
E v o l D i r

December 1, 2003

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

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.

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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Adelaide AustEvolSociety Apr15-19

Australasian Evolution Society Meeting in Wollongong
February 2004

Dear registrants and AES members,

With regret the AES meeting is being transferred to Adelaide Zoo (~April 15th -19th) due to a number of circumstances beyond the control of the organizers at Wollongong. My sincere apologies for the inconvenience to those planning to attend or who have already prepared abstracts. I hope that this will not colour anyone's view of the Society. It is entirely a regrettable local problem.

I know that the change will not suit everyone but we are fortunate in being able to combine the meeting with the Australian Society for Animal Behaviour's Annual Meeting. Details of the Animal behaviour meeting are available at <http://galliform.bhs.mq.edu.au/ASSAB/-events/ASSAB4.html>. The inclusion of AES will probably be best achieved by adding a day to the meeting but this is still in negotiation. More details will follow.

David Ayre – Professor David J. Ayre Director, Institute for Conservation Biology Department of Biological Sciences University of Wollongong Wollongong, NSW 2522 AUSTRALIA

phone 61 2 42213440 fax 61 2 42214135 email dja@uow.edu.au

<http://www.uow.edu.au/science/biol/staff/dja/-dayre.html>

CalPEG UC Irvine Dec13-14

We are pleased to announce the return of the California Population and Evolutionary Genetics meeting (CalPEG). CalPEG is a two-day meeting that typically attracts talks from a wide range of disciplines in ecology, behavior, and evolutionary biology. CalPEG is a great opportunity for post-docs, graduate students and advanced undergraduates to present their research in a relatively low-key setting, and it is the perfect environment for more established scientists to test-drive their latest crazy idea. This year, the keynote address will be delivered by Dr. Douglas Wallace (UCI) on "Ancient origins - Modern diseases: The mtDNA connection". A limited number of discounted rooms has been set aside at the local Travelodge, available on a first-come, first-served basis.

We hope to see you there!

CalPEG 03 University of California-Irvine December 13 &14, 2003 <<http://www.bio.uci.edu/-CalPEG03>>www.bio.uci.edu/CalPEG03 Updates:

Online registration and title submission are open-register before DECEMBER 1 to receive the early registration rate. Although on-site registration will be available, we ask everyone to register in the next week if at all possible so meals can be adequately planned. Graduate students seeking "bunk over" housing with UCI grad students should get their request to Ms. Jessica Poulin at <<mailto:jpoulin@uci.edu>>jpoulin@uci.edu ASAP.

Welcome Party at Durty Nelly's Irish Pub (2915 Red Hill Ave, Costa Mesa—walking distance from the Travelodge) planned for Friday, 12 December, 8:00-12:00.

Please forward this message to all interested parties in your department!

Your Organizers, Art Weis & Neil Tsutsui
 <mailto:aeweis@uci.edu>aeweis@uci.edu
 <mailto:ntsutsui@uci.edu>ntsutsui@uci.edu

Neil Tsutsui <ntsutsui@uci.edu>

Dresden MoleEvol July5-10

Dear Colleague,

We apologize if you receive this e-mail in duplicate, and we would like to ask you to distribute this information to potentially interested colleagues.

We are organizing an interdisciplinary conference on Molecular Evolution to be held in Dresden (Germany), July 5-10 2004. The conference is sponsored by the Max-Planck-Institut for the Physics of Complex Systems.

The goals of molecular evolution can only be accomplished by a highly interdisciplinary combination of experimental techniques of molecular biology, bioinformatics, and mathematical modeling. The increasing amount of data made available by genome sequencing projects are demanding an increasing integration of these disciplines. In particular, progresses in understanding the structural properties of biological entities at different levels, such as molecules, networks, and populations, can greatly contribute both to elucidate the mechanisms of evolution and to reconstruct its course.

We aim at bringing together people from different scientific communities working in the following three main areas: theoretical and empirical studies of population dynamics, computational and experimental studies of the stability and properties of biological macromolecules, and statistical analysis of sequences databases. The synergies between these different approaches are anticipated to improve our understanding of the processes and pathways of molecular evolution, and should be pursued further. We hope that our workshop helps stimulating this integration and provides a lively framework for debate and interaction.

SCIENTIFIC COORDINATORS: Ugo Bastolla (Cen-

tro de Astrobiología, Torrejón de Ardoz, Spain) Markus Porto (Technische Universität Dresden, Germany) H. Eduardo Roman (Università di Milano, Italy) Michele Vendruscolo (University of Cambridge, UK)

ORGANISATION: Mandy Lochar, MPIPKS Dresden, Germany

INVITED SPEAKERS (* TO BE CONFIRMED):

G. Bernardi (Italy) P. Bork (Germany) L. Duret (France) A. Eyre-Walker (UK) H. Fraser (USA) R. Goldstein (UK) P. Hammerstein (Germany) P. Higgs (Canada) I.K. Jordan (USA) M. Lassig (Germany) E. Lazaro (Spain) A. Lesk (UK) W.-H. Li (USA) S. Lindquist (USA)* P. Liò (UK) J. Lobry (France) A. Moya (Spain) M. Nei (USA) T. Ohta (Japan) C. Orengo (UK) L. Peliti (Italy) P. Schuster (Austria) E. Shakhnovich (USA) J. Shapiro (USA) P.F. Stadler (Germany) E. Szathmary (Hungary) A. Valencia (Spain) A. Wagner (USA)*

Applications are welcome and should be made by using the application form on the conference web page:

<http://www.mpipks-dresden.mpg.de/~strapp04> However, please note that the number of attendees is very limited. The registration fee is 100 euro. Costs for accommodation and meals will be covered by the Max Planck Institute. In exceptional cases, limited funding for travel expenses is available. Deadline for applications is March 31, 2004.

For further information and application forms please contact: Visitors Program Max-Planck-Institut für Physik komplexer Systeme, Nöthnitzer Str. 38, D-01187 Dresden Tel.: +49-351-871-2105 / Fax: +49-351-871-2199 strapp04@mpipks-dresden.mpg.de <http://www.mpipks-dresden.mpg.de/~strapp04>

Yours sincerely,

Ugo Bastolla, Markus Porto, Eduardo Roman, Michele Vendruscolo

Ugo Bastolla <bastollau@inta.es>

GordonConf MolEvol Feb1-5

2004 Gordon Research Conference on Molecular Evolution Feb 1-5 in Ventura, California

Please join us at the 2004 Gordon Research Conference on Molecular Evolution, February 1-5 in Ventura, CA. We are delighted to have among our speakers a distin-

guished group of both young and established scientists who have made and are making important contributions to our understanding of the patterns and mechanisms of molecular evolution. It is an outstanding group of speakers and discussion leaders, and we anticipate lively discussion as to the lessons learned, the unsolved problems, and the exciting new opportunities in the study of the evolution of the molecules of life. This is a research area that is exploding in impact and opportunities given the rapid accumulation of genome sequences from an increasingly diverse array of plants, animals, and microbes. We have structured the meeting to include ample opportunity for debate and exchange of ideas, as well as exploring new research agendas and questions, as well as analytical tools and methods.

The schedule is as follows: Sunday Feb 1 Evening: Evolution of genome complexity Wen-Hsiung Li: Discussion leader Michael Lynch: The origins of genome complexity Austin Hughes: How do multigene families evolve new functions?

Monday Feb 2 Morning: Patterns of human genetic diversity Marc Feldman: discussion leader Sarah Tishkoff: Genetic analysis of African populations: Dissecting human evolutionary history and complex disease Molly Przeworski: The signature of positive selection at randomly chosen loci Anna Di Rienzo: Inferences about human demography based on multilocus analyses of noncoding sequences

Evening: Adaptive evolution in plants Brandon Gaut: discussion leader Joy Bergelson: Evolution of plant disease resistance genes June Nasrallah: Molecular evolution of self-incompatibility genes

Tuesday Feb 3 Morning: Advances in analytical tools Tandy Warnow: discussion leader Rasmus Nielsen: Statistical tests of selective neutrality in the age of genomics Magnus Nordborg: The coalescent and molecular evolutionary inference. Mary Kuhner: Maximum likelihood estimation of natural selection under the coalescent

Evening: Evolution of heterochromatin and noncoding sequences Steve Henikoff: discussion leader Barbara Wakimoto: The evolution of heterochromatic genes in *Drosophila* Harmit Malik: The evolution of centromeres and their histones

Wednesday Feb 4 Morning: The tree of life Mitch Sogin: discussion leader Billie Swalla: Phylogeny of Deuterostomes: Vertebrate Origins Michael Sanderson: Prospects for large-scale phylogeny reconstruction in the Tree of Life Nancy Moran: Independent origins and horizontal transfer of bacterial symbionts

Evening: Evolution of gene expression Michael Purug-

ganan: discussion leader Greg Gibson: Genetic contributions to transcriptional variation: mapping transcripts of traits Greg Wray: Rapid evolution of cis-regulatory sequences

Thursday Feb 5 Morning: Network evolution Andy Clark: discussion leader Eric Davidson: The evolution of gene networks that control development Andreas Wagner: Molecular evolution in genetic networks

Evening: Comparative genomics Chip Aquadro: discussion leader Casey Bergman: The comparative genomics of transposable elements in *Drosophila* Evan Eichler: Evolutionary implications of jumping genomic segments

We look forward to having you join us. You can apply for the meetings at: <http://www.grc.org> (follow the links for "Attending a Conference", then "Online Application", then selecting "Molecular Evolution").

Please note that we are providing partial support for graduate and post doctoral students to attend the meeting, up to the limits of our funding.

Best wishes, Mike Clegg (Chair) and Chip Aquadro (Vice-Chair) 2004 Gordon Research Conference on Molecular Evolution

cfa1@cornell.edu cfa1@cornell.edu

IrkutskBaikal EvolBiol Sep6-11

Dear colleagues, We are glad to invite you to participate in the 1st Baikalian Workshop on Evolutionary Biology with the subject "Tracing Past Environmental Changes in the Genetic diversity of Contemporary Faunas"

The general idea is to join theoretical biologists, modelers, bioinformatics people and molecular biologists to extract new information from phylogenies that would allow one to infer how the evolutionary histories of species was affected by past environmental changes. The emergence of new methods to infer the demographic histories of organisms from molecular phylogenies allows one to address how environmental changes may have impacted the origin and the evolutionary histories of species and their populations. In view of the growing interest to describe, understand and predict the consequences of the present anthropogenic global climate changes on global biodiversity, we suggest that the possibility to use phylogenetic information to account for the impact of environmental changes on patterns of diversification in species and populations may

become an important and new approach. Whereas the demographic consequences of environmental change are usually studied below the species level, the phylogenetic approach enables to investigate if and how environmental changes have resulted in increased (or decreased) rates of diversification (speciation ><extinction). By exploring the available, and newly emerging methods to link phylogenetic information to environmental and biotic factors (influence of the presence of other organisms in a particular eco-system) this meeting intends to bridge the gap between theoretical ecology, population genetics and phylogenetics by exploring how molecular phylogenies, may allow one to investigate the importance of environmental change on the rate of evolutionary diversification in groups of related species.

Organising Committee includes Erik Verheyen, Dr., Royal Belgian Institute of Natural Sciences, Brussels, Belgium. (Chairman) Sergei V.Semovskii, Dr.Sci, Molecular Systematics Lab, Limnological Institute Siberian Branch, Russian Academy of Sciences, Irkutsk, Russia. (Co-chairman) Dmitry Yu.Sherbakov, Dr., Molecular Systematics Lab, Limnological Institute Siberian Branch, Russian Academy of Sciences, Irkutsk, Russia. Ulf Dieckmann, International Institute of Applied System Analysis, Laxenburg, Austria Vladimir V.Kolchanov, Prof., Institute of Cytology and Genetic, Novosibirsk, Russia Boris Sket, Prof., Professor, University of Ljubljana, Slovenia Nils Chr. Stenseth, Prof., University of Oslo, Norway Koen Maretns, University of Amsterdam, the Netherlands

The planned venue is Limnological Institute, Irkutsk, Siberia, Russia, September 6-11, 2004 with field tour to Lake Baikal and special Baikalian session at the Lake Baikal shore. The registration fee (400 US\$) includes an abstracts book, coffee breaks, Irkutsk city tour, Baikal field tour on a research vessel, the welcome party and the conference banquet. We plan to have a special program for accompanying persons

Prospective participants are invited to send an abstract of their paper for the Workshop ot later than April 1, 2004. E-mail for correspondence is semovskii@sherb.lin.irk.ru Conference Web site is <http://www.lin.irk.ru/1BWEB> .

We would be gratefully appreciate if you would distribute this information among your colleagues. Thank you in advance.

semovskii@lin.irk.ru

Louvain la Neuve Biodiversity Apr7-10

Symposium announcement

Biodiversity: state, stakes and future Louvain-la-Neuve, Belgium, 7-10 April 2004

There will be six theme sessions, each with an invited keynote speaker.

Dispersal and demography in fragmented landscapes
Keynote speaker: Erik Matthysen (Antwerp)

Genetics and the conservation of biodiversity
Keynote speaker: Richard A. Ennos (Edinburgh)

Biodiversity and functioning of forest ecosystems
Keynote speaker: Alain Franc (Paris)

Biodiversity and agriculture
Keynote speaker: Françoise Burel (Rennes)

Economic and managerial aspects of biodiversity
Keynote speaker: Paulo Nunes (Venice)

Invasive species
Keynote speaker: to be announced

Each session is open for contributions of talks and posters. Please see our website <http://www.bdiv.ucl.ac.be/> (follow link to "Symposium 2004") for more information.

Renate Wesselingh Biodiversity Research Centre Université catholique de Louvain Louvain-la-Neuve, Belgium symposium@bdiv.ucl.ac.be

Renate Wesselingh <symposium@bdiv.ucl.ac.be>

Madison WI EvolAquaticSystems Aug22-26

Announcement for an AFS Genetics Section Symposium, 134th Annual Meeting, August 22-26 in Madison, Wisconsin:

GENETIC CONSEQUENCES OF HUMAN IMPACTS ON AQUATIC ECOSYSTEMS: EXAMPLES FROM THE GREAT LAKES AND ELSEWHERE

Organizers: Jeff Hard, Conservation Biology Division,

Northwest Fisheries Science Center, 2725 Montlake Blvd. E., Seattle, WA 98112-2097, Tel: (206) 860-3275, Fax: (206) 860-3335, email: jeff.hard@noaa.gov

Kim Scribner, Department of Fisheries and Wildlife & Department of Zoology, 13 Natural Resources Building, East Lansing, MI 48824-1222, Tel: (517) 353-3288, Fax: (517) 432-1699, email: scribne3@msu.edu

Synopsis: We wish to announce a symposium to be sponsored by the AFS Genetics Section and held at the AFS 134th Annual Meeting on August 22-26 in Madison, Wisconsin. This symposium is intended for 1.5 days (approximately 25 presentations of 20 min. duration), and will address genetic research in a variety of areas that seeks to understand the effects of human activities on the aquatic environment, with special emphasis on the Great Lakes. The magnitude of these impacts is increasing at an alarming rate. Species and populations that have evolved means of coping and thriving within the environments they inhabit are confronted with anthropogenically induced selection pressures that are unprecedented in geographic scale and intensity. Better understanding of patterns of genetic and phenotypic variation within and among natural populations, of the ways that human activity affects these patterns, and of the means organisms have to respond to changing selection pressures will improve managers' decision making. Increasingly, molecular technology and methods of analyses provide a means to assess and predict risks to the viability of fish resources and aquatic communities. This symposium seeks to bring together researchers who are working at the forefront of these fields.

The symposium is tentatively organized into three sections. The first section will outline our current understanding of the evolutionary processes that underlie existing genetic and phenotypic diversity. Topics will include history of colonization and radiation, patterns of population genetic diversity, comparative phylogeography, and the role of systematics in definition of evolutionary units and management units, and the genetic basis of adaptive variation.

The second section will focus on anthropogenic effects on aquatic populations that can be resolved via molecular or quantitative/heritable variation in phenotypic data. Topics will include introduced species, disease, climate change and environmental tolerance, effects of genotype and potential for evolutionary response to large-scale environmental variation, evolutionary effects of harvest, effects of hatchery fish on genetic diversity and fitness of wild stocks, effects of pollution, environmental stressors, and hybridization. Examples will be drawn from the Great Lakes and elsewhere.

The third section will discuss emerging genetic approaches to detect evolutionary change and agents. Topics will include molecular approaches to quantitative genetic problems, genomics, bioinformatics, gene mapping and candidate genes, QTL, biological control, and emerging computational approaches.

We intend to propose the symposium to AFS by their deadline of December 18, 2003. Therefore, we ask those interested in contributing a presentation (talk or poster) to contact one of us with a tentative title by December 15, 2003. Anyone interested in serving as a session chair should also contact us by that date.

Sponsors for the symposium include the Great Lakes Fishery Commission.

Kim Scribner <scribne3@msu.edu>

Paris PopGenet Dec5-6 3

2nd DNA POLYMORPHISMS IN HUMAN POPULATIONS International Symposium Friday Dec 5th and Saturday Dec 6th Musée de l'Homme (Museum of Mankind), Paris France

The FINAL PROGRAM and ALL THE ABSTRACTS selected from the call is available at the website: <http://www.mnhn.fr/mnhn/ecoanthropologie/accueil.html>
We remind that the registration deadline at discount fees is the 15th of November

Invited speakers: Frederic AUSTERLITZ (University of Orsay - "Paris Sud"); David BALDING (Imperial College, London - United Kingdom); Graham COOP (Oxford University, UK); Laurent EXCOFFIER (University of Bern - Switzerland); David GOLDSTEIN (University College, London - United Kingdom); Raphaël LEBLOIS (University of Montpellier II, France); Stephanie MANEL (University Joseph Fourier, Grenoble - France); Susan PTAK (Interdisciplinary Center for Bioinformatics, Leipzig - Germany); Chris SPENCER (University of Oxford - UK)

FINAL PROGRAMME:

First session: David Balding Identifying adaptive genetic divergence among populations from genome scans
Frédéric Austerlitz Impact of fertility transmission on genetic diversity in humans
Graham Coop Full likelihood inference on gene trees under selective models

Second session: (discussant: Lluís Quintana-Murci)
David Goldstein TO BE ANNOUNCED Mark Stonek-

ing Detecting local selection in human populations
Chris Spencer Selection, recombination and linkage disequilibrium

Third session: (discussant: Pierre Darlu) Susan Ptak Evidence for population growth in humans is confounded by fine scale population structure Stephanie Manel Geographical analysis of landscape genetic variation: Landscape genetics Raphael Leblois Estimation of demographic parameters under isolation by distance : What can we do now?

Fourth session: Franz Manni The identification of genetic barriers and the evaluation of their robustness by an improved Monmonier's approach Rodney J. Dyer The shape of genetic structure: a graph-theoretic analysis of global human genetic variation Daniel Falush Inference on historical admixture from multilocus genotype data

Fifth session: Oscar Lao Geographic structure of variation at SNPs conferring risk for Coronary Heart Disease Luis Barreiro Different nucleotide and haplotype diversity in two closely related innate immunity genes in humans Laurent Excoffier Molecular diversity and genetic structure after a spatial expansion: Application to human data

Sixth session: Carlos D. Bustamante Assessing the evolutionary consequences of amino acid variation in the human genome using genomic polymorphism and divergence data Santos Alonso Compound haplotypes at Xp11.23 and human population growth in Eurasia Ciara Dolan Distinction of Caucasian (Irish) population structure defined by pathogen response-related genetic variants and other genetic variants

POSTER session: Patricia Balaesque Evolutionary dynamics and population genetics of sex-linked homologous microsatellites: from molecular mechanisms to population genetic analysis Raphaëlle Chaix Lineages, clans and tribes in patrilineal societies revisited by genetic data. The example of mongol-turkic pastoral populations Fabio Di Giacomo Non-clinal patterns of human Y-chromosomal diversity in Italy Catherine Godinot Decrease in predominance of mitochondrial DNA haplotype B in the Aymara population suffering from excessive erythrocytosis Annie Guiller Comparison of spatial genetic patterns in the land snail *Cornu aspersum* inferred from different statistical tools Lejla Kapur MtDNA diversity in local human populations after war resettlement Francesca Luca MtDNA variation in central Africa: Stéphanie Plaza Joining the pillars of Hercules: mtDNA sequences show multidirectional gene flow in the Western mediterranean sea Juan Sanchez Y-Chromosome analysis of the Somali population suggests the origin of the haplogroup E3b1

Evelyne Heyer & Franz Manni Musée de l'Homme (Museum of Mankind), Dept. of Men, Natures and Societies Population genetics group 17, Place du Trocadéro 75016 Paris, France Email: manni@mnhn.fr

Franz Manni <manni@mnhn.fr>

RSLondon PlantPhylo Mar15-16

What? Plant phylogeny and the origin of major biomes
When? 15/16 March 2004 Where? At the Royal Society, London Cost? Free to all, but registration required
How? Register on-line at www.royalsoc.ac.uk/events
Meeting Summary Continental biomes are the world's most biodiverse areas, but little is known about their history. Molecular phylogenies offer a new means of dating the origin of plant taxa that form the structural framework of these ecosystems. This meeting will discuss the theoretical background to dating phylogenies and place insights from calibrated plant phylogenies in a palaeobotanical and ecological context.

Organised by Dr Toby Pennington, Dr Quentin Cronk and Dr James Richardson

Speakers include:

Mike Sanderson, University of California, Davis, Ian Woodward, University of Sheffield, Mark Chase, Royal Botanic Gardens, Kew, James Richardson, University of California, Robyn Burnham and Kirk R Johnson, University of Michigan and Denver Museum of Natural History, Denver, Toby Pennington, Royal Botanic Garden, Edinburgh, Matt Lavin, Montana State University, Bob Hill, University of Adelaide, Mike Crisp, Australian National University, Barbara Graven- deel, Nationaal Herbarium Nederland, Leiden, Quentin Cronk, University of British Columbia, Vancouver, Canada Bonnie Jacobs, Southern Methodist University, Peter Linder, Institute of Systematic Botany, Vanessa Plana, Royal Botanic Garden, Edinburgh, Suzanne Renner, Systematische Botanik and Michael Donoghue, University of Yale.

Further information and registration details can be found on the Royal Society website www.royalsoc.ac.uk/events. Or contact Suzi White on suzi.white@royalsoc.ac.uk

Suzi White Events Officer

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UNotreDame MEEC Mar5-7

Call for papers 24th Annual Midwest Ecology and Evolution Conference, University of Notre Dame March 5th-7th, 2004

The graduate students in the Department of Biological Sciences at the University of Notre Dame would like to invite graduate students and post-doctoral associates from the Midwestern United States to submit abstracts for oral and poster presentations at the 24th Annual Midwest Ecology and Evolution Conference (MEEC).

This year, MEEC will be held on the campus of The University of Notre Dame, in South Bend, Indiana from March 5-7, 2004. Keynote speaker will be Dr. Michael Rosenzweig, professor of ecology and evolutionary biology at the University of Arizona.

In addition to contributed sessions on topics in ecology and evolution, invited and contributed papers will be considered for two special symposia: (1) Conservation Issues in the Midwest, and (2) Conceptual Innovations in Ecology and Evolution. Papers presented at these symposia will be considered for publication in a special issue of the American Midland Naturalist.

MEEC provides an opportunity for graduate students and post-docs to present their research in a relatively informal environment and is a great way to meet other ecology and evolutionary scientists in the Midwest eco-region.

Deadline for submission of abstracts is January 31th, 2004. Registration fee is \$40.

For more information, go to <http://meec2004.org> or email drake.4@nd.edu.

Hattie Dambroski <hdambros@nd.edu>

USussex PopGenet Dec16-19

This is gentle reminder that registration and title submission closes for the Pop Group Meeting on nov 15th. Do not worry if you have registered already and not received confirmation; I will circulate an email to all registrants once registration has closed.

Population Genetics Group Meeting

University of Sussex

Tuesday Dec 16th until Friday Dec 19th

The Population Genetics Group meeting is a small (~150 delegates) informal meeting of evolutionary biologists. The cost of the conference

is modest, at 185 pounds for registration, accomodation and all meals.

There will be three plenary talks, which will be given by John Maynard

Smith, Tim Birkhead and Laurent Duret; there will be two parallel sessions of 20 minute talks at other times and a poster session. The conference will start on the evening of tuesday Dec 16th, with the first talk the following morning, and will finish at lunch on friday december 19th.

Please visit our web-site (<http://www.biols.susx.ac.uk/CSE/popgroup/home.html>) for further information, to submit talk/poster titles and to register.

Adam Eyre-Walker Centre for the Study of Evolution & School of Biological Sciences University of Sussex Brighton BN1 9QG

tel : 01273 678480

UWollongong AustEvol Feb10-12 2

“AES Final Call for Abstracts”

Dear Evolutionary Biologists,

The University of Wollongong, NSW Australia, is hosting the 3rd Australasian Evolution Meeting. It will be held on 10-12 February 2004, and will cover all aspects of evolutionary biology.

The closing date for Abstracts and early registrations is Monday 17th November 2003.

We will let you know which category that you have been accepted for by November 24th.

Oral presentations in power point form should be burnt

onto CDs to simplify loading onto computers at the meeting.

Poster dimensions: Posters should fit boards that are 90cm wide and 2m tall.

If you have any enquiries please email Julie Wright (juliew@uow.edu.au) or visit the website which will be updated regularly.

<http://www.uow.edu.au/science/biol/aes2004/-index.html> Paul Rymer For AES Organizing Committee

Wollongong AustEvol Cancelled

Australasian Evolution Society Meeting in Wollongong
February 2004

With regret the AES meeting will have to be cancelled or postponed due to a number of circumstances beyond the control of the organizers. Apologies for the inconvenience to those planning to attend or who have already prepared abstracts.

Hopefully the meeting will be rescheduled for later in the year at another venue but this is still being negotiated.

David Ayre –

Professor David J. Ayre Director, Institute for Conservation Biology Department of Biological Sciences University of Wollongong Wollongong, NSW 2522 AUSTRALIA

phone 61 2 42213440 fax 61 2 42214135 email dja@uow.edu.au

<http://www.uow.edu.au/science/biol/staff/dja/-dayre.html>

GradStudentPositions

DalhousieU Avena barbata	9	UBC PlantMolGenomic Evol	14
DeakinU PenguinGenetics	10	UEdinburgh LanguageEvol	14
EmoryU EvolBiol	10	UGroningen AnimalEvolEcol	15
Groningen TheoBiol	11	UHawaii IslandSnail	16
OregonStateU FishEvol	12	UMaryland Bioinformatics MolEvol	17
OregonStateU PinePhylogeny	12	VanderbiltU EcolEvol	17
Sanger EvolGenomics	12	VrijeU Phenotypic plasticity	17
SmithCollege MicrobialEvol	13	WashingtonU Evolution	18
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DalhousieU Avena barbata

Graduate Studentships Plant Evolution and Ecology

I am seeking students interested in pursuing graduate study (MSc and/or PhD level) in Plant Evolution, Ecology and Genetics. Our lab focuses on the genetic basis

of fitness variation across heterogeneous habitats.

Study System: We are using the slender wild oat, *Avena barbata*, as a study organism, because it occurs as two genotypes associated with contrasting wet and dry habitats, and which differ in a suite of ecological traits related to these habitats. We have crossed these genotypes and have available 200 recombinant inbred lines (RILs). Each RIL is a true breeding line fixed for a random combination of alleles from the two parental genotypes. Thus we have a system where (a)

it is possible to replicate specific genotypes across environments and experimental treatments, (b) any correlation of traits (e.g., size and fitness) across lines implies a shared genetic basis for the two traits (c) genetic mapping of the genes controlling ecological traits can be conducted easily.

There are a variety of questions that can be addressed in this system. Two examples include the following, but interested students should feel free to suggest others.

Selection on life history variation: The genotypes vary in the timing of the switch from vegetative to reproductive growth (days to first flower) as well as variation in allocation to individual offspring (seed size). Both are key life history traits that are expected to be under strong selection as well as strong trade-offs. The RILs provide an excellent system in which to study these issues

Costs and Benefits of Phenotypic Plasticity: Our RIL's show considerable plasticity for traits such as root allocation (typically a very plastic trait in plants), but moreover, the *degree* of this plasticity shows heritable variation among lines. Therefore, the fitness consequences of different levels of plasticity could be studied within and between environments.

Resources At Dal, students would have access to

- Facilities for DNA genotyping through the shared Marine Gene Probe Laboratory
- Greenhouse facilities
- Permanent field plots in the native habitat (in California)

Funding is available in support of the research, and student stipends can be arranged.

Contact: Robert Latta, Dept. of Biology, Dalhousie University

Halifax, Nova Scotia, B3H 4J1

Email: Robert.Latta@Dal.ca

More Info : www.dal.ca/~rglatta/latta.html

DeakinU PenguinGenetics

Applicants must be Australian citizens or permanent residents (NZ citizens can be accepted pending approval from the ARC)!!!!

PhD Scholarship - ARC APAI Conservation genetics of

the little penguin ~23,000 per annum tax-free

Deakin University, in conjunction with its research partner, Phillip Island Nature Park, has been awarded a scholarship by the Australian Research Council for a Doctoral student in conservation genetics of the little penguin.

The Little Penguin is a unique bird of high tourism and community appeal. Unfortunately, breeding colonies are highly susceptible to extinction from localised perturbations. The project will provide essential information for the development of effective colony-specific management plans. It will identify colonies of greatest extinction risk by determining the extent that they will be supplemented by immigrants in the event of a decline, and how few individuals produce offspring which in turn go on to reproduce. The project will also infer the recent history of colony sizes such that contemporary changes in abundances can be interpreted. DNA-based techniques will be employed to address these questions.

The PhD scholarship offers an annual stipend of approximately \$23,000 tax free, for three years (with likelihood of a 6 month extension if required), to commence in 2004. Applicants must be Australian citizens or permanent residents (NZ citizens can be accepted pending approval from the ARC), and should hold a first class honours degree or equivalent qualification in a field such as ecology, molecular genetics, conservation biology, or a related discipline.

The position should be filled by early 2004.

Enquiries and expressions of interest regarding the project should be directed to:

Chris Burridge School of Ecology & Environment
Deakin University chrisb@deakin.edu.au Phone (03) 5563 3297 Fax (03) 5563 3462

General scholarship information is available from:

Ms Julie Hunter Research Scholarship Office Research Services Deakin University Geelong Vic 3217 Email: research-scholarships@deakin.edu.au Tel: (03) 5227 3492

EmoryU EvolBiol

Dear Prospective Graduate Students and Colleagues:

This "Public Service" message is to let you know that the Graduate Program in Population Biology, Ecology

and Evolution (PBEE) at Emory University is now considering applications for the fall of 2004. If you are (or know of) a highly motivated, ambitious and able student looking for a superb graduate program in population biology, ecology and evolutionary biology, the hardly cryptic (but sincere) purpose of this message is to encourage you (or them) to submit an application to our program. In the first weeks of February we will choose the candidates to bring to Atlanta for interviews, March 26-28, 2004.

We can train students in a many areas of population biology, ecology and evolutionary biology. Those areas in which we have particular strengths (are arguably the best graduate training program in the country) are: the ecology and evolution of infectious diseases, and molecular evolution and functional genomics.

The faculty of the PBEE program includes members of the Departments of Biology, Genetics, Anthropology, Environmental Studies, Biostatistics, Medicine, Epidemiology, International Health, Psychology, and the Emory Vaccine Center. The PBEE faculty also includes investigators at the Yerkes National Primate Center and the US Centers for Disease Control and Prevention (CDC), both of which are within an easy (and pleasant) walking distance from the main campus.

The PBEE program is part of the Division of Biological and Biomedical Sciences. Students accepted to this, or other Division programs are guaranteed at least five years of support with a competitive annual stipend, health insurance, and a full tuition waiver.

Emory is located in a posh and tree-lined section of Atlanta, about five miles from downtown. For those who don't know and/or have northern, Midwestern or Western US prejudices (as many of us once had), Atlanta is a beautifully wooded and wonderfully cosmopolitan and liberal (yup) city. It is located in the piedmont of the Appalachian Mountains about two hours drive from the high mountains and five hours from either the Atlantic or Gulf coasts.

For more details about the PBEE program in general, our areas of strength and our faculty, "click on" our website. http://www.biomed.emory.edu/PROGRAM_SITES/PBEE/ For information about research opportunities in specific areas of PBEE, we encourage you to write directly to the faculty in those areas. Instructions about how to apply to the PBEE program and application forms can be obtained by "clicking on www.biomed.emory.edu/admissions_applicationinformation.html With best wishes, Bruce

Bruce R. Levin blevin@emory.edu Samuel Candler

Dobbs Professor (404) 727 2826 Office Department of Biology (404) 727 2956 Lab 1510 Clifton Rd. (404) 727 2880 FAX Atlanta, GA 30322, USA <http://www.eclf.net/>

Groningen TheoBiol

07.11.'03

Dear Brian, A Ph.D position is available immediately in the group of Theoretical Biology in Groningen for a foreign (non-Dutch) student. The project concerns modelling of 'Self-organization of social behaviour in primate societies'. Could you please put the information below or of the attachment on the web? Thank you very much, Charlotte Hemelrijk

PhD position at the University of Groningen, the Netherlands 'Self-organization of social behaviour in primate societies' For insect societies it has been shown that complex social behaviour may arise from simple interactions between individuals and their environment by self-organization. This approach has seldom been applied to the complex behaviour of primates, because particularly in primates sophisticated cognition is assumed to underlie complex social behaviour. However, even in humans, societal phenomena, such as traffic jams, result in part from self-organization. The aim of the present PhD project is to explain complex social phenomena of primates and their species specific differences by self-organization. The method is a simulation study (computer models) in which artificial individuals are supplied with simple rules and behavioural phenomena are studied at the level of relationships and of the group. Using this procedure explanations will be sought for all kinds of aspects of primate social behaviour, ranging from coalition strategies, reconciliation behaviour, exchange strategies, maternal styles to migratory behaviour. The aim is to investigate the extent to which such phenomena may arise as emergent properties from the interactions among the individuals and environmental characteristics, such as the distribution of food, the degree of predator pressure, and the competitive regime.

We are looking for a foreign (non-Dutch) student with: - MSc in biology or other relevant discipline - knowledge of social behaviour of animals (preferably primates) - knowledge about, and interest in self-organization - experience with computer programming - ambition to obtain a Ph.D degree within 4 years

The position is for four years and expected to lead to a Ph.D degree. The student will receive a stipend of 1340 Euro per month from the University of Groningen Foundation. This is sufficient for sustaining basic needs of living. Note that the city of Groningen is an excellent living place. It is surrounded by a mosaic of rural and natural landscapes and is well known for its student friendly atmosphere.

If you are interested in this position, please submit your application with curriculum vitae, list of publications, summary of research interests and two letters of reference by December 10, 2003 to:

Dr. Charlotte K. Hemelrijk, Tel. 0031-50-3638084, Email c.hemelrijk@biol.rug.nl, Theoretical Biology, Biological Centre, Kerklaan 30, 9751 NN Haren, The Netherlands (for more information www.rug.nl/-biologie/theobio)

PD Dr. Charlotte K. Hemelrijk Theoretical Biology Biological Centre Kerklaan 30 9751 NN Haren The Netherlands

Tel. 0031-50-3638084 Fax 0031-50-3633400

Please note also my new home-address and my new phone number at home (which changed twice): Charlotte K. Hemelrijk Da Costalaan 24 9752 ER Haren The Netherlands Tel 0031-50-5343671

Charlotte Hemelrijk <C.Hemelrijk@biol.rug.nl>

OregonStateU FishEvol

Ph.D. position - Department of Zoology, Oregon State University

Funding for a Ph.D. student is available in the aquatic biology lab of Dr. David Lytle. The position will begin in Fall of 2004, with the option of joining us at field sites during summer 2004. Support will come from graduate research assistantships within the lab and departmental teaching assistantships (Zoology guarantees 5 years of support).

Potential research topics include, but are not limited to: - using theory, behavioral experiments, and molecular methods to study how aquatic organisms evolve strategies for surviving floods and droughts - studying the ecological effects of flow regime modifications (dams, diversions, channelization) on aquatic plants and animals - developing image recognition technology to identify aquatic invertebrates for conservation efforts (col-

laborative NSF-funded project)

Applicants should send a resume and a 1-page statement of research interests directly to Dr. Lytle (david.lytle@science.oregonstate.edu), and apply to OSU's Zoology Department by the Jan. 15 2004 deadline (<http://oregonstate.edu/dept/zoology/>).

***** David A. Lytle Oregon State University (541) 737-1068 <http://www.science.oregonstate.edu/lytlelab/>

OregonStateU PinePhylogeny

Ph.D. position - Department of Botany & Plant Pathology, Oregon State University

An NSF-funded position is available for a Ph.D. student in the labs of Aaron Liston and Richard Cronn, beginning Fall, 2004. The student will investigate the phylogenetic relationships of Pinus subgenus Pinus using low-copy number nuclear genes. We are especially interested in candidates who are interested in 1) methodological and theoretical issues related to phylogenetic analysis of multiple genes, or 2) the application of phylogenetic results to questions in ecology and evolutionary biology.

Applicants should send a resume and a 1-page statement of research interests directly to Dr. Liston (listona@science.oregonstate.edu), and apply to the Department of Botany & Plant Pathology by the Jan. 15 2004 deadline (<http://oregonstate.edu/dept/botany/>).

Aaron Liston Department of Botany & Plant Pathology Oregon State University Corvallis, Oregon 97331-2902 USA <http://www.orst.edu/dept/botany/herbarium>

Aaron Liston <listona@science.oregonstate.edu>

Sanger EvolGenomics

Dear colleagues, I would like to draw your attention to the Graduate program at The Sanger Institute. The addition of many new faculty in the last couple of years has made The Sanger Institute a very attractive place for studies of human variation and evolutionary genomics. If any students are interested please follow the

instructions below or contact individual faculty members to find more info. You will also find all the necessary info at the Sanger website at <www.sanger.ac.uk>

Graduate Studies At The Sanger Institute: Four Year PhD Programme Overview The Wellcome Trust Sanger Institute PhD programme provides research opportunities and training for graduate students who wish to study for a 4-year PhD degree registered at the University of Cambridge commencing in October 2004. To see the type of research undertaken at the Wellcome Trust Sanger Institute please visit our Faculty Members pages. Application procedure Please complete the on-line application. Ensure that your chosen referees download and complete the referees form. Should you have any difficulties in submission please contact the Graduate Programme Administrator. The closing date for applications is Monday 15th December 2003. Selected candidates will be invited to attend our PhD Open Day on Monday 26th January 2004 at The Wellcome Trust Genome Campus, Hinxton where they will be interviewed by potential supervisors and discuss their research interests. For overseas applicants this may take the form of a telephone interview (during the last two weeks of January). If you haven't heard from us by Friday 16th January 2004, you should assume that you have not been short listed and invited for interview. After the PhD Open Day and the interviews we will try to let you know as soon as possible if your application was successful. Academic Requirements Candidates are expected to hold, or obtain, a 1st or an upper 2nd class degree or equivalent overseas qualifications. Where applicable, GRE results will be required. The studentships will be allocated on a competitive basis after the Open Day. Students will obtain full financial support including tuition regardless of nationality. Current Students At the moment the Sanger Institute has 40 PhD students who as members of the University and Colleges actively take part in the University's academic and social life. Copies of Cambridge University's Graduate Studies Prospectus (2004 - 05) are available from the Graduate Studies Prospectus web pages. Additional information can be found at the Graduate Admissions web pages.

Emmanouil (Manolis) T. Dermizakis, Ph.D. Division of Medical Genetics University of Geneva Medical School 1 Rue Michel-Servet 1211 Geneva Switzerland
tel: +41 22 379 5719 fax: +41 22 379 5706 URL: www.medgen.unige.ch

SmithCollege MicrobialEvol

Two NSF-funded graduate positions are available to work on:

(1) diversity and genome evolution of ciliates (2) phylogeography of coastal ciliates

(1) The first position focuses on the evolution of ciliate genomes, particularly in the class Phyllopharyngea. This ciliate class includes the bizarre suctorians, a lineage in which adults lack cilia but give 'live birth' to ciliated embryos that they 'brood' in a variety of unusual structures. The project aims to use multigene genealogies to assess relationships, and to further characterize genome processing within this class.

(2) A second position is available to work on the phylogeography of coastal ciliates, focusing on members of the class Spirotrichea. The aims of this project are to describe the diversity of coastal ciliates using both molecular and morphological approaches. Methods include light microscopy and silver staining, gene sequencing, field work and bioinformatics.

For more information, contact: Laura Katz Faculty member: Graduate Program in Organismic and Evolutionary Biology, UMass-Amherst Associate Professor: Department of Biology, Smith College Email: LKatz@Smith.edu Phone: 413-585-3825 Fax: 413-585-3786 <http://www.science.smith.edu/departments/Biology/lkatz/> And the admissions office of the Organismic and Evolutionary Biology Program at UMass-Amherst. <http://www.bio.umass.edu/oeb/oeb.html>

"Laura A. Katz" <LKatz@smith.edu>

SwissFederalResInst PopGenet

The Swiss Federal Research Institute WSL and its 450 staff members are committed to contribute to a landscape of high quality and to the protection of humans from natural hazards. The sections Ecological Genetics and Landscape Dynamics & Management offer

TWO PhD POSITIONS (POPULATION GENETICS)

/ HABITAT MODELING)

The successful candidates will participate in a European project, which starts January 1, 2004, that studies the diversity of plants at the genetic and floristic level in the Alps, and searches for explanatory variables as surrogates of biodiversity by modeling habitat diversity. The focal areas for the two dissertations, which are tightly linked, are (1) molecular genetic diversity of several Alpine plant species (AFLPs) and (2) species richness and habitat diversity modeling based on available floristic data and biophysical variables. In collaboration with the EU partners, and co-ordinated by the team of WSL, the combined data sets of all project participants will be analyzed.

The positions require (1) a strong background in the analysis of population genetic data and in population biology, as well as skills in lab work, or (2) experience in programming, GIS, modeling, and handling of large data sets. A good knowledge in the Alpine flora is highly advantageous. Both candidates should be willing to carry out field work in rugged terrain and to collaborate in a motivated team.

Our institute offers a well-equipped molecular laboratory (automatic sequencer, robotic pipeting station). A high-capacity IT network, work stations and software, as well as an excellent logistic support, are provided.

These positions are fixed-term for three years. Please send your application under reference number 371 to Mrs. Monika Huber, Swiss Federal Research Institute WSL, Personnel department, Zürcherstrasse 111, CH8903 Birmensdorf, Switzerland (e-mail applications cannot be accepted). Further information can be obtained from Dr. Felix Gugerli (Tel: +41-(0)1-739 25 90) or Dr. Niklaus Zimmermann (Tel: +41-(0)1-739 23 37).

Felix Gugerli Division Ecological Genetics Swiss Federal Research Institute WSL Zuercherstrasse 111/Postfach CH-8903 Birmensdorf

SWITZERLAND

phone: ++41 1 739 25 90 fax: ++41 1 739 22 15
WWW: <http://www.wsl.ch/staff/felix.gugerli/> WWW:
<http://www.wsl.ch/staff/felix.gugerli/>

UBC PlantMolGenomic Evol

A Graduate Assistantship (M. S. or Ph. D.) is avail-

able in the lab of Dr. Keith Adams at the University of British Columbia (UBC) in the area of plant molecular and genomic evolution, starting fall 2004. I am looking for a highly motivated graduate student to work with me on molecular evolution in polyploid and hybrid plants. Research will focus on expression and silencing of genes duplicated by polyploidy. See my web page at <http://www.ubcbotanicalgarden.org/-research/adamslab.php> Inquiries about the research area are welcome (kladams@iastate.edu).

UBC has a strong and interactive group of evolutionary biologists (see <http://www.zoology.ubc.ca/%7Eotto/-Evolution.html>), including several at the Centre for Plant Research (<http://www.ubcbotanicalgarden.org/-research>) and Department of Botany (<http://www.botany.ubc.ca>). UBC is located in scenic Vancouver - a cosmopolitan city of about 2 million, located near mountains and the ocean.

Candidates should have a strong undergraduate background in biology, and prior research experience with molecular techniques is desirable. Applicants should send a curriculum vita, a statement of research interests, and names of 3 references directly to Keith Adams (kladams@iastate.edu), and apply to one of the following UBC graduate programs: Plant Sciences - http://www.agsci.ubc.ca/grad/plant_sc.htm Botany - <http://www.botany.ubc.ca/grad/index.html>

Keith Adams Assistant Professor (starting August 2004) Centre for Plant Research University of British Columbia phone: 515-294-7098 fax: 515-294-1337 email: kladams@iastate.edu

Keith Adams <kladams@iastate.edu>

UEdinburgh LanguageEvol

Dear Brian,

I hope I have the right person for this... Could you please put the following information about our new postgraduate programme on the EvolDir website?

Thanks! Simon

MSc/PhD in the EVOLUTION OF LANGUAGE & COGNITION One year taught Masters & PhD programme

University of Edinburgh, UK

What is it that makes us human? How did our brains evolve? What are the origins of human language? Why

do we think the way we do? What are the mechanisms of biological, cultural and linguistic evolution?

The University of Edinburgh is introducing a new Postgraduate Programme in the Evolution of Language and Cognition. Students will tackle the key questions that are at the heart of the recent renaissance in the scientific study of the origins and evolution of human language and cognition.

The programme consists of two components: an interdisciplinary 1 year taught Masters degree, and a supervised PhD. Students will apply for one of the other degree, depending on background and experience. The MSc year can be used as preparation for the PhD.

Human evolution is a topic for cognitive scientists, psychologists, linguists, archaeologists, anthropologists, biologists, and computer scientists. Because of this, the postgraduate programme will suit students from a wide range of backgrounds. If you are interested in learning more about the evolution of human cognition and language, and about the many disciplines that contribute to its study, we'd like to hear from you.

We are now accepting applications for entry to the MSc in September 2004, and for entry to the PhD at any time.

To find out more about the course, and what it will be like to live and work in Edinburgh, go to our website. Here you will also find full details about how to apply.

<http://www.ling.ed.ac.uk/lec/elc> [Please feel free to pass on this email to anyone who might be interested.]

– Simon Kirby Language Evolution & Computation Research Unit School of Philosophy, Psychology & Language Sciences University of Edinburgh
www.ling.ed.ac.uk/~simon

Simon Kirby <simon@ling.ed.ac.uk>

UGroningen AnimalEvolEcol

The Research Group Animal Ecology of the research institute Centre for Ecological and Evolutionary Studies (CEES) has a vacancy for a full-time PhD position:

Project: offspring fitness and sex specific dispersal (vacancy nr. 203276)

Organization This PhD project is part of a large research grant on Sex-specific reproductive tactics: fitness consequences of avian sex allocation and dispersal

strategies granted to Prof. Jan Komdeur by the Dutch Organisation of Scientific research (NWO). The project aims to understand why young birds disperse to other places, while others stay at home. These dispersal decisions have important consequences for the fitness of the individual, as well as for the local population dynamics. The fitness consequences of such decisions may depend on social circumstances, such as local competitor density and dispersal decisions of other individuals in the population. This project is unique in its large scale and new experimental approach. The PhD will be part of the VICI group of Prof. Jan Komdeur, which is part of the Animal Ecology Group. The PhD will be supervised by Komdeur, Tinbergen and Both.

Job Description This project adult birds of either sex will be determined over their whole life. The project includes a large amount of field work, ranging from standard nest box checks, taking blood samples, catching and ringing, following individuals with radio transmitters.

Requirements Candidates must have a degree in biology, with specialisation in ecology, and a driver's license. We are looking for an enthusiast researcher with ample experience in field research on birds. Theoretical interest in evolutionary ecological research is a prerequisite.

Information about the position can be obtained from: Jan Komdeur (+31-50-3632056, j.komdeur@biol.rug.nl), Joost Tinbergen (+31-50-3632065, j.m.tinbergen@biol.rug.nl) or Christiaan Both (+31-50-3632235, c.both@biol.rug.nl).

INFORMATION Additional Information: On the project and research group Animal Ecology: <http://www.rug.nl/biologie/onderzoek/onderzoekgroepen/dierOecologie> On the institute: <http://www.rug.nl/cees> On the Faculty and University: <http://www.rug.nl/fwn/vacatures/vacaturesFWN> Application Interested applicants should send: their complete CV, names and contact information of two persons who can supply letters of recommendation upon our request, copies of any publications you have been involved in and a 1-page statement of your research interests, academic/professional goals and motivation for this project.

Conditions of employment The University of Groningen offers an appointment for a period of four years which period should be finished with a Ph.D. examination. During the first year the gross salary is 1683,- per month. This amount will increase to 2258,- during the fourth year. After one year, the performance of the candidate will be evaluated to decide whether there is sufficient progress to expect a successful completion of

the PhD thesis within the coming three years. A training programme is part of the agreement. You and your supervisor will make up a plan for the additional education and supervising that you specifically need. This plan also defines your teaching activities.

Application address Send applications for one of these positions before 17th December 2003 to: University of Groningen Personnel Department P.O.Box 72 9700 AB Groningen The Netherlands email vmp@bureau.rug.nl

Please indicate vacancy number on the letter and the envelope.

“S.C.Bakker” <S.C.Bakker-Geluk@biol.rug.nl>

UHawaii IslandSnail

To prospective graduate students.

We are looking to recruit a new graduate student to work in my lab at the University of Hawaii on the systematics, phylogenetics and biogeography of Pacific island succineid land snails. The project is funded by the National Science Foundation. Dr. Marta deMaintenon is the co-PI.

In order to apply, in the first instance you need to apply for admission to the graduate program in the Department of Zoology at the University of Hawaii: <http://www.hawaii.edu/zoology/>. Check the website for admission requirements, and note especially the need to have not only the general GREs but also the Biology subject GRE. If you are interested, send me an e-mail with a cv and we can discuss it further.

The following is the formal announcement of the graduate assistantship that would support the new graduate student for the initial 2 years. Other funding will be sought in order to support the student beyond this.

POSITION ANNOUNCEMENT

University of Hawaii at Manoa

Center for Conservation Research and Training Pacific Biomedical Research Center

Graduate Research Assistantship available

The Project TITLE: Revision and phylogeographic analysis of Pacific island succineid land snails OBJECTIVES: The project will undertake a systematic revision of the entire Pacific island succineid fauna (about 80 species). In addition, the project will investigate the evolutionary and geographic origins and diversification

of the species and the routes via which, over evolutionary time, they have colonized these myriad islands. APPROACH: The project will use both traditional analysis of morphological variation as well as modern DNA sequencing approaches and analytical methodologies.

Duties The GA will undertake a major part of the laboratory work, and may have some opportunity to travel in the islands of the Pacific. Ideally, he/she will develop his/her own dissertation research based on the project and expanding it.

Minimum Qualifications Classified full-time graduate student admitted to and enrolled in the MS program in the Department of Zoology. Experience in molecular genetics (DNA sequencing).

Desirable Qualifications Enrolled in the Ph.D. program in the Department of Zoology. Experience with phylogenetic analysis. Experience with anatomical dissection and characterization of mollusks.

Position Details The position is funded by NSF through the Center for Conservation Research and Training for a period of 2 years. The position is 0.50 FTE (i.e., 20 hours per week) and will begin the fall semester of 2004 (probably 1 September 2004).

Salary Salary commensurate with qualifications and experience. Minimum \$1296.50/month.

How to Apply As soon as possible, submit (via e-mail) a cv and a message explaining your interest to: Dr. Robert Cowie - cowie@hawaii.edu Phone: (808) 956-4909

Deadline Continuous recruitment, applications will be reviewed beginning 1 December 2003 until the position is filled.

Dr. Robert H. Cowie Center for Conservation Research and Training University of Hawaii 3050 Maile Way, Gilmore 408 Honolulu, Hawaii 96822 USA

Phone: (808) 956 4909 Fax: (808) 956 2647/9608

EECB: http://www.hawaii.edu/ecb/ecb_faculty/-robertcowie.html Samoan Snail Project: <http://www2.bishopmuseum.org/PBS/samoasnail/> IUCN (Tentacle): <http://www.hawaii.edu/ccrt/tentacle.html>

“Robert H. Cowie” <cowie@hawaii.edu>

UMaryland Bioinformatics MolEvol

Graduate position: Bioinformatics and Molecular Evolution

Interested individuals with a B.S. (or equivalent) in a field of computer science or life science are encouraged to consider graduate research at CARB in pursuit of a Ph.D. in the Behavior, Ecology, Evolution and Systematics (BEES) program at the University of Maryland, College Park. The successful candidate must apply for, and be accepted into, the BEES program, and will join a multi-year project to develop and apply computational tools to resolving fundamental questions regarding the evolution of introns and intron-containing genes. Applicants whose major field is in the life sciences must have strong quantitative skills and 1 year of training in computer programming (or equivalent experience); applicants whose major field is in computer science must have strong quantitative skills and a working knowledge of genetics and molecular biology.

For further information, and to apply, please contact Arlin Stoltzfus (arlin@carb.nist.gov).

Dr. Arlin Stoltzfus Center for Advanced Research in Biotechnology (www.carb.nist.gov) 9600 Gudelsky Drive, Rockville, Md 20850 Tel: (301) 738-6208 Fax: (301) 738-6255 WWW: www.molevol.org/camel Arlin Stoltzfus <stoltzfu@umbi.umd.edu>

VanderbiltU EcolEvol

GRADUATE STUDIES IN ECOLOGY AND EVOLUTION AT VANDERBILT

Dear colleagues and prospective students,

The Department of Biological Sciences at Vanderbilt University seeks interested and highly motivated graduate students to join a group of laboratories with complementary research interests focusing on ecological and genetic mechanisms of evolutionary diversification. Ongoing research investigates all stages of evolutionary diversification (population structure, reproductive isolation, speciation, phylogenetic radiation) and several fundamental ecological processes (adaptation, ecological specialization, symbiosis, social interactions).

Our group occupies a new (2002) building complete with DNA sequencing facility, abundant environmentally controlled rooms, and an adjoining state-of-the-art greenhouse. Vanderbilt researchers enjoy the participation of excellent undergraduates and the resources of a thriving medical center on a beautiful campus in the

heart of Nashville, a friendly and inexpensive city situated amidst the lush rolling hills of biologically diverse middle Tennessee. Graduate students receive generous stipends and are trained in a highly interactive inter-lab community.

Ecology & Evolution faculty, research interests include:

Patrick Abbot (abbot@uts.cc.texas.edu) social evolution, symbioses, molecular evolutionary genetics in insects and microbes

John Burke (john.m.burke@vanderbilt.edu) genetic basis of adaptation and speciation in plants

Dan Funk (daniel.j.funk@vanderbilt.edu) ecological specialization and speciation, phylogenetics in herbivorous insects

Manuel Leal (manuel.leal@vanderbilt.edu) animal communication and mate choice, predator-prey interactions, and sensory ecology in lizards

Dave McCauley (david.e.mccauley@vanderbilt.edu) population biology, population structure, local adaptation in plants and insects

For further information on research and graduate study at Vanderbilt, please consult our departmental web page at: <http://sitemason.vanderbilt.edu/biosci>. Specific questions can be directed to any of the above faculty.

Daniel Funk <daniel.j.funk@vanderbilt.edu>

VrijeU Phenotypic plasticity

The Department of Animal Ecology of the Institute for Ecological Sciences at the Vrije Universiteit in Amsterdam has a vacancy for a full-time Ph.D.-position:

Functional variation in phenotypic plasticity

This Ph.D.-position is part of a large research grant "The evolution of plastic traits: from genes to fitness" awarded to Dr. Jacintha Ellers by the Dutch Organisation of Scientific research (NWO).

Phenotypic plasticity allows animals to adapt their physiology, morphology and life history to changes in the environment over their lifetime. One of the most important environmental factors is temperature, especially for ectotherms, whose body temperature and metabolism is highly dependent on the external temperature. However, there are large differences in the response of life history traits to temperature both among

and within species. This research aims to explain the variation in phenotypic plasticity at a mechanistic as well as an evolutionary level, and investigate the effect of phenotypic plasticity on population divergence and speciation. The present PhD project focuses on phenotypic plasticity in life history traits in the springtail *Orchesella cincta* and will include both laboratory and field experiments. The major aims are to determine the genetics of plasticity using breeding experiments and molecular tools, to quantify the adaptive value of plasticity and to measure selection on temperature plasticity in different habitats in the field.

Requirements - MSc in Biology with specialisation in ecology or evolutionary biology - Theoretical interest in evolutionary ecology research - Excellent experimental skills, both in field research and in experimentation with small invertebrate animals - Experience with molecular techniques (DNA extraction, PCR, sequencing) is recommended - Motivation and ambition to obtain a Ph.D. degree within four years

Conditions of employment The position is for four years and expected to lead to a Ph.D degree. The student will receive a gross salary of 1683 Euro per month in the first year, increasing to 2394 Euro per month in the fourth year. A training programme is part of the position.

Application If you are interested in this position, please submit your application with curriculum vitae, list of publications, a summary of research interests, and motivation for this project before December 16, 2003 to:

Dr. Jacintha Ellers (ellers@bio.vu.nl) Faculty of Earth and Life sciences, Vrije Universiteit, De Boelelaan 1085, 1081 HV Amsterdam The Netherlands.

For more information you can contact dr. J. Ellers, tel. 020-4447076 (e-mail: ellers@bio.vu.nl) of prof. dr. N.M. van Straalen, tel. 020-4447070, or visit our website (www.bio.vu.nl/do/)

Jacintha Ellers <ellers@bio.vu.nl>

WashingtonU Evolution

To Whom It May Concern:

The graduate program in Evolution, Ecology, and Population Biology at Washington University in St. Louis is seeking interested and highly motivated graduate students to join a group of laboratories with research interests focusing on the study of the generation and

maintenance of biodiversity including studies on: systematics and phylogenetics; behavioral, population and community ecology; population genetics, speciation, macroevolution and macroecology; evolution and development, and the role of biodiversity in ecosystem functioning.

As part of the Division of Biology and Biomedical Sciences (<http://dbbs.wustl.edu>) our program provides students with the opportunity to conduct research rotations in a wide variety of laboratory atmospheres. Resources outside of the university include the Missouri Botanical Garden, the St. Louis Zoo, and Washington University's biological Tyson research station. Weekly student seminars provide students with frequent opportunities to discuss their own ideas and research, and frequent departmental seminars and visiting scientists give students access to the leading researchers.

A listing of the EEPB faculty and their research interests are included in this mailing.

Each student receives a generous stipend (\$22,000 for 2004-2005), tuition remission and health/disability coverage. Optional group dental coverage is also available. Students are encouraged to apply for nationally competitive fellowships. Students who obtain competitive external funding for at least three years and paying at least 75% of the DBBS stipend may receive an enhanced stipend of \$5,000. The enhanced stipend will continue, as long as he/she remains in academic good standing. Some additional stipulations apply to these awards.

We are deeply committed to creating a diverse program, and ask that you keep us in mind in your interactions with underrepresented student groups (e.g., women, minorities).

We would appreciate your help in making your students aware of exciting graduate opportunities at Washington University in St. Louis. Interested students are encouraged to access our website at (<http://www.biology.wustl.edu/EEPB/evolbiology.php>). Application to the program is free, and applications are available via the internet (<http://dbbs.wustl.edu/>) or by calling the Division of Biology and Biomedical Sciences at (800) 852-9074.

Thank you for helping make undergraduates at your institution aware of the opportunities at Washington University.

Sincerely,

Jonathan Losos, Ph.D Program Director Evolution, Ecology, and Population Biology Washington University in St. Louis, MO

Dana Sterbenz Graduate Student Coordinator Wash-

ington University Division of Biology and Biomedical Sciences 660 S. Euclid Ave Box 8226 St. Louis, MO 63110 Medical School office (314) 362-4806 Main Cam-

pus office (314) 935-4201
sterbenzd@dbbs.wustl.edu

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AlbionCollege PlantEvolEcol

PLANT ECOLOGIST

The Biology Department of Albion College seeks a full time, tenure-track PLANT ECOLOGIST, to begin August, 2004. The appointment will be at the Assistant Professor level. A Ph.D. is required, and teaching experience is preferred. The successful candidate will have demonstrated expertise in plant ecology with an emphasis on the use of molecular genetic techniques to address questions at the population level. The candidate will be expected to teach an upper-level, undergraduate course in ecology, to contribute to team-taught introductory courses, and to develop an upper-level course in the candidate's area of expertise (such as Population Genetics, Conservation Biology, Restoration Management, etc.). A research program utilizing traditional

and molecular techniques and incorporating undergraduate students is expected. Facilities include standard molecular biology equipment, TEM, SEM, and a 55-hectare nature center adjacent to campus. Construction of a new state-of-the art interdisciplinary science complex will begin in 2004. Albion College is a selective, liberal arts college of approximately 1700 students located in a culturally diverse community of 10,000 in south-central Michigan, within an hour's drive of major universities. See <http://www.albion.edu/biology/> for further information. Send letter of application, including teaching philosophy and research interests, curriculum vitae, graduate and undergraduate transcripts, recent reprints, and three letters of reference (electronic copies not acceptable) to: Dr. E. Dale Kennedy, Biology Department, Albion College, Albion, MI 49224-1831. The deadline for completed applications is December 15, 2003. Albion College is an Equal Opportunity Employer, committed to diversity as a core institutional value.

Dean G. McCurdy, Ph.D. Department of Biology Albion College Albion, Michigan 49224 USA

Tel: (517) 629-0290 Fax: (517) 629-0888 E-mail: dmccurdy@albion.edu Web: <http://people.albion.edu/dmccurdy>

ArizonaStateU EvolBiol

Faculty Positions Arizona State University

The new School of Life Sciences (SoLS) at Arizona State University (ASU) (<http://sols.asu.edu/>) invites applications for multiple tenure-track positions at the Assistant, Associate or Full Professor level. These positions are part of a major expansion in the life sciences at Arizona State University that includes the recent integration of life sciences departments, the ongoing development of the Arizona Biodesign Institute (<http://www.azbio.org/>) and the partnering of ASU with the Translational Genomics Research Institute (TGEN) (<http://www.tgen.org/>). Successful candidates are expected to build vigorous, extramurally funded and independent research programs and to interact with SoLS researchers in existing areas of excellence. Collaboration with scientists in other departments and off-campus research institutes is encouraged as well. Successful applicants will receive competitive start-up packages and teaching loads that are compatible with high research productivity. Faculty are expected to participate in undergraduate and graduate teaching and to mentor students and postdoctoral fellows. Candidates must have a doctoral degree in a relevant discipline at the time of appointment, and a publication and funding record appropriate to rank. Postdoctoral research experience is desired. To apply, send a cover letter stating the position desired, a curriculum vitae, up to three representative publications, statements of future research plans and teaching philosophy and interests, and arrange for three letters of reference to be sent. Letters of reference, but not application materials, may be sent by email. Candidates wishing to be considered at the Full Professor rank should provide the names and contact information of three references in lieu of arranging for letters of reference to be sent. The initial target date for receipt of applications is December 15, 2003; if not filled, weekly thereafter until the search is closed. Appointments are anticipated to begin in Fall 2004 although the starting date is negotiable. Applications should be sent to the addresses provided below in each job description. Email inquiries or letters

of reference (only) should be sent to sols@asu.edu. ASU is an Affirmative Action/Equal Opportunity Employer. Note: the complete ad will appear in the 14 November 2003 issue of the journal *Science*.

Evolutionary and Systems Biology We seek integrative scientists who use experimental approaches to study evolutionary, physiological or developmental processes across levels of organization in microbes, plants or animals. Individuals with research programs incorporating evolutionary approaches, functional and comparative genomics, molecular physiology, or proteome or metabolome analysis on model systems are particularly encouraged to apply. Applications must be sent to Chair, Evolutionary and Systems Biology Search, School of Life Sciences, Arizona State University, PO Box 874501, Tempe, AZ, USA 85287-4501.

Biogeochemistry/Microbial Ecology These positions are open to outstanding candidates working on biogeochemical processes ranging from microbial transformations to global change. We prefer interdisciplinary scholars who will take advantage of the vibrant, growing community of biogeochemistry at ASU building on existing collaborations between SoLS, the Departments of Geological Sciences and Chemistry and Biochemistry, as well as the Center for Environmental Studies and the Astrobiology Program. Applications must be sent to Chair, Biogeochemistry Search, School of Life Sciences, Arizona State University, PO Box 874501, Tempe, AZ, USA 85287-4501.

Evolutionary Bioinformatics/Computational Biology (Assistant Professor level only) Individuals with a research emphasis in computational biology, molecular evolution, population genetics or a related area of computational bioscience are desired. In addition, preference will be given to those candidates with research programs that emphasize theory, informatics, and/or empirical analysis of existing genome sequence and polymorphism data. The successful candidate will be expected to participate in the Center for Evolutionary Functional Genomics (<http://azbio.org/efg>), will join a thriving local genomics research community, and will be housed in the new Arizona Biodesign Institute with access to significant high-performance computing. Applications must be sent to Chair, Evolutionary Bioinformatics and Computational Biology Search, School of Life Sciences, Arizona State University, PO Box 874501, Tempe, AZ, USA 85287-4501.

BrownU Genomics

The Division of Biology and Medicine at Brown University announces the opening of five tenure-track faculty positions. The start date for two positions will be July 1, 2004, with the remaining three anticipated in July 1, 2005. Qualifications include a Ph.D. or M.D. degree and a track record of excellence in research. Applicants will be expected to pursue independent, externally-funded research programs that emphasize genomic and proteomic approaches to contemporary biological problems. Applications from physician-scientists are welcome. The applicants will be expected to engage in graduate, undergraduate and/or medical school teaching, and will have the opportunity to participate in several NIH-funded training programs.

Research space will be provided in a new, state-of-the-art facility. These new faculty positions represent the cornerstone of an interdepartmental strategic initiative whose objective is to spearhead contemporary biomedical research and to coordinate multidisciplinary approaches in basic science with clinical programs at affiliated hospitals. Targeted areas of investigation are broadly defined to include Genetics, Biochemistry, Developmental Biology, and Neuroscience. Researchers in the fields of cancer biology, biology of aging, and those using mouse models to study mechanisms of disease are especially encouraged to apply.

Applications for Associate or Full Professor rank will be treated with confidentiality and need not include letters of recommendation; a list of references may be requested later. Applications at the Assistant Professor level should include at least three reference letters. Review of applications, which should include a curriculum vitae and a description of research interests, will commence on December 1, 2003, and will continue until the positions are filled. Specific qualifications for appointment at the different faculty ranks can be requested in writing. Contact address: Dr. John M. Sedivy, c/o Ms. Tammy Glass, Box G-J223, Brown University, Providence, RI 02912.

gilad@eva.mpg.de

CalStatePolytechnicPomona Bioinformatics

FACULTY POSITION BIOINFORMATICS

The Biological Sciences Department at California State Polytechnic University, Pomona invites applications for a tenure-track, ASSISTANT PROFESSOR position in bioinformatics, beginning September 2004. Consideration is given to candidates who combine modern experimental and computational tools in genomics and/or proteomics to address basic biological questions. A Ph.D. in bioinformatics or related field is required. Post-doctoral experience is preferred. The successful candidate will have the potential for excellence in undergraduate teaching, and for developing an externally-funded research program that will involve undergraduate and Master's students. Teaching responsibilities will include a bioinformatics course, contributions to introductory biology courses and other undergraduate courses related to the individual's area of expertise, and the development of additional specialty courses. Research collaborations are encouraged within the department and with members of a newly-established interdisciplinary program in bioinformatics that includes faculty members from biology, chemistry, and computer science. Access to a high-performance computing facility is available. Cal Poly Pomona is a comprehensive Masters level university with a diverse student body. The successful candidate will have demonstrated ability to be responsive to the educational equity goals of the university and its increasing ethnic diversity and international character. Applicants should forward (1) curriculum vitae, (2) statement of teaching philosophy, (3) proposed plan of research, (4) representative publication reprints, and (5) the names and contact information of five references to: Chair, Bioinformatics Search Committee, Biological Sciences Department, California State Polytechnic University, 3801 West Temple Avenue, Pomona, CA 91768-4132. Review of applications begins on January 15, 2004. Official transcripts and three letters of reference will be required of all finalists. For further information, visit the Department web site at: <http://www.csupomona.edu/~biology>. California State Polytechnic University, Pomona is an Equal Opportunity, Affirmative Action Employer. Cal Poly Pomona follows to all state and federal regulations and prohibits discrimination based on gender, race, sexual orientation, national origin, handicap, marital status,

age, religion, or veteran status.

John Demboski <jrdemboski@csupomona.edu>

CollegeAtlantic PlantEvol

Faculty Member in Botany/Plant Biology

College of the Atlantic (COA) is a small, accredited, private college offering the B.A. and M.Phil. in Human Ecology. Founded in 1969, the ocean-front campus is located in Bar Harbor, Maine, adjacent to Acadia National Park. Faculty organization is non-departmental, and the college has a system of self-governance. The innovative curriculum includes: self-directed, interdisciplinary study; team teaching; involvement of undergraduates in research; and a commitment to prepare students to address environmental and social problems.

COA seeks a full-time faculty member in Plant Biology, to begin in August 2004. The position involves teaching five classes a year, advising students, and directing senior projects and independent studies. All COA faculty collaborate in democratic governance, committee work, and crafting a shared vision of Human Ecological education. The position requires excellent teaching skills, the ability to engage students at all levels, and the motivation to collaborate with faculty in all areas of the college. Learn more about COA by visiting our web page, www.coa.edu. COA is seeking a botanist with strong taxonomic skills and field experience whose interests and expertise will enhance our strength in field-based instruction. The successful candidate must offer courses in local flora, plant systematics, and plant taxonomy. Also desirable is the ability to offer courses in some of the following: economic botany, ethnobotany, evolutionary history of plants, forest ecology, and interdisciplinary courses that help make connections to other areas of the curriculum. The position requires developing projects and field experiences for students that utilize local resources, e.g., Acadia National Park, the college's arboretum and field stations on two islands in the Gulf of Maine, Beech Hill Organic Farm and Forest; and the college's museum of natural history. The new faculty member will also share responsibility for curating our herbarium. The position requires a Ph.D. in biology or a closely related area, teaching experience, and research and/or teaching experience in the field.

Send a cover letter, a statement of teaching philosophy, vita, and three letters of reference to:

Plant Biology Search Committee College of the Atlantic
105 Eden St. Bar Harbor, ME 04609.

Review of applications will begin January 5, 2004 and continue until the position is filled.

ColumbiaU EvolEcol

New Faculty Position in The Department of Ecology, Evolution, and Environmental Biology (E3B), Columbia University in the City of New York.

The Department of Ecology, Evolution and Environmental Biology seeks to appoint a broadly trained ecologist (empirical or theoretical, population or community, plants, animals, or microbes, terrestrial or aquatic) as Assistant Professor. The successful candidate will be expected to establish a vigorous, externally funded research program that complements and augments existing strengths within E3B and related institutions and to participate in undergraduate and graduate teaching.

More information can be found at <http://www.columbia.edu/cu/e3b/job>. Candidates should send statements of research and teaching, a curriculum vitae, and contact information for 3 or more referees to:

Shahid Naeem Search Committee Chair Dept. Ecology, Evolution and Environmental Biology (E3B) Columbia University Schermerhorn Extension, 10th Floor 1200 Amsterdam Avenue, Mail Code 5557 New York, NY 10027 U.S.A.

DEADLINE: November 30, 2003

Applications from women and minorities are especially encouraged. Columbia University is an Equal Opportunity/Affirmative Action Employer.

CornellU EvolStatGenomics

Dear colleagues,

We still have another week before search committees start meeting to go through applications, and I wanted to remind you of some opportunities at Cornell in the area of evolutionary genomics. For people with an inter-

est in empirical studies, there is a junior faculty opening in Population Genetics/Evolutionary Genomics in my department (Molecular Biology & Genetics). For those more statistically inclined, there is a position in Statistical Genomics in the department with Carlos Bustamante and Rasmus Nielsen (Biological Statistics and Computational Biology). If you have experience in human genetics, the department of Nutritional Sciences has a position in human population genetics and a first-rate set of epidemiologically oriented colleagues. There are other genomics positions open here, but those are the ones whose primary focus is evolutionary genetics.

We have an exceptional environment for pursuing evolutionary genomics here at Cornell. Besides a terrific list of colleagues, there are mechanisms for graduate and postdoctoral research that truly succeed in fostering deep and meaningful cross-disciplinary research. Graduate students are recruited through a variety of overlapping fields, including Ecology & Evolutionary Biology, Genetics & Development, and Computational Biology (new), and the system here succeeds well in giving students and postdocs a sense that they can get concrete input from people campus wide. Some of the evolutionary genomics faculty include:

Chip Aquadro - *Drosophila* molecular population genetics
Ed Buckler - genetic and molecular analysis of complex traits in maize
Carlos Bustamante - statistical inference from genome-scale data
Andy Clark - molecular population genetics of *Drosophila* and humans
Jeff Doyle - molecular phylogenetics of plants
Rick Durrett - mathematical modeling of evolutionary processes
Rick Harrison - population genetics of adaptation; hybrid zones
Steve Kresovich - analysis of plant genomic diversity
Brian Lazzaro - molecular population genetics of *Drosophila* and *Anopheles*
Susan McCouch - rice population genetics/genomics
Rasmus Nielsen - statistical inference in molecular evolution and population genetics
Steve Tanksley - genomic organization of quantitative variation in Solanaceae
Mariana Wolfner - comprehensive analysis of accessory gland proteins in *Drosophila*

Mammalian genomics is very strong here, with David Lin, Mike Kotlikoff, Teresa Gunn and John Schimenti (arriving from Jackson Lab) pursuing genomic approaches in mouse biology, and Greg Acland, Rory Todhunter and others pursuing dog genomics through extensive pedigrees initiated with wide interbreed outcrosses. In the plant sciences, June Nasrallah is continuing to make exciting breakthroughs in the molecular basis of self-incompatibility and retains a strong interest in evolutionary aspects of SI. Maureen Hansen's work on RNA editing has intriguing evolutionary aspects.

In computer science, the primary strength lies in analysis of protein structure (Ron Elber), including applications of computational geometry to evolutionary changes in protein structure. The expertise in peptide threading methods has led to significant progress for June Nasrallah's and Mariana Wolfner's groups. Golan Yona works on the classification structure of the global proteome, and he is a deep resource for machine learning approaches to mining genome data. Uri Keich works on word-structure of genomes, which has applications for motif finding, megablast searching, etc.. Many of us in genomics are making extensive use of the Cornell High Performance Computing group's cluster, which recently exceeded 1 teraflop and houses more than 2400 nodes.

There is a wonderful concentration of people focusing on the theory of network structures, and I had an inspiring time at a colloquium last year that featured Steve Strogatz, Jon Kleinberg, and James Thorp, all Cornell faculty who are big names in network theory.

To make the process simple, just email your package (CV, research statement) to me and we will make sure your application gets to the right place. It is quite easy to be considered by multiple searches here, because these genomics searches are coordinated campus-wide.

Sincerely, Andy Clark
Molecular Biology & Genetics
Tel: 607-255-0527 Email: ac347@cornell.edu

Dijon EvoEcol

A lecturer position (Maître de Conférences) is available in Dijon (France) on the following general topic : Evolutionary ecology in host-parasite interactions

Location: Group Evolutionary Ecology, UMR CNRS 5561 Biogéosciences (<http://www.u-bourgogne.fr/-BIOGEOSCIENCE/>)

Teaching activities : Populations biology ; Community ecology ; Landscape ecology and animal ecophysiology. Courses and practical in Licence and Master of Sciences (200-250 hours/years).

Research activities : Host-parasite interactions and evolutionary ecology. Host parasite interactions as a selective force in birds, relationship between immune abilities and life history traits, parasites and sexual selection, avian demography and pathogens.

Application information : Suitable qualification for ap-

plication : At least, PhD + Qualification aux fonctions de Maître de conférences + french speaking. First administrative step for Qualification aux fonctions de Maître de conférences Section 67: Population Biology & Ecosystems : on line registration following information (in french) on the web site of the Ministère de l'Education National <http://www.education.gouv.fr/-personnel/enssup/antares/default.htm> See Campagne 2004 Deadline : Octobre 20th, 17:00 Paris Time

Further information and specific enquiries : - Frank Cézilly: frank.cézilly@u-bourgogne.fr (Tel + 33 (0)3 80 39 62 46) : President of the Section 67 jury recruitment at Dijon. - Thierry Rigaud: thierry.rigaud@u-bourgogne.fr (Tel : + 33 (0)3 80 39 39 45) : Head of the team "Ecologie Evolutive" - Bruno Faivre: bruno.faivre@u-bourgogne.fr (Tel: + 33 (0)3 80 39 62 06) : Coordinator of research programs on Population Biology and Evolutionary Ecology in birds

-

Thierry Rigaud Université de Bourgogne UMR 5561 Biogéosciences Equipe Ecologie Evolutive 6 boulevard Gabriel 21000 Dijon thierry.rigaud@u-bourgogne.fr Tel: +33 (0) 3 80 39 39 45 Fax: +33 (0) 3 80 39 62 31 *****

Dorchester EvolGenetics

Molecular Ecologist/Evolutionary Geneticist £24,450 - £30,000

The Centre for Ecology and Hydrology (CEH) is the leading body in the U.K. for research, survey, monitoring and training in the terrestrial and freshwater sciences. CEH Dorset, at the Winfrith Technology Centre near Dorchester, carries out research in terrestrial and river habitats, including population and conservation ecology.

Leading the Molecular Ecology Group, a team of scientists and postgraduate students, you will be responsible for advancing population and evolutionary biology within CEH by developing population genetics theory and applying molecular techniques to ecological questions. Current projects include gene flow in GM plants, conservation genetics of endangered species, and micro-evolutionary processes. You will develop new research initiatives in these or related areas, often in close collaboration with other groups in CEH and university

departments. This is a great opportunity for a young scientist to develop exciting initiatives. With a track record in winning research funding, you will have published high impact papers and led small research teams. Starting salary will depend on experience and high calibre scientists will have the opportunity for rapid promotion. {pay award pending}

This is a re-advertisement. Previous applicants should not apply.

Further details and application forms available from Diana Morton, CEH Dorset, Winfrith Technology Centre, Nr Dorchester, Dorset DT2 8ZD, UK (e-mail dmo@ceh.ac.uk, telephone 01305 213500). Closing date for receipt of completed applications is 14th November 2003 quoting reference CEHDOR22.

James Bullock <jmbul@ceh.ac.uk>

HumboldtStateU EvolEcol

Erik S. Jules Department of Biological Sciences Humboldt State University Arcata, CA 95521 Ph: 707-826-3346

Ecologist: Lectureship, Humboldt State University. We invite applications for a 10-month lectureship to begin August 2004. Responsibilities will include teaching Principles of Ecology and one or more lab sections of Principles of Ecology. Responsibilities will also include directing one or more Teaching Assistant. Minimum qualifications include a Ph.D. in biology, ecology, or related field by the time of employment, previous teaching experience in ecology, and an interest in field-oriented biology. The Department of Biological Sciences offers a greenhouse, herbarium, vertebrate museum, insect collection, and access to numerous unspoiled habitats nearby. For a more detailed description of the Department see the website at <<http://www.humboldt.edu/~biosci/>><http://www.humboldt.edu/~biosci/>. Salary commensurate with qualifications and experience. Candidates should send letter of application, curriculum vitae, statement of teaching philosophy, transcripts (graduate and undergraduate), and the names, e-mail addresses, and phone numbers of three references to: Chair, Ecologist Search Committee, Department of Biological Sciences, Humboldt State University, Arcata, CA 95521 postmarked no later than January 30, 2004.

Erik Jules <esj4@humboldt.edu>

KentStateU 2 EvolPlantBiol

FACULTY POSITIONS Plant Biologists (2 positions)

The Department of Biological Sciences at Kent State University invites applications for two tenure-track Assistant Professorships. Position one is for a Plant Evolutionary Biologist with interests in population genetics, molecular evolution, or related areas. Position two is for a Plant Biologist with interests in developmental biology, genomics, or related areas. Both positions are to commence in Fall 2004. We seek candidates using molecular approaches in their field who will complement existing departmental strengths in evolutionary biology, ecology, or physiology. The successful candidates will be expected to develop a vigorous extramurally funded research program and to contribute to departmental teaching at the undergraduate and graduate (M.S. and Ph.D.) levels. Candidates must have a Ph.D. in a relevant field and postdoctoral experience. Applications should include a curriculum vita, concise statements of research and teaching goals, and recent reprints. Applicants should also arrange to have three letters of reference sent in support of the application. A review of completed applications will begin on November 30, 2003 and will continue until the position is filled. More information about the Department of Biological Sciences is available at <http://www.kent.edu/biology>. Please send all materials to: Chair, Plant Evolution Search Committee or Chair, Plant Developmental Biology/Genomics Search Committee, Department of Biological Sciences, Kent State University, P.O. Box 5190, Kent, OH 44242-0001.

Kent State University is an Equal Opportunity/Affirmative Action Employer

aschwarz <aschwarz@kent.edu>

OlympiaWA FishWildlife

Fish Geneticist - DNA

Washington Department of Fish & Wildlife Olympia, Washington USA

This position provides an opportunity a qualified indi-

vidual to make significant contributions at the interface of applied science (genetics) and fish management and conservation while working for one of the major resource management agencies in the Pacific Northwest.

Responsibilities: lead (and work as member of) team-based projects collecting and analyzing DNA data to address management and conservation issues for Pacific salmon, steelhead, trout, and selected marine fish and invertebrates. Current and future studies include: analysis of population structure, stock and species ID, mixture analysis (mixed-stock fisheries), and hatchery evaluation & monitoring.

Qualifications: General qualifications for Fish and Wildlife Biologist-3 positions can be found at: <http://hr.dop.wa.gov> (select Current Job Openings, Natural Resources & Parks, Fish & Wildlife Biologists, Fish & Wildlife Biologist 1-4 Eligibility Pool; see Announcement # 1-0-061-OC). Applicants must be U.S. citizens or currently hold a valid U.S. work visa that would allow them to complete at least the first year of the 2-yr appointment.

Salary: Salary range (range 53) is: \$39,492 - \$50,592 per year plus benefits. This is a 2-yr project position. Renewal/extension beyond the second year is dependent on performance and funding.

Closing Date: when filled

Contact: To be considered for this position, individuals must be registered on the FISH AND WILDLIFE BIOLOGIST 1-4 ELIGIBILITY POOL. On the Internet, go to <http://hr.dop.wa.gov/statejobs/jobs.htm> to find the relevant Recruitment Announcement (under Current State Job Openings, Search by Job Category, Natural Resources & Parks, Fish and Wildlife, Fish and Wildlife Biologists [#1-9-104-OC]) and State Job Application Form (under Application Form, State Job Application Form Word format or PDF format). Applicants should complete a Washington State Job Application Form after consulting the relevant Announcement mentioned above; and completing the Specialty Fields Supplemental Form (download from link at bottom of the Fish and Wildlife Biologists Eligibility Pool Announcement). Applicants need to obtain a copy of the knowledge, skills, and experience (KSE) exam from Jim Shaklee (email address: shakljbs@dfw.wa.gov) and use it to complete the "exam" answer portion (part 9) of the State Job Application Form. Candidates should FAX or mail: the completed Application with KSE "exam" answers and the Specialty Fields Supplemental Form to: James B. Shaklee, Washington Department of Fish and Wildlife, 600 Capitol Way N, Olympia, WA 98501 (FAX: 360-902-2943). For more information about this position, contact Jim Shaklee by email,

or by telephone (360-902-2752) or Sewall Young (email: youngsfy@dfw.wa.gov; phone: 360-902-2773).

If you want more information about the application process, please contact Joe Vidales at 360-902-2624.

WDFW is an Equal Opportunity/Affirmative Action/Equal Access Employer.

James B. Shaklee Genetics Lab Washington Department of Fish and Wildlife 600 Capitol Way N Olympia, WA 98501 phone: 360-902-2752 FAX: 360-902-2943

PennStateU EvolBiol

Assistant Professor in Astrobiology/Evolutionary Biology

The Eberly College of Science at Penn State invites applications for a tenure track faculty position in Astrobiology with the appointment to be made in one of the departments of the college including Biology, Biochemistry and Molecular Biology, and Chemistry (<http://www.science.psu.edu>). We seek a candidate interested in pursuing evolutionary research, with either prokaryotes or eukaryotes, on the early evolution of the Earth's environment and biota. Potential fields of study include, but are not limited to, molecular, cellular and developmental evolution, and paleontology. The appointee will have the opportunity to join our Astrobiology Research Center (<http://psarc.geosc.psu.edu>) and is expected to develop a strong, externally funded research program and participate in undergraduate and graduate teaching. Applicants should send a PDF file containing their curriculum vitae, statement of research and teaching interests, and contact information for three references to astrobio@email.bio.psu.edu, or mail to: Chair, Astrobiology Search, Department of Biology, 208 Mueller Laboratory, The Pennsylvania State University, University Park, PA 16802-5301. Review of applications begins December 10, 2003 and will continue until a suitable candidate is identified. Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

NOTE: A separate search is already underway for a second position (Assistant Professor) in Astrobiology, by the Department of Geosciences at Penn State. For information on that position, please see the job announcement (<http://psarc.geosc.psu.edu>).

S. Blair Hedges, Ph.D. Department of Biology Pennsylvania State University 208 Mueller Lab University

Park, PA 16802-5301 tel. 814-865-9991, fax. 814-865-3125 <http://evo.bio.psu.edu/hedgeslab/>

PortlandStateU PlantEvolBiol

This is a reposting of an ad appeared in Science last week that provides some supplemental information on this position.

Plant Ecology and Evolutionary Biology

The Department of Biology at Portland State University invites applications for a plant biologist at the assistant professor level. We seek an individual with broad research interests in ecological or evolutionary aspects of plant biology, including but not limited to physiology, morphology, reproduction, development, plant-animal, or plant-pathogen interactions. Minimum qualification is a Ph.D. in biology, with priority given to candidates with postdoctoral experience and who have demonstrated success in developing a research program through publications or external funding. We encourage applications from individuals whose interests complement existing departmental strengths in ecology, physiology, evolution, and genetics (see the departmental web site: <http://www.bio.pdx.edu/>). The successful candidate will be expected to develop an externally funded research program, be effective in teaching at the undergraduate level, and participate in the training of graduate students in our masters and PhD programs. This is a tenure track, 9-month appointment to begin in the fall of 2004. Review of applications will begin 1 December, 2003, and will continue until the position is filled. A curriculum vitae, statement of current and future research, and three letters of reference should be sent to: Dr. Mitch Cruzan, Chair, Plant Ecology Search Committee, Department of Biology, P.O. Box 751, Portland State University, Portland, Oregon 97207. Portland State University is an Affirmative Action, Equal Opportunity institution and, in keeping with the President's diversity initiative, welcomes applications from diverse candidates and candidates who support diversity.

Additional information on PSU:

Portland State University (PSU), part of the Oregon University System, is a comprehensive public university that enrolls over 15,000 undergraduate and 3,400 graduate students, the largest graduate enrollment in the state. As over 60% of Oregon residents live within commuting distance of the campus, PSU is the primary

vehicle for meeting public upper division undergraduate education needs in the state. The institution offers BA, BS, MA, MS, MST, and PhD degrees in the following science departments: Biology, Chemistry, Physics, Geology and Environmental Studies.

The biology department at PSU is the largest and fastest growing academic and research unit on campus. The department is in the process of making a concerted effort to hire additional faculty to expand our existing research programs. The specific research areas of recent faculty hires in the biology department have been chosen to strategically establish inter-related research focus groups in microbial ecology, behavioural and physiological ecology, environmental genomics, evolutionary biology, and population and community ecology. In the next four years, we anticipate hiring 57 additional faculty in areas commensurate with our curricular and research goals.

Current teaching loads for new faculty in biology at PSU are light by most standards and similar to many other major research institutions.

—

Mitch Cruzan, Associate Professor Department of Biology Portland State University, Box 751 Portland, OR 97207 Phone: 503-725-8391 Fax: 503-725-3888 Webpage: <<http://web.pdx.edu/~cruzan/>> cruzan@pdx.edu

Rothamsted Bioinformatics

Senior Research Scientist

A senior bioinformaticist is required to initiate and lead cutting edge approaches to the integration of information from genomic technologies (sequence data, transcriptomes, proteomics, metabolomics, phenomics) in order to understand the dynamics of biological systems of relevance to crop production and utilisation.

The appointee will be expected to interact with current research programmes (notably on Arabidopsis, wheat and wheat pathogens) and with the newly established National Plant and Microbial Metabolomics Centre at Rothamsted Research.

In addition, the establishment by the appointee of an innovative research programme in an area within the broad remit of the Institute is an essential component of this post.

Email enquiries to Peter Shewry (peter.shewry@bbsrc.ac.uk) or Paul Verrier (paul.verrier@bbsrc.ac.uk) are welcome.

An appointment will be made at either Band 4 level (£32,700- £38,500) or Band 3 level (£39,000-£46,000), depending upon qualifications and experience.

Apply by application form only, available with further particulars from HR Department, Rothamsted Research, Harpenden, Herts, AL5 2JQ (<http://www.rothamsted.bbsrc.ac.uk>). E-mail: rres.hr@bbsrc.ac.uk. Please quote ref: 734. Closing date: 11 December 2003.

An equal opportunities employer

“lauren mccoys (RRes-Roth)”
<lauren.mccoys@bbsrc.ac.uk>

UGeorgia EvolGenetics 2

Just friendly reminder about the following advertised faculty position (as the application deadline approaches):

EVOLUTIONARY GENETICIST UNIVERSITY OF GEORGIA ASSISTANT PROFESSOR LEVEL, TENURE TRACK

An opportunity exists to join an active and interactive faculty of evolutionary biologists and geneticists at the University of Georgia. The research area is open but could include molecular ecology and evolution, population genetics, ecological and behavioral genetics, comparative phylogenetics, or similar disciplines in evolutionary genetics. Research emphasis may be empirical or theoretical, but should include a broad conceptual orientation, preferably with an organismal focus. The successful candidate will be expected to teach undergraduate and graduate courses in evolutionary biology and genetics. Applicants should provide a curriculum vitae with supporting materials, a cover letter including a brief statement of interests, and should arrange to have three letters of recommendation sent independently to: Evolutionary Genetics Search Committee, John Avise (Chair), Department of Genetics, University of Georgia, Athens, GA., 30602. Applications received before December 1, 2003, will be given priority consideration. The University is an Affirmative Action/Equal Opportunity Employer.

John C. Avise, Ph.D. Department of Genetics Life Sci-

ences Building University of Georgia Athens, GA 30602
 avise@uga.edu 706-542-1456 fax: 706-542-3910

John Avise <avise@uga.edu>

UHawaii ConservBiol

UNIVERSITY OF HAWAII AT HILO FACULTY POSITION

Assistant Professor of Biology, Position no. 83631, pay range 13, College of Arts & Sciences, general funds, full-time, tenure-track, nine-month type appointment to begin approximately August 2004. Duties: Teach undergraduate and MS degree program graduate courses in conservation biology, genetics, zoology, evolution, general biology, and corresponding laboratory courses, depending upon the successful applicant's background; conduct research in conservation biology/genetics, seek extramural research funding; participate in service activities. Minimum Qualifications: Ph.D. from an accredited college or university in a biological science discipline appropriate to the position, demonstrated expertise in conservation biology/genetics. Desirable Qualifications: Demonstrated commitment to teaching at the university level, familiarity with Hawaiian ecosystems and conservation issues. Salary: Competitive. To Apply: Submit curriculum vitae, letter of application, and the names and e-mail addresses of three recent references. It is preferred that these items be submitted electronically as Word or pdf files zipped together in a ZIP file named with the position number and last name (eg 83631Jones) and e-mailed to HR@UHH.hawaii.edu. Paper submissions are also accepted at Human Resources, Univ. of Hawaii at Hilo, 200 W. Kawili St., Hilo, HI 96720. Contact Address: Dr. William J. Mautz, Biology Department, University of Hawaii at Hilo, 200 W. Kawili St., Hilo, HI 96720-4091. Application Deadline: Review of applications will begin no earlier than December 10, 2003 and will continue until the position is filled. The University of Hawaii at Hilo is an EEO/AA Employer D/M/V/W.
 william mautz <mautz@hawaii.edu>

UMissouri PlantEvol

PLANT EVOLUTIONARY BIOLOGIST

University of Missouri-Columbia

The Division of Biological Sciences (www.biology.missouri.edu) at the University of Missouri-Columbia invites applications for a tenure-track assistant or associate professor in plant evolutionary biology. The successful applicant will establish an active research program applying experimental and/or theoretical approaches to the study of plant evolution. We are particularly interested in individuals whose strengths include phylogenetic approaches and whose research complements that of our current faculty.

MU features a world-class interdisciplinary program in plant biology (www.plantgroup.org), extensive new greenhouse and herbarium facilities, and proximity to floristically diverse field sites. The Division offers highly competitive salaries, generous start-up packages, modern research laboratories and support facilities, an active graduate program with institutional support for students and postdoctoral associates, and a highly interactive faculty. Columbia, Missouri is an attractive, progressive city with an excellent school system. We are firmly committed to fostering diversity on our faculty with regard to ethnicity, race, and gender and thus strongly encourage applications from women and members of minority groups.

Applications should be sent by e-mail to: pltevo@missouri.edu. Attach to the e-mail a single PDF (Adobe Acrobat) or Microsoft Word document that includes your curriculum vitae and statements of research and teaching interests. Copies of three publications and three letters of reference should be mailed to: John David, Chair, Division of Biological Sciences, 105 Tucker Hall, University of Missouri-Columbia, Columbia MO 65211-7400. The review of applications will begin on December 1, 2003 and continue until the position is filled.

MU is an Equal Opportunity-Affirmative Action Employer. To request ADA accommodations contact Robin Brueckner at 573-882-6650 or by e-mail at bruecknerr@missouri.edu.

-

Tim Holtsford 573-882-3016 (office) Division of Biological Sciences 573-882-2988 (lab) 202 Tucker Hall 573-882-0123 (FAX) University of Missouri Columbia, MO, 65211-7400, USA

Email: HoltsfordT@Missouri.edu

Lab webpage: <http://www.biosci.missouri.edu/~holtsford/Index.html> General Botany webpage: <http://www.biology.missouri.edu/courses/>

Bio12_Holtsford/

UOklahoma EvoEcol

Ecologist

Applications are invited for a tenure-track Assistant Professor position beginning in the Fall 2004. We seek someone who addresses research questions in ecology, broadly defined, and has expertise in biostatistics. Candidates must have a Ph.D. and a demonstrated ability to conduct significant research as judged by publications. The individual selected is expected to establish an externally-funded research program and contribute to teaching (one course per semester), including a graduate biostatistics course. Preference will be given to candidates whose research bridges areas within Evolution/Ecology/Behavior. Send curriculum vitae, reprints/preprints, research and teaching statements, a summary of statistical expertise, and three letters of recommendation to: Chair, Ecologist Search Committee, Department of Zoology, University of Oklahoma, 730 Van Vleet Oval, Norman, OK 73019. Further information about the Department of Zoology is available at <http://www.ou.edu/cas/zoology/>. Screening of candidates will begin January 15, 2004 and continue until position is filled. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates encouraged to apply.

Gary D. Schnell, Curator of Birds & Professor of Zoology Sam Noble Oklahoma Museum of Natural History, University of Oklahoma 2401 Chautauqua Avenue, Norman, Oklahoma 73072, USA Telephone 405-325-5050; Fax 405-325-7699; Email gschnell@ou.edu

URegina EvoEcol

Faculty Position Ecologist University of Regina

Ecologist. The Department of Biology at the University of Regina invites applications for a tenure-track position at the Assistant Professor level, effective July 1, 2004 (subject to budgetary approval). We are seeking an ecologist with strong quantitative skills, in particular those studying aquatic ecosystems. Candidates

must have a PhD, a productive research record, and postdoctoral experience is an asset. As well as establishing an externally-funded research program, the successful candidate will teach undergraduate and graduate courses, and develop an advanced undergraduate course in his/her area of expertise. Start-up research funds will be provided, as well as a reduced teaching load in the first two years. The Faculty of Science has superior computational facilities (Laboratory of Computational Discovery, see <http://www.icd.uregina.ca/>), a new stable isotope laboratory (EQAL, see <http://uregina.ca/eqal/>), and first-rate field research capabilities. As well, construction of a new Laboratory Building will begin in Spring 2004. To apply for the position, submit a letter of application outlining research and teaching goals, a curriculum vitae, samples of research publications, and arrange for three letters of reference to be sent to: Dr. W. Chapco, Head, Department of Biology, University of Regina, Regina, SK, S4S 0A2 Canada. (fax 306-337-2410; phone 306-585-4231; e-mail William.Chapco@uregina.ca). The closing date for applications is January 15, 2004. Further information about the department is available at: <http://www.uregina.ca/science/biology>. In accordance with Canadian Immigration Regulations, preference will be given to citizens and permanent residents of Canada, although all outstanding candidates will be considered. The University of Regina is committed to the principle of employment equity.

Dr. W. Chapco, Head Department of Biology University of Regina Regina, Canada SK S4S 0A2 Phone: 306-585-4478 Fax: 306-337-2410 e-mail: chapco@uregina.ca

USDA Madison WI PlantTech

The USDA, ARS, Vegetable Crops Research Unit in Madison, WI, is seeking applications for a permanent, full-time Biological Science Laboratory Technician (Plants), GS-404-7/8/9. Salary is commensurate with experience (\$31,830 - \$50,617 per annum), plus benefits. Candidates must be U.S. Citizens. Candidates must request a copy of the vacancy announcement (ARS-X4W-0060) by either calling 301-504-1482 or by copying the full text announcement from the ARS Homepage at www.ars.usda.gov. Candidates must submit specific information as outlined in the vacancy announcement. Applications must be postmarked by the closing date of December 8, 2003. USDA/ARS is an equal opportunity provider and employer. Women and

minorities are encouraged to apply.

<http://www.afm.ars.usda.gov/divisions/hrd/vacancy/-X4W-0060.html> jbrunet@wisc.edu

USFW DexterNM FishEvol

Job is posted at <http://jobsearch.usajobs.opm.gov> with application information.

Please contact Manuel Ulibarri at 505-734-5910 for additional information or questions.

VACANCY IDENTIFICATION NUMBER: DS181565
 OPENING DATE: Oct 29, 2003 CLOSING DATE: Nov 11, 2003 POSITION: INERDISCIPLINARY, GS-0482/0440 -11 / 12 PROMOTION POTENTIAL: GS - 12 SALARY: \$47,110.00 - \$56,463.00 Annually THIS IS A Career/Career Conditional APPOINTMENT LOCATION(S): DEXTER, NM - 1 vacancy EMPLOYING AGENCY: U.S. FISH AND WILDLIFE SERVICE APPLICATIONS WILL BE ACCEPTED FROM: ALL U.S. CITIZENS

MAJOR DUTIES

Employee serves as the laboratory manager for a modern, independent, fully functional molecular and ecological genetics laboratory. Employee provides administrative oversight and technical direction for all studies carried out in the laboratory. Dexter is assigned the responsibility for holding, studying, and culturing numerous rare, threatened or endangered fish species of the American Southwest. Provides genetics information useful to professionals charged with establishing and maintaining artificial genetic refuge populations, production broodstocks, and progeny used in imperiled fish reintroduction, restoration, and recovery efforts. Employee supplies, equips, and maintains laboratory facilities and ensures proper instrument operation. The employee participates in the planning, design, and execution of applied research studies by selecting appropriate laboratory methodology to achieve experimental objectives. Employee selects, purchases, maintains and operates a variety of laboratory instruments used to perform tests, analyses, and other laboratory procedures. Employee implements and enforces a strong laboratory safety and hazardous waste disposal program. Research focus is on genetic identification and characterization of target and related species including development of population genetic profiles useful in determining population genetic status and trends necessary

to establish recovery goals.

Connie Keeler-Foster Fishery Biologist (Genetics) Molecular Ecology Program Dexter National Fish Hatchery and Technology Center P.O.B. 219, 7116 Hatchery Rd. Dexter, N. M. 88230 505-734-5910 fax 505-734-6130 "I've lost all patience with the search for peace of mind" Alice in Chains

USydney ChairBiology

PROFESSOR AND CHAIR IN BIOLOGY – UNIVERSITY OF SYDNEY

The School of Biological Sciences at the University of Sydney seeks to appoint a Professor and Chair in any field of contemporary biology compatible with its programmes.

Deadline for submission of application: January 8, 2004.

Further information about the School and the position is available from <http://www.bio.usyd.edu.au>, or from the Head of School, Associate Professor R Hinde (phone +61-2-9351-2277/2848; fax +61-2-9351-2558; e-mail rhinde@bio.usyd.edu.au).

Yours sincerely,

Lars – Dr Lars S Jermiin, Lecturer School of Biological Sciences Heydon-Laurence Building A08 University of Sydney New South Wales 2006, Australia

Phone +61 (02) 9351 3717 Fax +61 (02) 9351 4119 E-mail lsj@bio.usyd.edu.au WWW page <http://www.bio.usyd.edu.au/~jermiin>

UToronto EvolBiol

Developmental and/or Evolutionary Biology

The Department of Zoology of the University of Toronto is inviting applications for a tenure-stream Assistant Professor position, to be nominated for a Tier II Canada Research Chair (CRC). We encourage applications from outstanding researchers in evolutionary developmental biology, cell/developmental biology, or comparative and functional genomics, with prospects

for interacting with strong existing groups in animal morphogenesis and evolution/systematics (details and links at <http://www.zoo.utoronto.ca/>). Job expectations include an internationally recognized research program and effective teaching of graduate and undergraduate students. The University comprises several hundred laboratories in the life sciences, over 35 of which actively participate in the outstanding Collaborative Graduate Program in Developmental Biology. Evolutionary biology is well represented by interactive groups spanning Zoology, Botany, and the Royal Ontario Museum. Application review begins 15 December, continuing until position filled. Anticipated start July 2004.

Submit a CV, brief statements of research plans and teaching interests, and have three letters of reference sent to: Professor James Thomson, Chair Department of Zoology University of Toronto Ontario M5S 3G5 Canada (jthomson@zoo.utoronto.ca).

CRC searches are explicitly international in scope. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority. The University of Toronto offers the opportunity to teach, conduct research, and live in one of the most diverse cities in the world. The University of Toronto is strongly committed to diversity within its community, and especially welcomes applications from visible minority group members, women, aboriginal persons, persons with disabilities, members of sexual minority groups and others who may contribute to the further diversification of ideas.

Peter Andolfatto <pandolfatto@zoo.utoronto.ca>

UtahStateU MicrobialGenomics

Two Faculty Positions:

Assistant Professor MICROBIAL FUNCTIONAL GENOMICS Department of Biology Utah State University

The ideal candidate will complement the research interest of the current faculty including insect and plant defense responses, symbiotic and host-pathogen interactions, evolutionary genetics, ecosystem function, and cell signaling. Candidates must have a Ph.D. or equivalent. Postdoctoral experience and evidence of the ability to sustain a competitive research program are preferred. Teaching responsibilities will include lower/upper division courses in the successful candidate's area of expertise.

Candidates should send curriculum vitae, summary of research interests, teaching philosophy, and names and contact information of three references to: Dr. Daryll B. DeWald, Search Committee Chair, Department of Biology, 5305 Old Main Hill, UT 84322-5305.

Screening of applications will begin 1 December 2003 and continue until the position is filled. (www.biology.usu.edu <<http://www.biology.usu.edu>>)

Assistant Professor PHYSIOLOGY Department of Biology Utah State University

The Department of Biology at Utah State University (<http://www.biology.usu.edu>) seeks to recruit a tenure-track assistant professor in physiology. Candidates must have a Ph.D. or equivalent, postdoctoral experience and evidence of the ability to sustain an extramurally funded research program. All areas of physiology will be considered, although research interests that complement existing molecular/cellular/systems level programs in the department will be considered positively. Teaching responsibilities will include courses in upper/lower division vertebrate/human physiology. Candidates should send curriculum vitae, summary of research interests and teaching philosophy, and names and contact information of three references to: physiologist@biology.usu.edu.

Review of applications will begin 1 December 2003 and continue until the position is filled.

Utah State University is a research-intensive school of 20,000 students, nestled in a mountain valley 80 miles north of Salt Lake City, Utah. Opportunities for a wide range of outdoor activities are plentiful. Housing costs are at or below national averages, and Cache Valley provides a supportive environment for families and balanced personal/professional life. USU offers competitive salaries and outstanding medical, retirement and professional benefits (see <http://personnel.usu.edu> for details). Women and minority candidates are encouraged to apply, and partner accommodation is available for dual-career couples (see: <http://www.usu.edu/-provost> for more information). Utah State University is an affirmative action/equal opportunity employer with a National Science Foundation ADVANCE Gender Equity program, committed to increasing diversity among students, staff, faculty, and all participants in university life.

Michael Pfrender Department of Biology 5305 Old Main Hill Road Utah State University Logan, UT 84322-5305

Ph# 435-797-7623 Office 435-797-7625 Lab

USU Biology Department: <http://www.biology.usu.edu/>
 Biosystems: <http://www.biosystems.usu.edu/>
 Daphnia Genomics Consortium: <http://daphnia.cgb.indiana.edu>

Mike Pfrender <mpfrender@biology.usu.edu>

UticaCollege EvolBiol

Assistant Professor of Biology

Utica College Department of Biology invites applications for a tenure-track position to begin 1 August 2004. Candidates must have a Ph.D. by the start date. Post-doctoral and/or teaching experience and an active research program that will involve undergraduates are preferred. Teaching responsibilities may include general biology courses, Invertebrate Biology, Developmental Biology, and Molecular Biology. Review of applications will begin 1 December 2003 and continue until the position is filled. Send letter of application, curriculum vitae, and three letters of recommendation to: Dr. Lawrence Aaronson, Dean of Arts and Sciences, Utica College, Utica, NY 13502-4892. Utica College is an Equal Opportunity/Affirmative Action Employer. Women and Minorities are encouraged to apply.

Dr. Shelley L. Ball Molecular Diagnostics Laboratory National Centre for Advanced Bio-protection Technologies Box 84, Lincoln University Canterbury, New Zealand Phone: 64 (3) 325-2811 or 64 (3) 325-3696, extension 8411 FAX: +64 (3) 325-3844 (when dialing from overseas, dial 011 before the 64) E-mail:ball@lincoln.ac.nz Website: www.uoguelph.ca/~sball/

"A good friend will come and bail you out of jail....but a true friend will be sitting next to you saying, Damn...that was fun!"

WesternMichiganU EvolBiol

Ecological or Evolutionary Biologist

The Department of Biological Sciences at Western Michigan University seeks applications for a position

in ecology-evolution at the Assistant Professor level beginning in fall 2004, pending budgetary approval. The position will carry a joint appointment in the Environmental Studies Program. Individuals with expertise in evolutionary/ecological genetics, ecosystem ecology, or vertebrate ecology are particularly encouraged to apply, but we seek applications from all candidates who complement existing strengths of the department in ecology and evolutionary biology. The successful candidate will be expected to teach at the undergraduate and graduate levels and establish a vigorous, extramurally funded research program. A Ph.D. and relevant post-doctoral experience are required. Information concerning the Biological Sciences Departments programs and faculty can be obtained at <http://www.wmich.edu/bios/>. Western Michigan University is a student-centered research university with a strong commitment to research excellence in the biological sciences. To apply please send letter of application, curriculum vitae, statements of teaching and research interests, and have three letters of reference sent to Dr. Steve Kohler, Chair, Ecology-Evolution Search Committee, Department of Biological Sciences, 3441 Wood Hall, Western Michigan University, Kalamazoo, MI 49008-5410. Review of applications will begin December 1, 2003, and will continue until the position is filled. Western Michigan University is an Equal Opportunity Employer with an affirmative action program to encourage application from underrepresented groups.

David N. Karowe Associate Professor Department of Biological Sciences Western Michigan University Kalamazoo, MI 49008-5410 phone (269) 387-5630 fax: (269) 387-5609 e-mail: karowe@wmich.edu web page: <http://vms.cc.wmich.edu/~karowe>

David Karowe <david.karowe@wmich.edu>

WillamMaryCollege PlantEvolBiol

We are searching for a plant biologist with interests in physiology and/or development. Someone working from an evolutionary perspective would be especially attractive. If I can provide any information, please drop me a note.

PLANT PHYSIOLOGY/PLANT DEVELOPMENT

The College of William and Mary's Department of Biology invites applicants for a tenure track position at the

ASSISTANT PROFESSOR level in plant physiology and/or plant development. The successful candidate will be expected to maintain an extramurally funded research program involving both undergraduate and master's degree students. Teaching responsibilities are a plant physiology course with laboratory, the lecture portion of a large course in general botany to be taught in alternate years, and another course in the area of the candidate's expertise to alternate with general botany. Candidates must demonstrate the potential and motivation to achieve excellence in teaching. This includes communication skills and the ability to motivate students in both large and small courses, from molecular to whole-organism botany. Previous experience teaching undergraduate courses would be viewed favorably, and postdoctoral research experience is expected. A competitive start-up package is available and first year teaching load negotiable. Review begins December 1, 2003, and will continue until an appointment is made. Submit a letter of application, curriculum vitae, statements of research plans and teaching philosophy, a list of courses relevant to the botanical sciences taken or taught, and three letters of reference to Search Committee, Department of Biology, The College of William and Mary, P. O. Box 8795, Williamsburg, VA 23187-8795. Information on the college may be obtained at <http://www.wm.edu/> The College is an EEO/AA employer.

=====

George W. Gilchrist Email #1: gwgilc@wm.edu
Department of Biology, Box 8795 Email #2:
kitesci@cox.net College of William & Mary Phone:
(757) 221-7751 Williamsburg, VA 23187-8795 Fax:
(757) 221-6483 <http://gwgilc.people.wm.edu/>

WoodsHole ResTech

The following position has been formally approved and applications are currently being accepted:

Senior Research Technician Supervisor: Dr. Paul Barber Location: Boston University Marine Program, Woods Hole, Massachusetts

Duties A Research Assistant position is available in a laboratory that uses molecular genetic techniques to investigate evolutionary process in marine environments. Duties will primarily consist of routine molecular genetic techniques (including, but not limited to, DNA extraction, PCR, Cloning, and DNA sequencing) and

data analysis (e.g. sequence alignment, phylogenetic and population genetic analysis). Some general lab maintenance (e.g. ordering, collection management) and library research will also be expected.

Preference will be given to candidates who have previous molecular genetic experience and who have a demonstrated interest in pursuing scientific research. Further preference will be given to candidates who are interested in becoming intellectually as well as technically involved in the research

Minimum skills Bachelor's degree in Molecular and Cellular Biology, Genetics, Organismal Biology or related field. Basic computer skills including word processing (Microsoft Word) spreadsheets (Microsoft Excel), and graphics (Photoshop and Illustrator). Knowledge of phylogenetic software a plus. Ability to work independently on assigned tasks, work on multiple assignments with overlapping timelines, and meet schedules and timelines. Knowledge of basic research methods.

Applicants are encouraged to contact Paul Barber at: pbarber@bu.edu. Further information on the laboratory and it's activities can be found at: ww.bu.edu/biology/Faculty_Staff/barber.html

To apply for the position: Access the position in the BU Office of Personnel web site <http://www.bu.edu/-personnel/employment>. Click on "Job Opportunities", then click on "Job Search and Apply Online". At the bottom of the page, enter "1283/K043" into the box for "Job Search". Clicking on the Job Title will take you to a description of the position with a button at the bottom of the page to submit your C.V. to formally apply for the position. – Dr. Paul H. Barber Boston University Boston University Marine Program 7 MBL Street Woods Hole, MA 02543 (508)289-7685 phone (508)289-7950 FAX pbarber@bu.edu

Paul Barber <pbarber@bu.edu>

YorkU EvoEcology

York University, Department of Biology, Toronto, Ontario, Canada

The Department of Biology invites applications for a tenure track position in Ecology at the level of Assistant Professor. The Department is diverse, research-intensive and well equipped. Our website (www.biol.yorku.ca/grad/faculty.htm) contains further information about current research activity. The

successful candidate will have a Ph.D., an outstanding research record, be expected to develop a strong, externally-funded research program, participate in the undergraduate Conservation Ecology Programme (<http://www.biol.yorku.ca/dept/2003-2004/-conservationEcology>), and supervise graduate students. A demonstrated interest in field-based research is strongly encouraged, and post-doctoral experience is an asset. Please submit an application package consisting of a curriculum vitae, a research proposal (5 pages maximum), a 1-page statement of teaching interests and philosophy, single copies of three publications, and names of three references to the Chair of the Ecology Search Committee, Department of Biology, York University, North York, ON, M3J 1P3. Applications are due by Dec 15, 2003. The expected appointment

date for this position is July 1, 2004. All positions at York University are subject to budgetary approval.

This faculty search is being performed in accordance with York University's Affirmative Action Program. Women, racial/visible minorities, persons with disabilities and aboriginal peoples who wish to participate must self-identify. More information may be obtained from the York University website (<http://www.yorku.ca/acadjobs/index.htm>) or from the university's Affirmative Action Program Office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

kwilson@yorku.ca

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AMOVA comparisons

Dear List

Do methods exist for comparing variance components derived from AMOVA analysis that would allow tests for similarity across species?

Andrew Martin Dept of EEB Univ. of Colorado
Andrew.Martin-1@colorado.edu

Allele network homoplasy

Hello all, I have been looking at some population sequence data that appears to have characters with high degrees of homoplasy in an allele network. These characters, when mapped on the allele network, are individually responsible for the designation of unique alleles in 4-5 regions of the allele network. These problematic characters also appear to create extensive 'loops'. Clearly, these characters are confounding the interpretation of this allele network, and I would like to deal with them systematically. Does anyone know of a systematic method that allows one to deal with/delete/reweight homoplasious characters in population data? If so would you please direct me to the appropriate papers. Thanks, Wayne.

Wayne Delpont Molecular Ecology and Evolution Program Department of Genetics University of Pretoria Pretoria 0002 wdelpont@postino.up.ac.za

Aspelinium micros

hi everyone

I am working on *Aspelinium* (fern sp.). I was wondering if anyone (or know someone who) is using microsatellite markers from this species or related species.

thanks sunita

Mrs Sunita Khatkar Mount albert Research Centre 120 Mt Albert Rd Private Bag 92169 Mt Albert Auckland

NZ Ph 64 9 815 4200 ext 7136 Fax 64 9 815 4201 email skhatkar@hortresearch.co.nz

Base Composition Statistics

Dear All,

I am trying to statistically analyse the relationship between base composition across a set of sequences. The aim is to show that the level of one of the bases is significantly correlated to the level of another base. I am concerned though that a simple regression of the compositions for any two bases is not statistically valid, as the summed percentage of the bases is constrained to be a constant.

I would like to know if there is a standard way of statistically comparing values that are constrained and bounded in this way. Any suggestions would be much appreciated.

Kind Regards, Andrew Gibson

Andrew Gibson School of Biological Sciences, The University of Manchester, 2.17 Stopford Building, Oxford Road, Manchester. M13 9PT Phone: (+44) 0161 275 5064 Email: andrew.p.gibson@stud.man.ac.uk

Bubalus samples

Does anyone have mtDNA D-loop sequence data from *Bubalus arnee* (wild *Bubalus bubalis*) or DNA samples or tissue samples?

Thank you, Connie Mulligan

Connie J. Mulligan, PhD Assistant professor Department of Anthropology PO Box 117305 University of Florida Gainesville, FL 32611 Tele: (352) 392-2253, ext 248 Fax: (352) 392-6929 email: mulligan@anthro.ufl.edu website: <http://www.clas.ufl.edu/~users/mulligan/Webpage/index.html>

Capture recapture data

I am working on population genetics of *Pagrus auratus* (Sparidae) in southeastern Australia. Current stock recognition is mainly based on capture/recapture data but I question whether the tagging of fish has a direct influence upon spatial movement. There seems to be very little literature available that critically addresses this issue. If anybody knows of any such papers I would be most grateful to be informed of such.

Kind regards and thanks in advance,

Leon Meggs Ecology & Environment Deakin University
Warrnambool, Australia Email: lbm@deakin.edu.au

Leon Meggs <lbm@deakin.edu.au>

Clonal reproduction software

I would like to find a software that can detect clonally related individuals in a population sample (of otherwise sexuals) and estimate their frequencies. Preferably usable for AFLP dominant markers, and with possibilities for adjusting for scoring errors. Can you help me?

I need the software for a study of populations *Poa pratensis* with both sexual and apomictic reproduction.

Thanks in advance

Thure

Thure P. Hauser, Ph.D., Senior Scientist Plant Research Department, PRD-309 Risø National Laboratory DK-4000 Roskilde, Denmark Phone: +45 4677 4238 Fax: +45 46774160 http://www.risoe.dk/pbk/-staff_uk/thha.htm

Clonal reproduction software answers

Original question:

I would like to find a software that can detect clonally related individuals in a population sample (of otherwise sexuals) and estimate their frequencies. Preferably usable for AFLP dominant markers, and with possibilities for adjusting for scoring errors. Can you help me?

I need the software for a study of populations *Poa pratensis* with both sexual and apomictic reproduction.

Thanks in advance

Thure

Thure P. Hauser, Ph.D., Senior Scientist Plant Research Department, PRD-309 Risø National Laboratory DK-4000 Roskilde, Denmark E-mail: thure.hauser@risoe.dk Phone: +45 4677 4238 Fax: +45 46774160 http://www.risoe.dk/pbk/staff_uk/thha.htm

ANSWERS:

Hans Siegismund (HSiegismund@zi.ku.dk): DOS sorting of genotypes to detect similar types

Dear Dr Hauser,

In the software FaMoz (available freely at <http://www.pierroton.inra.fr/genetics/labo/Software/-Famoz/index.html>) you can calculate the identity probability (for codominant or dominant loci), which gives you, according to the number of loci considered, the number of identical pairs of individuals. It does'nt answer directly to your question, but if you have many clonally propagated individuals, the identity probabilities are expected to be high !

Hope it can help !

Best regards

Sophie

Sophie Gerber gerber@pierroton.inra.fr INRA - UMR BIOGECO 69 route d'Arcachon tel 33 5 57 12 28 30 (FRANCE) 33612 Cestas cedex fax 33 5 57 12 23 81 http://www.pierroton.inra.fr/genetics/Perso/Sophie/page_sophie_english.html

Jeg har brugt MLGsim, som Per Stenberg og Magnus Lundmark fra Umeå Universitet har lavet, til at estimere hvor mange kloner der forekommer i mine populationer. Programmet beregner sandsynligheden for om individer med samme multilocus genotype er opstået ved tilfældig seksuel = reproduktion.

<http://www.molbiol.umu.se/forskning/saura/-software.htm> Se også: P. Stenberg, M. Lundmark, and A. Saura. MLGsim: a program for detecting clones using a simulation approach. *Molecular Ecology Notes* 3 (2):329-331, 2003.

Jeg vil meget gerne hville programmer der bliver foreslået.

Mvh Katrine Petersen

Katrine Petersen Department of Ecology, Evolution and Diversity Botanical Institute University of Copenhagen Oester Farimagsgade 2D DK - 1353 Copenhagen K email katrinep@bot.ku.dk

— Dear Thure using co-dominant markers (microsatellites), MLGsim (described in Mol Ecol Notes a couple of issues back) can detect the probability that two identical genotypes have not been produced sexually. Afica Gomez (Gomez & Carvalho Mol Ecol 2000) did something along similar lines - the software is not published, but I could probably get it, and in fact I'm intending to use both on datasets for Daphnia and clonal snails. However, for dominant data this seems like a difficult problem to me and I would be very interested to hear of any answers that you receive on this, and indeed any other software (for dominant or codominant data). Thanks David

(D.W.Weetman@hull.ac.uk)

— Dear Thure,

I recently came across a paper dealing with similar questions in weavils: Stenberg et al (2003) Molecular Biology and Evolution, 20, 1626-1632. The authors use the program MLGsim, see: Stenberg et al (2003) Mol Ecol Notes, 3, 329-331, available at <http://www.molbiol.umu.se/forskning/saura/software.htm> I hope this helps. Otherwise, I would also be interested in reading the other answers that you get. Could you please post it on the list?

Good luck!

Ruza

Ruzica Bruvo Department of Evolutionary Biology Institute of Animal Evolution and Ecology Westphalian Wilhelms-University Muenster Huefferstrasse 1 D-48149 Muenster, Germany

bruvo@uni-muenster.de

- Hi,

I recently wrote a program that does just what you want (I think). The only problem may be that it only runs on a Macintosh, and I didn't write a users manual, as I wrote it for my private use and never intended to publish it. The program can read molecular data (allozymes/msats/AFLP/RAPD) and then

— / —

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>

Cyprinus carpio samples

Hello all,

Does anybody have *Cyprinus carpio* (Carp) fish tissue samples from:

-Austria - Danube River -Germany - anywhere, or - Russia - Volga river and/or Amur river?

If so, could you please provide:

- 5-10 individual samples (i.e. from 5-10 individual fish) in the form of fin-clips from any fin on the fish, or fish flesh-tissue. Preserve the specimens in small tubes (e.g. 1.7ml) in 100% ethanol.

- your name and address so we can thank you

The tissue should be as fresh as possible as it is required for DNA analyses. The tissue should be sent to:

Dr Christopher Austin, Associate Professor, Campus Coordinator - Warrnambool, Coordinator of Postgraduate Aquaculture Courses School of Ecology and Environment, Deakin University, PO Box 423 Warrnambool, 3280 Victoria, Australia Phone: 03 55633518 Fax: 03 55633462 http://www.deakin.edu.au/sch_ecol_env/-research/mol_ecol_bio/home.htm

To correspond, please email me, Binh Thai, at tbt@deakin.edu.au

Thanks in advance.

Binh Thai

Binh Thai Master Student School of Ecology and Environment Deakin University Warrnambool VIC 3280 AUSTRALIA Tel: 61.3.55633569, 61.3.55615831 Mob: 0408038242 http://www.deakin.edu.au/sch_ecol_env/-research/mol_ecol_bio/home.htm

Binh Thai <tbt@deakin.edu.au>

dear and reputable members of the evoldir,

marcus feldman gave a talk today at the u of c (wed 12 nov) about the evolution of epistasis. strangely, he did not mention the possibility that the structure of epistasis patterns/gene interactions could be a simple side-effect of i) the genetic basis of essential biomechanic, biostructural, and cell-dynamic features required for function, performance, and fitness; and ii) of the mechanisms that have been evolved to reduce the number of deleterious mutations that engage in undesirable yet avoidable epistatic interactions.

it is indeed very plausible that over evolutionary time any unnecessary opportunities for mutations to show epistatic interactions are eliminated to make sure that new mutations (i.e. mostly deleterious mutations) affect the smallest possible number of phenotypes thereby avoiding additional deleterious effects. and it is also hard to think that this need will not constrain the spectrum of epistatic interactions much more strongly than any other factors.

concededly, it is possible that modifiers of epistatic interactions among mutations whose fitness consequences are negligible population-genetically, can arise resulting in a spectrum of epistasis patterns different from that typical for strongly deleterious mutations. but such patterns should be much less interesting than the patterns of epistasis of mutations affecting traits more important biomechanically and population-genetically, patterns that, again, must have been tuned strongly by natural selection.

ironically, however, the epistasis patterns/gene interactions that are less constrained evolutionarily should be those of greatest interest to genetic epidemiologists. such patterns should indeed be typical for mutations that cause "complex disease" and/or senescence, mutations that have managed to evade the surveillance of natural selection during the reproductive period by means of intricate genotype-phenotype mappings and complicated epistatic interactions, and/or are totally free to engage in any kind of epistatic interaction because their phenotypic effects are apparent only in older individuals after selection has ceased to act, respectively.

has anybody made these points before? and if yes where?

best to you all

marcos

French INAPG internships

November 2003

WOULD YOU RECEIVE A STUDENT IN YOUR LAB?

CALL FOR INTERNSHIPS IN ECOLOGY

The Institut national agronomique Paris-Grignon (INAPG), located in Paris, France, is an institution for advanced education whose 1st and 2nd years are comparable to the 3rd and 4th years in the University system. Students are accepted into the Institute after a two-year preparation and a relatively intense competition.

The teaching curriculum covers a wide spectrum of fields: statistics, biology, agronomy, animal science, biotechnology, food sciences, environmental sciences, ecology, economics, etc.

INTERNSHIPS. At the end of the 2nd year, students must spend at least two months in a research laboratory, a company, a production plant, etc. Optionally, they can also perform a "long" internship of 6-12 months inserted between the 2nd and 3rd years of study.

BACKGROUND. Regarding population biology, all students take courses in quantitative genetics (10 hours), population genetics (12 hours), population ecology (10 hours) and ecosystem ecology (6 hours). In addition, those interested in ecology and evolution can take more advanced courses in conservation ecology (30 hours), evolutionary genetics (30 hours), theoretical ecology (70 hours, incl. a personal project) or living resource management (2 months, incl. a personal project).

WORK TYPES. Many kinds of work are acceptable, provided that the students get a minimal experience of what research work is. Ideally, the student should conduct a well-identified little project. The majority of ecology students generally prefer field projects but there are always some who request theoretical projects (data analysis, modelling).

DATES. Training must last a minimum of 8 weeks, to be arranged after mid-May 2004 when courses are over in Paris. This period may extend until early September. For "long" internships, dates can be arranged between mid-May 2004 and late August 2005.

FUNDING. Most students receive some financial help from the INAPG. If you can offer some stipend, this will be welcome but is certainly not required.

If you can receive one or more of our students, either this year or in future years, will you please answer the following questions.

PERSON IN CHARGE

GENERAL TOPIC

SHORT DESCRIPTION OF THE WORK (max 15 lines)

POSSIBLE DATES

LOCATION

ACCOMODATION POSSIBILITIES

STIPEND (if any)

Please include your address in your message.

Ecologie des populations et communautés, Institut national agronomique Paris-Grignon, 16 rue Claude Bernard, 75231 Paris cedex 05, France Tel. +33 1 44 08 72 15. Fax: +33 1 44 08 72 57 http://www.inapg.fr/ens_rech/bio/Ecologie/ecologie.htm ardit@inapg.fr

Gel imaging

Dear Evoldir members,

We are searching for a cheap agarose gel documentation system using just a digital camera. Has anyone ever tried this? Is there some simple way to do this without buying one of the expensive systems?

Thanks in advance, Evan

W. Evan Braswell Laboratory of Ecological and Evolutionary Genetics New Mexico State University Las Cruces, NM 88003

wbraswel@nmsu.edu

Gel imaging answers

Dear Evoldir members,

Earlier I sent out a request for help with gel documen-

tation systems. Here is my original message followed by the responses. Thanks to all for their help.

Evan

We are searching for a cheap agarose gel documentation system using just a digital camera. Has anyone ever tried this? Is there some simple way to do this without buying one of the expensive systems?

Thanks in advance, Evan

W. Evan Braswell Laboratory of Ecological and Evolutionary Genetics New Mexico State University Las Cruces, NM 88003

Be very carefull especially about the camera. I've just bought a system from Biorad. It has rather expensive digital camera - Panasonic Lumix DMC-LC40 - that is totally inappropriate for that kind of photography. You need to try if the autofocus works in this special conditions. In Lumix it doesn't. I have also tried Casio QV-R40 (twice cheaper) with the hood supplied by Biorad. Autofocus works much better, besides it has manual focus (very useful in case of weak banding). However the quality of pictures is quite weak. My advice is: 1. Check autofocus on dark surfaces with weak pattern (e.g. grey paper with only a few thin lines drawn on it). 2. Check the picture quality. 3. Buy camera with manual focus - just in case. 4. Maximum sensitivity should be about 300-400 ISO. 5. Minimal optical parameters are: aperture - 2,8; shutter - 1/4 s. The longer the time can be the better. Usual conditions for EtBr stained gel are 400ISO, shutter=4 sec, aperture=5,6. It is better because of bigger focal depth than with shorter times. 6. The optical resolution should be at least 4 Mln px. 7. You should have choice of level of compression - cameras with TIFF format are best however good quality JPEG are also sufficient. Look carefully at the pictures before you buy any camera :)

When I was in lab tech school, we used a UV transilluminator deck with a black cone-type thing with a hole in the top that you would set over the gel and put the digital camera up to. It seems that's about the cheapest one could set it up.

we are using a system you may be interested in. It consists of Canon PowerShotG1 digital camera, hood and two Kodak filters (as we're using EtBr and SYBR Green staining). In fact we purchased this system from Elchrom Scientific (www.elchrom.com) and it was about 5,000-5,500 EURO. However, I think that it was due to a gel analysis software included (TotalLab). We're using this system over 2 years and haven't had any problems with it yet, quality of pictures is very high. I think that you may assemble a system consisting of some good digital Camera (eg Canon Power-

ShotG5), any hood and the appropriate commercially available filters for about 1000 EURO. Hope this helps.

At Victoria University of Wellington a MSc and a Post-doc documented their gels in this way. We simply mounted a digital KODAK camera (~US\$ 1000) on a tripod and placed it over a transilluminator box. To avoid diffuse UV radiation a plastic shade was cut out of an old conference satchel, placed on top of the transilluminator, leaving a rectangular window to place the gels in. To visualise ethidium bromide stained gels we bought a plastic orange filter at a photo shop in town. We put a steel clamp next to the camera, clamped the orange filter carefully with a bit of tissue and moved it underneath the camera lens. Once the settings were satisfactory, we left the whole set-up like this in our dark room. The MSc student liked to score his gels in negative, another useful option when using a digital camera.

Yes there is such a system: put a cardboard box upside down over a transilluminator (UV), make a hole on what is meant to be the bottom of the box, use a simple red filter as those traditionally used with polaroid camera to take EtBr stained DNA, put your cheap digital camera over it, ideally on a stand. And Click! I don't know if this will work with EtBr but it does with Vista Green (Amersham rpn5786, 10 ul per 1ml of loading blue; it ties to the DNA and does not need to be added to the gel itself).

A few years ago I was looking for the same thing you are, a good and inexpensive gel documentation system (price range \$1000 - 2000). The cheapest that I know about is a system from Kodak. One of the good things about it is that the photos can be printed easily on a laser printer. My understanding is that the paper is more archival in quality than that found in fancier systems.

I have used the Dark Reader system with a digital camera. The box emits blue light and it has an orange cover that goes over it. Cybr gold (Molecular Probes) stains the DNA and shines through. It is as sensitive as ethidium and less toxic. The box costs around \$800 (still a little pricey, but maybe less than what you've been looking at) and if you want to know where to get one,

— / —

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>

Genetic Software Forum

The Genetic Software Forum at <http://rannala.org/gsf> provides a forum for posting questions and answers about the use of software for genetic analysis including (but not limited to) PAML, MrBayes, Immanc, BayesAss, etc. We have recently made improvements to the site by implementing the phpbb forum interface. Postings from the old forum have been preserved at <http://rannala.org/gsf> Bruce

Bruce Rannala Department of Medical Genetics 839 Medical Sciences Building University of Alberta Edmonton, Alberta T6G2H7 Canada Ph: (780)492-3139 brannala@ualberta.ca

GeneticDataAnalysis III

I am in the process of revising my book, Genetic Data Analysis II. I would appreciate any comments on which new topics should be added, and which of the present topics should be dropped or expanded.

With thanks,

Bruce Weir Phone: (919) 515-3574

Bioinformatics Research Center Fax: (919) 515-7315
NC State University email: weir@stat.ncsu.edu Raleigh
NC 27695-7566 URL: <http://statgen.ncsu.edu>

Genome walking

Dear colleagues, I am studying metallothionein (MT) genes that are involved in Heavy Metal responses in mussels. I have isolated some coding gene sequence(s) and want to use a PCR based DNA walking method to isolate the entire gene sequence(s) for use in populations surveys. Is there anyone out there who has used the Invitrogen TOPO Walker Kit or SIGMA's Universal Vectorsystem who could give me some advice as to their relative effectiveness? Any other advice/kits that could be useful? Many thanks, Adele

Adele Whyte Tuapapa Putaiao Maori Fellow School of Biological Sciences Victoria University of Wellington PO Box 600 Wellington NEW ZEALAND Phone: 64-4-472-1000 Visit the student portal @ <http://www=2Estudentvuw=2Evuw=2Eac=2Enz>

Isopoda Microsatellites

Does anyone out there know of any published or unpublished work on development of microsatellite markers in Isopoda (marine or freshwater). We have tried to usual literature searches but have so far failed to find anything. Even 'work in progress' or failed attempts would be useful to know of?

Many thanks Helen

Dr Helen Wilcock Department of Biological Sciences Cottingham Road University of Hull Hull HU6 7RX U.K. 01482 465542/465536 h.r.wilcock@hull.ac.uk

Journal cost

For those of us at smaller institutions, the cost of scientific journals has recently become relatively excessive. While completing my doctorate at a large university, I was not conscious of the true luxury afforded to me by a library system with a Big Ten budget. Taking a faculty position at a smaller school was a rude awakening to the reality of journal costs nowadays. I am writing to make a quick plea of consideration to the members of EvolDir - consider carefully the journals in which you publish and be especially mindful of the pricing policies of those journals. The reasons I encourage this are really twofold:

First, there are more and more journals that are priced in such a way that really only the larger research institutions can afford them, and not even then in all cases (see below). This means your articles will be more limited in their impact than you might like - and despite the impression you might have, research activity is quite vibrant on many smaller campuses. Your work will have limited impact in those arenas.

Second, I encourage you to consider publishing in journals that are marketed in such a way that they *are*

affordable. This means that those journals will have increased demand and increased readership, diminishing the current power the publishers of the most expensive journals have over the market. There are a number of ways to try to stem the tide of increased journal costs, but the most grassroots solution seems to be that scientists should stop publishing in those journals. As consumers of journal material, we have no choice, we must read those articles no matter where they are published. Publishers know that, and they use that to their profit. But as the producers of journal material, we do have a choice. Publish in journals that have reasonable pricing schemes and discourage some of the outrageous pricing being set by publishers at this time.

One of the publishing groups, Elsevier, has recently been the focus of concern at university libraries across the US (if not worldwide). A number of the journals published by Elsevier are undoubtedly of interest to EvolDir members, and those journals are not going to get read by a lot of other scientists. This is not just happening at smaller institutions - Cornell and Harvard are among those re-tooling their collections due to these rapidly increasing journal costs (see below). Give it some thought.

Cheers, Alec Lindsay

Paula J. Hane of Information Today Inc. reports:

“November 17, 2003 ” Cornell University Library has posted a list of about 200 Elsevier journal titles it is canceling for 2004. Harvard University says it is preparing for similar cuts in its Elsevier holdings. The University of California continues its negotiations with the Dutch publisher of scholarly scientific journals on behalf of all the UC campuses, while faculty on some campuses have resolved to boycott Elsevier if reasonable rates cannot be negotiated. Other universities and library consortia around the country are also in the throes of assessing what they can afford and what they will have to cancel due to price increases and budget constraints. It's journal renewal time and the strain of the tough decision making is taking its toll on academic librarians, who know that the results will, of course, directly affect the faculty and students they serve. . . . The Academic Senate at UC Santa Cruz recently passed a resolution demanding reasonable rates and urging faculty “to seriously consider cutting ties with Elsevier by refusing to sit on its boards, referee its journals, and submit papers to the publisher.” UCSC currently spends half of its budget for online journals to ScienceDirect Online from Elsevier. “

For the full story, see: <http://www.infotoday.com/-newsbreaks/nb031117-1.shtml> Here is the UC Santa Cruz Academic Senate resolution: <http://->

senate.ucsc.edu/col/res.1405.pdf Alec R. Lindsay, Ph.D. Assistant Professor Department of Biology Northern Michigan University 1401 Presque Isle Avenue Marquette, MI 49855 office & lab: (906) 227-1834

Journal cost 2

Dear all

I suggest the fellow site, were there are a group of scientist that try to solve this problem:

<http://www.plosbiology.org> Cheers

Paulo Russo Almeida

evoldir@evol.biology.mcmaster.ca wrote:

For those of us at smaller institutions, the cost of scientific journals has recently become relatively excessive. While completing my doctorate at a large university, I was not conscious of the true luxury afforded to me by a library system with a Big Ten budget. Taking a faculty position at a smaller school was a rude awakening to the reality of journal costs nowadays. I am writing to make a quick plea of consideration to the members of Evoldir - consider carefully the journals in which you publish and be especially mindful of the pricing policies of those journals. The reasons I encourage this are really twofold:

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Paulo Russo <prusso@utad.pt>

Journal cost 3

Dear all

I just would like to add to Paulo Russo comments an additional point to consider: most of third world scientific institutions can not afford to pay for those journals, even the "low price journals", therefore this is starting to be a "new barrier" to scientific development in our contries avoiding the access to scientific information mostly generated with public founds around the world

Federico Villalobos-Brenes San Jose, COSTA RICA

Federico Villalobos-Brenes <fvillalobos@cibrc.org>

Journal cost 4

Dear all

> Second, I encourage you to consider publishing in journals that are > marketed in such a way that they *are* affordable.

An additional means has been discussed at the Bonn University. We know that discontinuing the receipt of those high priced journals is not a way to force lower fees, because you exclude yourself from the information. Thus, another way discussed was not to act as referee for such journals/publishers. Whether this is really a feasible way, I don't know. But nevertheless I wanted to add this point for discussion.

Best wishes, Heiko Schmidt

Heiko Schmidt von-Neumann Institut fuer Computing
Tel.: Forschungsgruppe Bioinformatik Fax.: FZ
Juelich Email: [he.schmidt\(AT\)fz-juelich.de](mailto:he.schmidt(AT)fz-juelich.de) D-52425
Juelich Web: <http://www.fz-juelich.de/nic/> Associ-
ated member of: Institut fuer Bioinformatik Tel.: 0211
/ 81 - 11 914 HHU Duesseldorf Fax.: 0211 / 81 -
15 767 Universitaetsstr. 1, Geb. 25.02.02 Email:
[hschmidt\(AT\)cs.uni-duesseldorf.de](mailto:hschmidt(AT)cs.uni-duesseldorf.de) 40225 Duesseldorf
Web: <http://www.cs.uni-duesseldorf.de/>

Heiko Schmidt <hschmidt@molgen.mpg.de>

Journal cost 5

I would like to remind EVOLDIR members that the publisher's of Systematic Biology provide 50 free "memberships" to libraries at scientific institutions in developing countries. We have not used up all those allotted.

Anyone who knows of a library in a developing country that would like to receive a free "membership" to (our already-very-low-priced journal) Systematic Biology, please send the name and email address of the librarian and the name and address of the institution to me at chris.simon@uconn.edu.

For your information: Systematic Biology (SB) is the journal of the Society of Systematic Biologists. SB is published six times per year: February, April, June, August, October, and December. The objective of this society is the advancement of the science of systematic biology in all its aspects of theory, principles, methodology, and practice, for both living and fossil organisms, with emphasis on areas of common interest to all systematic biologists regardless of individual specialization. Articles published in SB are original theoretical or empirical studies that explore principles and/or methods of systematics. Systematics is considered broadly to include phylogenetic studies of biogeography, paleontology, development, genes, and/or anatomical/cellular/molecular traits of taxa. Empirical papers chosen for publication are judged to be of interest to a broad systematics audience because they represent exemplary case studies involving some important contemporary issue or issues. These may be unusually thorough explorations of data, applications of new methodology, illustrations of fundamental principles, and/or investigations of interesting evolutionary questions. Our 2002 ISI citation index is 7.112.

Chris Simon Professor; Editor of Systematic Biology
Department of Ecology & Evolutionary Biology 75
North Eagleville Road University of Connecticut Storrs,
CT 06269-3043

chris.simon@uconn.edu Office (860) 486-4640 Lab (860)
486-3947 Fax (860) 486-6364

Longnose dace samples

Hi.

Our lab is working on a wide scale phylogeographic study of the longnose dace (*Rhinichthys cataractae*), a common cyprinid of North American rivers. We are doing DNA-analyses of this species and do already have samples from several St.Laurence rivers (Quebec, Canada).

In order to trace the origin of the North American populations we hope to get samples from distant localities. Is there someone who have well conserved specimen of this species (or closely related species) and is ready to send specimens or tissue samples to us to complement our analysis? 95% ethanol is excellent for storing and shipping the material. However, we will also accept samples that have been fixed in formalin.

Please contact me on the address given below.

Many thanks and best wishes,

Philippe Girard M. Sc. Département des Sciences Biologiques Université de Montréal Courriel: philippe.girard@umontreal.ca Tél. (514) 343-6111 poste 1051

MHC DRB primers

Hallo,

does anybody know something about primers that amplify a wider range or the whole DRB gene?

nschwensow@zimserver.zoologie.uni-hamburg.de

Macaque DNA

Dear Evoldir members,

I am working on the evolution of genes implied in SIV infection in Macaques, and I am looking for samples (blood or tissues in ethanol) or DNA from different species of this genus, especially *Macaca nemestrina*, *M. fuscata* and *M. cyclopsis*, *M. assamensis*, *M. arctoides* and *M. radiata*. If you had one or several of these species, or if you know of a way to find DNA from these macaques, please contact me!

Thanks a lot,

Alice Michel-Salzat

Equipe Transmission et Dissémination Virales
Département d'Immunologie Unité INSERM 567,
UMR CNRS 8104, IFR 116 27, rue du Faubourg Saint
Jacques 75014 Paris, FRANCE tel. 01 40 51 65 22 fax
01 40 51 65 35

alice.michel-salzat@cochin.inserm.fr
www.cochin.inserm.fr

<http://->

Marsupial tissue

Dear all,

Im going to work on population genetics of marsupials in Brazil. Does anyone could provide some samples of tissue or DNA of southern American marsupials for primer testing? The best would be *Didelphis* or *Monodelphis*.

Thanks a lot, Yvonne Meyer-Lucht

ymeyerlucht@web.de

Univ. Hamburg Zoological Institute & Museum Dept.
Ecology & Conservation Germany

Monogenean micros

I'm about to help someone with cloning microsatellites from the Monogenean parasite *Gyrodactylus salaris*. Does anyone have any unpublished or unsuccessful experience with microsatellite development in Monogenea? Thanks, John Dallas

Dr John F. Dallas NERC-University of Aberdeen
Molecular Genetics in Ecology Initiative School of Biological Sciences Zoology Building Tillydrone Avenue
Aberdeen AB24 2TZ UK

Voice: 01224 272 273 Fax: 01224 272 396
j.dallas@abdn.ac.uk <http://www.abdn.ac.uk/~nhi571/>

Outcrossing from AFLPs answers

The standard program for estimating outcrossing rates is Kermit Ritland's MLTR (which I have used quite extensively), however this only accomodates codominant data. Kermit has another program, MLDT, which is intended for dominant data (which I have not used). Both programs are apparently pretty identical, except for the data type. They can be downloaded from: <http://genetics.forestry.ubc.ca/ritland/programs.html>
In terms of number of maternal plants, and number of seeds per plant: I have generally found that 20-30 maternal families, with 5-10 seeds per family will give resonable estimates. Usually, increasing the number of maternal families improves the outcrossing rate estimate more than adding more seeds per maternal family. However, these numbers are for codominant (allozyme) data. dominant data may give less information per locus, so you may need to use more maternal plants and/or seeds.

Feel free to write back if you have any questions about using MLTR/MLDT

Hope this helps, Chris

Chris Herlihy Department of Biology Queen's University Kingston, ON, Canada K7L3N6 (613) 533-6000 x75125 herlihy@biology.queensu.ca <http://biology.queensu.ca/~herlihy> -----

The software I made, called FaMoz, is able to make a paternity analysis with dominant markers, like AFLP, I send you in another mail the two corresponding papers. The software is freely available on internet at the following address: <http://www.pierroton.inra.fr/genetics/labo/Software/Famoz/index.html> I would ad-

vise that for a proper evaluation of individual outcrossing, at least 30 offspring per mother should be used.

I hope this helps ! Best regards

Sophie

Sophie Gerber gerber@pierroton.inra.fr INRA - UMR BIOGECO 69 route d'Arcachon tel 33 5 57 12 28 30 (FRANCE) 33612 Cestas cedex fax 33 5 57 12 23 81 http://www.pierroton.inra.fr/genetics/Perso/Sophie/page_sophie_english.html -----

We have used microsatellites, which are generally considered codominant, for estimating outcrossing rates and found that null alleles (just like a recessive allele in the analysis) really mess up the estimates of outcrossing rates (manuscript attached to this message). The Holsinger program does estimate outcrossing rates with dominant data, but the error margins are HUGE with dominant data! I strongly discourage you from dominant markers for estimating outcrossing rates. Isozymes give you much better estimates (as long as you can take enough tissue from your plants without causing damage).

Bye

Claus -----

This paper is not exactly what you want, but should give you some good ideas.

Cheers, a.

```
@Article{milligan:1993b, author = "Milligan, Brook G. and McMurry, C. Kay", title = "Dominant vs.~codominant genetic markers in the estimation of male mating success", OPTcrossref = "", OPTkey = "", journal = mol_ecol, year = "1993", volume = "2", OPTnumber = "", pages = "275-283", OPTmonth = "", OPTnote = "", OPTannote = "", keywords = "paternity analysis, maximum likelihood, EM algorithm" }
```

– Allan Strand, Biology <http://linum.cofc.edu> College of Charleston Ph. (843) 953-9189 Charleston, SC 29424 Fax (843) 953-9199

I'm not sure whether Kermit Ritland's programs allow for dominant markers, but for an unsuccessful grant proposal a few years ago, I did a few simulations suggesting that with a relatively small number of polymorphic loci (say 30) you can distinguish selfed progeny from outcross progeny by scoring as outcrossed any offspring that do *not* match the maternal genotype at recessive loci.

I'm attaching the Word document that describes the

simulations. You can ignore the likelihood/Bayesian stuff that follows, unless you're interested.

Kent

– Kent E. Holsinger kent@darwin.eeb.uconn.edu <http://darwin.eeb.uconn.edu> – Department of Ecology & Evolutionary Biology – University of Connecticut, U-3043 – Storrs, CT 06269-3043 -----

It is not really software but a simplified version of how to calculate selfing rates (=1- outcrossing rates) with dominant data.

Have a look and maybe its usefull for your problem. Vrieling, K., P. Saumitou-Laprade, E. Meelis and J. T. Eppelen. 1997. Multilocus DNA

fingerprints in the plant *Cynoglossum officinale* L. and their use in the estimation 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>

Polyploid diversity

Dear All,

I am trying to find published studies that quote statistics such as "Heterozygosity", "Genetic Diversity" "Population Differentiation" etc. for allopolyploids, disomically inheriting autopolyploids, and polysomically inheriting polyploids greater than 6x.

My primary aim is to establish the methods they've used for calculating these statistics, particularly with isozymes, but other markers are also of interest.

If you have involved with (or are aware of) such studies, please could you send references to darren.obbard@plants.ox.ac.uk.

Best Wishes,

Darren – Darren Obbard PhD Student darren.obbard@plants.ox.ac.uk

Darren Obbard <darren.obbard@plant-sciences.oxford.ac.uk>

PopGenet textbooks

Hi

I am teaching a fourth-year Population Genetics course and would be interested to know if anyone has any thoughts or recommendations as to 'new' texts that are worth considering.

Thanks a lot.

Ruth

R.C. Waldick, Post-Doctoral Fellow Large Animal Research Group Department of Zoology, Downing Street University of Cambridge Cambridge, CB2 3EJ, United Kingdom Tel: 01223 336643 & 01223 336677 FAX: 01223 336676 rcw36@hermes.cam.ac.uk

PopGenet textbooks answers

Hi to Evol respondents of my Pop Gen Textbook question:

I want to thank everyone who sent me comments and ideas for my 4th year Pop Gen class. I really appreciate it. I hope to follow-up with several people independently in the next week, but for general information, I am submitting (below) a synopsis of the replies I received (MANY of which were requests for a summary of the replies).

Best wishes and Thanks,

Ruth

Summary: replies regarding the choice of a fourth year Population Genetics Textbook

(Nov. 2003-EvolDir)

The two most recommended texts are: 'Genetics of Populations'- P. Hedrick -the second edition-and: Hartl and Clark. Hedrick's text is viewed as being up-to-date and was repeatedly credited as providing very good coverage of ecologically relevant models (which quite a number of respondents felt was important). In general, each text appears to have its strengths and limitations, so many respondents recommended a combination of

texts for achieving a better coverage of mathematical, ecological, and molecular topics. A number of replies indicated that they do not hold to a single text, but use a variety of source materials. I have included extracts from the email replies I received (below):

(I) Comments on top two texts:

(i) Genetics of Populations P. Hedrick

"Genetics of Populations, 2nd edition by Phillip W. Hedrick is our preferred text. I find it easier to follow than Hartl and Clark and the book is fairly up to date." "I use and really like Hedrick." "I really like Hedrick's 'Genetics of Populations' for a somewhat more advanced coverage." "... but it is not up to date on molecular data." "...together with standard textbooks like Hartl & Clark, I use Hedrick's "Genetics of populations" (2nd edition from 2000). I do not know whether it is new enough for your purpose." "I use Hedrick's text, but have also taught courses that are more focused on evolutionary/ecological genetics using the various Falconer editions. They lucidly cover standard population genetics but of course do not address molecular evolution. Depending on the interest of the class, forays into quantitative genetics are best done with either Falconer (and now MacKay), or Lynch and Walsh. ..Hedrick is also a great text, and covers ecologically relevant models." "I have been teaching a 4th year (really a mixed 4th year/graduate population genetics class at Cleveland State, Ohio). I found Hedrick's "Population Genetics" workable to this audience, but the 2nd printing ...contained a number of ...errors in formulas."

(ii) Principles of Population Genetics Hartl & Clark

I received a number of replies that simply indicated that Hartl & Clark is the text used.

"My guess is that you will find the response is that Hartl and Clark is the most used. It is thorough and well-written, though the different editions vary in their logic of presentation. My understanding is that the most recent version (ed. 4) is an improvement over the 3rd edition. (I liked the second ed. better than the third.) The primers also are reasonable, and may be better for a short course." "For texts that are more introductory, I like the relatively new 'Introduction to Conservation Genetics' (Frankham, Ballou, and Briscoe) and the good old Hartl 'Primer of Population Genetics'." "... there are also various versions.. which are not that well received by students." "...not really satisfied... Not up to date on molecular data." "... together with standard textbooks like Hartl & Clark, I use Hedrick's "Genetics of populations" (2nd edition from 2000)."

(iii) Also worth noting, is Richard Haliburton's new

book:

“I will try the new text from Prentice Hall ”Introduction to Population Genetics“ (ISBN 0-13-016380-5) by Richard Halliburton when I do the course next (replacing Hartl & Clark). I think ..(it) puts a more ecological accent to the text...” “I am trying a new book for a new class here that is an undergraduate-level population genetics course. I haven’t used the book yet but I like what I have seen so far. It is by Richard Halliburton, 2003. Introduction to Population Genetics. Pearson, Prentice Hall. www.prenhall.com.” (II) Other comments:

(i) General comments on books by various authors:

John Gillespie- less mathematical but good (now being revised). Durrett, Rick- Probabilistic Models for DNA Sequence Evolution. Tavaré, Simon- Ancestral Inference in Population Genetics (freely available online).Ewans, Warren- The second edition of the 1979 book “Mathematical Population Genetics” will be coming out in a few months. Frankham, Briscoe and Ballou: “conservation genetics” “useful as the first part is population genetics and later there are applications to conservation biology. In our case the students can use the same book for both courses.” Joe Felsenstein- “Theoretical Evolutionary Genetics” available as a free PDF: website-

— / —

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>

PopGenetics software

Can people recommend population genetics software to use in teaching population genetics? In particular, knowing about programs that include options for single and two-locus selection, genetic drift, gene flow, mutation, and inbreeding, or some of these categories, would be useful. If you have used it in class and found it successful, I would like to know that as well.

Thanks very much, Phil Hedrick
(philip.hedrick@asu.edu)

PopGenetics textbook

I am in the process of revising my book, Genetics of Populations, for the third edition. I would appreciate any comments that would be helpful in deciding what to include or not include in this new edition. In particular, I would appreciate comments from people who have used the second edition in class. Thanks in advance,

Phil Hedrick (philip.hedrick@asu.edu)

Requesting used lab equip

Dear Colleagues,

I am in the process of setting up a lab at a small college in NW Florida. At this time my budget is very limited. My goal is to equip this lab to carry out research focused on phylogenetics and population genetics of various organisms. I am looking for sources to obtain some slightly outdated equipment such as a PCR machine, water bath, incubator, centrifuges and other equipment used for DNA isolation and analysis. I am also looking for some decent binocular microscopes, dissecting scopes, and other lab equipment. If anyone has such equipment, or knows of someone who does, this information would be greatly appreciated.

Thanks in advance and best regards, David X Williams, Ph.D.

“Williams, David” <williamsd@owcc.net>

Restriction problems answers

Dear all,

We posted an inquiry concerning AFLP restriction and/or ligation problems with ECO R I and PST I (see end of message).

In the meantime, we managed to get the Eco restriction working for at least 1 species. Pre amplification yielded

the expected smear, be it vaguer than for Mse, but this is expected (Eco 6bp-cutter, Mse 4bp). A combination of Eco and Mse worked as shown by pre-amplification: the combination yielded a fragment's smear of different length as compared to Eco alone or Mse alone.

Pst I is still not working at all.

Below a compilation of the replies we got, which we thought may be of use to all of you.

Thanks to all who took the time to reply, Peter Kupe-
rus and Marc Stift. stift@science.uva.nl

In response to your problem with EcoRI digestion and ALFP ligations, I too had the same problem. I never tried using PSTI, though. Initially, I would recommend that you perform a single enzyme digest with EcoRI to assess whether the enzyme is cutting your genomic DNA at all. I found that different methods for extracting genomic DNA had an effect on digestion, just as I found that different species of plant worked better as well. In fact, I couldn't get DNA using the Qiagen Plant DNA extraction kit to digest with EcoRI.

The solution that I came up with was to add spermadine to the digestion mix to a final concentration of 1.5 mM. This solved all of my problems, and allowed for complete digestion with both enzymes, and clean ligation of the adaptors, and all other downstream steps in the protocol.

This procedure worked for me, but a friend of mine in another lab who worked with birds was unable to fix the same problem by simply adding spermadine. So I can't say for sure that it will work for you.

But I think that you need to know whether or not EcoRI is cutting at all, and if it isn't then you should try the spermadine.

Good luck, and feel free to contact me directly with any additional questions.

Matt Streisfeld

Regarding your AFLP problems with the EcoRI/PstI enzyme combination: I note that you are using two enzymes with 6-bp recognition sequences. Such sites only occur an average of every ~4.1 kb, and it seems likely that very few PCR products would be within the size range that would amplify consistently and/or be resolved on typical denaturing gels. I guess the other obvious question is whether you're using the usual MseI (or 4-cutter) adapter, with restriction site changed, for one of the two sites. If you use the 6-cutter adapter sequence for both sites, the templates will likely tend

to form hairpins and amplify inefficiently. Of course, if the same thing worked for you before when done in exactly the same way, none of the above would explain it.

Good luck getting this figured out.

Dave Remington

We are experiencing the same thing. Well, somewhat. I have yet to fully grok the mysteries of AFLP's yet...

The first issue we had was that we were using an extraction kit that had EDTA in the storage buffer. This bound with the 4-hitter (if I remember correctly) and we consistently got funky results. Have you tried a single digestion for both enzymes to see if they are both cutting? This way you can be sure both are cutting. You can also throw in a standard lambda DNA and get a control on the problem. We got around this by storing the DNA in another buffer.

Currently, we are not experiencing the issue that all we get are bands in the 0-150bp range and nothing above that until 1-2kb. I have yet to figure out why. These results are consistent across many taxa and I have yet to figure out why.

If you could, please post any other responses back onto the web or pass them my way. I would also appreciate any information you get from this inquiry.

Rodney J. Dyer, PhD

I have been doing AFLPs with Eco and Mse enzymes. It took me a while to get it going as I hadn't noticed one of the primers was cited as 5'-3' and the other from 3'-5'. Consequently I had ordered one primer as the reverse of what it should have been, and it obviously did not work. It is certainly worth checking this, as it is an easy mistake to make, and you will still get smears on agarose gels due to fragments digested twice with a single enzyme.

Regards

Dr Martin Taylor

Brief translation of Dutch reply: [Eco often does not restrict properly in plants. Cause is unclear. Two options are methylation or inhibiting factors. Inhibition can be revealed by adding small amount of extracted DNA to lambda DNA and performing the restriction (may not exclude methylation entirely)].

Adapted DNA extraction may solve an inhibition problem. Apart from ordering an expensive isoschizomere, there is no solution to methylation.

Finally, for plants, DNA extractions may vary in applicability, presumably

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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>

For details see this web page: <ftp://evolution.gs.washington.edu/pub/popgen/popg.html> (note that this is an ftp: rather than an **http**: link).

— Joe Felsenstein joe@removethispart.gs.washington.edu
Departments of Genome Sciences and Biology, University of Washington, Box 357730, Seattle, WA 98195-7730 USA

Salamandra samples

Dear Members,

A question to be hold, We are investigating the population genetics of salamandra salamdra. We collect samples for microsattelite analysis from the tails tip. As far as we found, samples are kept in 95%EtoH. Does anyone have a recommendation on what temperature and weather different conditions are needed for long term preservation (0.5 years and on)? Much Obliged,

Nir Peleg, PhD program Institute of Evolution, Faculty of Science & Science Education, ,University of Haifa 31905, Israel E-mail: nirpo@hotmail.com

Software PopG 3

PopG version 3.0 has been released. PopG (formerly called Simul8) simulates evolution of a single locus in the presence of natural selection, mutation, migration, and genetic drift. The program is free (in the sense of “free beer”) with executables and its source code and compilation support files available. No special permissions or licenses are needed to run multiple copies of the program in a class.

Executables are available for Windows, MACOS 9, MACOS X, and Intel-compatible Linux. Although most users will not want or need to recompile it, compilation support machinery is available with the source code for Microsoft Visual C++ versions 6 and .NET, Metrowerks Codewarrior version 8, and Gnu C++.

The new version (3.0) differs from the previous one (2.0, released in 2001) largely in support for different compilers and availability of a native-mode graphics version for MacOS X.

Sonicator experience

Dear evoldir members,

I’m working with a new protocol for developing anonymous nuclear loci for phylogeographic/phylogenetic analyses. The protocol involves the shearing, through sonication, of genomic DNA into fragments around 1-2 kb in length. I’ve never used a sonicator, and have several questions for the group.

I found a protocol for generating DNA fragments by sonication; it involves sonicating a ~0.3 microgram/microliter solution of buffered DNA in 35 microliter aliquots. In some of the literature I’ve found regarding sonicator specs, however, it seems like this is an unrealistically low volume. How do other people do this? Can sonicators work in such low volumes?

I’ve received price quotes of around \$2500-\$7000 for sonicators (depending on the model). Is this typical? What models are people using, and what prices are you paying for them?

Thanks! Amy

– Amy L. Russell, Ph.D. Gaylord Donnelley Postdoctoral Fellow Department of Ecology and Evolutionary Biology P.O. Box 208105 Yale University New Haven, CT 06520-8105

TEL (203) 432-6770 FAX (203) 432-5176
amy.russell@yale.edu

Statistical Power answers

Hello,

I have sent a question to evoldir and some researches have answered me, thank you very much. Below are the question and some answers:

Good afternoon,

My name is Claudia, I am PhD student in Genetics from Brazil. We are trying to submit a work using Exact test differetiation. The referees are asking the power test to it, but we do not find anything about it.

Do you know a software or someone that can help us?

Thank you very much, Cláudia

Jerome Goudet <Jerome.Goudet@ie-zea.unil.ch> wrote:

Hi Claudia,

I don't know of a software to do this. One way to go would be to simulate data under your hypothesis (i.e., population spacing, migration and mutation rate etc...) using e.g. easypop (<http://www2.unil.ch/izea/-softwares/easypop.html>) and to estimate the power given your sample size by running many replicates.

As for a reference for which test of differentiation is more powerful, see our paper in genetics (1996) that you can download from

<http://www.unil.ch/popgen/research/reprints>

Best wishes. Jerome Bob O'Hara

For $k=2$ and $r=2$ we can use the odds ratio as a statistic and give it confidence limits. For either one higher it's more difficult, but I think the way to get a statistic is to look at it as a contingency table. If there is no association, then a chi-squared test would not be significant (this is an approximation to the Raymond and Rousset test), and you can use the chi-squared value as a statistic.

I would suggest something slightly different. The chi-squared is an approximation to a log-linear model. So, what you could do is fit a log-linear model with Haplotypes and Populations as factors, and then you will get a residual term (actually the Haplotypes x Population interaction), which under the null hypothesis will have a chi-squared distribution. Even if the null hypothesis is false, it will have an approximately non-central chi-squared distribution, so you can get confidence limits for that.

In practice, what you do is fit a log-linear model with Haplotypes and Populations as factors, and get the residual deviance (call it D), and it's degrees of freedom (which should be $(k-1)(r-1)$, call it df). Then, your point estimate is D , and the 95% confidence limits are $C_l * D/df$ and $C_u * D/df$, where C_l and C_u are the 2.5% and 97.5% points of a chi-squared distribution with df degrees of freedom. You'll have to find both,

because the distribution is not symmetrical.

To interpret these, note that under the null hypothesis the expected value of D/df is 1, so the further you are away from 1, the stronger the association. I don't have any great feel for how far away is from 1 you have to be to have an important effect, but you could do simulations and look at this statistic.

Things are getting complicated, aren't they? It's what happens when biologists try to do statistics. :-)

Bob

Olá Claudia, > >há um programa que se chama "Power and Precision" em que podes fazer a >Power analysis para a maioria dos testes, já confirmei e permite fazer >para o teste exacto. Este programa podes consegui-lo sem pagar para uma >utilizaação durante 30 dias. tentei enviar-te o programa em attachment, mas >é demasiado grande. podes fazer download da internet, se no google >procurares "Power and Precision". > >espero que ajude, >crisina santos >

Claudia, I don't know the exact test to which you refer, but a full proof, if time consuming way to generate the power for any test is to generate random data with the effect size and variation that you wish to determine the tests power to detect, and see if the test detects it. If you repeat this say 1000 times, then the percentage of times that you detect a difference is the power of the test. as a simple example, imagine you wanted to determine the power of a t test to detect a difference of 5 mm, between two groups of 10 fish. Imagine also that you have an estimate of the standard deviation of fish size. You can then get a computer program to generate two groups of random fish by drawing numbers at random from normal distributions, with the appropriate sd, but means that differ by 5 mm. You then do a t test to see if you can detect the difference. Repeat lots of times for an estimate of power. Obviously it would be better to get a computer program to automate the whole process. Excel is pretty good for simpler kinds of things. You will obviously need to come up with a simulation that models the assumptions of the test that you are interested in. However, depending on what the editor has asked you to do, you might find the attached paper useful in avoiding it. It basically points out that post hoc power analysis is a waste of time. Nick

Hello Claudia!

— / —

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>

Stratcon program

Hi guys,

Does anybody have a copy of the computer program STRATCON, by John Huelsenbeck, Paleobiology 20(4):470-483, 1994? I need a copy for a ms I'm working on.

Happy Halloween

– Marcos Perez-Losada, PhD Department of Integrative Biology Brigham Young University WIDB 401 Provo, UT 84602-5181 USA

Lab: (801) 422-5594 Office: (801) 422-9378 Fax: (801) 422-0090 E-mail: mp323@email.byu.edu

Marcos Perez-Losada <mp323@email.byu.edu>

Sus scrofa divergence

Dear All,

does anyone know any recent estimates of the rate of evolution of mitochondrial cyt b and dloop of suidae(particularly of sus scrofa)? Just another question: does anyone know any paleontological records about the divergence among suidae with particular reference to sus scrofa?

Thanks a lot!

Stefano Mona Department of Zoology University of Bari stifano1@yahoo.it

Tetraploid micro scoring

Dear All It would be so great and appreciable if one have any time to send me a sample file which in that microsatellites have been scored in a Hexaploid or Tetraploid species for ARLEQUIN , GENEPOP or etc.

This kind scoring mixed up me!

Thanks for your regards!

Vahid Erfani Moghaddam , Plant Biotechnology Department, Agriculture Faculty, PO.Box 84154 Isfahan University of Technology (IUT), Isfahan , Iran Email : v_erfani@yahoo.com Tel : (+98) 0311-3913362

Vahid Erfani Moghaddam <v_erfani@yahoo.com>

Tree distance

Dear evolutionist.

Is there any software that can calculate the distance between two phylogenetic trees based on both tree topology and genetic distance? Any information is highly appreciated!

Sincerely

Tuo Shi

Institute of Marine and Coastal Sciences Rutgers University 71 Dudley Road, New Brunswick, NJ 08901 Phone: (732)-932-6555 ext. 332 Fax: (732)-932-4083 Email: tuoshi@imcs.rutgers.edu <http://www.marine.rutgers.edu/ebme/index.html>

mtDNA rate

Dear All,

Could someone please inform me the most recent (reliable) estimates on the rate of evolution of anuran mitochondrial sequences (preferably the rate for cyt b gene in Rana frogs)? Please provide reference details if possible. I shall be very grateful for your help.

Sincerely, De-Xing Zhang

De-Xing Zhang, PhD Research Professor PO Box 70 Institute of Zoology Chinese Academy of Sciences 25 Beisihuan-Xi Road Beijing 100080 P. R. China

Tel: (+86) 10 6261 2962 Fax: (+86) 10 6261 2962 E-mail: dxzhang@panda.ioz.ac.cn http://www.ioz.ac.cn/departement/agripest/group/zhangdx/ZhangDX_E.htm http://www.ioz.ac.cn/departement/agripest/group/zhangdx/ZhangDX_E.htm

PostDocs

ArizonaStateU Bioinformatics	52	RockefellerU GeneRegulationEvol	59
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Jena EvolGenomics	57	UTromso MicrobialPopGenet	63
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ArizonaStateU Bioinformatics

Postdoctoral Position Bioinformatics and Computational Evolutionary Biology Arizona State University

A postdoctoral position is available in the areas of bioinformatics and computational evolutionary biology. There is considerable freedom in the choice of research topics, although spatial and comparative genomics and phylogenetics are areas of particular interest. Extensive collaborative opportunities exist between this position and the Arizona Biodesign Institute's Center for Evolutionary Functional Genomics (<http://www.azbio.org>) and the Translational Genomics Research Institute (<http://www.tgen.org>).

Doctoral degree in Biology or related area prior to appointment and not currently in a permanent faculty position is required. Background in evolutionary biology or theory; experience with computer programming, statistics or data analysis desired.

The position is for one year, renewable, with the earliest start date of January 1, 2004. Applications (including a CV, research statement, and names/contact info for three references) and questions must be submitted to msr@asu.edu (email preferred) or

Michael Rosenberg School of Life Sciences PO Box 874501 Arizona State University Tempe, AZ 85287-4501

Phone 480-965-1578 <http://lswb.la.asu.edu/rosenberg>
Applications will be reviewed beginning December 1, 2003; if not filled, weekly thereafter until the search is closed. AA/EOE

Arizona State University is an Equal Opportunity/Affirmative Action Employer.

Michael S. Rosenberg, Ph.D. Assistant Professor School of Life Sciences / Arizona State University msr@asu.edu <http://lswb.la.asu.edu/rosenberg>

Austria MaleBiasedGeneExpr

Postdoctoral position available

Evolution of male biased gene expression in *Drosophila*

This position is available for two years in the laboratory of Christian Schlotterer. Applicants should have a background in bioinformatics, molecular evolution and/or population genetics. Candidates trained in the analysis of expression data are particularly encouraged to apply.

Current members of the laboratory come from Austria, China, France, Germany, Italy and Scotland. The laboratory operates bilingually, allowing non-German speaking researchers to integrate easily.

Vienna provides a stimulating scientific environment with a number of research groups focusing on population genetics and evolutionary biology: Reinhard Burger, Ulf Dieckmann, Dustin Penn, Karl Sigmund, Peter Schuster and Claus Vogl. Apart from good science, Vienna also offers an active cultural life (2 operas, 2 world class concert houses, numerous museums and the famous coffee houses), excellent public transport, excellent schools, numerous museums, and attractive outdoor recreation opportunities (alps are close by and you can sail within the city area!). <http://www.virtourist.com/cgi-bin/search.pl?Range=All&Format=Standard&Terms=vienna&Submit=Post>

Further questions and applications should be directed to Christian Schlotterer (Christian.schloetterer@vu-wien.ac.at). The position is available immediately; however, the starting date is flexible.

— Christian Schlötterer Institut für Tierzucht und Genetik Veterinärmedizinische Universität Wien Josef Baumann Gasse 1 1210 Wien Austria/Europe

phone: +43-1-25077-5603 fax: +43-1-25077-5693
<http://i122server.vu-wien.ac.at/>

BrownU MicrobialEvol

POSTDOCTORAL POSITION IN MICROBIAL

EVOLUTION, BROWN UNIVERSITY

Studies suggest that marine viruses are important in regulating microbial abundance and diversity and thus may influence nutrient cycling in marine systems. Despite their ecological importance, however, little is known about how these viruses interact with their hosts. We are initiating a project to examine the co-evolution of the cyanobacterium *Synechococcus* and its phage in both experimental microcosms and natural populations. We are looking for a postdoctoral researcher to participate in all aspects of the project such as overseeing the chemostat experiments and isolating natural populations of *Synechococcus* and phage. A qualified candidate will have a background in at least two of the following areas: ecology, evolutionary biology, viral genetics, microbiology, and/or experimental microcosms. The person will be based at Brown University in the Hughes lab (www.brown.edu/Departments/EEB/hughes/index.htm), but also interact with Dr. Marcie Marston at Roger Williams University (<http://www.rwu.edu/> www.rwu.edu). The appointment is for one year, with the possibility of another year extension if adequate progress is made.

For more information, please contact me at Jennifer_Hughes@brown.edu.

Jennifer Hughes Dept of Ecology and Evolutionary Biology Brown University Providence, RI

Jennifer B Hughes <Jennifer_B_Hughes@brown.edu>

ColoradoStateU MathEvol

Colorado State University Department of Mathematics Department of Statistics Program for Interdisciplinary Mathematics, Ecology, and Statistics Advertisement for Postdoctoral Positions

The Program for Interdisciplinary Mathematics, Ecology, and Statistics (PRIMES) is seeking to hire two postdocs to begin in the 2004 academic year. These postdocs will be fully integrated into the research and educational activities of PRIMES, which is a new graduate program in quantitative ecology supported by an Integrative Graduate Education and Research Training (IGERT) grant from the National Science Foundation. PRIMES enhances and integrates existing degree programs at Colorado State University with the goal of providing graduate students with the skills to tackle modern ecological problems using mathematical and

statistical techniques. PRIMES involves leading Colorado State faculty and researchers from across campus, as well as scientists from several government agencies. PRIMES research activities are organized into five research focus groups: Ecology of Managed Ecosystems; Ecology of Global Change; Dynamics of Introduced Disease; Aquatic Resources Modeling; and Evolution in Structured Populations. More details about PRIMES are available at www.primes.colostate.edu. Post-Doctoral position in population/quantitative genetics This position will be associated with the Department of Mathematics and the United States Department of Agriculture ARS National Center for Genetic Resources Preservation on a project to develop optimization algorithms for use in selecting and maintaining plant genetic diversity for the purpose of genebanking. A key goal is to develop computational methods for analyzing genetic marker data. Current areas of emphasis include (1) Population genetic-based statistical methods for inference of population structure and evolutionary history from genetic data and (2) Modeling of genetic erosion in ex-situ collections.

The successful applicant should have either a background in population genetics and conservation with at least some experience in computational methods or should come from a quantitative field and have a strong interest in biology. A Ph.D. in a related field is required. Good computer programming skills are essential.

Post-Doctoral position in the Department of Statistics This position will be associated with the Department of Statistics and will have research and educational responsibilities both to the Department of Statistics and PRIMES. The successful candidate should have experience or interest in the area of quantitative ecology. Research interest in spatial statistics, Bayesian statistics, time series, or sampling is preferred. A Ph.D. in statistics or a related field is required

PRIMES funding requires postdoctoral applicants be U.S. citizens or permanent residents. The initial appointment for these positions will be for one year with an option of a second year, if found mutually agreeable.

Applications and guidelines may be obtained at: www.primes.colostate.edu/post-doc.info. Applications should include a CV, statement of research interests, and copies of relevant publications. In addition, candidates should request 2-3 letters of recommendation to be sent separately to: Don Estep, Co-Director, PRIMES, Department of Mathematics, Colorado State University, Fort Collins, CO 80523-1874. For full consideration, applications should be received no later than January 12, 2004. However, applications will continue to be accepted until the positions are filled.

Colorado State University is an equal opportunity/affirmative action employer and complies with all federal and Colorado laws, regulations and executive orders regarding affirmative action requirements in all programs. The Office of Equal Opportunity is located in 101 Student Services. In order to assist Colorado State University in meeting its affirmative action responsibilities, ethnic minorities, women and other protected class members are encouraged to apply and to so identify themselves.

- Michael F. Antolin

Associate Professor of Biology 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

DukeU Baboon populations

An NSF-funded postdoctoral position is available in the lab of Susan Alberts at Duke University. The position is for one year but is extendable to two years. Work will focus on genetic analysis of the Amboseli baboon population, using DNA extracted from dung. Our recent genetic work has focused heavily on analyses of kin recognition and male reproductive skew; we are extending this to include population genetic analyses, including the effects of known dispersal patterns on population structure. Good molecular genetic skills and a background in evolutionary biology, behavioral ecology, or population genetics are required. The position is laboratory rather than field-based, but a trip to the field site is possible. Start date is flexible but we would like someone to begin as soon as possible. For information about the research in the lab, visit <http://www.biology.duke.edu/albertslab/>, and for information about the Amboseli Baboon Research Project visit <http://www.princeton.edu/~baboon/>. Interested applicants please send CV, letter of interest, and contact information for three reference letters to Susan Alberts, alberts@duke.edu. Wait to send letters of recommendation until requested.

- Susan Alberts, Assistant Professor Department of Biology, Duke University, Box 90338, Durham NC 27708 phone 919-660-7272 fax 919-660-7293

Susan Alberts <alberts@duke.edu>

ETHZurich ReactionNetworks

We are looking for a postdoc to study the impact of evolutionary processes on the design of metabolic and signal transduction networks based on mathematical models and computer simulations. Suitable applicants should have either a strong background in biology/biochemistry/biophysics with some experience in computational and mathematical modeling, or should come from a quantitative field such as physics, mathematics, or statistics and have a strong interest in biology. Good computer programming skills are essential.

The successful candidate may choose among several research topics, but will be strongly encouraged to develop her/his own research project within the context of the evolution of biochemical reaction networks.

The position is available immediately and the starting date is flexible. Funding is available for two years. The salary scale starts at around CHF 81000 (1 CHF is about 0.76 US \$) and depends on years of previous postdoctoral experience. The working language of our group is English. More information about our group can be found on our web page www.eco.ethz.ch. Review of applications will begin immediately and will continue until a suitable candidate is found. Applicants should send a brief letter describing their prior research experience and current interests, a curriculum vitae, and should arrange to have 2-3 letters of reference sent (preferentially by e-mail) to:

Sebastian Bonhoeffer, SNF Professor of Theoretical Biology ETH Zurich, ETH Zentrum NW, CH-8092 Zurich, Switzerland

Fax: +41 1 6321271 Tel: +41 1 6336033 Email: bonhoeffer@eco.unmw.ethz.ch

“Bonhoeffer, Sebastian”
<sebastian.bonhoeffer@env.ethz.ch>

ETHZurich ViralDynamics

We are currently looking for a postdoc interested to join our theoretical biology group at the ETH in Zurich. We have a growing group of people working on the de-

velopment of mathematical models of viral infections. Our main interests are the population dynamics of HIV within an infected individual and the evolution of drug resistance in response to therapy. We are looking for a highly motivated candidate with a creative, independent mind and with research experience related to some of the following areas: theoretical biology / evolution / virology / immunology / microbiology. Good mathematical and computer programming skills are essential. The successful candidate may choose among several research topics, but will be strongly encouraged to develop her/his own research project within the realm of the group's research interests.

The salary scale starts at around CHF 81000 (1 CHF is about 0.76 US \$) and depends on years of previous postdoctoral experience. The earliest starting date would be in February, 2003. The position is initially available for a year with a likely extension for a second year. The daily working language of our group is English. More information about our group can be found on our webpage www.eco.ethz.ch. Review of the applications will begin immediately and will continue until a suitable candidate has been identified. Applicants should submit a detailed CV including a statement about research experience and interests, and should arrange to have 2-3 letters of references sent (preferentially by e-mail) to:

Sebastian Bonhoeffer, SNF Professor of Theoretical Biology ETH Zurich, ETH Zentrum NW, CH-8092 Zurich, Switzerland

Fax: +41 1 6321271 Tel: +41 1 6336033 Email: bonhoeffer@eco.unmw.ethz.ch

“Bonhoeffer, Sebastian”
<sebastian.bonhoeffer@env.ethz.ch>

INRA France

Dear colleague,

We are looking for a postdoctoral fellow to set up an application to finance a post doctoral project dealing with TCP domain proteins. I would greatly appreciate if you could diffuse to whom would be concerned the information about the post doctoral project we propose in our team.

Yours sincerely,

—
Catherine DAMERVAL UMR G?n?tique V?g?tale

INRA/INA PG/UPS/CNRS La Ferme du Moulon 91
190 Gif-sur-Yvette FRANCE Tel : 33 (0)1 69 33 23 66
Fax : 33 (0)1 69 33 23 40

Catherine Damerval <damerval@moulon.inra.fr>

INRA France Arabidopsis

PROJECT FOR POSTDOCTORAL FELLOW APPLICATION

Project title : Functional analysis of the « P » transcription factors from the TCP domain family in Arabidopsis.

Candidates are invited for a Postdoctoral Fellowship Application in Toulouse at the LIPM, Laboratoire des interactions plantes microorganismes, UMR 2594 CNRS/INRA Chemin de borde rouge 31326 castanet tolosan Cedex

The aim of the project is to bring new insights into how the TCP proteins affect plant development. The project will involve immunological approaches to study the localisation of TCP proteins in planta and to characterize protein/DNA complexes, using Arabidopsis as a model system. The project is co-ordinate with a PhD research based around different approaches involving modifications of protein activity in planta and mRNA expression studies. A key element of this work is the utilisation of specific antibodies against designed peptides, and the project would be particularly suitable for an applicant with previous experiences of protein and antibody manipulations. Further details of the group project, and a summary of our research programme, are available at: http://capoul.toulouse.inra.fr/-centre/lipm/fr/regulations_transcriptionnelles/-regulations_transcriptionnelles.htm If anyone is interested to set up an application we will search a fellowship to finance this post doctoral project.

Please contact Dominique Tremousaygue at tremou@toulouse.inra.fr or Christine Hervé at herve@toulouse.inra.fr

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Catherine Damerval <damerval@moulon.inra.fr>

InstZoologyLondon 4 ConsBiol

Institute of Zoology Zoological Society of London

Four Postdoctoral Fellowships

Starting salary GBP 24,728 including London Weighting

Applications are invited for up to four postdoctoral research fellowships, each available from 1 January 2004. These are four-year fixed-term appointments for outstanding young researchers to undertake a programme of independent research within the Institute of Zoology's current research themes in conservation biology (<http://www.zoo.cam.ac.uk/ioz/index.htm>). Applications in the following areas are especially encouraged, but applicants wishing to work on other topics relevant to the Institute's research will also be considered:

Disease threats to wild birds and other taxa (Dr Andrew Cunningham: Andrew.Cunningham@ioz.ac.uk)

Social evolution and social behaviour, or foraging ecology of bees (Dr Andrew Bourke: Andrew.Bourke@ioz.ac.uk)

Reproductive and developmental mechanisms, especially in relation to lower vertebrates (Professor Bill Holt: Bill.Holt@ioz.ac.uk)

Extinction dynamics, especially using experimental approaches (Dr Peter Bennett: Peter.Bennett@ioz.ac.uk)

Theoretical population genetics with application to conservation (Dr Jinliang Wang: Jinliang.Wang@ioz.ac.uk)

Development of measures of the global state of biodiversity (Dr Andrew Balmford: apb12@cam.ac.uk)

Impact of life histories on population dynamics, or the interface between socio-economics and ecology (Dr Richard Pettifor: Richard.Pettifor@ioz.ac.uk)

For the post associated with Dr Andrew Cunningham, a wildlife veterinarian with research experience is sought. The post dealing with the development of measures of the global state of biodiversity is collaborative with Dr Andrew Balmford at the University of Cambridge Conservation Biology Group.

Candidates must be within 5 years of completing a Ph.D. (or veterinary degree) and should be able to

demonstrate their potential for successful independent research in the appropriate field. Applications should include a cover letter (stating preferred area of research of those listed if applicable), CV, a two-page outline of proposed research, and the names and full contact details of three referees (including the candidate's Ph.D. supervisor). For informal enquiries, contact the senior researcher identified within each specified area or Professor Georgina Mace (Georgina.Mace@ioz.ac.uk).

Send applications to: Human Resources, Zoological Society of London, Regent's Park, London, NW1 4RY, where further details are available (tel. +44 (0)20 7449 6253; e-mail hr@zsl.org).

Closing date 5 December 2003

Dr W C Jordan Institute of Zoology Zoological Society of London Regent's Park London NW1 4RY Tel: 020 7449 6631 Fax: 020 7586 2870 email: w.jordan@ucl.ac.uk or bill.jordan@ioz.ac.uk <http://www.zoo.cam.ac.uk/ioz/people/jordanb.htm>

 - This e-mail has been sent in confidence to the named addressee(s). If you are not the intended recipient, you must not disclose or distribute it in any form, and you are asked to contact the sender immediately. Views or opinions expressed in this communication may not be those of The Zoological Society of London and, therefore, The Zoological Society of London does not accept legal responsibility for the contents of this message. The recipient(s) must be aware that e-mail is not a secure communication medium and that the contents of this mail may have been altered by a third party in transit. If you have any issues regarding this mail please contact: administrator@zsl.org.

JamesCookU HoneyBees

A postdoctoral position will be available in 2004, at James Cook University in Queensland, Australia. The position is supported from an Australian Research Council grant, is tenable until the end of 2006, with an incremental salary beginning at James Cook Uni-

versity Academic Level A6 [currently \$A46487]. The appointee will join the research group of Professor Ross Crozier with the primary objective of studying the molecular basis of honeybee social behavior, possibly including studies on immune system genes. The work is part of a collaborative project with Ben Oldroyd (University of Sydney). Applicants should be expert in general molecular evolutionary techniques, familiarity with techniques for studying gene expression is an advantage, and knowledge of honeybee biology and husbandry would also be desirable. The starting date is negotiable, but February 1st 2004 is preferred. Applications should include the names and email addresses of three referees, address the selection criteria and be sent by email to Ross Crozier at ross.crozier@jcu.edu.au. Consideration of applications will begin on December 1st 2003. Further information may be sought from Ross Crozier. General information about the University and the region may be found at: <http://www.jcu.edu.au/>

Ross H Crozier FAA

Professor of Evolutionary Genetics School of Tropical Biology James Cook University Townsville, Queensland 4811 AUSTRALIA

email: Ross.Crozier@jcu.edu.au phone: +61 7 4781 5734 (office) +61 7 4781 5723 (lab.) +61 7 4781 5450 (lab.) fax: +61 7 4725 1570

<http://medusa.jcu.edu.au/crozier/croziergrouphome>

Jena EvoGenomics

Postdoctoral Position in Evolutionary Genomics

A postdoctoral position is available immediately in the Department of Genetics and Evolution at the Max-Planck-Institute of Chemical Ecology in Jena, Germany.

This position is associated with a collaborative project to examine the role of positive selection in the evolution of recently duplicated and rapidly diverging genes in the model plant *Arabidopsis thaliana* and close relatives. We are currently focussing on genes potentially involved in reproductive isolation, response to biotic stress and genes of unknown function (orphan genes) that show signatures of selection.

The work will involve the identification of candidate genes by computational mining of genome databases;

the isolation, sequencing and annotation BAC clones; the expression analysis of genes and tests of evolutionary hypotheses using phylogenetic reconstruction and tests of positive selection. A background in molecular biology and molecular evolution is expected. An interest in quantitative aspects of sequence analysis and proficiency in a programming language (our favorite is Python) is highly desired.

The Department of Genetics and Evolution of the Max-Planck-Institute of Chemical Ecology (http://www.ice.mpg.de/tmo/home/home_en.htm) provides an excellent work environment with a modern genomics and bioinformatics infrastructure and a critical mass of scientists working on the interface of evolutionary and functional genomics. The institute is international in character with English as the daily language.

The contact address for applications and further information is:

Dr. Karl Schmid

Department of Genetics and Evolution Max-Planck-Institute of Chemical Ecology Hans-Knöll-Str. 8 07745 Jena, Germany Tel: +49 3641 571465 Email: schmid@ice.mpg.de Internet: vanilla.ice.mpg.de/~schmid

Karl Schmid <schmid@ice.mpg.de> Karl Schmid <schmid@ice.mpg.de>

MaxPlanck Ploen PopGenet

Max-Planck-Institute for Limnology Tropical Ecology Working Group

Population Genetics: Postdoctoral Research Position

A postdoctoral position in population genetics is available at the Tropical Ecology Working Group, Max-Planck-Institute for Limnology in Ploen, Germany.

The successful candidate will study the evolutionary history and biogeographical distribution of South-American insects (in particular Acrididae, Orthoptera) that are host-specific on aquatic macrophytes. The population structure of the host-plants will be studied in parallel by members of our group. The applicant should have a strong background in population genetics and good expertise in the development and use of microsatellite markers and data analysis of such markers. General interest in Neotropical insects and wetlands will be appreciated. Experience with Orthoptera

and/or aquatic macrophytes are a plus.

The position is available for 2 years, the intended start is January 2004. For further information please contact Prof. Joachim Adis, E-mail: adis@mpil-ploen.mpg.de

Applications will be considered until fulfilled. Please submit applications with your CV, publication list, and names and addresses of two scientists who may be contacted to: Prof. Joachim Adis, Max-Planck-Institute for Limnology, Working Group Tropical Ecology, August-Thienemann-Str. 2, 24306 Ploen, Germany.

Joachim Adis <adis@mpil-ploen.mpg.de>

Mexico MarineSci

Postdoctoral positions in Marine Sciences

The Oceanology Division (OD) of the "Centro de Investigación Científica y de Educación Superior de Ensenada, B.C." (CICESE), Mexico announces the interest in incorporating as postdoctoral researchers Doctors in Sciences with a large academic potential, with the aim of strengthening high priority research lines in the Departments of Aquaculture, Ecology, Biological Oceanography and Physical Oceanography. The selected candidates will continue their academic formation through research both independent and in close collaboration with entitled researchers in the OD. We are receiving applications from recent Ph.D.s in any discipline of Marine Sciences, applicants with expertise in the following areas are encouraged to apply: Salt-marsh Structure and Dynamics, Zooplankton Ecology, Polychaete Taxonomy and Dynamics, Fish Communities, Coastal Oceanography, Molecular Genetics (with an emphasis in population and evolutionary genetics), Theoretical Physical Oceanography, Data Analysis and Assimilation, Ocean-Atmosphere Interactions, Geophysical Fluid Dynamics, Meteorology, Littoral Processes, and Climatology.

Requirement: Having recently obtained the Ph.D. degree (no more than 3 years), in a program in oceanography, marine sciences, atmospheric sciences, or similar.

Interested candidates please submit: Letter of intent, Curriculum Vitae (including list of publications), name and addresses of 3 references willing to provide academic recommendation letters.

Send application materials to:

Dr. Francisco J. Ocampo Torres Director, División de Oceanología CICESE Km. 107 Carretera Tijuana-Ensenada Ensenada B. C., 22860 México

Axayacatl Rocha <arocha@cicese.mx>

Montpellier Butterflies

Post-Doctoral Position: Modelling reintroductions of *Maculinea* butterflies

The position is available beginning 1 September 2004, and is funded by the EEC as part of the research network "MacMan". My team is developing population biological theory for the reintroduction of *Maculinea* butterflies in Europe.

The candidate will develop analytical and numerical simulation models with the objective of producing quantitative and qualitative guidelines for reintroduction strategies. These guidelines and the models upon which they are based will incorporate the large empirical knowledge we currently have on the ecology and evolutionary biology of these biological systems.

The successful candidate will have already established an excellent publication record in population biology and be able to conduct independent research.

The position will be based at the Université de Montpellier, France.

Length of contract: 1 year

Contract to begin: 1 September 2004 or shortly thereafter. The candidate must have finished his/her PhD prior to appointment.

For more information see:

<http://www.isem.univ-montp2.fr/GE/Parasites/-ParasiteHome.php>

Please send full CV and two letters of recommendation to:

Dr. Michael Hochberg Genetique et Environnement ISEM - University of Montpellier II Place Eugene Bataillon, CC 065 34095 Montpellier Cedex 5 France e-mail: hochberg@isem.univ-montp2.fr

OntarioCancerInst SeqAnalysis

Postdoc position available

A postdoctoral fellow is being sought to work on the development of novel methods for the analysis of sequence and genomic data. The lab is interested in many aspects of molecular evolution, computational biology, bioinformatics, and genomics and the projects will be determined based on the interests and skills of the successful applicant.

The position is at the Ontario Cancer Institute in Toronto, part of the University Health Network and affiliated with The University of Toronto.

Funding is available for 2 years at a salary of 38-45K Can\$ +benefits, depending upon experience and qualifications and is available to start immediately.

Please send your detailed curriculum vitae, research interests and reference information to

Elisabeth Tillier e.tillier@utoronto.ca

Contact for more information:

Elisabeth Tillier Ontario Cancer Institute/ UHN Suite 703, 620 University Ave Toronto, ON. CA Phone: 416 946 4501 x3978 e.tillier@utoronto.ca <http://www.uhnres.utoronto.ca/tillier/>

RockefellerU GeneRegulationEvol

A postdoctoral position is available in the group of Eric Siggia at Rockefeller University for an applicant with a background in molecular evolution, developmental biology, or bioinformatics and an interest in the prediction of gene regulation in model organisms and its evolution. My group has close collaborations with the yeast genetics lab of Fred Cross at Rockefeller on projects ranging from screens for synthetic promoter libraries to modeling single cell fluctuations in the cell cycle. There are also many joint projects underway with the fly development lab of Ulrike Gaul comparing gene regulation in *D.melanogaster* and *D.pseudoobscura*, and predicting cis regulatory modules for eye and wing development. Further information can be found at <http://>

/www.physics.rockefeller.edu/~siggia . Applications consisting of a CV, publications, and several letters of reference can be sent to siggia@eds1.rockefeller.edu, start date, Feb-Sept 2004.

Prof. Eric Siggia Dept of Physics Center for Studies in Physics and Biology 523 Clark Hall Box 25 Cornell University Rockefeller University Ithaca, NY 14853-2501 1230 York Avenue 607 255 4669 New York, N.Y. 10021 212 327 8546 FAX 607 255 6428 FAX 212 327 8544 <http://www.physics.rockefeller.edu/~siggia>

Sanger PopGenetics

Dear colleagues,

One or more post-doc positions are available starting April 2004 or later in the newly established laboratory of Population and Comparative Genomics at Sanger Institute.

I am looking for highly motivated young scientists with training in population genetics, evolutionary biology and/or comparative genomics, and the ability to perform independent research. The main projects in the lab will be:

1. Genome-wide analysis of gene expression variation in the human genome and association with nucleotide (mostly regulatory) variation with a focus on disease susceptibility genes.
2. Comparative analysis of the human genome to identify functional genomic elements.
3. Development of methodologies for large-scale analysis of genetic variation data (SNPs and haplotypes) and integration of these methods in disease association studies.

Post-doctoral fellows are free to participate in any one of the above projects but will also be encouraged to develop new projects within the interests of the lab and make use of the Sanger high-throughput infrastructure. The Sanger Institute offers competitive salaries and an excellent package of benefits.

If you are interested or have any questions please contact: Manolis Dermitzakis (currently at the University of Geneva) e-mail: Emmanouil.Dermitzakis@medecine.unige.ch Tel: 0041-22-379-5719

Representative publications: Dermitzakis E. T., A.

Reymond, N. Scamuffa, C. Ucla, E. Kirkness, C. Rossier and S. E. Antonarakis (2003). Evolutionary discrimination of conserved non-genic sequences (CNGs). *Science* Oct 2 (e-pub ahead of print). Dermitzakis, E. T., C. M. Bergman and A. G. Clark (2003). Tracing the evolutionary history of regulatory sequences in *Drosophila* with models that predict transcription factor binding sites. *Molecular Biology and Evolution* 20: 703-714. Dermitzakis, E. T., A. Reymond, R. Lyle, N. Scamuffa, C. Ucla, S. Deutsch, B. J. Stevenson, V. Flegel, P. Bucher, C. V. Jongeneel and S. E. Antonarakis (2002). Numerous potentially functional but non-genic conserved sequences on human chromosome 21. *Nature* 420: 578-582. Dermitzakis, E. T. and A. G. Clark (2002). Evolution of transcription factor binding sites in mammalian gene regulatory regions: conservation and turnover. *Molecular Biology and Evolution* 19: 1114-21.

Emmanouil (Manolis) T. Dermitzakis, Ph.D. Division of Medical Genetics University of Geneva Medical School 1 Rue Michel-Servet 1211 Geneva Switzerland

tel: +41 22 379 5719 fax: +41 22 379 5706 URL: www.medgen.unige.ch

StonyBrookU BenthicInvertAdaptation

Postdoc on Benthic Invertebrate Adaptation

A Postdoctoral Research position is available in Jeff Levinton's laboratory with an anticipated start date of February 1, 2004. The candidate should have experience in freshwater or marine benthic ecology and population biology, but experience in some aspect of population genetics of aquatic or marine organisms with molecular experience is also desirable. The research will focus on adaptation and the cost of evolution of resistance to metals and will involve studies of field density, dispersal ability, genetic differentiation, and life history costs and adjustments to the evolution of resistance. Funding is for at least two years with a salary of \$32,000 per year.

Please send a curriculum vita, letter stating interest and experience, and have at least two letters of reference sent to:

Jeffrey S. Levinton Department of Ecology and Evolution Stony Brook University Stony Brook NY 11794-5245 USA

or

levinton@life.bio.sunysb.edu

Email applications, in the form of pdf or MS word files are acceptable. Deadline for applications is December 1, or until a suitable candidate can be identified.

Stony Brook University is an Affirmative Action/Equal Opportunity Employer

Jeff Levinton <levinton@life.bio.sunysb.edu>

UAlaskaFairbanks FungalEvol

Postdoc in Fungal Molecular Ecology

The Taylor lab in the Institute of Arctic Biology (<http://mercury.bio.uaf.edu/iab/index.html>) at the University of Alaska Fairbanks is seeking a postdoctoral associate to contribute to the NSF funded project "Coupling Diversity with Function - Metagenomics of Boreal Forest Fungi." This two year project is a collaboration among several faculty at UAF (Gary Laursen, Tom Marr, Roger Ruess, Lee Taylor) and the Whitehead Institute Center for Genomic Research (<http://www-genome.wi.mit.edu/>), and aims to carry out the most in-depth sequencing of fungal herbarium specimens and soil amplicons yet conducted. The focus of sampling is the Bonanza Creek LTER site (<http://www.lter.uaf.edu/>). The resulting comprehensive sequence database will be used for ongoing and future ecological studies. A completed Ph.D., a record of active research and publication, and experience in one or more of the following areas are essential: high-throughput molecular methods, RNA methods, fungal phylogenetics or population genetics, mycorrhizal ecology, and bioinformatics. UAF provides an exciting intellectual atmosphere and a rewarding place to live, especially for those who enjoy scenic wilderness, myriad outdoor activities and a friendly community. We have a strong ecosystem ecology group, and a growing group of molecular and evolutionary biology faculty. To submit an application, follow the instructions at: <http://www.uaf.edu/uafhr/Employment/Job0903-383.html>. For more information about the position, contact Lee Taylor at fft@uaf.edu or 907-474-6982. 907-474-6982.

UArizona DrosophilaSymbionts

Postdoctoral position to work on bacterial symbionts of *Drosophila* species, with Nancy Moran and Therese Markow, at the University of Arizona. See <http://www.hr.arizona.edu/27450xrsp.htm> or email for more information to nmoran@email.arizona.edu.

– Nancy A. Moran Regents' Professor Department of Ecology and Evolutionary Biology University of Arizona Tucson Arizona 85721 nmoran@email.arizona.edu tel 520-621-3581 fax 520-621-9190 fax 520-621-9190

UBristol EvolParasitology

Postdoctoral Research Assistant (ref.9849), University of Bristol, UK area - evolution/ecology/parasitology

School of Biological Sciences Closing date 9.00 GMT, 8th Dec, 2003

This position is available for three years to work on a project funded by the Wellcome Trust investigating density-dependent effects in parasitic nematode infections (Paterson & Viney, 2002, *Parasitology*, 125, 283-292). The programme of work will use an empirical approach to determine the extent of immune dependent density-dependent effects in nematode infections and to consider their immunological basis, coupled with a theoretical analysis of their epidemiological consequences. The empirical work will be undertaken by you and a full-time post-graduate research assistant. You will also undertake a programme of statistical and theoretical analyses. The theoretical work will be conducted in collaboration with Rachel Norman (University of Stirling). Previous experience in analytical or theoretical work is essential, and some relevant laboratory experience is desirable.

Grade : Grade 1A

Salary : £23,296

Contact for informal enquiries :

Dr M Viney Mark.Viney@bristol.ac.uk Tel. 0117 928 7475

Dr S Paterson S.Paterson@liverpool.ac.uk

Further particulars and details of how to apply can be found at <http://www.bris.ac.uk/jobs/>

— Dr. Steve Paterson, Lecturer in Host-Parasite Biology School of Biological Sciences University of Liverpool L69 7ZB Tel. (+44) (0) 151 795 4521 Mob. (+44) (0) 794 192 3147 Fax. (+44) (0) 151 795 4408 email S.Paterson@liverpool.ac.uk

Steve Paterson <S.Paterson@liverpool.ac.uk>

UCanterbury LifeHistory

POSTDOCTORAL RESEARCH IN NEW ZEALAND: Applications are invited for a 12-month Postdoctoral Fellowship in the area of behavioural ecology in the Department of Zoology, University of Canterbury, Christchurch, New Zealand. The successful applicant will undertake field-based research into evolutionary changes of life history traits in New Zealand birds since the introduction of exotic predators by human settlers. Applicants should have experience in both field-based research and a strong background in evolutionary biology, in addition to possessing a high degree of investigative and interpretative skills. Some work will require visits to remote islands and so a high level of independence and self-reliance is necessary. Enquiries and applications (with three letters of reference) should be directed to Dr. James Briskie (Jim.Briskie@canterbury.ac.nz), School of Biological Sciences, University of Canterbury, Private Bag 4800, Christchurch, New Zealand. Email submissions accepted. Closing date is 30 November 2003, with a starting date as soon as possible after that (before 1 February 2004 preferred). More information on the University of Canterbury and the conditions of appointment can be obtained by visiting www.canterbury.ac.nz

James Briskie <j.briskie@zool.canterbury.ac.nz>

UGothenburg BreedingSystems

Postdoctoral position in molecular ecology of reproductive tactics and breeding systems.

A postdoctoral grant position is available for molecular

ecological work on evolution and ecology of reproductive tactics and breeding systems. Current projects of the research group in which the successful applicant will work are sociality and brood parasitism in waterfowl, and breeding systems in shorebirds. Proficiency with molecular methods, in particular microsatellite analyses, is essential, and a background including population genetics and evolutionary ecology is desirable. The grant level (no tax) is about 190 000 SEK per year (in October 2003 corresponding to about 25,000 USD). Initial funding is for one year, with likely possibility for extension. The position will start as soon as a suitable candidate can arrive. Please email a CV and list of publications, a brief statement of research interests, and the names of three persons who can provide letters of reference, to: malte.andersson@zool.gu.se

Professor Malte Andersson Animal Ecology Department of Zoology University of Gothenburg Box 463 SE 405 30 Göteborg Sweden Tel. +46 31 773 3695, fax +46 31 416729 Web: <http://vivaldi.zool.gu.se/-Ekologi/personal/Malte/malte.andersson.htm> Web: <http://vivaldi.zool.gu.se/Ekologi/personal/Malte/-malte.andersson.htm>

UMaryland MolEvol

Competitive NRC Fellowship in Computational Molecular Evolution

We seek to sponsor an ambitious individual to pursue an innovative project on mutation-biased adaptation of macromolecules, through the prestigious NRC Research Associateship program. The NRC Research Associates program is a competitive 2-year fellowship program that provides successful applicants generous support for research undertaken in federal laboratories. Applicants must submit a proposal and other application materials by 15 February, 2004, in order to meet the next deadline. U.S. citizenship is required.

The project to be proposed by the applicant may involve computer simulation or mathematical modelling, and should build on the theoretical foundation for understanding mutation-biased adaptation developed by Yampolsky and Stoltzfus, 2001 (*Evol. & Dev.* 3: 73-83). Preliminary unpublished work provides a basis for several research directions. Please consult our website for further information (www.molevol.org/-camel/opportunities), and contact Arlin Stoltzfus (arlin@carb.nist.gov) with any questions.

Arlin Stoltzfus Research Biologist, National Institute of Standards & Technology CARB 9600 Gudelsky Drive Rockville, MD 20850 tel: 301 738 6208

Arlin Stoltzfus <stoltzfu@umbi.umd.edu>

UMinnesota PlantFungalEvol

POSTDOCTORAL POSITION: EVOLUTION OF PLANT/FUNGAL INTERACTIONS

Postdoctoral position available for the evolutionary interaction of corn and one its most common pathogens, *Ustilago maydis* or corn smut. The focus of the research is on the evolutionary response of the pathogen to domestication and host range expansion of the host plant. Interestingly, the pathogen was cultivated as a food by Mexican and native peoples throughout the Americas, as it continues to be in Central and South America. Postdoctoral researcher in this position will assist in the analysis of population-level evolution for *Ustilago* and to investigate questions of host-specialization, differential genetic expression responses of the fungus to the host, or interactions with other fungal symbionts of maize. Funding is through a NSF BioComplexity award and the candidate will find good opportunities to interact with evolutionary biologists, ecologists, and theoreticians in the Community Genetics group as well as the EEB department.

Contact: Georgiana May Dept. Ecology, Evolution, Behavior U. Minnesota gmay@umn.edu 612-614-6737 612-614-6737

UPretoria Phylogeography

University of Pretoria Postdoctoral Fellowship: Phylogeography of Reptiles and Frogs from the Cape Fold Mountains Feb 2004-Dec 2005

A University of Pretoria postdoctoral fellowship is available in the Molecular Ecology and Evolution Programme of the Department of Genetics. The successful applicant will work as part of a collaborative research project on Comparative phylogeography of the southern Afrotemperate Bioregion. The overall objectives of the research project are: 1. To identify phylo-

geographic patterns within taxa of the naturally fragmented Afrotemperate bioregion; 2. To infer historical processes and events which have shaped these patterns of genetic diversity through phylogeographic comparisons across co-distributed species; 3. To develop and extend methods for combining genetic information across species and incorporating this into spatial management databases and 4. To incorporate our understanding of regional and local-scale processes into a conservation framework that ensures the maintenance of intraspecific genetic diversity and adaptive potential. The successful applicant will: 1. Conduct cooperative field sampling for endemic herpetofaunal species in strategic areas of the Cape Fold Mountains with the existing project team and associated postgraduate students based at Pretoria University, Stellenbosch University and Western Cape Nature Conservation Board. 2. Analyse phylogeographic and population genetic diversity within target species groups (This postdoctoral researcher, project coordinator, Dr. Cunningham, and collaborators will each analyse different target species groups but will combine their resources for field sampling and collaborate on the development of new methods for combining data across species and for incorporating this information into spatial databases), 3. Use spatial modeling techniques to predict the distribution of species and genetic lineages within and among these taxa.

PhD candidates with degrees in Zoology, Genetics or Biology should contact Dr. Paulette Bloomer for further details. Candidates with spatial modeling experience are encouraged to apply. Please send a full CV and the names of three referees to: pbloomer@postino.up.ac.za. The fellowship includes a bursary of R80 000 per year (with a second year of support dependent on progress during the first year), a contribution towards relocation costs and a conference attendance award. Deadline for applications: 12 January 2004.

wdelpor@postino.up.ac.za

UTromso MicrobialPopGenet

Postdoc position in microbial population genetics.

A 3-year postdoc position is available in microbial population genetics at the Department of Pharmacy, Faculty of Medicine, University of Tromso, Norway. We are an active research group focusing on molecular as-

pects of gene flow in bacterial populations (<http://www.farmasi.uit.no/~knielsen/>). With this new position, we seek to strengthen our understanding of the population scale aspects of gene flow in haploid populations by applying population genetic theory and approaches. Both clinical and environmental projects will be followed. Previous training in population genetics required. The Department is located in a new building on the main campus with excellent working conditions. The University is the worlds Northernmost and offers exciting opportunities for outdoor activities. Applications, in 5 complete copies and marked with the ref. nr. 03/4184, should be sent to: The University of Tromso, N9037 Tromso, Norway. The application must include a CV and list of publications. The application deadline is 17 November 2003. For further information contact Assoc. Prof. Kaare M. Nielsen, Tel. +47 77 646165, email knielsen@farmasi.uit.no.

Kaare Nielsen <knielsen@farmasi.uit.no>

UTromso MicrobialPopGenet 2

Dear Sir, I would appreciate if you could post the following announcement on the Evoldir postdoc site.

(The announcement is similar to the one I sent some days ago, but due to the good response I got from posting it on your site I have extended the deadline until the end of the month).

Postdoc position in microbial population genetics.

A 3-year postdoc position is available in microbial population genetics at the Department of Pharmacy, Faculty of Medicine, University of Tromso, Norway. We are an active research group focusing on molecular aspects of gene flow in bacterial populations(<http://www.farmasi.uit.no/~knielsen/>). With this new position, we seek to strengthen our understanding of the population scale aspects of gene flow in haploid populations by applying population genetic theory and approaches. Both clinical and environmental projects will be followed. Previous training in population genetics required. The Department is located in a new building on the main campus with excellent working conditions. The University is the worlds Northernmost and offers exciting opportunities for outdoor activities. Salary, approx. 360 000 NOK per year. Applications, in 5 complete copies and marked with the ref. nr. 03/4184, should be sent to: The University of Tromso, N9037 Tromso, Norway. The application must include a cover

letter, a CV and list of publications. The application deadline is 30 November 2003. For further information contact Assoc. Prof. Kaare M. Nielsen, Tel. +47 77 646165, email knielsen@farmasi.uit.no.

Kaare M. Nielsen Department of Pharmacy Faculty of Medicine University of Tromso N9037 Tromso, Norway Tel: + 47 77 646165 Fax: + 47 77 646151 Email: knielsen@farmasi.uit.no <http://www.farmasi.uit.no/~knielsen/> Kaare Nielsen <knielsen@farmasi.uit.no>

UZurich EvolBiol

Postdoctoral position in Evolutionary Biology

A postdoctoral position is available in the group of Lukas Keller at the Zoological Museum of the University of Zurich, Switzerland. I am seeking a candidate with broad interests in evolutionary biology who uses molecular, quantitative, or population genetic approaches to study fundamental questions about the processes of evolution in wild animal populations. I will consider applicants from a wide range of specializations including, but not limited to, evolutionary genetics, population and quantitative genetics, molecular ecology and conservation genetics.

Applicants must have a PhD. Good quantitative and/or molecular skills are essential. The successful candidate is expected to develop her/his own research projects within the context of the group. The daily working language of our group is English.

Zurich has a strong and interactive group of evolutionary biologists, including several at the Zoological Museum, the Zoological Institute, the Institute of Environmental Sciences, the Institute of Systematic Botany, and the ETH.

The position is available from 1 March 2004 for a period of three years, with a potential of three extensions of one year each.

If you are interested, please send me your curriculum vitae, list of publications, a sketch of research interests and the names of three potential referees (all in a single file if applying by email) by 18 December 2003.

Prof. Dr. Lukas Keller, Zoological Museum, University of Zurich, Winterthurerstr. 190, CH-8057 Zürich, Switzerland Email: lfkeller@zoolmus.unizh.ch Fax: ++41 1 635 68 18 www.unizh.ch/zoolmus

WCS RightWhales

Postdoctoral Position: Genetic Diversity and Population Structure among North Atlantic right whales using historical specimens

A one-year Postdoctoral Fellowship position is available at the Wildlife Conservation Society's Conservation Genetics Program to participate in a project that focuses on examining historical genetic diversity among North Atlantic right whales using a variety of historical and archaeological specimens.

The person who joins this project will be expected to

build upon previous work done in our lab that will provide a better understanding of the genetic variability of North Atlantic right whales through time.

Requirements: PhD with extensive experience in ancient DNA methodologies is essential, including DNA extraction, PCR amplification, DNA sequencing, cloning of DNA fragments, and microsatellite genotyping. The applicant should be independently motivated but have experience working in a large, multi-person, collaborative program.

Timeline: Position to start by January 1st, and preferably sooner.

Please send a CV, research statement detailing relevant experiences, and the names of 3 references to Dr. Howard Rosenbaum at hrosenbaum@wcs.org prior to November 20th. Electronic submission of pdf files preferred.

WorkshopsCourses

NCStateU StatGenet Spring2004 65
UCambridge Computational Biology 65

NCStateU StatGenet Spring2004

NC State University will offer two online three-credit-hour graduate-level courses in statistical genetics in the Spring of 2004. Registration is now open at <http://distance.ncsu.edu> for

ST 610 D: Genetic Data Analysis, taught by Bruce Weir
ST 610 F: Statistical Analysis of Pedigree Data, taught by Elizabeth Thompson.

For ST 610 D, participants will receive powerpoint presentations with audio tracks with material from the forthcoming "Genetic Data Analysis III," Weir (2004).

For ST 610 F, participants will receive a CD with the lectures (text and audio) and references to "Statistical

Inference from Genetic Data on Pedigrees," Thompson (2000).

Bruce Weir Phone: (919) 515-3574

Bioinformatics Research Center Fax: (919) 515-7315
NC State University email: weir@stat.ncsu.edu Raleigh
NC 27695-7566 URL: <http://statgen.ncsu.edu>

UCambridge Computational Biology

Dear Dr Golding please would you advertise on your web site our new Masters course in computational biology? Details are on www.damtp.cam.ac.uk/user/pvl/-BIO/mphil.html With regards Peter Landshoff

Professor Peter Landshoff phone +44(0)1223 337 880 Cambridge CB3 0WA www.damtp.cam.ac.uk/user/pvl
Centre for Mathematical Sciences fax +44(0)1223 766 Peter Landshoff <P.V.Landshoff@damtp.cam.ac.uk>
883 Wilberforce Road secretary +44(0)1223 337 873

Instructions

Instructions: To be added to the EvolDir mailing list please send an email message to 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. In addition, if it originates from ‘blackballed’ addresses it will be sent to me at 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 EvolDir mailing list please send an email message to 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 EvolDir direct them to the email evoldir@evol.biology.McMaster.CA. Do not include encoded attachments and do not send it as Word files, as HTML files, as L^AT_EX files, Excel files, etc. . . . plain old ASCII will work great and can be read by everyone. Add a subject header that contains one of the keywords “Conference, Grad, Job, Other:, Postdoc, Workshop” and then the message stands a better chance of being correctly parsed.

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. So 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 L^AT_EX do not try to embed L^AT_EX or T_EX in your message (or other formats) since my program will strip these from the message.