we would like to present our unfinished proposal and get as much input as possible. Also, we would like to invite more collaborators (a SourceForge site has been set up for for phyloXML, see: <http://sourceforge.net/projects/phyloxml/>)

For our detailed proposal please see: <http://www.phyloxml.org> Thank you,

Christian Zmasek (czmasek ~at~ gnf ~dot~ org)

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## PostDocs

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### Azores ComplexDiseases

#### Post-Doc Position

The Research Centre of Natural Resources (CIRN) of the University of Azores (Portugal) is offering a Post-Doc Position to develop research on molecular variants of complex diseases. The grant covers a three-year period.

Candidates should send their CV and names and addresses of three references to: Nelson Simões (Ph.D) CIRN; University of the Azores Rua Mãe de Deus, Apartado 1422 9501-801 Ponta Delgada. Azores. Portugal.

Cristina Santos <Cristina.Santos@uab.es>

The Research Centre of Natural Resources (CIRN) of the University of Azores (Portugal) is offering a Post-Doc Position to develop research on molecular mechanisms involved on longevity and pathogenicity of entomopathogenic nematodes. The grant covers a three-year period.

Candidates should send their CV and names and addresses of three references to: Nelson Simões (Ph.D) CIRN; University of the Azores Rua Mãe de Deus, Apartado 1422 9501-801 Ponta Delgada. Azores. Portugal.

Cristina Santos <Cristina.Santos@uab.es>

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### ImperialCollegeLondon IchneumonoidWaspEvol

#### Postdoc:

A PDRA is sought for a 3 year, NERC-funded research project to answer three fundamental questions about the macroecology and macroevolution of ichneumonoid wasps: Do generalist (idiobiont) and specialist (koino-

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### Azores Longevity

#### Post-Doc Position

biont) species show the same tempo and mode of diversification, or do specialists show higher turnover and greater standing diversity as usually predicted? Are latitudinal trends in diversity explicable by differences in diversification rates between temperate and tropical lineages, or by differences in their ages? Have generalist parasitoids dispersed among continents at higher rates than specialists, as might be expected on the grounds of host availability?

In order to answer these questions, we are seeking a person to develop phylogenetic approaches to macroevolution that are useable with highly incomplete datasets. Required skills: experience in computer programming (ideally in R); statistical expertise; use of phylogenetic approaches to study evolutionary questions (tree-thinking); manuscript writing. Desired experience: phylogeny estimation; DNA sequence analysis; event-based approaches to biogeography and/or molecular clocks; management of technician or project students. The position will be based at the Silwood Park Campus of Imperial College London, and is jointly managed by Donald Quicke and Andy Purvis. The position is available from 1st October 2005 but the successful candidate can start any time before January 2006. Please email [d.quicke@imperial.ac.uk](mailto:d.quicke@imperial.ac.uk) for further details. To apply please send a C.V, covering letter and names and addresses of 2 referees to [d.quicke@imperial.ac.uk](mailto:d.quicke@imperial.ac.uk) or by snail-mail to Dr Donald Quicke, Division of Biology, Imperial College London, Silwood Park Campus, Ascot, Berkshire SL5 7PY, U.K.

[d.quicke@imperial.ac.uk](mailto:d.quicke@imperial.ac.uk)

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### JointGenomeInst MicrobialGenomics

POSTDOCTORAL POSITION Comparative community genomics of the gut microbiota. DOE Joint Genome Institute

An NIH-funded postdoctoral position is available to study the diverse microbial community that inhabits the gastrointestinal tract, specifically that of humans and mice. This community has important roles in host physiology, is rich in ecological interactions, and has potential for providing clues to the evolution of commensalism and pathogenicity. Some specific objectives of the project include understanding the diversity within the gut, the main differences between commensals and their pathogenic relatives, and the paths of horizontal

gene exchange within the gastrointestinal environment. We are looking for a postdoctoral researcher to participate in all aspects of the project, such as production and screening of BAC libraries, and comparative sequence analyses of the obtained sequences. Applicants should have skills in evolutionary genetics, genomics, computational biology or microbiology. Programming abilities a plus.

The person will be based in the Evolutionary Genomics Department of the DOE Joint Genome Institute (<http://www.jgi.doe.gov/programs/comparative/>), but will also have the opportunity to interact with the laboratory of Howard Ochman at the University of Arizona at Tucson. The DOE Joint Genome Institute, established on January 1, 1997, is a consortium of scientists, engineers and support staff from the U.S. Department of Energy's Lawrence Berkeley, Lawrence Livermore and Los Alamos National Laboratories, and is located in Walnut Creek, a nice community approximately 25 miles from San Francisco and 20 miles from Berkeley, with easy access to many locations in the Bay Area.

Please send inquiries and applications to Pilar Francino at [mpfrancino@lbl.gov](mailto:mpfrancino@lbl.gov). Applications should include a cover letter describing your research interests, a CV and names of three references.

– M. Pilar Francino, Ph. D. Research Scientist Genomics Division, Lawrence Berkeley National Lab and Evolutionary Genomics Department, DOE Joint Genome Institute 2800 Mitchell Drive Walnut Creek, CA 94598

phone: (925) 296-5872 fax: (925) 296-5666 e-mail: [mpfrancino@lbl.gov](mailto:mpfrancino@lbl.gov)

[mpfrancino@imap4.lbl.gov](mailto:mpfrancino@imap4.lbl.gov)

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### LausanneU ArabidopsisGeneExpression

Postdoctoral Position

Kin recognition and differential gene expression in *Arabidopsis thaliana*

Competition for resources lowers growth and fitness in most organisms. Studies in animals have revealed that relatedness between potential competitors is a key factor affecting the intensity of competitive interactions. As predicted by kin selection theory many animals can



discriminate among related (kin) and unrelated (non-kin) individuals and they are less competitive toward kin. Accordingly, productivity is frequently higher in groups of kin compared to groups of unrelated individuals. In plants, individuals of varying relatedness compete with one another, so kin selection is also likely to be important. Recent reports suggest the existence of self/non-self recognition in roots. At the molecular level, however, nothing is known about how such communication is established.

As part of an interdisciplinary project between the groups of Philippe Reymond and Laurent Keller, a postdoctoral position is available to study kin recognition in the model plant species *Arabidopsis thaliana*. The successful candidate will test whether growth patterns differ when two related (kin treatment) or two unrelated (non-kin treatment) plants are grown close together. Whole-genome microarrays will be used to measure gene expression changes between kin and non-kin treatments and genes potentially responsible for variation in the ability to recognize related individuals might be identified.

Funding is available for two years, beginning October 2005. Candidates with background in plant molecular biology, plant genetics, or experience with kin selection are encouraged to apply. Applications should include a cover letter detailing research interests and experience, a curriculum vitae, and the name of three references. To apply for the position or for more information, please contact Philippe Reymond (Philippe.Reymond@unil.ch) or Laurent Keller (Laurent.Keller@unil.ch). Information about the departments can be found at <http://www.unil.ch/dbmv> and <http://www.unil.ch/dbmv> Laurent Keller Department of Ecology and Evolution BB University of Lausanne 1015 lausanne Switzerland

New e-mail: Laurent.keller@unil.ch

<http://www.unil.ch/dee/page6763.html> Laurent Keller <Laurent.Keller@unil.ch>

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## Max-PlanckBerlin Humanmigrations

Postdoctoral position to investigate human migrations from Siberia to the Americas on the basis of the population structure of *Helicobacter pylori* bacteria

Max-Planck Institut fuer Infektionsbiologie, Berlin

A postdoctoral position is available as of 1 December,

2005 for a period of 21 months in the laboratory of Mark Achtman. The population structure of *H. pylori* correlates with human migrations (Science, 299L 1582-85, 2003) and can provide more information about recent migrations than does mtDNA or microsatellites (PNAS, 101:4646-51, 2004). A project has been initiated to examine the sources of the Amerind migrations based on the population structure of *H. pylori* isolated from different ethnic groups in Siberia. Other projects that are planned include analysis of the population structures of *H. pylori* from Central Asians and from Israelis of different religious, ethnic and geographical sources.

The successful applicant will have a proven track record in population genetics and a strong interest in human migrations. Knowledge of the Russian language and of the ethnic composition of Siberia would be desirable because it would facilitate communications with collaborators in Siberia and Moscow. Funding for field work, running costs and a technical assistant are in place until late 2007 and can possibly be extended. We have already obtained proof of principle that this project will work from initial analyses of samples from two locations and samples from an additional 4 locations will be available by the end of 2005.

Recent publications on this and related topics can be found at <http://web.mpiib-berlin.mpg.de/mlst/-AGroup/team/marksRef.html>.

Interested applications should contact Mark Achtman at [achtman@mpiib-berlin.mpg.de](mailto:achtman@mpiib-berlin.mpg.de).

Mark Achtman <[achtman@mpiib-berlin.mpg.de](mailto:achtman@mpiib-berlin.mpg.de)>

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## MaxPlanckPloen ParasiteEvol

Parasitologist (Postdoctoral Research Position)

The position is available at the Department of Evolutionary Ecology of the Max Planck Institute at Plön (near Hamburg, Germany) to work in a research project on the evolution of complex parasite life cycles (in collaboration with Dr. J. C. Chubb and Prof. G. A. Parker, Liverpool, UK). Our model system is the cestode, *Schistocephalus solidus*, with its two intermediate hosts, i.e. a copepod and the three-spined stickleback. We want to test experimentally model predictions for sequential growth patterns in the two hosts. Applications are invited from scientists with expertise in experimental parasitology. We need a skilful person who enjoys handling sophisticated tiny animals. The po-

sition is available for one year and can be extended. Salary will be according to the guidelines of the Max-Planck-Society. For further information please contact kalbe@mpil-ploen.mpg.de.

Please send your application including a CV, a list of publications and the contact information of three references by e-mail (milinski@mpil-ploen.mpg.de) before July 31.

Prof. Manfred Milinski Max Planck Institute of Limnology Department of Evolutionary Ecology August-Thienemann-Strasse 2 D-24306 Ploen, Germany

milinski@alpha1.mpil-ploen.mpg.de

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## NCStateU EvolStatGenetics

### POSTDOCTORAL POSITIONS IN EVOLUTIONARY AND STATISTICAL GENETICS

North Carolina State University, Raleigh NC, U.S.A.

Two two-year positions with Jeffrey L. Thorne are available. Candidates should have expertise in both evolutionary biology and statistics. Candidates should also be comfortable with computer programming.

One position is NSF-supported and pertains to the estimation of evolutionary rates and divergence times. This position is available immediately.

Another position is supported by an NIH project that aims to develop statistical techniques for incorporating phenotype (especially protein tertiary structure) into models of molecular evolution. This position is available as early as January 1, 2006.

Candidates should submit a C.V. and names of two referees. Informal inquiries are encouraged.

Jeff Thorne thorne@statgen.ncsu.edu <http://statgen.ncsu.edu/thorne/thorne.html> Mailing Address:

Jeff Thorne Bioinformatics Research Center North Carolina State University Campus Box 7566 Raleigh, NC 27695-7566

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## NIHBethesda GenomicStructure

### POSITION:

Post-doctoral fellowship in the Section on Genomic Structure & Function, Laboratory of Molecular & Cell Biology, NIDDK, National Institutes of Health, Bethesda MD 20892 USA

AVAILABILITY: January 2006

### TOPIC:

Experimental analysis of evolutionary inferences using the interaction between the mammalian L1 (LINE-1) retrotransposon and its host as a model system.

### SUMMARY:

L1 elements have been replicating and evolving in primates since 70 million years ago (MYA). During this time novel L1 families repeatedly arose, only to go extinct coincident with the emergence of another novel L1 family. This process has persisted to the present. Thus, in the human lineage an L1 family that emerged ~3.5 MYA is being superseded by one that arose ~1 MYA. This family is rapidly amplifying, and increasing the genetic diversity, but reducing the fitness of modern humans.

The presence of only a single evolutionary lineage of L1 families during human evolution (and during the evolution of most other mammals) presumably reflects fundamental parameters that govern the interaction between the L1 element and its host. This important, but largely unexplored, aspect of L1 biology is now a major focus of our laboratory.

Our approach to L1 / host interaction is framed by the assumption that evolutionary changes in L1 reflect in part its response to the host. L1 evolution has been characterized by both negative and positive selection; i.e., by both conservation of structure and adaptive changes. The latter changes often represent evolutionary responses to environmental factors (e.g., a virus to the immune response of the host).

Accordingly, we recently identified a number of host factors that interact uniquely with L1 components that have undergone adaptive evolution. The functional consequences (in terms of L1 retrotransposition) of the adaptive changes in L1 are being correlated with their biochemical and structural effects. In addition, possible effects of L1 components on the normal function of these host factors are also being examined.

Other projects that involve L1 / host interaction are also underway.

Additional information and references can be found at <http://www.niddk.nih.gov/intram/people/afurano.htm> QUALIFICATIONS & APPLICA-

TION:

Applicants must have received a doctoral degree within the last 5 years.

Thorough knowledge of molecular biology and proficiency in both the theory and practice of standard molecular biological and biochemical techniques is essential. Experience with molecular evolution and genetics would be beneficial but not required.

Interested applicants should send a CV & Bibliography, a short description of research interests, and have three letters of reference sent (all by email) to Anthony V. Furano: avf@helix.nih.gov.

– Anthony V. Furano

Building 8, Room 203 National Institutes of Health 8 CENTER DR MSC 0830 BETHESDA MD 20892-0830

avf@helix.nih.gov

Phones: Voice 301-496-6180 FAX 301-402-0053

<<http://www.niddk.nih.gov/intram/people/-afurano.htm>>

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## Perth MarineBiogeography

CSIRO Postdoctoral Fellowship, Perth, Australia (up to 3 years):

Marine Molecular Ecology and Biogeography.

Capitalising on the wealth of multidisciplinary knowledge flowing from the Western Australian Strategic Research Fund for the Marine Environment initiative this project will exploit the power of the emerging science, molecular ecology, to gain insights into how the distributions of key marine organisms are influenced by physical, oceanographic, climatic and hydrodynamic processes operating off Western Australia.

A central focus of our research is the influence of ocean processes such as the Leeuwin Current, its eddies and associated minor currents on the spatial and temporal dynamics of marine organisms, from zooplankton to macroalgae. These influences are manifested partly via dispersal of reproductive propagules within and between populations across local and geographic scales. Understanding these processes is central to interpreting the biological patterns observed in marine species. It is also important to understand these processes if marine reserves are to be effective tools for conserving biodiversity in exploited systems because it helps en-

sure reserves are representative and viable.

The project will investigate dispersal, gene flow, biogeographical patterns and evolutionary relationships using DNA-based genetic markers and models of dispersal and population dynamics. Biogeographic patterns observed in WA will be related to larger scale, continent, and basin-wide ocean processes. CSIRO at Floreat has ideal facilities with which to conduct this research, including modern molecular biology laboratories and an impressive capacity to conduct field based marine biological research.

This will be a well resourced postdoc and the research environment in which it will be conducted is extremely stimulating and dynamic. Furthermore, the lifestyle and climate in Perth is about as good as it gets. I encourage good early career molecular ecologists and phylogeneticists not to miss this opportunity.

Details of the application process will be posted on the CSIRO website by August 5 2005 ([www.csiro.au/-careers](http://www.csiro.au/-careers)).

If you are interested in this area of research please contact Phillip England ([phillip.england@csiro.au](mailto:phillip.england@csiro.au)) or Peter Craig ([peter.craig@csiro.au](mailto:peter.craig@csiro.au)).

- Dr. Phillip England Research Scientist CSIRO Marine & Atmospheric Research Private Bag 5, Wembley Western Australia 6913 ph. +61 8 9333 6537 mob. 0421718373 <http://www.per.marine.csiro.au/-staff/Phillip.England/>

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## RiceU SocialAmoebae

Post Doc in Genetics of Social Evolution in Social Amoebae at Rice University

A Postdoctoral position for 2-3 years is available immediately for work on the social amoeba *Dictyostelium discoideum*, a unique and exciting model organism for social evolution. *D. discoideum* has cooperation, conflict, and complete reproductive altruism in its social stage. It also has a short generation time, a sequenced genome, techniques for knocking out and modifying genes, and it can be easily studied in the laboratory and the field. The project, a collaboration with *Dictyostelium* genomics researchers at Baylor College of Medicine, involves finding and characterizing genes underlying sociality particularly cheaters and victims. It also involves testing whether social conflict leads to rapid evolution and arms races, determining how cheat-

ing is controlled, and relating laboratory findings to social evolution in the wild. Experimental evolution projects can also be done on social function. The position is funded by a large 5 year NSF grant from the Frontiers in Biological Research (FIBR) program. We are a friendly and interactive team of highly motivated investigators. We are seeking an energetic postdoc with a strong background in evolutionary biology, social behavior, microbial evolution, or molecular biology with an interest in working at the interface of these disciplines. Interested? Check out our website, [www.ruf.rice.edu/~evolve](http://www.ruf.rice.edu/~evolve) for more information on our research. If you are interested, please send an email to David Queller ([queller@rice.edu](mailto:queller@rice.edu)) or Joan Strassmann ([strassm@rice.edu](mailto:strassm@rice.edu)) with a CV, statement of research interests, and the names, phone numbers and email addresses of three references. Women and minorities are particularly encouraged to apply. We will begin reviewing applications 10 July 2005 and will continue to do so until the position is filled. David C. Queller, Joan E. Strassmann, Department of Ecology and Evolutionary Biology, MS 170, Rice University, 6100 Main St. Houston TX 77005-1892. – Joan E. Strassmann, Professor and Chair Dept. of Ecology and Evolutionary Biology, MS 170 Rice University, 6100 Main St., Houston TX 77005-1892 USA

phone: (713) 348-4922 fax: (713) 348-5232 e-mail STRASSM@RICE.EDU <http://www.ruf.rice.edu/~evolve/> Joan Strassmann <[strassm@rice.edu](mailto:strassm@rice.edu)>

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### SmithCollege EukaryoticTreeOfLife

#### POSTDOCTORAL POSITION RECONSTRUCTING THE EUKARYOTIC TREE OF LIFE SMITH COLLEGE

A Postdoctoral Research position is available to participate in an NSF- ATOL collaborative project entitled: "Assembling the Tree of Eukaryotic Diversity through Analyses of Microbial Eukaryotes."

Potential projects include both bioinformatics and experimental studies on multigene data from eukaryotic microbes. Applicants should have skills in molecular systematics, bioinformatics (ideally including python), microbiology and/or molecular evolution. A postdoc on this project will also have opportunities to work closely with collaborators at the Marine Biological Laboratories, the American Type Culture Collection and the University of Iowa (see <http://www.eutree.org>). The

position is available as of this fall, though there is some flexibility in start date, and will last at least two years.

To apply, please send a c.v. and the names of two referees to:

Laura A. Katz [Lkatz@Smith.edu](mailto:Lkatz@Smith.edu) Department of Biological Sciences College Road Smith College Northampton, MA 01063 Phone: 413-585-3825 (office) 413-585-3750 (lab) <http://www.science.smith.edu/departments/Biology/lkatz/> [LKatz@smith.edu](mailto:LKatz@smith.edu)

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### TuftsU EvolFieldStress

Post doctoral opening in Field Stress Endocrinology at Tufts University.

A postdoctoral position is available in the laboratory of Dr. L. Michael Romero in the Biology Department at Tufts University. The project will examine the effects of human disturbance on the stress responses of two endangered bird species. The position will entail approximately 4 months a year at a Texas field site, and the rest of the year at Tufts University. The postdoctoral fellow will work closely with the Principal Investigator and other members of a collegial and dynamic research group. Ample opportunities will be provided for independent design and implementation of experiments. Experience with behavioral or endocrine techniques desirable, with field experience a plus, but not necessary. Enthusiastic, highly motivated candidates, capable of both thinking and working independently and working well within a laboratory group, are sought. Most important is a willingness to learn and develop new techniques. The position is available immediately and will remain open until filled. If you are interested and either have your PhD or will receive your degree in the next few months, please contact me and send me your CV. L. Michael Romero, Department of Biology, Tufts University, Medford, MA 02155 617-627-3378 [michael.romero@tufts.edu](mailto:michael.romero@tufts.edu). For more information see my website at: <http://ase.tufts.edu/BIOLOGY/faculty/romero/> – L. Michael Romero Department of Biology Tufts University Medford, MA 02155 Phone: 617-627-3378 Fax: 617-627-3805 Email: [michael.romero@tufts.edu](mailto:michael.romero@tufts.edu) Web: <http://ase.tufts.edu/BIOLOGY/faculty/romero/> Michael Romero <[michael.romero@tufts.edu](mailto:michael.romero@tufts.edu)>

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## UIIdaho FungalEndophytes

Postdoctoral fellowship University of Idaho Center for Research on Invasive Species & Small Populations (CRISSP)

We are seeking a postdoctoral fellow to join a collaborative effort to examine investigate the ecology and systematics of fungal endophytes in *Centaurea maculosa* (spotted knapweed) in its introduced and native ranges, with an emphasis on plant-endophyte-insect interactions. This project is a two-year, collaborative effort involving faculty in ecology, entomology, mycology and systematics. A PhD in the biological or life sciences with an emphasis in molecular systematics is required. A strong interest in invasion biology is preferred. Detailed description of the position and application procedures can be found at <http://www.hr.uidaho.edu/-default.aspx?pid=35496> or contact George Newcombe by e-mail, or by phone, (208) 885-5289.

Cort L. Anderson Laboratory for Ecological and Conservation Genetics College of Natural Resources P.O. Box 441136 University of Idaho Moscow, ID 83844

tel: 208 885 8914 fax 208 885 9080 email: [cla@uidaho.edu](mailto:cla@uidaho.edu)

“Cort L. Anderson” <[cla@uidaho.edu](mailto:cla@uidaho.edu)>

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## UKansas SexuallySelectedBehavior

Postdoctoral Research Associate:

Post-doctoral Position in Animal Behavior / Evolutionary Genetics

A post-doctoral research associate position is available to examine the evolutionary genetics of sexually-selected behavior in acoustic insects. The work will involve behavioral and molecular genetic studies of *Achroia grisella* (lesser waxmoth), a species in which males attract females with an ultrasonic mating song. *A. grisella* is a symbiont of honeybees, and some emphasis will be placed on behavioral studies at bee colonies in the field. The laboratories are well-equipped for research focused on or involving acoustic communication,

signal processing, and molecular techniques, including quantitative trait loci (QTL) mapping. Required qualifications are: 1) A Ph.D. in Biology or a related field by the start of the appointment; 2) Experience in at least two of the following areas: a) animal behavior, preferably with invertebrates, b) quantitative or population genetics, c) molecular biology; 3) Good organizational and statistical skills; 4) Demonstrated verbal and written communication skills; 5) An ability to work independently, as well as to collaborate productively with other scientists. A complete application will include a letter of application stating the research and career interests of the applicant, a curriculum vita, and three letters of reference.

Application materials should be sent to Dr. Michael Greenfield or Dr. Jennifer Gleason, Dept. of Ecology & Evolutionary Biology, Univ. of Kansas, 100 Sunnyside Road, Lawrence, KS 66045, or (preferably) via email at [greenfie@ku.edu](mailto:greenfie@ku.edu) or [jgleason@ku.edu](mailto:jgleason@ku.edu). Phone: 785-864-7366 (M. Greenfield); 785-864-5858 (J. Gleason). You may also apply directly to the Univ. of Kansas personnel site:

<https://jobs.ku.edu/applicants/jsp/shared/frameset/Frameset.jsp?time19886231619>

Review of applications begins 15 July 2005 and will continue until the position is filled.

Lawrence is a fun and historic university town located approx. 40 miles west of Kansas City. The town offers museums, a performing arts center, restaurants and clubs, bookstores, an excellent public school system, and a variety of recreational activities; areas for hiking, fishing, and boating are found nearby. The University of Kansas is a comprehensive research institution with a superior library and laboratory facilities. Within the Division of Biological Sciences are several dynamic and collegial groups studying behavior and evolution that meet regularly for seminars and discussions. The project is funded by the U.S. National Science Foundation grant 'Genotype x environment interactions and the evolution of sexually-selected traits'. The University of Kansas is an EO/AA employer.

Michael D. Greenfield Professor Department of Ecology & Evolutionary Biology University of Kansas Lawrence, Kansas 66045

tel. 785-864-7366 fax 785-864-5321 email [greenfie@ku.edu](mailto:greenfie@ku.edu)

“Michael D. Greenfield” <[greenfie@ku.edu](mailto:greenfie@ku.edu)>



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## ULausanne ArabidopsisRootMorphology

### Postdoctoral Position

Ecological relevance of a natural genetic variation in root system morphology in *Arabidopsis thaliana*

The phenotypic variation observed between individuals or populations is partly the result of exposure to different environments and partly the result of genetic differences. Genetic differences drive adaptive evolution of organisms to changes in environmental conditions. We have exploited natural genetic variation to isolate a novel regulator of root system morphology in the model plant system *Arabidopsis thaliana*, the *BREVIS RADIX* (BRX) gene (Mouchel, Briggs & Hardtke 2004, *Genes & Development*, 18: 700-714). BRX is a novel plant-specific gene and the founding member of the highly conserved BRX gene family. The activities of the corresponding proteins are currently being investigated.

As part of an interdisciplinary project between the groups of Christian Hardtke (<<http://www.unil.ch/dbmv>><http://www.unil.ch/dbmv>) and Giordina Bernasconi (<<http://www.unil.ch/dee>><http://www.unil.ch/dee>), a postdoctoral position is available to study natural genetic variation in root morphology in the model plant species *Arabidopsis thaliana*. The successful candidate will test whether the naturally occurring loss-of-function BRX allele confers an adaptive advantage in its natural habitat or in particular physiological conditions. This will include analysis of competition within- and between genotypes in tissue culture and greenhouse experiments, and mapping of BRX genotypes in natural populations.

Funding is available for two years, beginning October 2005. Applications are invited from scientists with skills and interests in plant evolutionary ecology, experimental design and statistical analysis. Basic skills in molecular biology would be a plus. Please send your application including a cover letter detailing research interests and experience, a CV, and contact information of two references to both Christian Hardtke and Giordina Bernasconi. For more information, please contact <<mailto:Christian.Hardtke@unil.ch>> or <<mailto:Giordina.Bernasconi@unil.ch>>

Giordina.Bernasconi@unil.ch.

University of Lausanne provides excellent facilities, a lively intellectual and social environment and is beautifully located in Switzerland at the shore of Lake Geneva.

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Giordina Bernasconi

Email: [Giordina.Bernasconi@unil.ch](mailto:Giordina.Bernasconi@unil.ch) Phone +41 21 692 42 17 Fax +41 21 692 42 65 <http://www.unil.ch/dee> Swiss Zoological Society <http://ssz.scnatweb.ch/en/> Giordina Bernasconi <[Giordina.Bernasconi@unil.ch](mailto:Giordina.Bernasconi@unil.ch)>

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## ULeuven SeaBassGenome

### POSTDOCTORAL FELLOWSHIP

LINKAGE MAPPING AND GENOME SCAN OF EUROPEAN SEA BASS

KATHOLIEKE UNIVERSITEIT LEUVEN, LEUVEN, BELGIUM

A 16 month postdoctoral fellowship in fish genetics co-funded by the European Union (STREP project AQUAFIRST FP6-2004-513692) and the Fund for Scientific Research is immediately available at the Fish Genetics Group (Dr. Filip Volckaert) of the Laboratory of Aquatic Ecology. The main goal is the construction of a third generation linkage map of European sea bass (*Dicentrarchus labrax*) (see for example Chistiakov et al, 2004 *Animal Genetics*; Chistiakov et al, in press, *Genetics*). The immediate task involves (1) the development of type I microsatellites and SNPs, (2) the genotyping of the mapping panel and (3) the setting up of a genome scan of wild stocks. The results will be combined with parallel projects on a radiation hybrid and synteny map of sea bass. A fully equipped DNA lab, including ABI capillary sequencer, is available. Salary is according to Belgian standards. The successful candidate owns a Ph.D., has a strong background in molecular genetics, experience with marker development and if possible high throughput genotyping. Leuven is an historical university town with a high and very pleasant standard of living. Application date: 20 August 2005.

If interested, send (1) a letter with your motivation (including research interests and goals), (2) a Curriculum Vitae, (3) two of your most significant papers and (4) the names of 3 referees to:

Dr. Filip Volckaert Katholieke Universiteit Leuven Laboratory of Aquatic Ecology, Research Group on Fish Genetics Ch. de Bériotstraat 32 B-3000 Leuven, BELGIUM Phone: +32 16 32 39 72 (office) or +32 16 32 39 66 (secretariat) Fax: +32 16 32 45 75 Mailto:filip.volckaert@bio.kuleuven.be (changed as of 02.05.05) Website: <<http://www.kuleuven.ac.be/bio/-eco>><http://www.kuleuven.ac.be/bio/eco> Filip Volckaert <Filip.Volckaert@bio.kuleuven.ac.be>

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## ULiverpool IndustrialMelanism

NERC-funded Post-Doctoral Research Assistant, School of Biological Sciences, University of Liverpool

Adaptation to anthropogenic environmental change: the molecular genetic basis of industrial melanism in peppered moths

Industrial melanism in the peppered moth, *Biston betularia*, is among the best examples of rapid adaptation to environmental change, but little is known about the evolutionary origins and molecular identity of the underlying polymorphism for melanism. This project seeks to characterise the molecular genetics and developmental pathway controlling the melanic phenotype in *B. betularia* as a means to address the broader evolutionary questions. A longer-term aim is to detect hitchhiking around the putative polymorphism and to interpret patterns of linkage disequilibrium on melanism clines in relation to selection and gene flow. The work will involve close collaboration with Mike Quail (Sanger Institute) and Paul Dear (MRC) in Cambridge, and John True at Stony Brook New York.

The candidate should have a background in population/evolutionary genetics and experience in: general molecular biology, ideally including AFLP, ABI 3100 and sequence analysis; linkage mapping; and insect husbandry. Starting salary is 22,774 - 25,633 GBP per annum depending on experience and the preferred starting period is October-December 2005.

To apply and for further information, please send a covering letter and your CV with the names and contact details of 3 referees to Ilik Saccheri (<<mailto:saccheri@liv.ac.uk>>[saccheri@liv.ac.uk](mailto:saccheri@liv.ac.uk)). The closing date is 19 August 2005.

DR ILIK J. SACCHERI School of Biological Sciences University of Liverpool The Biosciences Building Crown Street Liverpool L69 7ZB UK

Tel. 44 (0)151 795 4522 Fax. 44 (0)151 795 4408 email [saccheri@liv.ac.uk](mailto:saccheri@liv.ac.uk) email [saccheri@liv.ac.uk](mailto:saccheri@liv.ac.uk)

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## UMontreal RNasePEvol

Post openings in biochemical/evolutionary research

Postdoctoral Research Fellow Graduate students at the PhD and Masters level

You will join a well-funded, internationally recognized research group working in the domains of biochemistry, comparative and evolutionary genomics of eukaryotes, and bioinformatics.

Applicants should have a strong background in biochemistry and/or molecular biology, to investigate and compare the activity and subunit composition (catalytic RNA plus proteins components) of mitochondrial RNase P from a variety of fungi, plants and protists (for preliminary investigations see the publications listed below, and references therein). Prior experience with enzyme purification and RNA biochemistry is appreciated but not required.

Interested candidates are invited to submit their application by e-mail ([Franz.Lang@Umontreal.ca](mailto:Franz.Lang@Umontreal.ca)), including a curriculum vitae, information on recently obtained University degrees, and a short statement on scientific interests.

### References

Seif, E., J. Leigh, Y. Liu, I. Roewer, L. Forget, and B. F. Lang. 2005. Comparative mitochondrial genomics in zygomycetes: bacteria-like RNase P RNAs, mobile elements and a close source of the group I intron invasion in angiosperms. *Nucleic Acids Res* 33:734-744.

Seif, E. R., L. Forget, N. C. Martin, and B. F. Lang. 2003. Mitochondrial RNase P RNAs in ascomycete fungi: lineage-specific variations in RNA secondary structure. *RNA* 9:1073-1083.

Franz Lang <[Franz.Lang@Umontreal.ca](mailto:Franz.Lang@Umontreal.ca)>

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## UPotsdam MolecularPlantEvol

50 % Postdoctoral Position (or, for an exceptionally well qualified graduate, a PhD studentship) in Molecu-

### lar Plant Ecology

Our group is studying evolutionary plant ecology, ecological genetics, and conservation biology of plants. Experimental studies in the field and common garden are used in combination with molecular methods to study the effect of environmental variation on biodiversity, both at the between and within species levels.

We are currently establishing a molecular lab using DNA markers and isoenzymes. The successful applicant will collaborate in setting up the lab and follow an independent research project on the molecular ecology of rare plants, or of invasive plants, or on community genetics. The successful applicant will teach 2 hours per semester week in German and contribute to raising external funds.

Funding (according to 50% German BAT IIa-O) is available from 1 October 2005, initially for three years, with the option of renewal for two more years. Applications should include a cover letter detailing research interests and experience, a list of publications, a curriculum vitae, and the name and address of two references.

Potsdam is a small city right next to Berlin (20 min to center). It offers lively scientific and cultural surroundings. Our group is located in the historical setting of Park Sanssouci. Information about the institute can be found at <http://www.bio.uni-potsdam.de/-index.htm>. Information about our group is available at <http://www.bio.uni-potsdam.de/spezbot>. To apply for the position (via email by 10 August) or for more information, please contact Markus Fischer ([fischer@rz.uni-potsdam.de](mailto:fischer@rz.uni-potsdam.de)).

Markus Fischer Professor of Community Ecology/Systematic Botany Institute for Biochemistry and Biology University of Potsdam Villa Liegnitz Lennéstr. 7a D-14471 Potsdam Germany Tel. ++49 331 977 4884 Fax ++49 331 977 4865 e-mail [fischer@rz.uni-potsdam.de](mailto:fischer@rz.uni-potsdam.de) <http://www.bio.uni-potsdam.de/spezbot/> Markus Fischer <[fischer@rz.uni-potsdam.de](mailto:fischer@rz.uni-potsdam.de)>

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### UToronto PlantEvolGenetics

Post-doctoral Research Fellow: Plant Evolutionary Genetics

A Postdoctoral position is available in John Stinchcombe's lab in the Botany Department at the University of Toronto, beginning Spring 2006, although

the starting date is flexible. The ideal candidate will have a strong background in molecular genetic techniques and an interest in applying them to ecological and evolutionary questions, but candidates from all areas of plant evolutionary and ecological genetics are specifically encouraged to apply. Potential research projects are flexible, but should be related to ongoing work on life history evolution and local adaptation; for more information on potential research areas go to: <<http://www.botany.utoronto.ca/ResearchLabs/-StinchcombeLab/>>.

Funding is available for 1-2 years. Toronto is a diverse, multi-ethnic, tolerant, cosmopolitan, safe and friendly city, and there is a strong, interactive group of ecologists, geneticists, and evolutionary biologists in the Botany <<http://www.botany.utoronto.ca/>> and Zoology <<http://www.zoo.utoronto.ca/>> Departments at the University of Toronto.

To apply, please send a short e-mail to John Stinchcombe <[john.stinchcombe@utoronto.ca](mailto:john.stinchcombe@utoronto.ca)> describing your research interests, publication record, and when you plan to finish your degree or current position—no attachments please! Selected applicants will be invited to submit a full c.v. and letters of reference at a later time.

I will be at the upcoming Gordon Conference on Evolutionary & Ecological Genomics (in Oxford, U.K.) and would be happy to talk with any interested candidates.

[john.stinchcombe@utoronto.ca](mailto:john.stinchcombe@utoronto.ca)

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### WayneStateU EvolReproduction

NIH-funded Post-Doctoral Fellow, School of Medicine, Wayne State University

A postdoctoral position is available at the Molecular Evolution Laboratories in the Center for Molecular Medicine and Genetics at the Wayne State University School of Medicine. The position is available immediately and is initially funded for a period of two years. The postdoctoral research fellow/associate will work in the laboratory of Dr. Derek Wildman. The research project is entitled Molecular Evolution of Reproduction, and is funded by the Perinatology Research Branch/National Institute of Child Health and Development/NIH. The emphasis of the laboratory is to use molecular evolution and comparative genomic tools to understand the evolution of labor and birth in mam-

mals. This basic research has applications to the prevention of preterm birth in humans. The ideal candidate will have excellent skills in phylogenetic analysis, comparative genomics, statistics, and molecular biology. Experience with microarrays and animal models is also desirable. Wayne State University is an equal opportunity employer and women, disabled persons, and members of underrepresented minority groups are particularly encouraged to apply.

The Molecular Evolution Laboratories at the Center for Molecular Medicine & Genetics at Wayne State University include the labs of Derek Wildman, Lawrence Grossman, and Morris Goodman. Other research interests include the evolution of aerobic metabolism, mam-

malian systematics, and the evolution of the anthropoid primate neocortex.

To apply, please send a full curriculum vita, up to 3 relevant manuscripts, and contact information for three references. Please send applications (either electronically or via post) to

Derek Wildman Wayne State University Services in Support of the Perinatology Research Branch-NIH/NICHD Hutzel Women's Hospital 4 Brush, Room 4820 3990 John R., Detroit, MI 48201 313.577-8234 office 313.577.3418 lab 313.577.5218 fax Email: [dwildman@med.wayne.edu](mailto:dwildman@med.wayne.edu)

Please email Derek Wildman with any enquiries or questions.

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### ColdSpringHarbor ComparativeGenomics Nov2-8 ApplDeadlineJul15

Course announcement - Application deadline, July 15, 2005

Cold Spring Harbor COMPUTATIONAL & COMPARATIVE GENOMICS November 2 - 8, 2005 Application Deadline: July 15, 2005

INSTRUCTORS:

Pearson, William, Ph.D., University of Virginia, Charlottesville, VA Smith, Randall, Ph.D., SmithKline Beecham Pharmaceuticals, King of Prussia, PA

Beyond BLAST and FASTA - Alignment: from proteins to genomes - This course presents a comprehen-

sive overview of the theory and practice of computational methods for extracting the maximum amount of information from protein and DNA sequence similarity through sequence database searches, statistical analysis, and multiple sequence alignment, and genome scale alignment. Additional topics include gene finding, identifying signals in unaligned sequences, integration of genetic and sequence information in biological databases.

The course combines lectures with hands-on exercises; students are encouraged to pose challenging sequence analysis problems using their own data. The course makes extensive use of local WWW pages to present problem sets and the computing tools to solve them. Students use Windows and Mac workstations attached to a UNIX server; participants should be comfortable using the Unix operating system and a Unix text editor.

The course is designed for biologists seeking advanced training in biological sequence analysis, computational biology core resource directors and staff, and for scientists in other disciplines, such as computer science, who

wish to survey current research problems in biological sequence analysis and comparative genomics.

The primary focus of the Computational and Comparative Genomics Course is the theory and practice of algorithms used in computational biology, with the goal of using current methods more effectively and developing new algorithms. Cold Spring Harbor also offers an Advanced Bioinformatics Programming course, which focuses more on software development.

Over the past few years, the course has been expanded to cover more algorithms and exercises on comparative genomics and genome databases.

For additional information and the lecture schedule and problem sets for the 2004 course, see:

<http://fasta.bioch.virginia.edu/cshl04> To apply to the course, fill out the form at:

<http://meetings.cshl.edu/courses/-courseapplication.asp> WRP@VIRGINIA.EDU

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### IowaStateU GeometricMorphometrics May29Jun2

GEOMETRIC MORPHOMETRICS WORKSHOP  
IOWA STATE UNIVERSITY AMES, IOWA, USA  
May 29 - June 2, 2006

An NSF-sponsored Morphometrics workshop will be held at Iowa State University, Ames, Iowa, USA from May 29 to June 2, 2006. The instructors will be: Dean C. Adams (Iowa State University), F. James Rohlf (SUNY Stony Brook), and Dennis E. Slice (University of Vienna). Keynote speaker: Fred L. Bookstein (University of Washington).

This is a 1-week workshop which provides a comprehensive introduction to both the theory and methods for the analysis of biological shape. Emphasis is on understanding the theoretical background of the field, as well as the practical mechanics of both landmark and outline methods for shape analysis. The main objective of the workshop is to provide students with sufficient knowledge of these approaches that they will be able to effectively and correctly apply them to their own research programs. Applications in Ecology and Evolution will be emphasized.

The workshop is limited to 20 participants who will

be provided with travel grants that include room and board during the workshop. Applications must be received by OCTOBER 1, 2005 to receive full consideration.

Further details on the workshop and application procedure may be found at: <http://www.public.iastate.edu/~dcadams/GMWorkshop/> Dean C. Adams Assistant Professor Department of Ecology, Evolution, and Organismal Biology Department of Statistics Iowa State University Ames, IA 50011 tel: (515) 294-3834 fax: (515) 294-1337 web: <http://www.public.iastate.edu/~dcadams>

Dean Adams <[dcadams@iastate.edu](mailto:dcadams@iastate.edu)>

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### Switzerland SexualSizeDimorphism Aug21-26

INTERNATIONAL WORKSHOP ON SEXUAL SIZE DIMORPHISM

This is your last chance to register for the workshop on Sexual Size Dimorphism 21-26 August 2005, Switzerland. The workshop will be in a fabulous location in the Alps, and will include presentations on a wide range of organisms and approaches.

See the Programme at <http://www.bath.ac.uk/bio-sci/szekely/workshop/-SSD%20Workshop2%20webmod.htm> We no longer accept offers for oral presentations, although a few slots left for posters. If interested, please send an email to [congres2@zoolmus.unizh.ch](mailto:congres2@zoolmus.unizh.ch)

Final deadline of registration and bookings: 5 August 2005

Best regards, Wolf Blanckenhorn ([wolfman@zoolmus.unizh.ch](mailto:wolfman@zoolmus.unizh.ch)) Tamas Szekely ([T.Szekely@bath.ac.uk](mailto:T.Szekely@bath.ac.uk)) Daphne Fairbairn ([daphne.fairbairn@ucr.edu](mailto:daphne.fairbairn@ucr.edu))

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Dr Tamas Szekely Department of Biology and Biochemistry University of Bath, Bath BA2 7AY, UK 01225 383676 (phone) 01225 386779 (fax) [T.Szekely@bath.ac.uk](mailto:T.Szekely@bath.ac.uk) (email) <http://www.bath.ac.uk/Departments/BiolBioch/-tamas.html> <http://www.bath.ac.uk/bio-sci/-biodiversity-lab/framework.html> WORKSHOP ON SEXUAL SIZE DIMORPHISM - AUGUST 2005 <http://www.bath.ac.uk/bio-sci/szekely/>



workshop/SSD%20Workshop2%20webmod.htm

bssts@bath.ac.uk

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## Instructions

Instructions: To be added to the EvoDir mailing list please send an email message to [Golding@McMaster.CA](mailto:Golding@McMaster.CA). At this time provide a binary six letter code that determines which messages will be mailed to you. These are listed in the same order as presented here — Conferences; Graduate Student Positions; Jobs; Other; Post-doctoral positions; WorkshopsCourses. For example to receive the listings that concern conferences and post-doctoral positions this would be 100010. Messages are categorized on the basis of their subject headings. If this subject heading is not successfully parsed, the message will be sent to me at [Golding@McMaster.CA](mailto:Golding@McMaster.CA). In addition, if it originates from ‘blackballed’ addresses it will be sent to me at [Golding@McMaster.CA](mailto:Golding@McMaster.CA). These messages will only be read and dealt with when I have time. The code 000000 has all channels turned off and hence gets only a once monthly notification of the availability of a monthly review pdf file.

To be removed from the EvoDir mailing list please send an email message to [Golding@McMaster.CA](mailto:Golding@McMaster.CA). Note that ‘on vacation’, etc, style messages are automatically filtered and should not be transmitted to the list (I hope), but should you wish to avoid the e-mail’s your code can be temporarily changed to 000000.

To send messages to the EvoDir direct them to the email [evodir@evol.biology.McMaster.CA](mailto:evodir@evol.biology.McMaster.CA). Do not include encoded attachments and do not send it as Word files, as HTML files, as  $\text{\LaTeX}$  files, Excel files, etc. . . . plain old ASCII will work great and can be read by everyone. Add a subject header that contains the correct category “Conference:, Graduate position:, Job:, Other:, Postdoc:, Workshop:” and then the message stands a better chance of being correctly parsed. Note that the colon is mandatory.

The message will be stored until the middle of the night (local time). At a predetermined time, the collected messages will be captured and then processed by programs and filters. If the message is caught by one of the filters (e.g. a subject header is not correctly formatted) the message will be sent to me at [Golding@McMaster.CA](mailto:Golding@McMaster.CA) and processed later. In either case, please do not expect an instant response.

## Afterward

This program is an attempt to automatically process a broad variety of e-mail messages. Most preformatting is collapsed to save space. At the current time, many features may be incorrectly handled and some email messages may be positively mauled. Although this is being produced by  $\text{\LaTeX}$  do not try to embed  $\text{\LaTeX}$  or  $\text{\TeX}$  in your message (or other formats) since my program will strip these from the message.